

151 ESSAYS

Panoramic Coverage on Topics of

Contemporary, Social, Political, Economic,
Science & Technology, Environmental,
Education, Health & Sports, Personalities,
Proverbial & Idiomatic etc.

SC GUPTA

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PREFACE

to the Revised Edition

Writing an Essay is an art which needs discipline of mind, analytical power, rich vocabulary to express ideas or thoughts in appropriate context. A candidate must have thorough knowledge of the topic, good expression, grammatical accuracy and coherence of thoughts to write well crafted essays.

For writing good essay, one must inculcate interest in reading books of eminent authors on varied subjects, newspaper and informative magazines. Reading helps in assimilation of thoughts and practice leads to presentation of thoughts in a cohesive and methodical manner in the form of essay.

The present book is quite comprehensive and contains essays on almost all current topics.

- Topics are classified in different categories such as Contemporary, Social, Political, Economic Issues, Science & Technology, Environmental Issues, Education, Health & Sports, Renowned Personalities, Proverbial & Idiomatic and Miscellaneous.
- Efforts have been made to incorporate latest available data and facts in essays wherever required.
- Use of simple and standard language has been kept in mind so that students of different calibre are benefited.
- A separate section containing 'Important Quotations' has been incorporated so that students may use them in writing essays as and when required.

I am sure the book '151 ESSAYS Revised Edition' will certainly help in stimulating the readers' thoughts and enhance their capabilities to present subject matter in a concise and organised manner.

The readers are advised to go through the initial pages very carefully as it deals with 'how to write an effective essay'. Readers' suggestions for further improvement of the book are always welcomed.

SC GUPTA

129, South-West Block, Near Eidgah,
Alwar, Rajasthan

CONTENTS

CONTEMPORARY ISSUES 1-50

1. Coronavirus (COVID-19): Great Lesson to Reset Humanity & Its Priorities 1-7
2. India and the QUAD 8-11
3. Privatisation of Agricultural Marketing in India : New Farm Bills 12-15
4. Rafale Jet 16-19
5. Nobel Prize Winners, 2020 19-21
6. Empowering Our Youth with 21st Century Skills 22-25
7. National Education Policy, 2020 : Educating New India 26-30
8. India-China Clashes 31-35
9. National Health Id : Will it improve our Health? 36-39
10. Abolishment of Article 370 : A Historical Step to Bring Peace in Kashmir 40-42
11. Online Gaming is Dangerously Attractive to Youth 43-47
12. Censorship of Web Series and its Pros & Cons 47-50

SOCIAL ISSUES 51-120

13. Child Labour in India : An Unavoidable Dilemma 51-54
14. Divyangs : Their Rights and Challenges 54-56
15. A Ten-Year Rural Sanitation Strategy : Sustaining India's 100% ODF Mission 57-59
16. Indian Secularism: A Blend to Constitutional & Cultural Heritage 60-62
17. Social Media : Blessing or Curse for the Society 62-65
18. Increasing Population : Boon or Bane 65-67
19. Role of Media in Indian Democracy 68-70
20. Role of NGO's in India 71-73
21. Poverty in India : Can We Ever Able to Eradicate it? 74-77
22. Challenges for Women in India : Against Time and Space 77-79
23. Can Corruption be Eradicated From Our Society? 80-82
24. Urban Poverty and Homelessness in India 83-86
25. Human Trafficking : Modern Day Slavery 86-88
26. Is Capital Punishment Justified? 89-90
27. Impact of Advertisement on Society 91-92
28. Naxalism : Threat to Internal Security 93-96
29. Indian Cinema and Its Impact on Society 96-99
30. Euthanasia : Right to Die with Dignity 100-102

31. Caste Discrimination and Exclusion in India	102-105
32. Role of Students in Politics	106-108
33. Transgenders : Can They Ever be Free of Discrimination	108-110
34. Old Age Population in India : Trapped in Isolation, Poverty and Illness	111-113
35. Youth Involved in Drugs	113-116
36. Honour Killing : Most Heinous Crime	116-118
37. Educating a Girl Child : Educating the Whole Family	118-120

POLITICAL ISSUES

121-166

38. Electoral Reforms and Indian Democracy	121-124
39. 124th Constitutional Amendment : Reservations for Economically Weaker Sections	125-127
40. Triple Talaq : A Way Towards Uniform Civil Code	127-129
41. Women's Reservation Bill : A Forgotten Issue	130-131
42. Educational Qualifications for Politicians : Necessary or Superfluous	132-135
43. E-Governance in India : Concept, Initiatives and Challenges	136-139
44. Fundamental Rights : Bedrock of Indian Democracy	139-141
45. Right to Internet as Fundamental Right	142-143
46. Panchayati Raj and Rural Development in India	144-146
47. Moral Ethics of Public Servant	147-148
48. National Register of Citizens (NRC) and its Implications	149-151
49. Right to Information (RTI) Act : Revolutionary Tool in Democracy	152-154
50. Is the Coalition Government a Success Story in Indian Politics?	155-157
51. One Nation One Election: Is India Ready?	158-160
52. Judicial Activism in India	161-164
53. Reservation Policy in India : Does it Need Review?	164-166

ECONOMIC ISSUES

167-229

54. Ayushman Bharat : World's Biggest Health Cover Initiative	167-170
55. Significance of Geographical Indications in India	171-174
56. Skilling India : A Necessity	174-177
57. Land Reforms in India : An Unfinished Agenda	178-180
58. Tourism in India : Opportunities & Challenges	181-184
59. Rising Income Inequality in India	185-187
60. Black Money : Grave Menace for the Nation	188-190
61. Industrial Development in India	191-193
62. Micro, Small and Medium Enterprises Engines of Growth	194-197
63. Banking Sector Reforms in India : A Pillar for India's Growth	198-201

64. Mega Merger of Banks in India	201-204
65. Challenges in Indian Agriculture and Possible Remedies	204-207
66. Make in India : Big Boost to Industry and Employment	207-210
67. Food Fortification Initiative : Securing Nutritious Food for Every Indian	211-214
68. Cryptocurrency : New Form of Monetary System	214-216
69. Changing Pace of Digital India	217-220
70. The Problem of Unemployment in India	220-223
71. Globalisation and its Impact on Indian Society	224-226
72. Start-ups in India	226-229

SCIENCE AND TECHNOLOGY

230-265

73. Cyber Warfare : The Next Frontier of War	230-232
74. Gene Editing : Cutting the Unwanted	233-236
75. Stem Cells : Regenerating Organs	236-239
76. Blockchain Technology: Promise and Challenges	240-243
77. India's Nuclear Programme	243-245
78. ISRO : The Torchbearer of Indian Innovation	246-248
79. Chandrayaan 2 : India's Moon Mission Inspired the World	249-251
80. Nanotechnology : A New Revolution	251-253
81. Gaganyaan Mission : India's Manned Space Mission	253-255
82. Mobile Phone : A Necessary Evil	256-258
83. Rise of Artificial Intelligence	259-261
84. Drone Technology : Benefits and Challenges of UAVs	262-265

ENVIRONMENTAL ISSUES

266-324

85. Environmental Pollution : Making the Planet Unhealthy for Living	266-269
86. Deforestation : The Result of Human Greed	270-273
87. India's Deepened Water Crisis	274-278
88. Drought : Challenges and Mitigation in India	278-281
89. Floods in India : Causes and Control	281-283
90. Energy Conservation Programmes in India	284-286
91. E-Waste : The Darker Side of Digital Revolution	287-289
92. Wildlife in India : Protected or at Risk?	290-293
93. Bioplastics : An Alternative to Plastic Pollution	293-296
94. Sustainable Development : Relevance in Today's World	297-299
95. Global Climate Change : Can We Save the Mother Earth?	300-303
96. Disaster Management in India	304-306

97. Rainwater Harvesting	307-309
98. Declining Biodiversity Impact on Human Lives	310-313
99. Genetically Modified Food: Effects on the Environment and Humans	313-315
100. Incurable Rivers in India	316-318
101. Nuclear Hazards and Their Effects on Ecology	319-322
102. War Against Single-use Plastic	322-324

EDUCATION, HEALTH AND SPORTS **325-356**

103. Lifestyle Diseases in India	325-327
104. Online Schooling : The Future of Education?	328-330
105. Right to Education : No Child Should be Left Behind	331-333
106. Sports in Our Country : Issues and Reforms	334-337
107. Education Without Values Makes a Man Clever Devil	338-341
108. Significance of Private Universities in India	342-344
109. Yoga : A Journey towards Self-reliance	345-347
110. Fit India Movement : A Step Towards Healthy Future	348-350
111. Naturopathy : Self Help for Good Health	351-353
112. Physical Education : Compulsory for All in Schools	354-356

RENOWNED PERSONALITIES **357-410**

113. Virat Kohli : The Run Machine	357-358
114. Pankaj Advani : Most Successful Billiards Player of all time	359-360
115. Dutee Chand : Inspiring a Million Dreams	361-362
116. Bajrang Punia : Bahubali of Indian Wrestling	363-364
117. Azim Premji : Czar of India's IT Industry	365-366
118. Ajit Doval : The Man Behind India's Internal Security	367-369
119. Saint Mariam Thresia : Saint from God's Own Country	369-371
120. Elon Musk : An Entrepreneur Building Our Future	371-373
121. Greta Thunberg: Young Voice Against Climate Change	373-375
122. PV Sindhu : First Woman Olympic Silver Medalist from India	376-378
123. Dr APJ Abdul Kalam : Missile Man of India	378-379
124. Dr Amartya Sen : First Nobel Laureate Indian Economist	380-382
125. Dr BR Ambedkar : The Apostle of Dalits	382-384
126. Mother Teresa : Symbol of Peace and Humanity	384-386
127. Mary Kom : Hurdles can be Overcome by Dedication	387-388
128. Mukesh Ambani : The Rise of a Billionaire	389-390
129. Nelson Mandela : First Black President of South Africa	391-393
130. Narendra Modi : The Leader of New India	393-395

131. Pt. Jawaharlal Nehru: The Architect of Modern India	396-398
132. Rabindranath Tagore : First Asian Nobel Laureate Writer	399-400
133. Swami Vivekananda : A Spiritual Reformer	401-402
134. Subhash Chandra Bose : Patriot of Patriots	403-405
135. Sarojini Naidu : The Nightingale of India	405-407
136. Sachin Tendulkar : A Living Legend	407-408
137. Sundar Pichai : An Inspiring Story of an Indian Techie	409-410

PROVERBIAL AND IDIOMATIC 411-430

138. Uncertainty Should Ignite Creativity not Depravity	411-412
139. As You Sow, So Shall You Reap	412-413
140. Wisdom Finds Truth	413-414
141. Justice Delayed is Justice Denied	415-416
142. Failures are the Pillars of Success	417-418
143. Best for an Individual is not Necessarily Best for the Society	418-420
144. Ideas Rule the World	421-422
145. The Child is Father of the Man	422-423
146. Think Positive and Win Positively	423-424
147. Knowledge without Character is Dangerous !	425-426
148. Money is a Good Servant, But a Bad Master	426-427
149. Quick but Steady Wins the Race	428-429
150. We Live in Deeds, Not in Years	429-430

MISCELLANEOUS ISSUES 431-465

151. Significance of Jal Shakti Abhiyaan	431-433
152. Fake News Menace	434-436
153. Indo-Pacific Zone : An Emerging Power Zone	437-439
154. International Solar Alliance : India's Lead for Global Cooperation	439-442
155. Bharat Ratna Awards	442-444
156. United Nations and World Peace	445-447
157. India-Pakistan Conflict : Time to Reset our Relations	448-450
158. Brexit Process : Deal or No Deal	451-453
159. Energy Crisis : An Opportunity to Push Clean Energy	454-456
160. India- Nepal : Relations	457-459
161. Israel Arab Peace Deal	460-463
162. Inclusion of Women in Armed Forces	463-465

● **Important Quotations 466-470**

Understanding An ESSAY

An essay is a long piece of writing that gives information about a given topic. It also helps to communicate the writer's point of view to the readers. The purpose of an essay writing is to test the language proficiency of the candidate along with his/her creativity and intellectual skills. It tests (or evaluates) the ability of the candidate to present his/her ideas in the best possible manner. A good essay should be clear, concise and well-organised. It should create an impact in the mind of the readers.

The length of an essay varies according to the requirement. Essay writing not only develops logical thinking, but also improves the writing abilities and organisational skills of the student.

PARTS OF AN ESSAY

A well written essay is mainly divided into three parts

- **Introduction** The introduction (or introductory paragraph or opening paragraph) is the most important part of an essay. An eye-catching and impactful introduction generates the reader's interest to go through the entire essay. A brief summary of the topic can be used to introduce the topic. Remember that it should be short and to the point. An relevant quotation can be added at the beginning to capture the reader's attention. The introduction should properly convey the main point of the essay.
- **Main Body** The body of the essay contains all information about the topic. In this part, gradually develop the topic while writing the essay. Remember that your views expressed in the essay should not be biased. Only logical arguments, relevant facts and figures should be given. Apart from this, you can also add suitable explanation or elaboration should be added wherever required.
- **Conclusion** A strong conclusion is equally important to an essay as an eye-catching introduction. The concluding paragraphs should summarise the essay in a few lines. A strong conclusion provides a final perspective on the given topic. An interesting anecdote or quotation can be added to end the essay in an impressive manner. It should not be too long.

STEPS TO WRITE AN EFFECTIVE ESSAY

1. **Brain Storming/Thinking About the Topic** Before you start writing the essay, spare a few minutes to think about the topic.
2. **Jot Down the Main Points, Examples, Facts etc** Note down all the points, facts, examples that come to your mind on a separate sheet.

3. **Preparing a Rough Sketch** Once you have jotted down the main points, you need to organise your ideas. Writing an outline/rough sketch or sketching is an excellent way to organise your ideas in a logical manner.
Preparing a rough sketch is very simple and includes the following points:
 - Write the topic in BLOCK LETTERS at the top of the page.
 - Divide the page into three headings namely Introduction, Main Body and Conclusion.
 - Write the main points under each heading.
 - Organise the points in a logical sequence.
4. **Analysis of Rough Sketch** After you have prepared the rough sketch, go through it once to check if you have missed out any important point. You can also make changes in the order of points, examples etc.
5. **Writing the Main Essay** After making the sketch, start writing the essay according to the plan/outlines you have created. You will be surprised to see how much time you have saved while writing the essay. Also, your essays will be more organised and impressive than before.

POINTS TO BE KEPT IN MIND

- Use different types of sentence structures to write your essay.
- Use transition paragraphs to move from one main point to another.
- Take care of punctuation errors, spelling mistakes and grammatical errors.
- Don't repeat words or phrases.
- Cite good examples wherever necessary.
- Use true and accurate information in your essay.
- Mention quote, anecdotes, stories, examples, case studies as they make the essay interesting to read.
- Don't use irrelevant and inappropriate examples, quotations, evidence etc.
- Don't use negative language, slang and abbreviations to write your essay.
- Don't make your essay too long.
- Revise your essay after writing.

CORONAVIRUS (COVID-19)

GREAT LESSON TO RESET HUMANITY AND ITS PRIORITIES

From time to time, the world has been tormented with newly emerging pandemics throughout the history. It was believed earlier that the intensity of destruction caused by such pandemics was largely on account of lack of better health facilities. But this current COVID-19 outbreak has proved that humans are still not completely able to fight pandemics caused by the deadly viruses.

Pandemics have occurred even after high technological advancements in the healthcare infrastructure. The COVID-19 outbreak was first reported towards the end of 2019 in Wuhan, in Hubei province of China. Subsequently, it spread to other parts of the world. It was declared as a pandemic by the WHO on 11th March, 2020.

What is a Coronavirus?

Coronaviruses are large family of viruses that are common throughout the world and can cause respiratory illnesses in people and animals. There are several known coronaviruses that infect humans and animals. Human coronaviruses were first discovered in 1960. The coronaviruses that can infect humans are

1. 229E (Alpha Coronavirus)
2. NL63 (Alpha Coronavirus)
3. OC43 (Beta Coronavirus)
4. HKU1 (Beta Coronavirus)
5. MERS-CoV(Beta Coronavirus)
6. SARS-CoV(Beta Coronavirus)

The new coronavirus, also known as Novel Coronavirus or SARS CoV-2 is a newly emerged coronavirus that has never been identified before. It is responsible for the outbreak of the COVID-19 disease that causes respiratory illnesses in humans. The new corona virus is zoonotic in nature, which means that it can spread easily from animals to humans.

The people infected with COVID-19 disease due to the new coronavirus experience mild to moderate respiratory illnesses and recover without any special treatment. But the COVID-19 disease affects the older vulnerable people badly and those having other medical problems. People those having cardiovascular diseases, diabetes, chronic respiratory diseases, cancer etc. are more likely to develop serious illness.

How it Spreads?

The COVID-19 disease spreads primarily through droplets of saliva or discharge from the nose when an infected person coughs or sneezes. The virus can also spread through the aerosol particles discharged from the mouth while speaking in closed spaces. The people who are infected with the COVID-19 disease can get either very low infection or very high infection. Those who have been infected with lower infection load may develop very mild symptoms or develop no symptoms at all.

Those infected with higher infection load, develops severe symptoms which can also be life threatening. The virus seems to be easily spreading in the community and sustaining for longer periods in the community because of asymptomatic infections that are not easy to detect. In COVID-19 disease the common symptoms include-runny nose, fever, headache, cough, sore throats, red marks on the skin, loss of taste and smell, rashes, tiredness, diarrhoea etc. People having serious illness due to COVID-19 disease, are not able to breathe easily, may feel chest pain and pressure and may also have loss of speech or movement.

Prevention and Cure

There are no special cures for the COVID-19 disease. People who get infected by the disease are provided with symptomatic treatment that includes reducing fever and treating the respiratory system with common interventions. To prevent infection and slow down its transmission, the most effective techniques are

- Maintain cleanliness around the houses and communities.
- Maintain personal hygiene such as washing hands regularly, not touching contaminated and dirtier surfaces and objects and washing or sanitising hands as soon as possible after touching any surface.
- Maintaining safe distance of more than 2 metres from other people who are coughing or sneezing.
- Avoid touching face, eyes, ears, nose etc. frequently.
- Covering mouth fully when coughing or sneezing.
- Not indulging in intoxicating activities such as smoking, drinking and other harmful things such as drugs, as these things weakens the nervous system as well as the respiratory system.
- Practise physical distancing, avoiding unnecessary travelling, staying away from large number of people or crowd.
- Cleaning and disinfecting surfaces and frequently touched objects.
- Practicing physical activities and exercise daily, inside the house or personal spaces so that immunity can be boosted.
- Maintaining a healthy diet to provide strong immunity to the body.
- Staying home and contacting a doctor if feeling unwell.

Emergence of New Coronavirus and Role of WHO

The novel virus is likely to have emerged from the Bats. The intermediate host might be a pangolin. The possible host of the new virus is still being researched upon. But it is certain that this virus has emerged due to mutations and adaptations. The virus has a unique ability to mutate rapidly and adapt a new host.

World Health Organisation (WHO), the global health organisation has played a significant role in dealing with the pandemic. It has emerged as a leading organisation involved in the global coordination for mitigating the COVID-19 pandemic. It declared the outbreak a Public Health Emergency of International Concern and warned all countries to prepare.

After the emergence of the COVID-19, WHO has been at the heart of the fight against the disease. It is intended to be an international leader in public health by alerting the world to the threats of diseases, developing policies to coordinate response to COVID and providing safety equipments to various countries.

The WHO has spearheaded several initiatives like the COVID-19 Solidarity Response Fund to raise money for the pandemic response, the UN COVID-19 Supply Chain Task Force, and the solidarity trial for investigating potential treatment options for the disease.

WHO agreed to an independent investigation into its handling of the pandemic. It announced the setting up of an independent Expert Review Committee to examine aspects of the international treaty that governs preparedness and response to health emergencies.

WHO has shipped more than two million items of Personal Protective Equipments (PPEs) and one million diagnostic test kits to over 120 countries. WHO has launched multilingual e-learning courses about various aspects of COVID-19, including for preparedness and response.

WHO has been criticised also by the former US President Donald Trump terming it as China centric. It is alleged that WHO was slow to publicly recognise the threat posed by the COVID disease. Questions were raised on its contradictory statements regarding COVID. But it is also true that world will need the WHO as only an International organisation like the WHO can coordinate efforts to tackle COVID on a global scale.

Effect of COVID-19 on India

COVID-19 has exposed the vulnerabilities of healthcare systems. It has affected people's primary healthcare provisions. It has highlighted the shortage of health infrastructure in terms of doctors, medical equipment, hospitals, healthcare workers both in terms of availability and accessibility.

This pandemic affected workers of unorganised sector mostly who are daily wager or those working in Micro, Small and Medium Enterprises (MSMEs) and left them jobless, and rapidly increased the unemployment rate. Due to lockdown as inter-state transportation services were shut down, farmers are unable to sell their crops in the market. They incurred huge losses and forced to throw out their crops. The revenue of the tourism sector got down due to a strict ban on both domestic and international flights.

There has been fall in economic growth of the country as industries were shut. India entered into a phase of technical recession. Due to the outbreak of the pandemic, most schools and educational institutions have closed down. The learning has become online which exposed the digital divide existing in the country. Also, the institutions are not equipped with digital technology and teachers also lack training in term of usage of these tools.

The COVID-19 impacted the supply chains and production/manufacturing facilities of defence companies. As these companies have to depend on different components on different sources located in affected countries and it lead to a decrease in demand for defence equipment.

Impact of COVID-19 on Global Economy

Amid the coronavirus pandemic, several countries across the world adopted complete/partial lockdowns to flatten the curve of the infection. These lockdowns meant confining millions of citizens to their homes, shutting down businesses and ceasing almost all economic activity.

According to the International Monetary Fund (IMF), the global economy is expected to shrink by over 3% in 2020, the steepest slowdown since the great depression of the 1930s.

The outbreak of COVID-19 has had deeper impact on Indian economy. A UN report estimated a trade impact of more than USD 350 million on Indian economy due to this outbreak, making India one of, the worst affected economies across the world.

Lockdown had put great stress on the supply chains of essential commodities and therefore, many of the Indian companies have focused on the production and supply of essential items only. It thereby stopped all other production activities.

Measures Taken by India to Fight COVID

After the WHO declared COVID-19 a pandemic, government suspended all the International VISAs, domestic flights and restricted the movement of the people by imposing Nationwide lockdowns so, that the transmission of the disease could be stopped and people do not get infected. The most important steps included

- 1. Arogya Setu App** It launched the Arogya Setu App which was developed by the National Informatics Centre (NIC). It uses smartphone's bluetooth and GPS features to track the Novel coronavirus transmission. It informs the individuals and authorities in case some one has been infected by the COVID disease. It has a self assessment test, do's and dont's and gives recommendations.
- 2. Atmanirbhar Package** Government announced ₹ 20 lakh crore Atmanirbhar Package in total five tranches. The package will be used for frontline workers, farmers, building and construction workers, MSME sector, banks, and several direct tax measures. It also includes a package for enhancing ease of doing business reforms.
- 3. Supplying foodgrains** The Food Corporation of India supplied 126 tonnes of foodgrains to States and Union Territories during the COVID lockdown. The government also extended the Pradhan Mantri Garib Kalyan Anna Yojana till November 2020 to provide rice, wheat, chana to 80 crore Indians for free.

4. **Producing PPE Kits** India ramped up the production of PPE kits and became the second largest producer of PPE-Personal Protective Equipment in the world with daily production of over 5 lakh kits. In terms of the production of ventilators, India has scaled up its capacity to over 3 lakh ventilators per annum. India has significantly indigenised production of medical devices.
5. **Shramik Trains** Hundreds of Shramik special trains were run by the railways to transport the migrant workers to their home places. Stranded workers, students, pilgrims, tourists etc. were transported to their native states. The Railways subsidised the fare for these special trains by upto 85% of the cost. The remaining cost was borne by states.
6. **Vocal for Local Campaign** The Prime Minister urged the people to buy locally produced goods and services so that India could quickly rebuild its economy and become self-reliant. There is an urgent need to recognise the importance of local manufacturing, local markets and supply chain.
7. **Vaccine Development** Indian firms have been quick to respond to the demands of a vaccine for COVID. There are three firms that are in the race of making a COVID vaccine. India is one of the countries that started phase three trials within 6 months of the COVID outbreak.

Vaccine Development Against COVID 19

The world has united to fight against COVID-19. Countries are making efforts to develop vaccine to win the battle against the pandemic. Sputnik V, a coronavirus vaccine launched by Russia is touted as the world's first such vaccine. Currently, WHO and Russian health authorities are discussing the process for possible WHO prequalification for its newly approved COVID-19 vaccine.

British-Swedish company AstraZeneca and the University of Oxford have worked together to develop non-replicating viral vector vaccine named ChAdOx1 nCov-19 vaccine. It has been found to be safe and induced an immune response in early-stage clinical trials.

India has participated equally in developing vaccine for treating COVID-19. Serum Institute of India (SII) and the International AIDS Vaccine Initiative (IAVI) have announced an agreement with pharmaceutical major Merck to develop SARS-CoV-2 neutralising Monoclonal Antibodies (mAbs).

The Pfizer and BioNTech vaccine uses messenger RNA (*mRNA*) technology, which relies on synthetic genes that can be generated and manufactured in weeks, and produced at scale more rapidly than conventional vaccines.

Bharat Biotech in collaboration with the Indian Council of Medical Research (ICMR) has developed Covaxin, an indigenous vaccine. The vaccine makes use of an inactive version of a virus to spike up production of antibodies in the host body.

Ahmedabad-based pharma giant, Zydus Cadila has made two versions of vaccines. The company is testing two versions of its vaccine, one which makes use of molecular DNA to elicit an immune response, while the other uses a live measles viral strain to provide protection. The vaccine is expected to be available by March 2021.

HGCO 19 vaccine has been developed by Gennova Biopharmaceuticals-HDT Bio. This vaccine belongs to a newer category called '*mRNA*' vaccines, which make use of the messenger RNA molecules to recreate the Covid-19 spike protein-the spikes found on the surface of the SARS-Cov-2 virus.

How Prepared Are We for Another Pandemic?

Presently, the world is not prepared to face another pandemic. It has also been proven by the fact that world's largest healthcare system of USA is not able to contain the deaths of its citizens. Infectious diseases together account for more than 13 million death every year worldwide. Infections spread from one region to another rapidly due to globalisation, urbanisation, climate change as well as ecological pressures. All these factors also contribute in the emergence of new viruses due to mutations and adaptations. These conditions, if not controlled are likely to cause Pandemics and affect the global population.

The world must start immediately to prepare for another pandemic as almost 2/3rd of the new diseases affecting humans have become zoonotic infections caused by pathogens originating in animals. The rise in international trade of exotic animals, intensive and unhygienic livestock farming, rapid urbanisation, encroachments into wildlife habitats must be slowed down and stopped. Large scale environmental exploitation has played a key role in emergence of new pathogens. With receding glaciers, the viruses that were hitherto unknown to humans are able to invade new hosts and create fertile grounds for new pandemics.

Negligence of environment, ecology and biodiversity for short term gains may cost the world and grant it with another pandemic of much large scale and intensity. Thus, there is an urgent need that each country in the world must enhance its preparedness and competence to prevent, detect and respond to public health emergencies. It will involve surveillance, risk, reduction, capacity building, and stern effort and commitment.

Imagining the World after COVID-19

The COVID-19 disease has exposed the fragile basis of our society. It has also given us a chance to build a more sustainable and inclusive future. After we have recovered from COVID-19, the world must push towards a more sustainable lifestyle. Reducing materialism, caring for mother nature, working for the family's wellness, healthy diet, regular exercise shall be the priority of nations and individuals that form them. The protection of natural resources and wise use of exhaustible resources should drive the new lifestyle.

Healthcare needs of the countries should be taken into account while preparing policies. There will be raised awareness about personal as well as social hygiene and cleanliness. People will continue the use of masks and face covers as to protect themselves from close contacts with people. The rapid urbanisation that has created huge unsustainable cities and metros will be decongested to create spaces for public as well social and community activity that requires open spaces. The education sector will need to recalibrate itself for the digital mode of education as to prevent congestion of classrooms and due to its unique advantages too. To reduce chances of contamination, schools and educational institutions will need to modernise their teaching techniques.

Work culture will shift towards working from home and remote locations as it is cost effective and efficient. More companies as well as employees will adopt working from home with the use of modern technology.

The most important of all will be to imbibe a sense of care in the people's mind and hearts to care for the environment. The world nations should join hands to recognise the importance of sustainable interrelation between people, animals and their shared environment. This will optimise health outcomes, reduce risk and strengthen preventive efforts to prevent another pandemic and if it occurs then mitigate the effects on the people.

Terms related to COVID-19

Here is a list of various words related to COVID-19

- **Asymptomatic** It is a condition when an infected person doesn't show any symptoms of disease.
- **Community Spread** Infections identified in a given geographic area without a history of travel elsewhere and no connection to a known case.
- **Contact Tracing** The process of indentifying, assessing and managing people who have been exposed to a contagious disease to prevent onward transmission.
- **Essential Services** These are the services and functions that are absolutely necessary, even during a pandemic. These services include healthcare related, food and other essential goods services, basic sanitation including sewage and garbage removal etc.
- **Flattening the Curve** Slowing the spread of the virus. The 'curve' refers to a graph showing the number of cases of COVID-19 that happen over a period of time.
- **Quarantine** Separating and restricting the movement of people exposed or potentially exposed to a contagious disease.
- **Social Distancing** It means putting physical distance between yourself and other people. This is key strategy for avoiding COVID-19 Infection and to flatten the curve.
- **PPE Kit** PPE stands for personal protective equipment. This include masks, faceshields, gloves, gowns and other coverings that healthcare workers used to prevent the spread of infection to themselves and other patients.

INDIA AND THE QUAD

The globe is changing constantly at a fast pace as the new power centres are emerging and older ones rejuvenating. The Chinese aggression in its maritime and land domain is a fine example of the quick and rapid changes occurring in the neighbourhood of India. In this context, the four countries of Quad have strengthened their efforts, including India, to secure their interests in all the spheres such as political, economic, environmental, security etc. India has significant strategic interests in the Indo-pacific region. To secure its interests against the unilateral rise of Chinese aggression, it will need to form strategic alliances such as Quad grouping.

What is QUAD?

Quad or Quadrilateral Security Dialogue is an informal strategic dialogue between four countries that include India, Australia, USA and the Island nation of Japan. It aims to ensure and support a “free, open and prosperous” Indo-Pacific region. The idea of Quad grouping was first given by the former Japanese Prime Minister Shinzo Abe in the year 2007. At that time, the idea could not move forward as Australia had pulled out apparently due to Chinese pressure. Another reason for the discontinuation of Quad included more Beijing friendly regime in Japan and reiteration of India-China relationship.

During the 2017 ASEAN summit, all the four members rejoined the negotiations to revive this quadrilateral security alliance. They gave shape to develop a new strategy to keep the critical sea routes in the Indo-pacific region free of any influence, especially Chinese influence. The organisation now aims to promote a “free and open Indo-Pacific amid China’s aggressive postures in the region.” India, Japan and USA were in talks to invite Australia for a quadrilateral coordinated navy exercise at Malabar.

This military exercise will give a new military dimension to the Quad grouping. These four countries have strongly asserted their views that China’s growing assertiveness should be contained in the Indo-Pacific region. The Quad, apart from containing China’s growing influence, also provides freedom from uncertainties in the Asian region.

The Quad is also a grouping of like minded democratic countries that will certainly help in promoting the values of democracy, rules, diversity, cooperation and inclusiveness. It will be more sustainable if the countries are able to balance their interests and include more substantive dimensions apart from the current ones.

Dimensions of Quad

Diplomatic The Quad is a forum for diplomatic consultation. The meetings of Quad have sought to address the broader agendas of the Indo-Pacific region. There is high level of policy coordination between the members that impact the rules based regional order, including maritime security, terrorism, cyber security and connectivity. The Quad can complement even the ASEAN cooperation that is helpful for maintaining peace and prosperity in the Asian region.

Intelligence Quad is not yet a strategic alliance. So, there are limitations as how much intelligence can be shared between its members. Despite this, there are increasing signs of information sharing in a number of military sectors, including maritime domain awareness.

As the Quad member's major military assets are located throughout the Indian ocean, this immense geographical range provides a certain strategic advantage. The information sharing can be enhanced in the maritime sector to tackle issues such as maritime terrorism and piracy. All the four countries are building information networks with Australia, Japan and USA sharing defence related information through an agreement. India has also begun to create the foundations for information sharing with USA and Japan.

Military Military component of the Quad does not play an important part in deterrence. Military cooperation among the four members of Quad are limited. But military-to-military cooperation is necessary. Measures can be taken to improve the preparedness of military for any contingency in the Indo-Pacific. There must be capacity building of the Indo-Pacific regional states. Military technology and defence equipment transfer will also be essential. States in the region still rely on major powers such as Russia and USA. India can also play atleast a supplementary role in enhancing the military capabilities of the regional states.

Economy The economic aspect of Quad will include economic integration and regional connectivity. China's Belt and Road Initiative has made significant impact on the existing rules of development of infrastructure. The capital provided by China to various developing countries is used by them to fulfil their infrastructural needs. The regional connectivity initiatives should aim at integrating the far West Asia and Central Asian region with the South-East Asia through the Indian ocean. Investments to create strategic infrastructure should be undertaken to improve regional connectivity and secure mutual interests in trade, commerce, connectivity, peace and prosperity.

Quad Nations and China

The four member countries of the Quad have some common reservations regarding China's influence in the region as these countries are affected by China's growing influence in their respective sphere of influence.

USA USA has followed a consistent policy to restrain China's increasing influence in East Asia. USA sees Quad as an opportunity to regain its influence in the Indo-Pacific region. The USA has described China as a strategic rival in its national security strategy, national defence strategy and Pentagon's report on the Indo-Pacific strategy.

Australia Australia has been concerned about China's growing interests in its land, infrastructure, politics and its universities. Taking in account its overwhelming economic dependence on China for the prosperity of the continent, it has continued its commitment to a comprehensive strategic partnership with China. It is seeking to shift away from its overwhelming dependence on China.

Japan Japan has expressed concerns related to China's territorial transgression in the region. As Japan has also large trade relations with China therefore, Japan has to balance its economic needs and territorial concerns.

India China's violation of international norms, boundary transgressions in India, construction of military facilities etc have posed a serious challenge for India. India needs to confront the Chinese aggression on its borders, secure its land as well as maritime interests and maintain strategic autonomy.

Advantages or Opportunities for India

For India, there are face-offs at the border, the effects of One Belt One Road Initiative and impact of China-Pakistan economic corridor on its strategic landscape. The Quad provides it with many advantages to eliminate these challenges. The opportunities for India include

- 1. Increased Defence Spending** China spends huge sums on its defence sector that is more than the collective spending of Japan, Australia and India together. The presence of USA in the grouping will provide a necessary boost to the defence sector of India as it will aid in technology transfer and defence cooperation.
- 2. Secured Borders** With Chinese aggression on India's borders, Quad can prove to be an effective alliance to reduce Chinese influence in the border regions of India. The situation in the Northern borders has been worsened by both China's and Pakistan's influence in pressurising India. Quad can play a balancing role in this situation.
- 3. Sustainability in Indian Ocean** Indian ocean is the only ocean of the world that is named after a country, that is India. India has the responsibility to act as the net security provider in the Indian ocean region. For providing sustainability and prosperity in the Indian ocean region, India along with the Quad nations can counter Chinese String of Pearls or Maritime Silk Road and its debt trap diplomacy.
- 4. India's Act East Policy** India's Act East policy that aims to promote economic strategic and cultural relations with vast Asia-Pacific region will be strengthened with the involvement of India with Quad grouping. It will also provide a boost to the vision of SAGAR- Security and Growth for all in the region.
- 5. Stability in the Region** India is concerned about the declining significance of USA and growing Chinese influence in the Indian ocean and Asian region. This imbalance created by such a situation may create instabilities in the regions that affect India's interests. Thus, Quad grouping can be an opportunity to infuse stability in its neighbourhood region.

Challenges with Quad

Though the Quad Grouping has many perceptible advantages but it has various issues that need to be resolved to make it a success. These issues include

1. **An Undefined Vision** Despite the potential for cooperation, the Quad remains a mechanism without any defined strategic objectives. This can also be ascertained by the separate interests of each country in the grouping. India wants to advance the security and economic interests of all countries in region whereas US wants a formal alliance.
2. **Non-alignments** India's foreign policy works on the principle of Non-alignment. India will need to abandon its strategy of non-alignment in order to counter the Chinese threat by having a formal alliance with US and other two countries in the form of Quad.
3. **Chinese Closeness to ASEAN** China has advanced huge loans to the ASEAN region. It has also several strategic infrastructure projects and military bases in various islands of ASEAN countries. Chinese influence has further grown in the ASEAN after the RCEP (Regional Comprehensive Economic Partnership) pact.
4. **No Convergence Among Members** All the Quad members have different strategic interests. They look forward to the Quad to enhance their own interests and fulfil their aspirations. A coherent vision among the Quad members is absent. Though advances have been made in various talks among the members but a common and long term vision document is necessary.

Way Forward

The Quad will have to evolve a clear vision for itself. It will need to move beyond the China centricity and be open towards accommodating each other's interests and ensure that talks of a 'Free and Open Indo-Pacific' is more than just talks. The Quad should focus on building a robust regional mechanism and cooperate with all the regional players to evolve a more inclusive Asia, simultaneously balancing each other's interests.

PRIVATISATION OF AGRICULTURAL MARKETING IN INDIA

NEW FARM BILLS

Agricultural marketing system is an efficient method of distributing farmer's surplus produce at a fair and reasonable price. The term 'market' refers to a place where there is exchange of goods between the producer and the consumer but agricultural marketing involves operations such as procurement, grading, collecting, preserving, transportation and financing. An efficient and stable marketing system is essential for the development of agriculture sector. It provides the farmer an opportunity to increase production, commercialise operations and incentivise farmers to produce diverse varieties of crops. Though reforming the agricultural marketing system is usually separated from agricultural farm and farmers but, it is directly related to improvements in the living standard of farmers, which aims to make India free from hunger and turn poverty into prosperity.

Significance of Agricultural Marketing

Agriculture marketing plays a significant role in improving production, productivity and consumption. It also helps in accelerating the pace of economic development. It has direct bearing on the life of the farmers as India is primarily an agricultural country and more than 60% of the population depends upon agriculture. Indian farmers also produce a significant quantity of cash crops that require transportation, storage and distribution to urban markets. Marketing infrastructure is necessary to transport such cash crops.

Agriculture sector supplies raw materials to industries and therefore marketing of crops such as cotton, sugarcane, oilseeds, etc are important. It is also required for shifting from subsistence agriculture to commercial agriculture in India. Also, any increase in the efficiency of marketing results in lower costs of distribution to the consumers that also raises the national income.

Marketing also aids in bringing new varieties, qualities and beneficial goods to the consumers. It can also boost the growth of a number of agro-based processing industries. If agricultural marketing is managed scientifically, it stabilises price levels and plays an important role in economic development and stability of a country.

Marketing System in India

The existing system of agricultural marketing in India is in the form of following types of markets

- **Direct Sale to Traders and Moneylenders in Villages** A considerable part of total produce of farmer is sold by him to village traders and moneylenders at very low prices. The moneylenders or traders are either independent or may act as an agent of a bigger merchant in the nearby mandi. In India, more than 50% of the agricultural produce is sold in the local village markets in the absence of organised market systems.
- **Weekly Haats and Shed** Weekly haats and sheds are organised once or twice in a week or on special occasions or longer intervals. The agents of wholesale merchants operating in different mandies visit these markets. These type of markets are poorly equipped, are uncovered and lack storage, drainage and other facilities. Only small and marginal farmers who have no access to the bigger markets sell their produce in such markets.
- **Mandies or Wholesale Markets** One single mandi serves a large number of villages. Mandies are generally located in cities. In such mandies, business is carried out by Ahartiyas (commission agents). The farmers sell their produce to these Ahartiyas with the help of middlemen. The middlemen are often involved in malpractices. The Ahartiyas of these mandies sell the produce to the retail merchants. These mandies are regulated by the Agricultural Produce Marketing Committees (APMC). Under APMC Act, farmers are required to sell a large number of commodities in these mandies where prices are often manipulated. These mandies also lack storage, warehousing etc.
- **Cooperative Markets** A cooperative society collects surplus from its members and sell it at the mandies collectively. This is the cooperative system of marketing. It increases the collective bargaining power of the members and they are able to obtain better price of their produce. In addition to the sale of produce, these societies also serve the farmers in a number of ways. They also provide finances to the members and incentivises them to grow better quality crops.
- **Contract Farming** Contract farming has emerged as an important mode of procurement of agricultural goods by several agribusiness firms which are private, public or cooperatives. There is an advance agreement of the farmer with the large firms that procure the produce of a pre-determined quality at fixed prices. This type of marketing is quite beneficial to the farmer, but the outreach of this type of farming is very low in India.

Issues of Agri-Marketing Systems in India

Farmers in India are not able to get a fair and remunerative price as a consequence of the defects in Indian agriculture marketing system. Various committees and groups have been setup to bring out the inadequacies in the agricultural marketing systems across India. The weaknesses of India's agricultural marketing are :

1. **Irregular Warehousing** There are absence of proper warehousing facilities in the villages. Farmers are compelled to store their products in pits, mud-vessels, kutcha storehouses. This leads to a considerable wastage of agricultural products and valuable production gets rotten due to improper storage facilities.

2. **Lack of Standardisation** The quality of agricultural produce is not graded properly due to lack of standardisation. Better quality produce and poor quality produce are considered as one and sold in a common lot at same prices. The farmer who has invested more for producing higher quality crops do not get a fair price.
3. **Poor Transport Facility** Only a small number of villages are connected by railways and pucca roads to the agricultural markets. Various small farmers carry their produce on slow and old means of transport such as bullocks. Such means of transport are inadequate to carry production to far off places. Due to these reasons, the farmers have to dump their produce in nearby markets even if the sale is at very low prices. This is true even with the perishable commodities that require quick transport facilities.
4. **Presence of Middlemen** The middlemen in agricultural marketing system cut through the farmer's revenue by as much as 50%. The chain of intermediaries in the marketing is very large. The farmers have to sell their produce to these intermediaries as a result of which their share of profit is reduced.
5. **Inadequate Market Information** It is not possible for small as well as marginal farmers to obtain information on exact market prices in different markets. The middlemen take advantage of the illiteracy and ignorance of the farmers. Often, unfair means are used to cheat the farmers. There are various unspecified and hidden charges levied by the middlemen upon these illiterate farmers.
6. **Lack of Organisation** There is lack of collective organisation on the part of Indian farmers. This reduces their collective bargaining power and reduces profits. They have to bow down to wishes of the functionaries in the markets. If the farmer himself does not learn the system of marketing, he will not be able to bargain with the buyers who are well informed. There are delays in making payments to these farmers. Many times high interest is also charged by local traders because of no bargaining power of the farmer.
7. **Malpractices in Markets** Several types of malpractices are prevalent in the agricultural markets. False weights and other unfair means are used by the functionaries in the market. Various unspecified charges are taken from the farmers. Small, illiterate and unorganised farmers are often cheated by employing fraudulent methods.

The government has been trying to reform the agricultural marketing system. The APMC acts have been amended several times to facilitate better price for farmers. Cooperatives and contract farming have been explored to give farmers professionalised services so that they are compensated for their crops fairly and at good profits. But these reforms have been inadequate and farmers continue to be exploited.

Three New Farm Bills

The government introduced three new acts to professionalise marketing of agriculture in India and ensure the welfare of farmers. These acts are the Farmer's Produce Trade and Commerce (Promotion and Facilitation Bill) that aims to permit the sale of agricultural produce outside the mandies regulated by APMCs. This will make the marketing of agricultural produce easier and profitable for farmers.

Other Two Bills The Farmers (Empowerment and Protection) Agreement of Price Assurance and Farm Services Bill aims to explore and develop contract farming so that farmers can benefit collectively and the Essential Commodities Bill seeks to deregulate the production, supply, and distribution of food items such as cereals, potatoes, pulses, onions and edible oilseeds.

Benefits of New Bills

The benefits of these new bills for farmers will be

- The new laws allows the farmers to sell their crops anywhere outside the mandies. This will enable them to fetch better prices for their produce and prevent their exploitation by the middlemen present in the APMC mandies.
- Farmer will benefit from the direct market linkages and supply chains. They will not be required to pay any additional sum of money like in the APMC mandies. This increases their profit margins.
- Agri tech startups, food processors, exporters etc. will also be benefitted due to the new laws. This will improve the conditions of both the farmers as well as reduce the prices for consumers.
- As time will move, new private markets will be setup in various places because of demands from these places. Farmers will be able to sell their products in these markets without payment of any additional fees or cess. The new private players will also provide professionalised services to the farmers such as proper and scientific grading, pick up services, transport, digital payments, bonus offers, a better refrigeration and storage, live tracking of their produce etc.
- Online agri-trade and market places will also be setup on the lines of the e-commerce websites. This will eliminate the large chain of middlemen and intermediaries and reduce the farmer's interaction with the cumbersome bureaucratic setup.
- Participation of private players and lesser regulation of markets will also improve the supply chains, increase investments in the marketing system and may also result in emergence of innovative solutions to solve common problems of Indian agriculture.
- Efficient supply chains are also going to reduce farm and transport wastages of the crops produced by the farmers. Perishable items will be transported and stored easily. Reduced wastage will surely incentivise the farmers to grow more such crops.
- Contract farming will be given a push and it will reduce price risk for the farmers. The farmer will get a pre-determined price for his produce as per the agreed quality of crops.
- Cooperative farming will also be promoted that will strengthen the bargaining power of the farmers. It will also reduce the intermediary chains in the marketing of produce so that the farmer grow best crops and not worry about the price they will get.

Way Forward

Though the farm bills promise a better price and better life to the farmers as well as the consumers but there are several concerns that have gone unaddressed. The farmers have protested in several states as there have been no consultations, debate and dialogue before passing these bills. Farmers fear that these bills will end the minimum price support provided by the government. The lack of bargaining power of farmers as compared to the large companies is a major concern. There is hardly any regulation outside the APMC mandies and farmers are concerned that they may be exploited by the private players without any government regulations. The changed stock limits will directly affect the farmers in negative ways. The state needs to take these concern into notice and resolve and address them by wider public consultation and debate. The new laws promise a lot to the farmers of India and this opportunity should not be wasted.

04

RAFALE JET

In a major boost to Indian Air Force (IAF) fighter jet squadron, five Rafale fighter jets were inducted into IAF on 10th September, 2020. These fighter jets have been inducted into IAF's Squadron 17. The induction was performed by Union Defence Minister Rajnath Singh and his french counterpart Florence Parly. These fighter jets can carry three times more payload than the current Tejas jet. The Rafale fighter jet is important for strengthening the military capabilities of India. It is significant for providing a strategic advantage to India's military in its currently disturbed neighbourhood.

The fighter jets, built by French Aviation firm Dassault took off from the Merignac Air Base in Southern France's Bordeaux and reached Ambala Air Base on 29th July, 2020. It covered a distance of about 7000 km from France to India with air-to-air refuelling and a single stop at the French Air Base in the United Arab Emirates (UAE). It was a moment of extraordinary pride for the IAF pilots who brought the Rafale fighter aircrafts to India from France.

The pilots include Group Captain Harkirat Singh (Jaipur, Rajasthan), who is the commanding officer of 17 squadron of IAF, Group Captain R. Kataria (Gurugram, Haryana), Wing Commander Abhishek Tripathi (Jalore, Rajasthan), Wing Commander Manish Singh (Balliya, Uttar Pradesh), Wing Commander Siddhu and Wing Commander Arun (Bihar). The touchdown of Rafale combat aircrafts in India marks the beginning of a new era in military history of India. The first squadron has been readied in the Ambala Air Base whereas the second one will be readied in the Hasimara Air force station in West Bengal.

History of Rafale Deal

In August 2007, Ministry of Defence, under the then United Progressive Alliance (UPA) government issued a request for proposal to procure 126 Medium Multirole Combat Aircraft (MMCRA) fighters. After four years, in May 2011, Air Force shortlisted Rafale and Eurofighter jets. Dassault Aviation of France came up with the lowest bid in January 2012 after which a Work Share Agreement was signed between Hindustan Aeronautics Limited (HAL) and Dassault Aviation of France. Under the 2014 Agreement between the two, the work to build 108 aircrafts was shared in the ratio of 70 per cent and 30 per cent between the two organisations respectively. The remaining 18 aircrafts were to be imported into India in a fly away condition. However, India and France were unable to decide the price of the aircraft.

In 2015, under the present NDA government, Prime Minister Narendra Modi visited Paris in April 2015 and announced a decision to buy 36 Rafale fighters via a government-to-government deal. French President Francois Hollande visited India in January 2016 and a Memorandum of Understanding (MOU) on purchase of Rafale jets is signed between India and France for \$ 7.8 billion (59,000 crore). In this deal, HAL was replaced by Reliance Defence Limited (RDL) as the offset partner in the deal.

The present deal was criticised by the opposition parties including the Congress Party on the basis of the higher prices of the current deal. The criticism was based on the promise that under the UPA government, the price of one aircraft was only ₹ 629 crores whereas under the present government, the price has gone up to nearly ₹ 1611 crores. The Rafale aircraft will be important for India as it is presently facing a two-front war from both China and Pakistan. Under the deal, Dassault has promised that all the rafales will be delivered to India by the end of 2021 in various phases.

Features of Rafale Aircraft

The Rafale jet has become the most advanced fighter jet in Indian Air Force fleet. As compared to the Sukhoi SU-MKI 30 (currently the best aircraft), the Rafale is faster and has a wide range and more capabilities. It is an 'omnirole' aircraft and comes with a host of weapons and can perform a variety of function such as aerial reconnaissance, ground support, in depth strike, anti-ship strike and nuclear deterrence. It is a 4.5 generation aircraft that has supersonic abilities. It can attack any target from surface-to-air as well as air-to-air. Rafale's combat radius is 3700 km which is far greater than China's J-20 Combat Aircraft's radius of 3400km. The main features of Rafale are

- It has a top speed of 1.8 mach and has overall empty weight of 10 tonnes. It can carry a maximum take off weight of 24.5 tonnes. It has a total length of 15.3 metres and wing span of 10.9 metres.
- The Rafale has a service range of 50,000 feet with a top speed of 2222 km/hr. Though it has an overall range of 3700 km but it can be extended with the help of mid-air refuelling.
- This fighter jet is equipped with stealth technology, which can effectively hide it from the enemy radars. It is smaller than the Sukhoi aircraft and hence it can be advantageous for the Indian Air Force during warfare.
- The Rafale is a nuclear ready aircraft as it can deliver nuclear weapons from both surface-to-air as well as air-to-air. It is equipped with oxygen generation system due to which there is no need to refill liquid oxygen.
- One of the special feature of Rafale is that it can take off from a smaller runway of 1300 feet which makes it capable of launching from an aircraft carrier ship.
- The Rafale cockpit has Hands on Throttle and Stick Control (HOTAS). It is equipped with a heads up-wide angle holographic display from Thales Avionique which provides aircraft with control data, mission data and firing targets.
- The Rafale is powered by two M88-2 engines from SNECMA. It is suitable for low altitude penetration and high altitude penetration missions.
- The Radar system in Rafale is more powerful from Sukhoi MKI's PESA radar. The missiles also have GPS enabled navigation system and imaging infrared terminal guidance.

Rafale's Missile Systems

The missile system of Rafale has the potential to integrate a large variety of current and future armaments. The Rafale can incorporate following missile systems

MICA It is an air-to-air Beyond Visual Range (BVR) interception, combat and self defense missile. This missile is able to fire upto 100 kms and is already incorporated in the current Mirage fighter jet.

METEOR It is a very long range air-to-air missile. It is a very long range rocket and ram-jet powered air-to-air missile. It has a striking capability of 150 km. The combination of Meteor weapons system with the Rafale jet is a game changer for India.

HAMMER It is Highly Agile and Manoeuvrable Munition Extended Range Missile. It is modular, rocket-boosted air-to-ground precision guided weapon series missile. It is fitted with GPS and imaging infrared guidance kit that enables it to hit its targets precisely.

Other missiles on the Rafale include SCALP long-range stand-off missile. It also has an AM39 EXOCET anti-ship missile. It can carry laser guided bombs with different warheads varying from 500 lbs to 2000 lbs. The most important feature in the missile systems of Rafale is that it can be customised according to the specific needs of countries.

Importance of Rafale for India

The idea to induct additional fighter jets in the IAF has been there since 2001. The actual process began in 2007. The Defence Acquisition Council, headed by the then Defence Minister approved the tender to buy 126 aircrafts in August 2007. Now the Rafale jets have been incorporated in the Indian Air Force, they will be able to provide unmatched capabilities to the IAF.

The following are the benefits of Rafale for India

- Rafale can easily take off from high altitude Leh and Ladakh region on a cold start. This will be beneficial for India as it is facing a threat from both the Pakistan as well as Chinese side. Indian forces can manage any threat on the border with the versatile capabilities of Rafale.
- India will have unmatched air power with the inclusion of 36 fighter Rafales in the Air Force. It can be used to manage the neighbourhood challenge that has become disturbed after the Chinese incursions into Indian territory in Ladakh region. The sanctioned strength of IAF squadrons is 42 but India has currently only 31 squadrons. To improve the squadrons strength Rafale will be helpful.
- The previous aircrafts bought by India were Sukhoi in 1996. Rafale will provide a necessary upgrade to the IAF's fighting capabilities.
- India is a regional player in South Asia. Rafale's inclusion will give a necessary boost to the regional power dynamics of India in South Asia.
- It is one of the finest combat aircrafts available in the global market. It is much more advanced than China's J20 aircraft, which is its main rival in the region.
- The aircraft has proved its unmatched capabilities in air combat missions in Afghanistan, Libya, Mali, Iraq and Syria in the last few years. India has become fourth country to have the strategic platform after France, Egypt and Qatar.
- The nuclear delivery capabilities of India will be strengthened further with the inclusion of Rafale in IAF.

Conclusion

The Rafale jet will be a paradigm shift in India's air power capabilities. As terrorism, expansionism etc. are common threats for countries, India and France should build capabilities and cooperate with each other in areas of defence and technology. With the inclusion of Rafale jet in the IAF, it is a beginning that can be carried on further to face common challenges emerging from the expansionist attitude of a few countries. It is essential for India to strengthen and further enhance its capabilities in the South Asian region to become a regional and global superpower.

05

NOBEL PRIZE WINNERS, 2020

The Nobel Prize is widely considered as the most prestigious award given for exemplary contribution to humanity in the field of Physics, Chemistry, Medicine, Literature, Economics and Peace. It is awarded annually by Swedish and Norwegian Institutions, according to the will established by Swedish inventor and industrialist Alfred Bernhard Nobel in 1895. In his will, Nobel instructed that the majority of his funds should be set aside for awarding prizes to those who, during the preceding year, shall have conferred the greatest benefit on mankind.

The Nobel prizes, initially a set of five awards, were first awarded in 1901. An additional award, the Sveriges Riksbank Prize in Economic Sciences was established in 1968 by the Bank of Sweden and was first awarded in 1969. It is also presented at the Nobel Prize Award ceremony. The Royal Swedish Academy of Sciences awards the Nobel Prize in Physics, Chemistry and Economics. The Nobel Assembly at Karolinska Institute Awards the Nobel Prize in Physiology or Medicine. The Swedish Academy grants the Nobel Prize in Literature. The Norwegian Nobel Committee based in Oslo confers the prize for Peace.

Nobel Prize Award Process

The Nobel Prize nomination and selection process is long and rigorous. This is an important reason why the prizes have grown in importance and prestige over the years to become the most important prizes in their field. Unlike many other awards, the Nobel Prize nominees are never publicly announced and they are not supposed to be told that they were ever considered for the prize.

After the nomination deadline, a committee compiles and writes a report with recommendations and sends it to the academy or other corresponding institution, depending on the category of the prize. The members of the institution then vote to select the winner.

Posthumous (after death) nominations for the Prize have been disallowed since 1974. Only in two cases the prize has been awarded posthumously to people who were nominated when they were still alive. This was the case with UN Secretary General Dg Hammarskjold (1961 Peace Prize) and Erik Axel Karlfeldt (1931 Prize in Literature); both of them were awarded the prize in the years they died.

The prize ceremonies take place annually in Stockholm, Sweden except for the Peace prize which is held in Oslo, Norway. Each recipient, or laureate, receives a gold medal, a diploma, and a sum of money that has been decided by the Nobel Foundation. (As of 2018, each prize is worth SEK (Swedish Krona) 10 million or about US\$ 1.1 million.

Nobel Prize 2020

Physics The 2020 Nobel Prize in Physics was announced by Royal Swedish Academy of Sciences on 6th October, 2020. The award in physics was given to three astrophysicists **Roger Penrose from UK, Reinhard Genzel from Germany** and **Andrea Ghez from USA**. Roger Penrose discovered that black hole formation is a robust prediction of the General Theory of relativity. Genzel and Ghez received the award for the discovery of a super massive black hole at the centre of milky way. Their discoveries have revolutionised the study of compact and supermassive objects and has solved many questions.

Chemistry The Royal Swedish Academy of Sciences announced the Nobel Prize in Chemistry on 7th October, 2020 **Emanuelle Charpentier and Jennifer A Doudna from France and USA** respectively got the award for discovering the CRISPR/Cas 9 genetic scissors. Their discovery had already contributed to significant gains in crop resilience, new cancer therapies and resistance from various diseases. Genetic scissors have become a new tool in the hands of scientists to rewrite the code of life.

Physiology The Prize in Physiology or medicine was announced on 5th October, 2020 by the Nobel Assembly at Karolinska institute in Sweden. The Nobel Prize in Physiology or Medicine was awarded to American medical researchers and virologists **Harvey J Alter** and **Charles M Rice**. The award was also shared by **Michael Houghton** from Britain. The award in Physiology was awarded for the discovery of Hepatitis C Virus in the year 1982 by screening millions of DNA samples. The discovery has been significant in making new medicines and blood tests that have saved millions of lives.

Peace The Nobel Peace Prize 2020 was announced on 9th October, 2020 by the Norwegian Nobel Committee. The 2020 Nobel Peace Prize was given to the **World Food Programme (WFP)**, a United Nations agency for its efforts to combat hunger as a weapon of war and conflict. The World Food Programme provided assistance to over 100 million people in 88 countries who were victims of acute food insecurity and hunger.

Economic Sciences The award in Economic Sciences was presented at the Royal Swedish Academy of Sciences on 12th October, 2020. The Prize in Economic Sciences, known as Sveriges Riksbank Prize in Economic Sciences, was awarded to **Paul R Milgrom** and **Robert-Wilson** for their work on commercial auctions. Robert Wilson developed the theory for auctions of objects with a common value and Paul Milgrom formed a more general theory of auctions. Their work has benefitted buyers, sellers and taxpayers around the world.

Literature It was announced at the Swedish Academy on 8th October, 2020. The prize in Literature was awarded to **Louise Gluck**, a poet from USA for her unmistakable poetic voice. Her poetry focuses on the painful reality of human beings, dealing with themes such as death, childhood, and family life. She is the fourth woman to win the Nobel prize for literature since 2010 and 16th woman to win it since its inception.

Nobel Laureates from India

Among the total recipients over the years, 13 are Indians (5 Indian citizens and 8 of Indian origin or residency). Rabindranath Tagore was the first Indian citizen to be awarded and Mother Teresa is the only woman in the list.

1. **Rabindranath Tagore** He was the first Indian to receive Nobel Prize in the year 1913. He received this award for his work 'Geetanjali'. He was awarded with Nobel Prize in Literature for his poetic thoughts.
2. **CV Raman** He was the second person to be awarded Nobel Prize in the year 1930. He was awarded Nobel Prize in Physics for finding the Raman effect.
3. **Hargobind Khorana** He received Nobel Prize in Medicine in the year 1968 in the field of genetics. He with other two scientists interpreted the genetic code and its functions in protein synthesis.
4. **Mother Teresa** She was the first Indian woman to receive Nobel Prize. She won the Nobel Peace Prize in the year 1979. She was born as Anjeze Gonxhe Bojaxhiu in Macedonia but was awarded Indian citizenship in the year 1948.
5. **Subramaniam Chandrasekhar** He won the Nobel Prize in Physics in the year 1983 for his study on the physical processes important to the structure and evolution of stars.
6. **Amartya Sen** Amartya Sen was awarded Nobel Prize in Economic Sciences in the year 1998 for his contributions to welfare economics.
7. **VS Naipaul** He was the seventh Indian to win a Nobel Prize. He was awarded with Nobel Prize in Literature in 2001.
8. **RK Pachauri** He was awarded Nobel Peace Prize in the year 2007 for his contribution in the field of climate change. He was the chairman of Intergovernmental Panel on Climate Change from 2002-2015.
9. **V. Ramakrishnan** V. Ramakrishnan was awarded Nobel Prize in Chemistry in 2009 for contributing to the studies of structure and function of Ribosome.
10. **Kailash Satyarthi** He was awarded Nobel Peace Prize in 2014 for his contribution to the struggle against suppression of children and young people.
11. **Abhijeet Banerjee** He was awarded the Nobel Prize in Economics for his contribution to alleviate global poverty in the year 2019.

Conclusion

The Nobel Prizes are now well established and their future is full of optimism, positivity and hope. However, there has been a mixed response to the award money given in the Nobel Prizes. Some hold the opinion that the huge sum given as prize money may corrupt the intellectual ambition of scientists and writers.

Some have the opinion that the prizes are admired as they are reliably honouring the major achievements and progress across the world. Nobel certifies that things are important in Science, Medicine, Literature and the area of 'peace' must be appreciated. Therefore, it provides a desperately needed symbol of authority and recognition of merit when all the other benchmarks are under attack.

EMPOWERING OUR YOUTH WITH 21ST CENTURY SKILLS

The development of a nation and society goes hand in hand with the development of the individual. When the society and the nation develops, it has a direct impact upon the development of an individual and vice-versa. With the coming of the 21st century, the entire world is witnessing a period of intense transformation in all areas such as education, global trade, economy, technology or society. The COVID-19 has also challenged the individual to cope up with its impacts. Thus, for such times when transformation is taking place quickly, a new and upgraded skill set is required for the students so that they are able to cope up with changing realities to face challenges in real life, leading to their comprehensive progress. The new 21st century skills would enable the students to contribute to the progress of the society and the nation.

Empowering our students with these skills is also a challenging task. The government has adopted and initiated several innovative policies and practices so that the younger generation of students can be empowered with 21st century skills.

The new education policy is a step forward in providing 21st century skills to the students. The Prime Minister has also mentioned the importance of inculcating 21st century skills in the students in his 'Mann ki Baat' program. He has focussed upon critical thinking, creativity, collaboration, curiosity and communication for the students so that they can be ready for facing the challenges of 21st century.

What are 21st Century Skills?

The term 21st century skills refer to a broad set of knowledge, skills, work habits, and character traits that are believed by educators, reformers, college faculties, employers etc to be critically important for success in today's world. Simply, these skills are those skills that are required by an individual to face the challenges of the 21st century world which is characterised by a digitally transforming, globally active, collaborative, forward moving, creatively progressing and quickly adopting world. The students of 21st century will require skills such as critical thinking and problem solving, collaboration and leadership, agility and adaptability, initiative and entrepreneurialism, oral and written communication, information analysis etc.

On the basis of historical development of 21st century skills, these can be broadly divided into learning skills, life skills and literacy skills.

- **Learning Skills** Skills required for the acquisition of new knowledge. Learning skills involve critical thinking, creativity and innovation, collaboration and communication.
- **Literacy Skills** Skills that help in creating and gaining new knowledge through reading, media and digital resources. Literacy skills involve information literacy, media literacy and technology literacy.
- **Life Skills** Skills required for successfully leading and living everyday life. Life skills include flexibility and adaptability, leadership and responsibility, initiative and self-direction, social and cross-cultural interaction.

Defining the 21st Century Skills

Critical Thinking and Problem Solving Critical thinking is the capability of an individual to objectively analyse a piece of information without any biases. It involves fairness and open-mindedness, being informed and active, being independent, willingness to question and to entertain doubts and recognising and assessing values, peer pressure and media influences.

Problem solving involves identifying relevant information by filtering out irrelevant data, and relating the set of information with another to solve the current problem on the basis of previous experience. These skills enables the student to analyse and evaluate various perspectives and interpret available information to reach conclusions. It enables the student to solve real world problems by exploring and observing their surroundings carefully.

Creativity and Innovation Creativity refers to new ways of seeing or doing things by generating new ideas (fluency), flexibility (shifting perspective easily), originality (conceiving something new) and elaboration (building on other's idea). Innovation means creation of something new, unique which is an improved version of the existing idea and is distinctive.

These skills enables students to bring out new ideas by brainstorming. They are able to use all the available concepts to create useful ideas and simultaneously improve one's creativity. The students learn how to communicate the new ideas to others.

Collaboration It is the ability to effectively work together with others. It involves working together, respecting other's needs and perspectives and contributing to and accepting the final outcome. Collaboration broadens the cultural, social and environmental boundaries and helps a student to understand social and environmental concerns better.

Communication It is the ability to express one's opinions, desires, needs, apprehensions oneself appropriately in a verbal and non-verbal manner. Communication skills can be used by the students for a variety of purposes. They are able to effectively disburse their ideas to others as well as listen to others carefully to infer meanings. They are able to use several forms of media and technologies with ease and know their usefulness with the help of good communication skills.

Information Skills These skills involve the ability to access information, media and technology to understand and critically evaluate different aspects of content and information and create and communicate with ease.

With the help of informational skills students critically access and evaluate information and manage information from a wide variety of sources. They are able to understand the sources of information and understand the issues they face.

Flexibility and Adaptability Flexibility refers to person's ability to change his actions and steps taken by him according to new situation and efficiently facing a difficult situation without compromising on values. Adaptability is a person's quality where they can modify or change oneself to suit a new environment. For our students, these skills are of utmost importance as they help them in moving forward in difficult times.

Leadership and Responsibility Leadership is the ability to guide a team and be capable of managing a team in relation to real world. These skills enable students to be committed, resilient and confident. Responsibility means being a good citizen, being aware of the important social and national issues that have impact on our daily life as a citizen and student and being aware of our Fundamental Duties and Rights.

Initiative and Self-Direction Initiative means the ability to begin a task independently and self-direction refers to working with integrity on self-motivation. These skills enables a student to work readily with diverse groups. They are able to manage time properly and are able to critically analyse their past to make the future better.

Productivity and Accountability Productivity can be understood as fulfilment of any task within a given time period. Accountability refers to the feeling of responsibility for any work done. It enables the students to set and meet their goals in times of obstacles and pressure. They are able to manage themselves punctually and patiently.

Social and Cross Cultural Interaction These are the skills to communicate, work, collaborate in diverse social and cultural environments. It gives the students the opportunity to work with people of diverse background, behave respectfully and build a healthy team environment.

Need for 21st Century Skills

21st century skills in the students are required not only because they have to face the problems of 21st century but also because they are able to learn completely and comprehensively only when they can become excellent citizens and are able to perform and fulfil their responsibilities towards themselves, society and towards the nation. The goal of teaching 21st century skills is to enable the student's potential by making them responsible human beings who are well aware of their competence and abilities. Studying for exams is not going to be enough for the 21st century. It will not help the students face everyday life situations of 21st century. These skills will be allowing the students to face their real life issues with an effective strategy. The growth and development of students in 21st century can be complete with these skills. These skills are also required to bridge the gender gap in schooling and employment where there are more opportunities for male students as compared to females and other genders.

Children with special needs can be empowered with the help of these skills so that they can feel independent in their home, school and community environments. Because of the rapid economic, social change, schools have to prepare students for jobs that have not yet been created, technologies that are still emerging and problems that humans don't yet know and understand. These skills will also support the young and vulnerable adolescent population so that they can develop themselves fully, cope up with risky situations and manage daily life pressure.

Dimensions of 21st Century Skills

21st century skills in the students requires them to build awareness in Global issues, be financially, economically literate, have civic literacy, health and environmental literacy. These dimensions can be explained as

- **Global Awareness** 21st century requires a student to be aware of the global cultures and he/she should learn to work in collaboration with people from diverse cultures, countries and religion. They should understand the specific needs of people from different cultures.
- **Financial and Economic Literacy** Students must be able to make appropriate personal economic decisions concerning them. They should know the role of their country's economy in everyday life so that it will enhance productivity and their career.
- **Civic Literacy** Students should be responsible citizens and shall effectively participate in civic life. They should exercise their rights and duties and understand the national and international importance of their civic decisions.
- **Health Literacy** Students should be aware and understand about basic health, safety and services that will improve health. They should be able to fully understand holistic well-being, including proper diet, nutrition, exercise and be stress free. They should be able to monitor personal health goals.
- **Environmental Literacy** Students should be aware of the impact of everyday life actions, like rising pollution, population on the environment. They should investigate and analyse issues affecting environment to reach out at solutions. They should be able to collectively act for addressing issues related to natural environment.

Conclusion

The world is changing of a face pace. We are supplying our students with skills that are not sufficient to address modern problems. Today due to rapidly changing economy, society, environment, technology, students are required to upgrade themselves and be ready for the current situations they face as well as those scenarios that they have never faced. Teachers should encourage their students to take on collaborative projects, engage them in extra-curricular activities and teach them to collaborate with their peers. Inculcating these new age skills in our students will require participation of teachers, government, parents, educators, technology creators and most importantly, the students themselves.

NATIONAL EDUCATION POLICY, 2020

EDUCATING NEW INDIA

India has a long history of holistic education. Education in ancient India was concerned not just with the acquisition of knowledge for living life in this world, but for complete realisation and liberation of the self from the worldly shackles. Education in India got enriched through the mixing of cultures that came to India from the invasions, till the arrival of the British. Realising the value of education as an important tool in life building and character building, after independence several initiatives were taken and are still being taken in the arena of education.

Education has the power to make the world a better place. It is a tool to achieve prosperity, development, empowerment, freedom and self-reliance. It helps to develop foundational cognitive skills of literacy and numeracy, higher order cognitive skills of critical thinking and problem solving and soft skills of cultural awareness, empathy, perseverance, grit, teamwork and leadership. If the education becomes inclusive, it becomes one of the most effective tools to promote a vibrant and tolerant society. The world is undergoing rapid changes. There is a sizeable shift in the understanding of the world with the emergence of big data, machine learning, artificial intelligence etc. The present world problems call for expertise in multiple disciplines. These disciplines particularly involve mathematics, computer science, data science in conjunction with subjects like humanities, social science etc. With the quickly changing employment and global ecosystem, it becomes increasingly important for the children to be creative, multi-disciplinary, and be adaptive and innovative.

The New Education Policy has been launched to provide accessible, equitable, and affordable education to all without any discrimination and consideration of their socio-economic background.

Principles of the New Education Policy

The New Education Policy of 2020 is based on the following principles

- **Flexibility** It seeks to provide flexibility for learners to choose their learning trajectory and choose their path according to their own talents.
- **Multi-Disciplinary** To provide holistic education across all spectrums such as science, social sciences, arts, humanities, sports etc.
- **Ethical and Constitutional Values** It aims to inculcate values of empathy, respect for others, cleanliness, etiquette, scientific temper, liberty, responsibility, equality and justice.

- **Equity and Inclusion** It will be the aim of all educational decisions, to ensure that all the students are able to thrive in the education system.
- **Professional Values** All the teachers and educators will be recruited through rigorous preparation. There will be emphasis on preparation, continuous professional development, positive working environment and service development.
- **Integrity and Transparency** It seeks to insure a transparent educational system while ensuring innovation and out of the box ideas through autonomy, good governance and empowerment.
- **Continuous Policy Making** Policies to be based on regular assessments of realities on the ground. Taking into account India's rich, diverse, ancient and modern culture and knowledge systems and tradition.
- **Life Skills** Focussing on building life skills such as cooperation, teamwork, communication, resilience etc.
- **Education as Fundamental Right** Education is a public service and not a commercial activity. It should be available to all with adequate quality. There shall be strong and sustainable investments in a vibrant public education system as well as an ethical and philanthropic private system.

Thus, with the application of these principles, the policy aims to build a globally excellent education system rooted in Indian ethos and aligned with the goal of a brilliant India. This will transform India into a global super power.

Components of the New Education Policy

The new policy aims to introduce several changes in the Indian education system from school to the college level. It includes revamping the following systems of education.

Schooling

The policy states that 85% of a child's brain development occurs prior to the age of 6 years. Thus, early childhood learning is of utmost priority. Early childhood care and education is the need of the hour. This early education and care will consist of flexible, multi-faceted, multi-level, play based, activity based and discovery based learning. It will develop motor skills, social-emotional, ethical skills and development of communication and early language skills.

The current system of 10+2 after the early education will be replaced by a new 5+3+3+4 curriculum structure. Now, the children in age group of 3 to 8 years will spend 5 years for foundational stage in preschool education and class 1st and 2nd. Three years will be spent at preparatory stage in classes 3 to 5. 3 years will further be spent at middle stages in classes 6 to 8. Four years will be in secondary stage for classes 9 to 12.

Co-curriculum and vocational subjects such as sports, arts, commerce, science will be treated at the same level. Students will be allowed to take up coding from class 6 onwards to improve their computer skills. Vocational education will also be given a push with internships from class 6. The exams of class 10th and 12th will be made easier to test competencies rather than memorise facts with all the students allowed to take the exam twice. The curriculum content is set to be reduced in classes and there will be focus upon critical thinking, and more discovery based, inquiry based and analysis based learning. A new and comprehensive National Curriculum Framework for teacher education will be formulated for improving teacher capabilities.

Medium of Instruction

The policy provides that medium of instruction in schools shall be the mother language till at least class 5th but preferably till class 8th and beyond. This will improve learning at the school level and children will be better able to understand the subjects that they will study.

The rate of dropouts from school education will also be reduced and curtailed with overhaul in the curriculum to make it more engaging and useful to students in the vernacular medium. For those who have dropout from schools, overall initiatives will be taken in order to bring them back.

Higher Education

In higher education, the gross enrollment ratio will be raised to 50% by 2035 from the current 26.3%. The policy also provides for a multi-disciplinary higher education framework with portable credits and multiple exits with certificates, diploma and degrees. The aim of university education will be to develop good, well rounded and creative individuals. It proposes a higher education system consisting of large, multi-disciplinary universities and colleges with at least one in every district.

It proposes increased access to higher education through open schooling, online education and open distance learning. It seeks to end the fragmentation of higher education institutions and turn them into large multi-disciplinary universities.

A comprehensive education system in the higher education institutions in which even the engineering institutions such as IITs will move towards more arts and humanities and students of arts and humanities learning more science so that education becomes more holistic.

Departments in languages, literature, music, philosophy, ideology, art, dance, theatre, education, statistics, pure and applied sciences, sociology, economics, sports etc. will be setup in higher education institutions to give education a comprehensive and holistic dimension.

The National Research foundation will be created as an apex body for fostering a strong research culture and building research capacity across higher education. Higher Education Commission of India (HECI) will be setup as a single umbrella body for entire higher education excluding medical and legal education.

College affiliation system will be phased out in 15 years and a stage-wise mechanism will be established for granting graded autonomy to colleges. Over a period of time, every college will develop into an autonomous degree granting college or a constituent college of a university.

Multiple mechanisms with checks and balances will be established to stop commercialisation of higher education. All the educational institutions will be audited as per standards of audit. The private higher education institutions will be encouraged which have philanthropic and public spirited intent.

Adult Education

Literacy and basic education opens up a whole new world of personal, civic, economic and lifelong learning opportunities for individuals that enables them to progress personally and professionally. An outstanding adult education curriculum framework will be developed by a new and well supported institution under NCERT.

The curriculum will focus on foundational literacy and numeracy, critical life skills, such as health awareness, childcare, family welfare, vocational skill development, basic education, and holistic education courses in arts, science, technology, culture, sports, recreation etc.

A suitable infrastructure will be ensured so that all interested adults will have access to education. Setting up of public libraries, which will be equipped with information and communication technology will be undertaken.

A national literacy mission will be started to mobilise community organisations and volunteers in order to achieve large scale adult literacy and education outcomes. Government will work closely with NGOs and other community organisations and support them as necessary.

Promoting Indian Arts and Culture

The preservation and promotion of India's cultural wealth will be considered as high priority for the country. Cultural awareness is important for the individual as well in order to provide him with a sense of identity, belonging, as well as an appreciation of other cultures and identities.

Initiatives will be taken from pre-primary level through the higher education level for exposing the students to Indian music, arts, crafts and languages. An accurate account of traditional Indian knowledge across humanities, sciences, arts and crafts and other sports will be undertaken.

India will also expand its institutes and universities studying all classical languages and literature with strong efforts to collect, preserve, translate and study the tens of thousands of manuscripts from ancient India.

All languages in India and their associated art, culture will be documented via a web based platform/portal/wiki in order to preserve endangered and all vulnerable Indian languages and their associated rich local arts and culture. The platform will contain videos, dictionaries, recordings, poetry, folk songs etc. to preserve them.

Further, a new body known as National Education Alliance for Technology (NEAT) will be setup to provide a platform for the use of technology to enhance learning, assessment, planning, administration for both school and higher education. It aims to create a rich software for students and teachers so that education reaches all. New technologies such as AI (Artificial Intelligence) will be used in fields of research with strong data backed framework. This will fulfil the needs and demands of 21st century students and the teachers.

How will it Improve Education in India?

The New Education Policy will give importance to student's practical knowledge and skills instead of pushing them towards rote learning. It is going to help the students develop scientific temper from a very young age. It will have the following benefits:

- It is going to focus upon universalising access from early childhood to higher education, integrating over two crore out of school children and aims to provide education to even the socio-economically disadvantaged children.
- Improving early access to education and childcare will strengthen the foundations of children's education and make them better humans. A strong foundation will also help the young children in adapting and learning quickly.

- Teacher education will be given a push. It will ensure that the right teachers teach the students. Comprehensive review of teacher training will ensure that teaching capabilities are enhanced, which in turn will enhance the learning outcomes.
- Increasing technology use will be able to bridge the gap in the existing system, students who were not able to get access to education will be connected to education system with the help of technology. Technology will also aim to defy the traditional barriers of caste, class, society, occupation etc.
- The policy seeks to deregulate the institutions and remove bureaucratic shackles. It will give more autonomy to the educational institutions which will improve their efficiency and delivery of education. It will improve the quality of institutions everywhere across the country. Universities will be able to introduce new courses without going through cumbersome regulatory processes.
- Adult education is going to develop at a faster pace. Vocational education for adults will enable them to get incorporated in the new world which requires learning of new skills for a better and prosperous future.
- The focus on learning through mother tongue will lead to intensive development of children at an early age. They will be able to relate to the local culture, geography, history and local arts. This will enable them to become good learners. It will increase their capacity of learning and understanding.

Way Forward

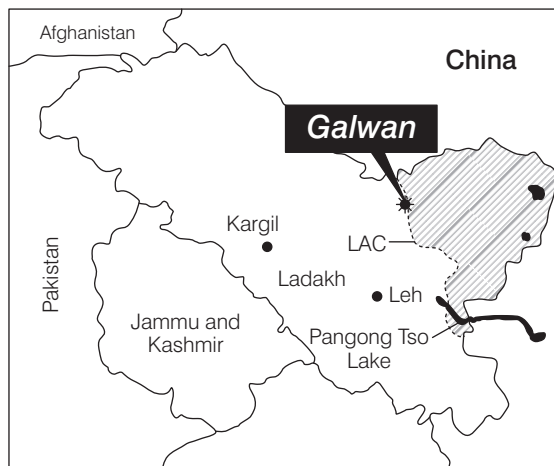
The New Education Policy is a step in the right direction. It focuses on critical thinking, experiential learning, interactive classroom, integrated pedagogy, and competency based education. Inclusive digital education serves as an empowering component of the policy. If investments in the education system will be made and all the states cooperate in fulfilling the aspirations mentioned in the policy, India will be able to reap the benefits of its young demography. NEP could shape the future of education across India. Through a robust education system, India will take a giant step towards establishing itself as a knowledge superpower.

INDIA-CHINA CLASHES

Indian Army and Chinese People's Liberation Army (PLA) have confronted each other once again in the latest border clashes near the Galwan valley in Eastern Ladakh region. This clash occurred in May-June, 2020, three years after the Doklam standoff between India and China in 2017. Both the sides faced casualties. These were the first casualties faced by Indian Army in a clash at the Indo-Chinese border since 1975. Though the Indian troops were armed but as per the Indo-China Agreements of 1996 and 2005, there should not be use of fire arms, guns, hazardous chemicals, explosives etc. within 2 km of Line of Actual Control. These agreements state that two sides should resolve their disputes through peaceful and friendly consultations.

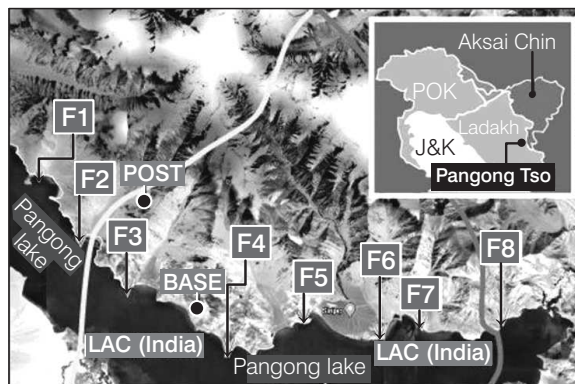
The Issue in Depth

The Galwan valley, where the clashes primarily took place is located between Ladakh in the West and Aksai Chin in the East. The Galwan river has its source in Aksai Chin, on China's side of LAC and it flows from the East to Ladakh where it meets Shyok river. On India's side of the LAC, Beijing is now claiming the entire Galwan valley on its side of LAC and India has rejected the claim as exaggerated and untenable. In the past, China has modified its earlier maps to show that China has sovereign rights over the entire Galwan valley. Now, China is unilaterally trying to alter the LAC, even when according to a 1993 agreement, China has agreed to strictly respect and observe the LAC between two sides.



Location of Galwan

According to the 1993 Border Peace and Tranquility agreement, the two sides have agreed to jointly check and determine the segments of LAC where they have different views of the LAC. The other two regions where there have been clashes include the hot springs area south of Galwan valley and Pangong Tso lake, further South of the hot springs area in the Union Territory of Ladakh. These two regions are strategically important. The Pangong Tso is a landlocked lake in Ladakh and lies in the path of Chushul approach which is one of the main approaches that China can use for an offensive in the Indian territory. The Pangong Tso lake is governed by fingers, which are cliffs protruding into the water body on its Northern bank. India claims that LAC passes through finger 8 on the East whereas China claims the LAC to be passing through finger 2 in the West. China has blocked Indian troops from patrolling the lake beyond finger 4, thus keeping an 8 km territory from finger 4 to finger 8 under its military control.



India-China Border

India and China share 3,488 km long Line of Actual Control. It is the demarcation line that separates Indian controlled territory from Chinese controlled territory. Both countries have different views owing to the undemarcated boundary, which lead to transgressions and face-offs time to time. India considers LAC to be 3488 km long whereas China considers it to be only 2000 km long. The India-China borders can be categorised into three sectors

1. **Western Sector** (Aksai Chin) The region is claimed by the Chinese government post 1962 war as an autonomous part of Xinjiang region. Geographically, it belongs to the state of Jammu and Kashmir. This sector witnesses highest transgressions.
2. **Central Sector** It is less disputed section of the Indo-China border but the clash of Doklam sector in 2017 and Nathu La pass trading issues have brought distress.
3. **Eastern Sector** McMahon Line had differentiated India and China in this sector but in 1962 war, the People's Liberation Army occupied 9000 sq km area of India. The announcement of a unilateral ceasefire made them step back on the international borderline. However, China has been claiming the area as its own and named it South Tibet.

Concerns Along the Indo-China Border

China is now claiming the entire Galwan valley and wants to unilaterally alter the LAC position. But this is not the only issue along the long India-China border. There are several permanent concerns that characterise the border between India and China. These include

- **Undemarcated LAC** The alignment of the LAC was never been agreed upon. The LAC is not a clearly demarcated line but it is based on the perceptions of the two sides. The current perception of LAC reflects the territories that are currently under the control of each side but the territorial boundary dispute is still a pending issue. India claims the LAC as the line which is marked on the maps of Survey of India, that includes even the Aksai Chin occupied by China. In China's case LAC corresponds to mainly its claim line but in the Eastern sector, China claims entire Arunachal Pradesh and South Tibet.
- **Different Claims** India and China do not agree upon the areas they claim. Differences in perception, particularly in 13 spots in the Western, middle and Eastern sector of the border often leads to faceoffs when the military patrolling units encounter each other in areas which are not clearly demarcated as to under whose control do they lie. Some of these areas are Chumar, Demchok, and Northern Bank of Pangong Tso lake.
- **Chinese Tactics** China leaves several territorial disputes intentionally unsettled so that they can use the grey areas to pressurise India at their own convenience. The border conflicts along the LAC seem to be indicative of this Chinese approach to use border issue to pressurise the Indian side.
- **Weakening Protocols** There has been a weakening of protocols and erosion of trust between both the sides due to frequent clashes and faceoffs. Various agreements in place such as the Agreement on Peace and Tranquility along the LAC signed in 1993 has not been implemented fully. The 1996 agreement on confidence building measures too has not been fruitful in resolving the disputes.

Concerns with Foreign Policy of India

India's growing power in the Asian region means that it needs a new paradigm for its foreign policy. If the current issue is not diplomatically managed, this may also cause great uncertainty in China's approach towards India as it has two neighbours that are hostile towards India.

There are some aspects of the foreign policy that have changed considerably and India needs to revisit that policy. Earlier India was seen as a natural rising power in South Asia and the Indian ocean region. It was the de facto leader of South Asian Association for Regional Cooperation (SAARC). India had committed itself to multilateralism and the Central Asian Connectivity Project with Iran as its gateway.

There were investments worth billions in Afghanistan and it enjoyed goodwill and influence in Sri Lanka and Bangladesh. India was competing and cooperating with China at the same time. In the current scenario, there has been a relative decline in India's regional prowess, especially in the neighbourhood. The institution of SAARC has weakened. Nepal has turned hostile towards India adopting a new map, possibly under Chinese influence.

Sri Lanka has tilted towards China which has undertaken massive infrastructure projects in Sri Lanka's port cities. Bangladesh too has presented its reservations on the Citizenship Amendment Act, 2019. When Afghanistan is undergoing transition, India has been out of multi-party talks. All these deficiencies present an opportunity for China to act as a supplementary in place of India in the region.

China has also made aggressive interferences in the internal affairs of smaller Asian countries. India has not provided support to these small nations to prevent Chinese aggression. Thus, India needs to build a stable order to counter these subtle Chinese ways of increasing its powers and intimidating its neighbours. There will be an urgent need to recalibrate the foreign policy dimensions to counter the Chinese offensive. Institutions such as the QUAD can be effectively used to contain China and balance the power dynamics in the region.

Reason for Chinese Aggression Along the LAC

There are several reasons apart from the undemarcated LAC, differing perceptions and issues with India's foreign policy. These include :

- **Change in the Status of Jammu and Kashmir** India has changed the status of Jammu and Kashmir to a Union Territory which may have infuriated China as it lays huge claims on the Ladakh region. China had also reacted furiously when India ended the protectorate of Sikkim in 1975 and integrated with India. China has also several claims in the Arunachal Pradesh. So any changes in the polity and governance of these territories makes China pressurise India on several fronts.
- **India's Developing Border Infrastructure** India has been strengthening its border infrastructure along the LAC. India has also constructed and upgraded the Darbuk-Shyok-Daulat Beg Oldie Road in the region that has also pushed China to pressurise the Indian establishment. With more developed infrastructure, Indian troops can patrol more areas than before which also leads to frequent clashes along the border.
- **Bilateral Relations** There has been some erosion in bilateral relations between both countries. India has been against the Chinese Belt and Road Initiative and the China-Pakistan Economic Corridor. India has also put several curbs on Chinese investments. India's assertions on Gilgit-Baltistan is seen in China as an attack on the China-Pakistan Economic Corridor.
- **India-US Alignment** India's foreign policy calls for non-alignment with any country or alliance. But India has, (in recent times) moved closer to USA. An evident degree of geopolitical convergence also exists between the US and India in the Indo-Pacific region, directed against China. The Quad Security Dialogue has also infuriated the Chinese as it is being perceived as an anti-China alliance. India is also projected as an alternative to China in the South Asian region.
- **Weakening Relation With Neighbours** China has made aggressive claims on the LAC as India's neighbourhood relations with various countries have deteriorated. Pakistan and Nepal have made aggressive claims on Indian territory with both of them even publishing new maps that show Indian territory as their own. Sri Lanka has moved closer to China and Bangladesh has expressed its concerns over the Citizenship Amendment Act (CAA).

- **China's Internal Politics** Internal pressures have been generated inside China due to COVID-19 and its effects on the Chinese economy that has seen a downslide amid the biggest health crisis China has faced since decades. The political and economic tensions have greatly aggravated pressures on Chinese leadership and anti-China wave around the world has further worsened matters for it. Thus, it is putting pressure on its neighbours to reascertain its supremacy and sprout domestic emotions.

Tactics to Solve the Disputes

India should first diffuse the tensions along the border with the help of existing mechanisms. There have been several rounds of talks too that have possibly resolved matters. But these standoffs are not merely border conflicts. They have a wider dimension to them. These dimension should be taken into account while dealing with China problem. The possible tactics to resolve these issue are

- **Diplomatic Means** Rather than openly considering the military option, India should go for diplomatic engagements with the Chinese. It should work towards creating international opinion in its support regarding border violations. Diplomatically India can create an international opinion that China is wrong and India has peaceful intentions whereas China's intentions are expansionist.
- **Maintaining Peace** India should not militarily offend China in the first place. It should realise that maintaining peace on the borders is essential for the whole region. It should act responsibly like a leader and maintain just and peaceful relations with even its neighbouring countries. Diplomatically its messaging capacity should be improved to spread the message of peace rather than conflicts in the region. It should also engage with the underdeveloped and developing countries of the region so as to provide them direct and indirect aid. This will maintain prosperity in the region and help in countering Chinese influence in these countries.
- **United India** Above all, India should become all united as that is the best antidote than any alliance and counter offensive. It should reiterate and rejuvenate the concept of unity in diversity. It should learn from The Dalai Lama as it is a symbol of enduring hope for millions of people. It should not abandon the Buddhist Teacher under Chinese pressures. All these tactics will produce excellent results and prevent the Chinese from threatening India.

Conclusion

India should move with caution and diplomatically put pressure on the Chinese side. It should seek US aid in pressurising China. The relations with Nepal, Bangladesh, Sri Lanka and other neighbours should be cordial so that they do not side with the Chinese. On the domestic front, development activities should be carried out on the China-India border so that China does not have an upper hand in the border infrastructure. The talks at the highest levels must be resumed with caution, keeping India's interests in mind.

Finally, it must be remembered that India and China are neighbours and have enjoyed historical relations between two nations. There is much for both the countries to gain from peace and a lot to lose from wars and fights.

NATIONAL HEALTH ID

WILL IT IMPROVE OUR HEALTH?

Healthcare has become one of India's largest sectors. It comprises of hospitals, medical devices, medical tourism, medical insurance etc. The healthcare providers are divided into public as well as private services. The public healthcare services that involves government services are present as tertiary and secondary healthcare facilities and primary health centres in rural areas. Lack of adequate and quality healthcare services in Public sector forces people to move to the private sector services that are very costly and involves huge out of pocket expenditure.

Several schemes have been run by different State Governments to improve healthcare services for various sections of services that were until now not available to them, but still various deficiencies exist.

To fulfil these deficiencies in the public health sector, the Prime Minister on the occasion of Independence day announced the launching of a National Digital Health ID. It will be a digital identification method that will contain the records of the health related information which could be easily shared with health authorities with a patient's consent. All the stakeholders such as hospitals, laboratories, insurance companies, telemedicine firms etc. will be expected to participate in the health ID system.

National Digital Health Id

A national digital health Id is a unique Id that will be assigned to every person which will identify the person, authenticate them and keep their health records for his/her medical history with the consent of the patient. It will allow for a seamless flow of health information across various systems for better service delivery to the patient. A health Id will be created by using the basic details and mobile or Aadhar number which will be unique to that person.

At present, digital health Id has been announced in Andaman and Nicobar Islands, Chandigarh, Dadar and Nagar Haveli, Daman and Diu, Ladakh, Lakshadweep and Puducherry. Apart from the patient's health information repository, the program will also include

- **Digi Doctor** It will be a comprehensive data gathering platform of all doctors that are currently practising or teaching modern/traditional system of medicine. It will allow the doctors to get connected to India's digital health ecosystem.

- **Health Facility Registry** It is a comprehensive record of health facilities across the country. It will include both public and private health facilities including hospitals, clinics, diagnostics, laboratories, pharmacies etc.
- **Electronic Medical Records** It will be a digital version of patient's treatment history from a single facility. The health information recorded in a facility will be stored locally at the establishment where the patient was registered. This information will be linked to patient's health Id.

Deficiencies of Healthcare System In India

Deficiencies in the healthcare system of India include inadequate reach of basic healthcare services, shortage of trained medical professionals, lack of quality services etc. It is necessary to find ways to use technology in health services to improve delivery of services and provide truly universal access to every citizen. But these objectives are not fulfilled due to various reasons. These are :

1. **Low Priority to Public Health** Keeping communities healthy through prevention of diseases and promotion of health and wellness has been a low priority historically in India. Of all the current expenditure on health, preventive care only accounts for 6.7% whereas curing people involves more expenditure as it involves other expenses such as pharmaceuticals, other medical goods and transportation. India, accounting for 18% of global population accounted for 3.6% of global tuberculosis and 26% of premature mortality due to diarrhoea, and a range of non-communicable diseases.
2. **Limited Training** In most states, public health management positions are taken over by doctors, that are trained mainly in the provision of curative services or by generalist civil servants. They have limited public health training to understand the cause and effect between risk factors and diseases as well as disciplines such as epidemiology, biostatistics, behavioural sciences and management of health services. Hospitals in rural areas are run by clinicians that have little expertise in managing health facilities.
3. **Poor Primary Health Services** The existing primary healthcare model is limited in scope. Services that are provided in these primary centres are only the services related to childcare, womencare, motherhood and certain services related to national health and schemes. These account for very low proportion of the essential services that people demand for their welfare and wellbeing and to prevent morbidity. Thus, there is no provision for services such as hypertension, heart disease, adolescent health, mental health, disability, ageing health, and early cancer detection.
4. **Low Workforce in Healthcare** India's healthforce is characterised by a diversity of healthcare workers in fields of allopathy, alternative systems of medicine such as ayurveda, homeopathy, unani and siddha. The doctor-population ratio in India is 1:1613. The nurse-population ratio is 1:1588. This is very low as compared to developed countries.

The distribution of existing workforce is concentrated in urban areas. Urban areas have four times as many doctors and three times as many nurses as in rural areas. As medical and nursing colleges are concentrated in Southern states, these conditions also increase the inequality in availability of trained medical healthcare providers. Apart from this, there is also shortage of allied health professionals such as lab technicians, radiologists etc.

5. **Increasing Cost of Medical Services** For various medical tourists India is an appropriately favourable destination for world class cheap healthcare but for Indians, healthcare has become increasingly expensive, remaining out of reach of many people. The price of treatment has risen at double the speed of rise in income as per the NSSO surveys. Many private establishments overcharge patients and also recommend unnecessary tests. This further raises the costs of hospitalisation and out of pocket expenditure.
6. **Lack of Standardisation** Different healthcare organisations have varying software supplies, depending of their size of working, management system and infrastructure. There is no standardisation in the delivery of healthcare. This creates confusions among the doctors when a patient moves from one health institution to another. Moreover, several patients are asked to start fresh treatment if they have switched from one doctor to another.

Digital Initiatives to Improve Healthcare

Many initiatives have been launched by the government in India such as the National Digital Health Blueprint, National Health Stack etc. These aim to overhaul India's existing healthcare ecosystem. They seek to digitise health records so that patients do not have to carry their lab reports, prescriptions etc. in physical form and digital records are available to them at their convenience. These digital records can also be shared with any doctor or family member with the patient's consent.

In this direction, the NITI Aayog proposed a nation-wide framework to digitise the healthcare in India, in the form of a National Health Stack. The National Digital Health ID is one of a horizontal component of the National Health Stack, which was announced by the Prime Minister from the ramparts of the Red Fort in his Independence day speech.

The components of the framework proposed by NITI Aayog include :

1. An electronic national health registry that would serve as a single source of health data for whole country.
2. An insurance claim platform that will allow the expansion of existing health coverage schemes such as Ayushman Bharat.
3. A personal health record system that would enable the patients to access their own health data as well as access by doctors.
4. A national health analytics platform that would provide a holistic view by combining various health initiatives to improve policymaking.
5. Other components such as a Unique digital health Id.

How will these digital initiatives improve healthcare in India?

Technology based initiatives will revolutionalise the set of public as well as private healthcare system in India. It will provide following benefits for the healthcare

- The digitisation of medically critical information will help the doctors in diagnosing the patient easily. The doctor will have access to the current and previous diagnostics, current and previous diseases, medical reports, prescriptions, discharge summaries, etc. It will reduce the time involved in the initial diagnosis and provide the patient with better quality healthcare services.

- Patients will be able to access health services remotely with the help of teleconsultations, e-pharmacies, online appointments etc. Patients will be able to access this information on a mobile app. This will reduce the inequality between rural and urban in the availability of health services.
- It is going to improve the efficiency, effectiveness and transparency in the health service delivery. Patients will be able to share their health records and history with the medical services providers quickly with the click of a mouse. This is going to reduce diagnostic and treatment time for critically ill patients who are in urgent need of care.
- Better quality of health data is going to be most beneficial for policy makers that will enable the government in forming better policies even for a particular region. It can be used to monitor the healthcare of India both geographically as well as demographically. This will strengthen government program implementation.
- Preventive healthcare will be strengthened because if an elaborate database about the prevalent diseases will be available to the government it will be in a better position to form policies and programs to establish, run and monitor the primary health centres to the preventive health needs of citizen.
- Research and development will greatly benefit from the availability of such aggregated information as there will be critical evaluation of effectiveness of various programs and policies by the government. There will a good network of feedback between researchers, policy makers and providers.
- Data will also be used by the private players securely to further improve their own services so that the vast number of patients associated with the private health facilities will be able to access better services at cheaper costs. This will also improve access to healthcare because private healthcare accounts for majority of healthcare providers in India.

Way Forward

All these high and tall promises can not be fulfilled without addressing the concerns associated with the privacy and data of the patient. There has been a little movement in the data protection framework of India. Medical health data is very critical. If it is not handled carefully, it will lead to invasion of privacy and other related issues with the patients. Further, the government will need to incentivise the hospitals, clinics, patients etc. so that they adopt the new technologies as it will require significant investments in technology setup and operation of the digital system. There must be standardisation across all the systems so that it does not become confusing to the patient as well as the services provider. The system will also be required to be error free as updation of data on the server involves significant errors that inturn may affect patient health. Apart from this, government will also be required to regulate the use of private data by the private players so that it is not misused. Thus, all these concerns if addressed can provide significant gains to healthcare in India and health of Indians.

ABOLISHMENT OF ARTICLE 370

A HISTORICAL STEP TO BRING PEACE IN KASHMIR

On 5th August, 2019, by virtue of the Presidential Order 2019, Article 370 pertaining to provisions of the separate Constitution of Jammu and Kashmir was abrogated. With this action, the Government of India revoked the special status or limited autonomy, granted under Article 370 of the Indian Constitution to Jammu and Kashmir.

Historical Background

Following the accession of Jammu and Kashmir to the Indian Union on 26th October, 1947, the Maharaja Hari Singh who had ruled Jammu and Kashmir earlier handed over control of defence, external affairs and communications to the Government of India. Article 370 and the accompanying Constitutional Order of 1950 formalised this relationship. In 1952, the Governments of the State and the Union agreed that Indian citizenship would be extended to all the residents of the state but the state would be empowered to legislate over the rights and privileges of the state's subjects, who would now be called 'permanent residents'.

Article 370 of the Indian Constitution gave special status to the state of Jammu and Kashmir by conferring it with the power to have a separate Constitution, a state flag and autonomy over the internal administration of the state. Article 370 was included in the section of the Constitution on temporary, transitional and special provisions. The Constituent Assembly of Jammu and Kashmir after its establishment was empowered to recommend the articles of the Indian Constitution that should be applied to the state or to abrogate Article 370 altogether.

Provisions of Article 35A and 370

A Presidential Order was issued in 1954 which specified the articles of the Indian Constitution that applied to the state. As part of this order, Article 35A was added to the Constitution, empowering the state legislature to legislate on the privileges of permanent residents of the state.

The state of Jammu and Kashmir defined these privileges to include the ability to purchase land and immovable property, ability to vote and contest elections, seeking government employment and availing other state benefits such as higher education and healthcare. Non-permanent residents of the state, even if they were Indian citizens, were not entitled to these privileges.

Later, as the state's Constituent Assembly dissolved itself without recommending the abrogation of Article 370, the article was understood to have become a permanent feature of the Indian Constitution. However, Clause 3 of the Article 370 gives the President of India the power to amend its provisions and scope.

In subsequent years, the provisions of Article 370 were diluted through various presidential orders to allow more subjects to be controlled by the Union Government which had earlier been applicable to the state government of Jammu and Kashmir. In each case, the concurrence of the State Assembly was taken before issuing the Presidential order. In various court cases over the years, the Supreme Court of India had always upheld that Clause 1 of Article 370 cannot be modified or deleted, as it states that it applies to the state of Jammu and Kashmir.

Reasons for Abrogation of Article 370

The reasons given by the Government of India for abrogation of Article 370 in August 2019, was that, it was only a temporary provision. Further, Article 370 was added in the Indian Constitution to provide autonomy to Jammu and Kashmir state. However, it failed to address the well-being of Kashmiris over the last 30 years, as they had been enduring generations of insurgency, violence and terrorism. It had also contributed to the gap between Kashmir and the rest of the nation.

Other reasons, which the government did not spell out but which must have influenced its decision are related to international events in the neighbourhood. The situation emerging in the Western neighbourhood, i.e. Pakistan and Afghanistan and the possible re-ascendance of the Taliban in Afghanistan, calls for greater attention and care in the Kashmir region. Further, the emerging geopolitical dynamics in Afghanistan and the resultant China-Pakistan relations could have potentially led to more heat on the Kashmir situation in the months ahead.

Provisions of Jammu and Kashmir Reorganisation Bill, 2019

Subsequent to the Constitutional Order of 5th August, the Jammu and Kashmir Reorganisation Bill was introduced in Parliament. This bill has been passed and made applicable with effect from 31st October, 2019.

Following are the some of provisions of this bill

- It divides the state of Jammu and Kashmir into two new Union Territories (UTs), Jammu and Kashmir and Ladakh. Of the six Lok Sabha seats currently with the state of Jammu and Kashmir, five will remain with the Union Territory of Jammu and Kashmir, while one will be allotted to Ladakh.
- The UT of Jammu and Kashmir will have an Assembly, similar to those in Delhi and Puducherry. The Jammu and Kashmir Assembly will have a five-year term, not six, as was the earlier case.
- Section 32 of the Jammu and Kashmir Bill, 2019, proposes that the Assembly can make laws on any subjects in the State and Concurrent lists except on state subjects relating to 'public order' and 'police'.

This is also similar to Article 239A of the Constitution that is applicable to Union Territories of Puducherry and Delhi. However, in the case of Jammu and Kashmir, the Assembly can make laws on land, which it cannot do in the case of Delhi.

- Accordingly, the special status provided to Jammu and Kashmir under Article 370 has been abolished. It will no longer have a separate Constitution, flag or anthem. The citizens of Jammu and Kashmir will not have dual citizenship. As the new Union Territory of Jammu and Kashmir will be subject to the Indian Constitution, its citizens will now have the Fundamental Rights enshrined in the Indian Constitution.
- Article 360, which can be used to declare a financial emergency, will now also be applicable. All laws passed by Parliament will be applicable to Jammu and Kashmir, including the Right to Information Act and the Right to Education Act. The Indian Penal Code will replace the Ranbir Penal Code of Jammu and Kashmir.
- Also, Article 35A, which originates from the provisions of Article 370, is now null and void. As the Presidential Order has extended all provisions of the Constitution to Jammu and Kashmir, including the chapter on Fundamental Rights, the discriminatory provisions under Article 35A will now be unconstitutional.

Conclusion

Article 370 has always been seen by the Kashmiris as a marker of their separate identity and autonomy. Thus, there is a possibility of widespread protests and violence as a reaction to the dilution of Article 370. Terror elements in Pakistan might find Kashmir to be the most fertile ground for breeding terrorism. The unrest can affect the democratic progress that has been made so far. Thus, the situation requires careful handling by the Government of India so as to create normalcy as early as possible.

The union government must build trust with the people of Jammu and Kashmir. A sense of oneness will change the perception of people of Kashmir towards Indian government. Due attention should be given to address the socio-economic distress in rural areas. More democratic rights should be given to the people and political activities should be allowed to resume. Special focus should be given to educating and skilling the youth so that they do not feel alienated. The state should be restored to its past glory.

ONLINE GAMING IS DANGEROUSLY ATTRACTIVE TO YOUTH

Indian online gaming industry has grown at an exponential rate over the past few years and it is expected to grow further with India's digital revolution. The beginning of online gaming industry in India is traced back to 2000s when PC gaming and console gaming brought several middle income group Indians on digital gaming platform. The international developers provided a base to the Indian gamers whereas the Indian gaming developer's ecosystem primarily acted as service providers. As India's smartphone user base and internet penetration increased, online gaming grew very fast with an estimated 120 million gamers online now.

The key driver of growth in Indian online gaming industry has been the rapid increase in penetration of low cost smartphones among the rural and urban populations. There are now approximately 400 million smartphone users in India. Though the internet penetration is low in India but it is expected to be about 53% of population in 2021. This growth will be further aided by new technologies at affordable costs, increase in local developer base etc.

With this increasing internet availability and rising number of online gamers, there have been ill effects such as poor academic performance, adverse effects on health, neglect of other important activities in one's life. Online gaming also leads to cyber bullying as well as inculcates wrong values in young children.

Profile of Indian Gamers

According to a study involving Google India, an average Indian gamer is below 24 years of age. Males make up most of the gamers as compared to females. 83% of gamers are male and are concentrated in urban areas of the country. These people, under the influence of their peers, begin gaming. Another reason for initiating online gaming is playing for recreation and utilisation of time.

Some people are also engaged in gaming for stress relief and social interaction. Mobile phones tend to be the most preferred gaming platform with 85% games played on mobile. The most preferred genre across Indian gamers are puzzle games, action games and adventure games. Male gamers are concerned about data and memory consumption whereas female gamers seek regular upgrade. More than 60% of gamers play online games on budget smartphones.

Reasons for Rise of Online Gaming in India

The following factors are responsible for rise in online gaming in India are

- **Internet Penetration** India is the second largest online market in world with an estimated 650 million users in 2030. There has been a steady rise in internet penetration in Indian rural as well as urban areas as compared to a decade ago. The leading internet depth in terms of user base is in the capital of India, New Delhi and surrounding regions. This is due to cheap data costs as compared to the other countries. Internet has been used actively by all the age groups for different purposes. Further, the potential for addition of new users also remains immense. This has led to an exponential growth in online gaming.
- **Improved Standard of Living** Income of middle class and upper middle class has increased considerably which has improved their standard of living. They are now able to spend more on leisure and spend their free time on such activities. Increased living standards and free time has attracted them towards online gaming which requires little investment in buying a smartphone and an active mobile internet connection.
- **Increase in Smartphone Penetration** India's smartphone base is estimated to reach 820 million in the next two years by 2022. There has been increase in number of smartphones in both rural and urban areas. This is due to the emergence of cheaper smartphones in the Indian markets. Smartphone penetration has increased to over 25% and it is much higher in the urban areas.
- **Young India** India is demographically a young country with 50% of population below the age of 25 years and 65% below the age of 35 years. This age group is involved in online gaming and is more aware about the trends in smartphone and online gaming platforms. This younger population of India has made it possible for online gaming to take roots in India.
- **Affordable Technologies** New technologies such as virtual reality, augmented reality are available in India at much cheaper rates as compared to earlier years. These technologies aid in online gaming and enhance the experience of gamers.
- **Growing Local Developed Ecosystem** Earlier international developers provided games to Indian gamers. But with growing skill level, Indian developers have emerged even on the global scale. Games have started to be made in India by local developers.
- **Localised Games** Games with localised context and in vernacular languages have emerged. These games can be played even by those people who do not know English language, the main language in which games are developed. Now games can be played in Indian languages with incorporation of localised context that attracts more people towards these games.
- **Free Games** Most of the games in the gaming ecosystem are free to play. Users have to pay no charges to download and play games. The emergence of freemium games has further aided the development of the gaming ecosystem in India. In this concept, the games are free to play but for some premium features the user has to pay to the developer. This does not deprive those users who wants to download and play free games only without buying the premium version.

Gaming Addiction in Youth

WHO has classified addiction to gaming as a mental health disorder. WHO defines gaming addiction as a pattern of persistent or recurrent gaming behaviour that becomes so persistent that it takes precedence over other life interests. According to a study done by a US based firm has revealed that 24.2% of Indian gamers have skipped work to play games. Many people play games during their work hours. There is enough evidence to suggest that gaming addiction has taken roots in India. WHO has said that gaming addiction can lead to impairments in all aspects of life, including academics, work, relationship and health.

According to psychologists, the following are signs of addiction

- Playing non-stop for prolonged periods.
- Declining social invitations to play games.
- Disturbed personal and professional relations.
- Sleep difficulties and disturbed sleep patterns.
- Headaches, dry eyes, sore fingers.
- Unusual weight gain or loss.
- Changes in daily activities such as eating habits.
- Less concentration on homeworks, studying, office work etc.
- Frequently playing games and not being able to stay away from it.

Effects of Gaming Addiction

Gaming addiction involves various physical and mental effects. The harmful effects of gaming addiction are

Financial Effects Though games are mainly free to play but they include various premium features that are paid. The gamers purchase the premium features in order to progress more in the game. The young people often spend huge amounts of their revenue for purchasing the premium content. Many platforms also require information of debit and credit card even to download free games. Young people who get access to these credit or debit cards often purchase the applications without their parent's consent. This, in extreme cases leads to overburdening debts and in many cases even friendly frauds with the young children.

Effects on Personal Growth One of the major effects on the youth is impact on other areas of life. It affects the personal growth as young people are not able to concentrate on their studies or on their profession. People may feel bored, find it difficult to concentrate and feel demotivated in their educational or professional life. Exposure to violent graphic or sexual content also has emotionally bad effects on young people. It leads to violent behaviour and daily life aggression over petty things. This also affects the personal growth of people because they often feel frustrated with themselves.

Effects on Social Relationships Gaming addiction hinders social interactions as people are busy in gaming while ignoring their relations. Reduced interaction in social lives is dangerous for both physical as well as mental health. Addicted gamers often suffer strained relationships. They often take socially destructive decisions as they prioritise gaming above all other life activities. After finishing their gaming sessions, they do not find time and sufficient energy to invest in their relations.

Effects on Mental Health Mental health is severely affected due to addiction to gaming. It induces anger or rage and young people often shout, scream or even physically attack their relatives or peers. Also, there is strong sense of urgency to return to gaming as soon as one finishes some other daily life task such as eating or doing home or office work. The people also feel isolated or lonely as they spend long times playing games without any interaction. Often the younger gamers feel depressed as they have to withdraw from playing games due to various reasons.

Effects on Physical Health People who continuously play games for longer hours suffer from stiffness, back aches, pain, numbness. Eye strain is common if one looks at the screen for longer times without any breaks. People often play games sitting in poor postures that also leads to complex stress and strains that are difficult to diagnose with common techniques. Gaming addiction also makes the life of people sedentary because people miss out of their regular exercise and even their regular meals. They also indulge in poor and hygienic activities such as eating junk food and eating and playing simultaneously. Gaming addiction also disturbs sleep patterns.

Thus, gaming addiction is a serious problem and puts various aspects of lives of people at risk. Addiction is a chronic condition where the mind perceives the gameplay as pleasurable and stress reducing but it has adverse effects on the young people and their families.

Reasons for Increased Gaming Among People

Video games improves a person's self-confidence and self-esteem. The person becomes empowered and thinks that they can handle the complex challenges of life. It also improves the decision making speed of the people. But it becomes quite dangerous as it is often the violence based action games that improves the decision making abilities.

While playing games teamwork is involved and it improves teamwork and cooperation skills. Contributing to the team and getting rewarded for it also makes the young people feel empowered and energetic.

Games that involve puzzle solving and mathematical skills engages people who have interests in mathematics and solving puzzles. This results in more number of hours being spent on playing games. If this continues for longer periods, it becomes addictive. Gaming gives a real workout to the player's brain. As the players continue to play games, the level of difficulty increases and people find the game more engaging. They find it challenging and have an urge to solve the more difficult levels. As it involves multi-tasking, it gives a sense of high self-esteem and the players feel improvements in their motor skills, decision-making abilities and cognitive skills.

Often friends in the peer groups recommend games to their friends. Social conversations and social buzz created about online gaming attracts younger people toward it. Engaging advertisements and fascinating graphics also contribute to increase in online gaming. Thus, all these factors together contribute to more engagements, less number of working hours and more hours in playing games.

Conclusion

Internet has become an integral part of daily lives of people in India as well as all over the world. More and more smartphones are being used even to carry out daily tasks such as cooking, travelling, learning, schooling etc. Mobile gaming has developed in India for over 2 decades now. While it has provided a sense of satisfaction to people but it has also been positively associated with social anxiety, loneliness and even depression. There is an urgent need to regulate gaming from the level of the family till the national level.

India has very rich demographic dividend if it is reaped in time and properly utilised. Addiction to gaming has emerged as a serious hinderance in reaping this demographic dividend. Though online gaming market has grown by leaps and bounds but it has also created several problems affecting the youth and their families. Such issues clearly underscore the need to rethink the way games on the internet are played and regulated.

12

CENSORSHIP OF WEB SERIES & ITS PROS AND CONS

The present decade of 21st century is changing the entertainment industry at a rapid pace. The entertainment industry has witnessed higher growth due to the emergence of over the top technological platforms or video streaming platforms in India.

At the start of the decade, almost 60% of the film revenue came from theatrical screening of movies and remaining share of revenue was generated by other sources such as CD/DVD release, DTH rights and other overseas rights. But now this trend is changing fast as the demand for video streaming platforms is increasing rapidly. Technology such as low cost internet, cheaper mobile devices, wifi sticks, on the go video streaming etc have enabled the rise of the OTT (Over-the-Top) platforms. These platforms are reducing the dependence on theatres, CDs and DVDs for new content. They stream conventional TV channels as well as web series that are exclusively available on these platforms.

As per the recent study, the most preferred content on these platforms is web series. Over 34% of viewers watch web series on these platforms. About 16% users watch movies and news on these platforms, 13% viewers watch reality TV shows whereas 10% users watch live sports events. Mostly Hindi content (over 80%) is viewed on these platforms.

Reasons Behind the Rapid Rise of OTT Platforms

These platforms are famous among viewers due to various reasons. Primarily, it is used for entertainment purposes. Leisure time is spent by people watching their favourite web series, news, sports etc. on these platforms. It provides high mobility. People can watch the shows while travelling, during lunch hours, during rest periods and it can be accessed anywhere and anytime. These platforms provide their services on mobile devices which are convenient to use. The cheap costs of data has also enabled the users to watch the web series and other contents online on their mobile devices at their own convenience.

The applications providing these contents on the phones are very easy to use. They do not require installation of any set top box, dish set up or even a television. All it requires is a smartphone and a good internet connection. Moreover, the content on these platforms is provided on demand. A person can open the OTT application and start watching whatever show they want to see. They don't need to wait for any scheduled timings in the day when the particular show will be available to them. These platforms are also cost effective. They are free to download and the monthly subscription fee is very low as compared to the traditional set top box or movie theatres.

The content on these platforms can be personalised and any language of one's choice can be chosen to watch the available content. They are also characterised by regular updates. Unlike the set top boxes and movie theatres where new shows and movies are available after longer periods of time, shows on the online platforms are available with regular updates. A diverse range of genres are available on demand. People can watch horror, comedy, drama, classic, romance, epics and various other themes, all on one platform with a single subscription fee. All these factors, together have contributed to the rise of these online platforms in India. These applications have further potential of changing the entertainment industry in India and taking its growth to new levels.

No Regulation Over Web Series Content

Conventional satellite channels provides the broadcasters with the discretion to air particular content. The government authorities are incharge of determining whether a particular content is suitable for being shown to the public. Emergence of online streaming has reduced the role of government in regulation. There are rules and regulations to regulate television operators but they fail to put any checks and balances on the newly emerging online streaming platforms. The personalised subscription based content on these platforms also reduces the surveillance that can be put up in these platforms.

These OTT platforms, streaming various web series are self-regulated. They have signed their self-made censorship code that prohibits them from showing certain types of contents and set up a grievance redressal mechanism for consumer complains. However, not all platforms have signed this code. Hence, many of these web series are still unregulated and their content is still not scrutinised before being aired. Though the government has said that they will regulate online content but rules are not yet clear.

The regulation is carried out by Cinematograph Act of 1952 and Cable TV Networks (Regulation) Act, 1955 and Cable TV Network Rules, 1994. These rules and laws lay down program and advertising codes that need to be followed during these broadcasts, but the definitions under these laws do not cover web series content on the OTT platforms. Thus, these platforms and web series are free to broadcast content that is on demand, whether it is abusive, obscene or hurt feelings and sentiments of a particular community. Thus, the unregulated nature of the OTT web series should be regulated by a separate body and laws, so that the regulatory loopholes can be filled.

Pros of Censorship and Regulation

The web series and associated content over the digital platforms have succeeded in reaching the wider audiences. But explicit content and violent content is also reaching our children and has adverse effects on their mindsets and lives. The advantages of censoring and regulating online web series content includes

- It protects the freedom of speech and expression of people as watching a particular web series is also included in expression and speech. Censorship and regulation can keep the people, particularly the children, away from violent and sexually manipulating content that can expose them to pornographic materials and various forms of discrimination. Thus, freedom of one community is balanced with that of the other community.
- Censoring and regulating this type of content can also prevent the people from being victims of abuse, violence and becoming perpetrators themselves. Children can get influenced and it could lead to changes in their behaviours that are harmful for others.
- It prevents certain religious and social groups from watching offensive content in these web series. Web series often broadcast that type of content which is eye catching and involves controversies. This is broadcasted to get as much subscribers and views as one can. Thus, regulating this type of content, which is religiously and socially offensive can be done to maintain a balance in the society.
- It will also prevent violent crimes and abusive culture that is taking roots in the Indian society. Many of the web series thrive upon violent and uncensored crime scenes that particularly influences the young people and they get indulged in these type of activities at an early age. The adolescent population is particularly vulnerable to such content.
- Certification and censorship will also improve the content being broadcasted on these online platforms in the form of web series. More relevant content that is relevant for Indian society can be made as opposed to the current western influence on these platforms.
- Regulation will also curtail the unfair advantages that is enjoyed by the OTT platforms broadcasting web series as compared to the traditional television. Thus, it will provide fairness and healthy competition on these platforms.

Cons of Censoring and Regulating

The disadvantages of censoring and regulations are

- It will curtail the freedom of speech and expression of creators. It will also curtail the creative expression of movie makers. Further, censoring a particular content can also lead to deprivation of public information related to the social issues prevailing in the society.
- Censorship is also guided by political interests. Often content that reveals truth about the ills of the ruling class is censored as to influence the voters. Web series that support a particular political party is also aired closer to the election times. There have been censorship attempts against shows and movies that have criticised the policies of the governments in the past.
- There are loopholes in the enforcement of censorship. Despite various laws for censoring, it has not yet been able to fully censor violent and explicit content. Still various TV shows and movies are filled with violent scenes and nudity. Thus, it is argued that web series censorship will also be waste of taxpayer's money and some other method should be invented.
- Censoring can also demotivate and demoralise creative expression of individuals. It can have negative effects on the fast growing entertainment industry of India as people will be demotivated to make new content because of fear of censorship.

Conclusion

The OTT technological platforms have successfully taken roots in the Indian entertainment market. It has led to a rush for ratings and profit making among the producers of the web series that are mainly viewed on the OTT platforms. These online platforms have given an opportunity to the Indian producers and creators in expressing themselves fully; simultaneously reaching the widest audience possible, breaking all the age, sex, class and caste barriers. But this industry is also affected by issues such as violent content, promoting hatred, discrimination, sexual nudity etc.

Thus, these concerns about the web series content should be addressed as soon as possible by consultations with all the stakeholders such as producers, the government, viewers and relevant regulators. It is proven, as in the case of other countries too that self-regulation is more or less similar to no regulation. Hence, censorship and regulation should be prioritised so that good quality content can be filtered out from the bad one.

CHILD LABOUR IN INDIA

AN UNAVOIDABLE DILEMMA

Childhood is considered to be the golden period of one's life but this doesn't hold true for some children who struggle to make their both ends meet during their childhood years. At a tender age, which is supposed to be an age of playing and going to school, some children are compelled to work in factories, industries, offices or as domestic help. Child labour means employment of children in any kind of work that hampers their physical and mental development, deprives them of their basic educational and recreational requirements.

According to the data from Census 2011, the number of child labourers in India is 10.1 million of which 5.6 million are boys and 4.5 million are girls.

History of Child Labour in India

Earlier, the children used to help their parents in agricultural practices such as sowing, harvesting, reaping and taking care of cattle etc. But industrialisation and urbanisation have in a way encouraged child labour. Now, children are employed in hazardous work such as bidi rolling, cracker industry, pencil, matchbox and bangle making industries, roadside dhabas (restaurants), hotels etc.

Working in these industries possess great risk to child physically and mentally. Some of them are :

- In the bidi industry, children are expected to perform all the chores of rolling, binding and closing the ends of bidis using their nimble fingers.
- The cracker industry poses threat to the lives of the children due to their direct exposure to the explosive material.
- The bangle and pencil making industries make the child susceptible to different respiratory problems and lung cancer, in the worst cases.
- Besides, children are employed as labourers in the garment, leather, jewellery and sericulture industry where children's health suffers due to poor working conditions.

Causes of Child Labour

A number of factors could be attributed to the rise of this menace. In the poor and lower strata families, children are considered to be an extra earning hand. These families have a conviction that every child is an earner, so they have more number of children. The children are expected to shoulder their parents' responsibilities. Parental illiteracy is also one of the contributors to this problem. Education tends to take a backseat in the lives of these children. The uneducated parents consider education as an investment in comparison to the returns which they get in the form of earnings of their children.

Employers also prefer child labourers in comparison to adults. This is because they can extract more work and still afford to pay the children lesser amount.

Hardships Faced by Child Labourers

The child labourers are subjected to unhygienic conditions, late working hours and different atrocities which have a direct effect on their cognitive development. Due to poor working conditions and undernourishment, child suffers from various health complications. The young and immature minds of the children find it difficult to cope with such situations leading to different emotional and physical problems. Uneducated/Unguided children who work in society sometimes get influenced by criminal activities and commit crimes at a low age.

Bonded child labour is one of the worst forms of child labour. In this, the children are made to work in order to pay off a loan or debt of the family. Bonded labour has resulted into trafficking of the children from rural to urban areas in order to work as domestic helps or in small production houses or just lead the life of street beggars.

Role of Government & NGOs

The government has an important role to play in this fight against child labour. As poverty is one of the major cause of child labour in India, the government needs to assure that it provides basic amenities to all its citizens and there is an equal distribution of wealth. It needs to generate sufficient jobs to assure employability to the poor.

At the same time, NGOs can provide vocational training to people in order to get them good jobs or to make them self-employed. The government, in collaboration with NGOs, should reach out to the poor people to make them understand the importance of education. They should be made aware of the government's initiative to provide free education to all the children between the age group of 6-14 years. The parents must be encouraged to send their children to the schools instead of work places.

Efforts to Stop Child Labour

To prohibit the child labour in India, the Nobel Prize winner Kailash Satyarthi took an initiative. He is the founder of Bachpan Bachao Aandolan (BBA), an organisation dedicated towards the eradication of child labour and rehabilitation of the rescued former child workers. The former President Pranab Mukherjee launched a "100 million for 100 million" campaign, that was conceptualised to end child labour, child slavery, violence against children, etc.

Educated citizens can contribute significantly in spreading the awareness about the harmful effects of child labour. High income group families can pool in funds to support the education of poor children. Schools and colleges can come up with innovative teaching programmes for the poor children. The principle of 'Each one, teach one' can be followed. Children of the support staff (peons, clerks etc.) of schools and colleges can be offered free education.

There are certain things we can do at our level to combat the menace of child labour. The need of the hour is to expand the machinery for enforcing the various laws on child labour. If child labour is to be eradicated from India, the government and those responsible for the enforcement need to do their jobs sincerely.

Laws to Safeguard Children's Right

The Indian Government enacted many laws to protect child rights, namely the Child and Adolescent Labour (Prohibition and Regulation) Act, 1986, the Factories Act, 1948, the Mines Act, 1952, the Bonded Labour System Abolition Act and the Juvenile Justice (Care and Protection of Children) Act, 2000.

Most of these acts prohibit the employment of children below the age of 14 years in factories, hazardous occupations or in bondage. The National Policy on Child Labour, 1987 looks into the rehabilitation of children working in hazardous occupations. Article 39 of the Indian Constitution declares the duty of the state to provide the children the facilities to develop in a healthy and congenial environment and in conditions of freedom and dignity.

The Right of Children to Free and Compulsory Education Act, 2009 mandates free and compulsory education to all children between the age group of 6 to 14 years. Apart from this, it also reserves 25 per cent seats in every private school for Economically Weaker Sections (EWS) of the society.

In May 2015, the government approved a proposal allowing children below 14 years of age to work in family enterprises or entertainment industry with specific conditions. In July 2016, the Parliament passed the Child Labour (Prohibition and Regulation) Amendment Bill, 2016. This Act amends the Child Labour (Prohibition and Regulation) Act, 1986 by widening its scope against child labour and provides for stricter punishment for violations. This Act completely banned employment of children under 14 years in certain occupations like bidi-making, mines, powerlooms, domestic work etc and also provides for the rehabilitation of children.

Key international laws dealing with child labour include the UN Convention on the Rights of the Child (CRC) 1989 and the International Labour Organisation (ILO) Conventions on the Minimum Age for Admission to Employment of 1973 and on the Worst Forms of Child Labour Convention, 1999. Indian Government has ratified both the ILO Conventions which deal with the minimum age for admission to employment and with prohibition of the worst forms of child labour.

Conclusion

The government needs to ensure that it has foolproof laws and they are properly executed as well as implemented. Strict measures need to be taken against those who encourage child labour in any form. Children are the future of a country and it is the childhood which has a profound impact on the future of a child.

A nation full of poverty ridden illiterate children cannot make progress. So, it becomes the collective responsibility of the citizens, society and the government to provide them an environment which helps them to bring out the best of their capabilities, thus, participate in the nation building process.

14

DIVYANGS

THEIR RIGHTS AND CHALLENGES

Article 1 of the United Nations Convention on the Rights of Persons with Disabilities offers that “Persons with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which in interaction may hinder their full and effective participation in society on an equal basis with other.” In this light, disability may be defined as a condition which may restrict a person’s mental, sensory or mobility functions to undertake or perform a task in same way as a person who does not have a disability.

Prime Minister Narendra Modi in one of his radio address of ‘Mann ki Baat’ regarded physically challenged person with divine ability. He also used the term ‘Divyang’ for Person with Disability (PwD).

There are currently more than 2 billion disabled people in the world, which is 37.5% of the world population. As per the census 2011, the number of persons with disabilities in India is around 2.68 crore constituting 2.21% of the total population. The increase is more in the rural areas and in the state of Maharashtra, Andhra Pradesh, Odisha, Jammu and Kashmir and Sikkim. The people with disabilities are often excluded and denied their rights in the society especially in rural area.

Types of Disability

Categories of disability types include various physical and mental impairments that can hamper or reduce a person’s ability to carry out their day to day activities. Disability can be broken down into following sub-categories

- **Mobility/Physical** Includes upper and lower limb disability, manual dexterity and disability in coordination of different organs of body.
- **Spinal Cord Injury** May result in partial or total disfunctioning of sensory organs.

- **Head Injuries or Brain Disability** Occurs due to brain injury and are of two types : Acquired Brain Injury and Traumatic Brain Injury.
- **Vision Disability** Blindness or ocular trauma.
- **Hearing Disability** Deafness.
- **Cognitive or Learning Disability** Impairment associated with dyslexia.
- **Psychological Disorders** Personality disorders or schizophrenia.
- **Invisible Disabilities** Not immediately apparent.

Problems Faced by Divyangs

Persons with Disabilities (PwDs) or Divyangs often lack support services. It is due to lack of support services, they are denied basic education or vocational training. As per the India Social Development Report (SDR), about 45% of all PwDs in India are illiterate. There are various issues such as availability of special schools, trained teachers and availability of educational materials for the disabled.

Further, they are also denied of employment opportunities. Lack of rehabilitation leads to poverty. Most of the public spaces in India are not equipped with special requirements of the disabled people. Lack of adequate disabled-friendly facilities has acted as bigger roadblock and has prevented differently abled people from making valuable contributions to the society.

Initiatives taken by Government of India

India is a signatory of the United Nations Convention on Rights of Persons with Disabilities (UNCRPD). Further, India has ratified the convention in 2007.

Government of India has taken several steps for inclusion and empowerment of PwDs/Divyangs in line with the obligations under UNCRPD. Some of the schemes and initiatives undertaken by Government are as follows

- **Assistance to Disabled Persons for Purchasing/Fitting of Aids/Appliances (ADIP) Scheme (1981)** It has been launched to assist the needy disabled persons in procuring durable, advanced and scientifically manufactured, modern, standard aids and appliances. The scheme intends to promote the physical, social and psychological rehabilitation among disabled.
- **Deen Dayal Disabled Rehabilitation Scheme (DDRS) (2003)** The objective of DDRS scheme is to create an enabling environment to ensure equal opportunities, equity, social justice and empowerment of persons with disabilities. The approach of this scheme is to provide financial assistance to voluntary organisations to make available the whole range of services to PwDs.
- **Scholarships for Persons with Disabilities (PwDs) (2014-15)** The scheme has been launched by the Department of Disability Affairs to provide financial assistance to the parents of students with disabilities for studying at Pre and Post Matric Level.
- **Accessible India Campaign (2015)** Accessible India Campaign or Sugamya Bharat Abhiyaan is a program which has three important components- to build environment accessibility, transportation system accessibility, information and communication eco-system accessibility.

- **Schemes of the National Trust** The National Trust is an autonomous organisation of the Ministry of Social Justice and Empowerment, Government of India. The National Trust works for the welfare of persons with disabilities of Autism, Cerebral Palsy, Mental retardation and Multiple disabilities.

The National Trust has launched DISHA (Early Intervention and School Readiness Scheme) for early intervention for Person with Disability (PwD) through therapies, trainings and providing support to family members. The National Trust has also launched Vikas Day Care Scheme for people with Autism, Cerebral Palsy and multiple disabilities above the age of 10 years. The scheme aims to improve interpersonal and vocational skills.

- **Unique Disability ID** ‘Unique ID for persons with Disabilities’ project is an initiative of Department of Empowerment of Persons with Disabilities and Government of India. It aims at building a holistic end-to-end integrated system for issuance of Unique Disability ID and certificates.
- **The Rights of Persons with Disability Act, 2016** The act is the disability legislation passed by Indian Parliament to fulfil its obligation to the UNCRPD. The act listed seven conditions of disabilities to be covered which were blindness, low vision, leprosy, hearing impairment, locomotor disability, mental retardation and mental illness. The law also seeks to enhance the rights and entitlements of PwD and provides effective mechanism for ensuring their empowerment.

Way Forward

The Constitution of India ensures equality, freedom, justice and dignity of all individuals and mandates an inclusive society for all including persons with disabilities. The Constitution of India further lays the responsibility for empowering the disabled persons to states. People with disabilities need much more support than others in the face of pandemic. We would fail as a human race if we don't show a humane response equitably with affirmative action for people with disabilities. A multi-sectoral collaborative approach involving all stakeholders, Government of India, Ministries, State Governments/UTs, Central/State undertakings, local authorities and NGO's is required. Appropriate authorities must undertake activities for the empowerment of Divyangjans.

A TEN-YEAR RURAL SANITATION STRATEGY

SUSTAINING INDIA'S 100% ODF (OPEN DEFECATION FREE) MISSION

Sanitation strategy is the process of providing facilities, services and provisions for the safe disposal of human waste. According to World Health Organisation (WHO), about 60% of world's open defecation takes place in India. Inadequate sanitation is a major cause of diseases world-wide.

The Department of Drinking Water and Sanitation (DDWS) under the Ministry of Jal Shakti, Government of India, launched the Ten year Rural Sanitation Strategy (2019-29) in September, 2019. It focuses on sustaining the sanitation and behaviour change that has been achieved under the Swachh Bharat Mission-Grameen (SBM-G), ensuring that no one is left behind and increasing access to solid and liquid waste management. For this, Government divided all the areas into three categories

- **ODF** An area can be declared as Open Defecation Free (ODF), if not even a single person is found defecating in the open at any point of the day.
- **ODF+** If the area is declared as ODF and all community and public toilets are functional and well maintained at any point of the day.
- **ODF++** If the area is already declared as ODF + and the faecal sludge/septage and sewage are safely managed and treated with no discharging or dumping of untreated faecal sludge into the open drains, water bodies or areas.

Earlier Sanitation Programmes

Several sanitation programmes had been in operation in the country from 1986 onwards, but their achievements were slow and unsatisfactory. Throughout the Indian history from Patanjali's philosophy to the writings of Vivekananda and the Gandhian concept of sanitation, the emphasis on sanitation has always been integral to India's cultural foundation. Though built on a history of understanding the relevance of sanitation, marginal concern was accorded to it among human settlements developed in the pre-independence period under British rule. Then, in 1986, the Government of India launched the Central Rural Sanitation Programme (CRSP), the first nationwide sanitation programme.

Several other nationwide Sanitation Programmes have been launched since then, such as the Nirmal Bharat Abhiyan (NBA), 1999 in rural India and Basic Services for Urban Poor (BSUP), 2005 and the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) in urban India.

Present Scenario

After the launch of SBM-G in 2014, over 10 crore toilets have been built in rural areas and over 5.9 lakh villages, 699 districts and 35 States/UTs have declared themselves Open Defecation Free (ODF). The Ten year Rural Sanitation Strategy lays down a framework to guide gram panchayats, policy makers, implementers and other stakeholders in their planning for 'ODF Plus' status in which everyone uses a toilet and every village has access to solid and liquid waste management. Before 2014, less than 50% households in the country had access to sanitation facilities (even lesser in rural areas), only 30% of the generated wastewater and sewage was treated before being discharged into rivers and streams and about four lakh children each year died of diseases such as cholera, dysentery and diarrhoea or suffered from stunted growth as a result of poor sanitation.

Ten Year Sanitation Strategy : The ODF Plus Strategy

The current ODF Plus Strategy is different from the earlier programmes, as it has given a major role to the Gram Panchayats in waste management. Further, it is aligned to the Sustainable Development Goals (SDGs) related to clean water and sanitation, which were both missing in earlier programmes. Two salient features of the rural sanitation strategy are to sustain the gains made under SBM-G and to achieve a clean living environment with solid and liquid waste management.

The first element of the ODF Plus Strategy is sustained usage of individual household latrines on a continual basis. One problem with usage of rural household latrines has been non-availability of piped water or continual source of water to ensure cleanliness of household latrines. This is related to the Jal Jeevan Mission of the Ministry of Jal Shakti, under which piped water supply to all rural households will be ensured by 2024.

Other elements of the ODF Plus Strategy include ensuring that no one is left behind from earlier Sanitation Programmes, providing sanitation access to new households, sanitation coverage of public spaces through public and community toilets, implementation of solid and liquid waste management in rural areas and maintenance of visible cleanliness.

Role of Gram Panchayat

Gram Panchayats will be the key in realising ODF Plus with support from Village Water and Sanitation Committees. It will be responsible for ensuring ODF sustainability, adoption of solid and liquid waste management and continuation of sanitation behaviour as well as monitoring for slippages.

The Gram Panchayats will conduct rapid assessment of water and sanitation gaps and develop plans with the involvement of the community to address the gaps. They will create management systems for the operation and management of sanitation services and sensitise communities for contributing funds towards the required infrastructure.

Measures to be Taken Under the Strategy

Waste management through ODF Plus Strategy will take place in the areas of biodegradable and non-biodegradable waste management, greywater management and Fecal Sludge Management (FSM). Non-biodegradable household waste management will focus on plastic waste, as it is a major problem today.

Greywater is the waste water generated from water used in the kitchen, for bathing and washing clothes. It stagnates, leading to breeding to the mosquitoes and incidence of diseases. It may reach ponds, lakes and rivers, causing both microbial and chemical pollution. Fecal Sludge Management will include construction of FSM treatment plants for village clusters or using existing Sewage Treatment Plant (STP) facilities of nearby urban areas.

While the sanitation infrastructure is being upgraded, the village population will need to change their information, education and communication strategy. It means giving messages through the mass media such as radio, TV, newspapers, etc at Central and State levels for reinforcing behaviour change and continued inter-personal communication at the household level to sustain the usage of toilets and for use of overall safe sanitation practices.

Further, the capacity of the rural communities will be strengthened through a number of measures. The National Skill Development Corporation (NSDC) will help to enhance skills in sanitation and allied sectors. Each state and district will have a Training Management Unit (TMU) to provide oversight and support to the capacity strengthening interventions. The district level TMU shall have the responsibility of imparting training at the Block level for all the Gram Panchayat functionaries.

Sustaining the gains from SBM-G and moving towards ODF Plus, require high managerial and operational competence to ensure sustainability and utilisation of investments in sanitation. In addition, government funding will remain the primary source of financing in the sanitation sector. However, encouraging alternate means of financing is an important focus area to ensure sustainable financing of sanitation in rural India. Monitoring and evaluation on a regular basis of the success of all these measures is necessary.

Thus, sample surveys will be conducted by an independent verification agency to assess issues related to continued usage of toilets, sustainability of ODF villages and progress on solid and liquid waste management.

Conclusion

The goal of Sanitation project is to understand the success of government's rural sanitation scheme from the view of coverage, equity, accountability, efficiency and health. All these plans and programmes of the government cannot be sustained without the active participation of the rural dwellers. It therefore, goes without saying that for sustaining India's 100% ODF over the next ten years, it will have to become a Jan Andolan.

INDIAN SECULARISM

A BLEND OF CONSTITUTIONAL AND CULTURAL HERITAGE

Secularism means separation of religion from political, economic, social and cultural aspects of life and religion being treated as a purely personal matter. It emphasizes dissociation of the state from religion and full freedom to all religions and tolerance of all religions. It also stands for equal opportunities for followers of all religions and no discrimination on grounds of religion.

Historical Context of Secularism in India

Secular traditions are very deep rooted in the history of India. Indian culture is based on the blending of various spiritual traditions and social movements. In ancient India, the Sanatan Dharma (Hinduism) was basically allowed to develop as a holistic religion by welcoming different spiritual traditions and trying to integrate them into a common mainstream. Even after the advent of Jainism, Buddhism and later Islam and Christianity on the Indian soil, the quest for religious toleration and co-existence of different faiths continued. In medieval India, the Sufi and Bhakti Movements bonded the people of various communities together with love and peace. The leading lights of these movements were Khwaja Moinuddin Chisti, Baba Farid, Sant Kabir Das, Guru Nanak Dev, Saint Tukaram and Mira Bai, etc.

The spirit of secularism was strengthened and enriched through the Indian Freedom Movement too, though the British have pursued the policy of divide and rule. However, Indian Freedom Movement was characterised by secular tradition and ethos right from the start. Gandhiji's secularism was based on a commitment to the brotherhood of religious communities based on their respect for and pursuit of truth, whereas, JL Nehru's secularism was based on a commitment to scientific humanism tinged with a progressive view of historical change.

Philosophy of Indian Secularism

The term 'secularism' is like to the Vedic concept of 'Dharma Nirapekshata' i.e. the indifference of state to religion. The model of secularism adopted by the western societies is based on the complete separation of religion and state (i.e. separation of church and the state). Indian philosophy of secularism is related to 'Sarva Dharma Sambhava' (literally it means that destination of the paths followed by all religions is the same, though the paths themselves may be different) which means equal respect to all religions.

This concept, embraced and promoted by personalities like Vivekananda and Mahatma Gandhi is called 'Positive secularism' that reflects the dominant ethos of Indian culture. India does not have an official state religion. However, different personal laws on matters such as marriage, divorce, inheritance, alimony varies with an individual's religion. Indian secularism is not an end in itself but a means to address religious plurality and seeks to achieve peaceful co-existence of different religions.

Secularism and Indian Constitution

There is a clear incorporation of all the basic principles of secularism into various provisions of Constitution. The term 'Secular' was added to the Preamble by the 42nd Constitutional Amendment Act of 1976 (India is a sovereign, socialist, secular, democratic, republic). It emphasises the fact that constitutionally, India is a secular country which has no state religion. And that the state shall recognise and accept all religions and not favour or patronise any particular religion.

While, Article 14 grants equality before the law and equal protection of the laws to all, Article 15 enlarges the concept of secularism to the widest possible extent by prohibiting discrimination on grounds of religion, race, caste, sex or place of birth. Article 25 provides 'Freedom of Conscience', that is, all persons are equally entitled to freedom of conscience and the right to freely profess, practice and propagate religion. As per Article 26, every religious group or individual has the right to establish and maintain institutions for religious and charitable purposes and to manage its own affairs in matters of religion. Article 51A i.e. Fundamental Duties obliges all the citizens to promote harmony and the spirit of common brotherhood and to value and preserve the rich heritage of our composite culture.

Threats to Indian Secularism

While the Indian Constitution declares the state being absolutely neutral to all religion, our society is steeped in religion. Mingling of religion and politics that is mobilisation of votes on grounds of primordial identities like religion, caste and ethnicity, have put Indian secularism in danger. Communal politics operates through communalisation of social space, by spreading myths and stereotypes against minorities, through attack on rational values and by practicing a divisive ideological propaganda and politics. Politicisation of any one religious group leads to the competitive politicisation of other groups, thereby resulting in inter-religious conflict.

One of the manifestations of communalism is communal riots. In recent past also, communalism has proved to be a great threat to the secular fabric of Indian polity. Rise of Hindu Nationalism in recent years have resulted into mob lynching on mere suspicion of slaughtering cows and consuming beef. In addition with this, forced closure of slaughterhouses, campaigns against 'love jihad', reconversion or ghar-wapsi (Muslims being forced to convert to Hinduism), etc., reinforces communal tendencies in society. Islamic fundamentalism or revivalism pushes for establishing Islamic state based on Sharia Law which directly comes into conflict with conceptions of the secular and democratic state. In recent years, there have been stray incidences of muslim youth being inspired and radicalised by groups like ISIS which is very unfortunate for both India and the world.

Way Forward

In a pluralistic society, the best approach to nurture secularism is to expand religious freedom rather than strictly practicing state neutrality. It is incumbent on us to ensure value-education that makes the younger generation understand and appreciate not only its own religious traditions but also those of the other religions in the country.

There is also a need to identify a common framework or a shared set of values which allows the diverse groups to live together. The prerequisites to implement the social reform initiative like Uniform Civil Code are to create a conducive environment and forging socio-political consensus.

17



SOCIAL MEDIA

BLESSING OR CURSE FOR THE SOCIETY



A social networking site is an online platform which people use to build social networks or social relationship with other people who share similar personal or career interests, activities, backgrounds or real-life connections. Social media has facilitated a lot in reshaping communication industry and redefining the ways in which we communicate and express ourselves. Social media engages people constantly and accumulate everyone in some or the other trending activity.

People have embraced social media so persistently that it has become an integral part of our lives now. It is being used not only by individuals but also businesses, organisations and governments, who are utilising social media platforms for constant engagement with the masses. However, there are a number of evidences from different studies that shows that increase in the usage of smartphone and social media leads to mental distress, self injurious behaviour and suicidal tendency among youth.

Different Types of Social Media

The list of social media platforms is growing and these platforms are always evolving. On these platforms, users can share thoughts, curate content, upload photos and videos, form groups based on interests and participate in lively discussions. They're built around the user and everything that's important to them and their social circles.

Following are the types of social media networks

- **Social Networking Sites** Most of us are familiar with social networking sites like Facebook, Twitter and LinkedIn. These platforms help us connect with friends, family and brands. They encourage knowledge sharing and are all about personal, human to human interaction.
- **Media Sharing Networks** Social media platforms like Instagram, Youtube and Snapchat are used to share photographs, video and other kinds of media on the web.
- **Discussion Forums** Social media channels like Reddit, Quora and Digg are used for finding, sharing and discussing different kinds of information, opinions and news.
- **Bookmarking and Content Curation Networks** Social media networks like Pinterest, Flipboard helps to find out, share, discuss and save a variety of latest content and media that are trending as well.
- **Customer Review Networks** Sites like Yelp, Zomato, TripAdvisor helps you to find, share and review different information about a variety of products, services or brands.

Social Media : A Double Edged Sword

In India, millions of people use social networking sites for various purposes. India is home to over 400 million people that use social media platforms.

The number of social media users have increased by 130 million between 2019-2020. Most of the users in India are using social media platforms through their mobile devices, which are prone to hacking and malicious activities.

Every social media has two sides-bright and dark. It can either be a help or a hindrance depending on the way how people use it. It is a known fact that social media sites have been used for various purposes that have brought a revolution in the society. On the other hand, there have also been various negative consequences of use of social media. Thus, it has the following advantages as well as disadvantages

Advantages of Social Media

Some of the advantages of social media are as follows

- **Connecting People** The primary advantage of social media is connectivity. People from all over the world can connect with each other easily. Social media connects us with people we may never meet in person, yet we're still able to develop a strong relationship with these people.
- **Equivocal Expression** On social media platform, there are no regulators when someone publishes something *via* his/her social profile. A person can express his/her opinion without any outside influence. Social media has emerged as a democratised platform.
- **Revolution in Business** Small businesses and large businesses now have the same opportunities to speak with people through social media platforms. They can advertise their products through social media platforms.
- **Help and Assistance** Another primary advantage of social media is that there are sections and groups on social networking sites like Facebook and Twitter which are dedicated to help people out who are facing any issues regarding any product or services.

- **Consumer Insight** Brands are also now able to tailor their products and services to what people really need and are looking for. Social networking helps narrow the gap between a company and their current and/or potential consumers.
- **Education** Social media have immensely benefited the education sector all over the world. With the arrival of online classes to the availability of all kinds of learning resources, every student can easily educate themselves.

Disadvantages of Social Media

Some of the disadvantages of social media are as follows

- **Misinformation and Fake News** As the reach of social media is increasing, there's both 'real' and 'fake' information to be found *via* social content. People can find real news and they can find fake news, laid out as real.
- **Cyber-Bullying** Social media can also facilitate cyber-bullying, which can take disagreements to new levels, leaving little escape for victims. People seem to feel bolder and more apt to attack others when hiding behind their screens.
- **Social media can be addictive** Social media is quite addictive and is highly damaging and detrimental for personal lives. Social media addiction result into poor performance in academics, increased inferiority complex due to constant comparison with others and deficit of real-life social skills and emotional intelligence.
- **Privacy Concern** Many of servers of these social media Apps are located outside the country. There have been instances of data leakage and breach of the privacy of its users. Many of the users of social media are adolescents who are generally unaware of privacy guidelines. The recent example of Bois Locker Room in Delhi was seen in this context.
- **Health Issues** The excess use of networking sites has created many health issues. People who are addictive to these sites experience many negative side effects such as headache, eye strain, sleep deprivation etc.

Future of Social Media in India

Social media and networking have grown tremendously in the last two decades. The growth of social media sites has mainly been aided by a large number of young people in India. India has the largest number of facebook users in the world. It has offered a large number of opportunities to individuals, small businesses, educators, marketing companies, schools and colleges etc. Thus, the social networking media is here to stay and grow leaps and bounds. Also, e-learning has become a part of everyone's daily routine. Thus, there is a prospect for the growth of more users on social networking sites.

There is need to strictly regulate the flow of misinformation, abuse, fake news etc. that have the ability to harm the citizens. There should be laws and policies clearly defining as to how the data of the people is to be stored, used and shared because it concerns the national security and sovereignty of India. If social media is regulated appropriately, it will bring enormous benefits for everyone.

Conclusion

Communication is vital to the human race as social beings. However, with the increase in penetration of social media, the onus falls on each individual who uses social media to be mindful while spending time online. Guardians must also keep an eye on how their children use social media, to monitor their social connections and restrict the amount of time they spend socialising and playing games on it. Social networking has advantages as well as disadvantages. We need to look at the problem in a scientific manner. On a positive note, we can control child's addicting habits by limiting his/her screen time.

18



INCREASING POPULATION

BOON OR BANE



Today, we are facing rapid increase in population in many parts of the world. The sudden increase in the number of individuals in a community is often termed as population explosion. In the past 200-300 years, the world's population has increased tremendously. It is predicted that the human population will increase by 1 billion in the next decade. Population explosion results mainly due to accelerating birth rate, a decrease in infant mortality and increase in life expectancy. Many people look at the population explosion as a problem or have negative viewpoint about it, however, several people also look at it as a huge opportunity for a Nation to achieve its ambitions. It can be said that population growth can be blessing, but when it put the pressure on resources, it becomes bane.

Status of Population in India

India is the second most populated country in the world with nearly a fifth of the world's population. According to the 2011 Census Report, the population of India is 1.21 crore with 62.37 crore males and 58.64 crore females. The total literacy rate in the country at present is 74.04%. The density of population is 382 persons/sq km. UN report of 'The World Population Prospect 2017' revision by Department of Economics and Social Affairs has forecasted that Indian population will surpass the population of China by 2025.

Reasons for Population Explosion

Population growth and demography is a multi-dimensional concept, hence many scholars from different fields such as Geography, Economics and Anthropology have suggested many reasons for the rapid growth of Indian population.

In this section, we will discuss various social, economic and political causes for population growth in India.

- **Social Causes** The high illiteracy and absence of rationalism among people are the main reasons for high birth rate. The religiously orthodox and conservative people are against the use of family planning measures. Compared to developed countries, the age of marriage for girl child is low in India.
Further, she is burdened with reproducing a son which creates a scenario of unwanted girl child. Similarly, emphasis on agriculture, dominance of joint family and high rural population are seen as other reasons for the population growth.
- **Economic Causes** Widespread poverty is also the cause of increase in population. Poor people believe more children as an asset. In addition to it, there is lack of social security in India, hence children are seen as insurance by many communities in India. The high infant mortality rate also pushes people to reproduce more children.
- **Political Causes** India is a democratic polity where political leaders are seen as patron in chief of the community. Since representative of people are selected on majority of votes polled, their respective community's leaders discourage population control measure. Further, population control measures are seen as government sponsored program with citizens as beneficiary whereas in other developed countries, it is movement by citizens and supported by the government.
- **Geographical Causes** Around 50% of India's population is directly or indirectly indulged in agriculture which is subsistence in nature, hence more children are seen as helping hands in highly intensive agricultural operation.

Effects of Population Explosion

The phenomenon of population explosion has led to various problems that includes low rate of capital formation because of high dependency ratio, low standard of living, high poverty and lower productivity of labour. Some of the effects of population explosion are as follows

- Socially, population explosion leads to migration of people from rural areas to the urban areas causing the growth of slum areas. People in slums live in most unhygienic and insanitary condition which gives birth to number of diseases.
- Migration in big cities often lead to several associated problems. Overcrowding, traffic congestions, frequent accidents and pollution in big cities are the direct results of over population.
- Population explosion is the result of high birth rate. Frequent pregnancy without leaving a gap which is hazardous to health of mother leads to high death rate among women in the reproductive age.
- Environmental consequences of population explosion are even more dangerous. It increases pressure on land and leads to further sub-division and fragmentation which is compensated by using synthetic fertilizers, insecticides and pesticides which in turn pollute land, water and air.
- Lastly, increased housing and transportation needs creates pressure on existing natural resources of the country which is limited in nature. It also significantly increases the Green house gas emission in atmosphere.

Population Growth as Boon

- Population growth provides us with a more number of working population. Larger population provides a greater manpower. If this manpower is utilised efficiently in different sectors, it can lead the country towards prosperity.
- India's population is termed as a young population as the average age of Indian population is around 25-26 years, which is considered as productive age. This kind of population can help the economy to grow.
- Greater population means more consumers for industries. So many industries focus on the countries having large population to sell their products. These leads to competition and eventually leads to a fall in the prices of many goods.
- Population explosion also provides us with people of multiple talents in the fields such as sports, music, art etc. If a country invests well on human resources and provides enough opportunities to the people, it can come up with vast pool of talented people.
- With the increase in working age population, the dependency rate will decrease. It will also add savings and investments in the country as more people are in employable age group. This will bring economic prosperity in the long run.

Population Growth as Bane

- The increase in population puts a pressure on the several resources. This leads to the overall shortage in land, jobs, capital, housing and health services.
- Rapid population explosion has led to the over exploitation of the natural resources and degradation of environment.
- To cater the demands of ever increasing population, building the subsequent infrastructure for providing basic necessities like health, education and water become a challenge for various government authorities.
- For feeding a large population, we need more production of food. Even though new techniques of agriculture have increased our productions, there is still malnutrition reported in parts of country.
- Poverty is one of the key issues which is directly linked with over population.
- When the population is large, there are employment issues. Many people have the necessary qualifications but there are not enough jobs for them.
- Population explosion ultimately leads to the decrease in per-capita income and standard of living of the people.

Conclusion

While the population explosion can give us many opportunities for development, it also undermines the available resources. This results in the degradation of the quality of living. The quality of an undernourished, poverty stricken, unhealthy but big society is definitely lower than a smaller but healthy, educated, economically secured and well employed society. The population can be our strength only when we have resources and power to feed, provide the basic facilities, health care and jobs. This will mould them into an asset. But in reality, we don't have the necessary resources to do this. Therefore, we should make conscious efforts as individuals to put a curb on further population increase. It is the only way through which we can secure better future for upcoming generations. Highlighting the importance of population control, Prime Minister in his Independence Day Speech of 2019, equated the "family planning as another form of patriotism." Hence, family planning needs to taken as another 'Jan andolan' by the citizens of the country in order to visualize the dream of making India a global superpower.

ROLE OF MEDIA IN INDIAN DEMOCRACY

Media refers to the communication outlets or tools that are used to store and deliver the information or data. The components of the mass media include communications industry, such as print media publishing, the news media, photography, cinema, broadcasting (radio and television) and advertising. In India, media constitutes the fourth pillar of democracy.

Media supplies the political information that influences voter's decision. They identify problems in our society and serve as a medium for deliberation. They also serve as watchdogs that we rely on for uncovering errors and wrongdoings by those who have power. Media is vital in generating a democratic culture that extends beyond the political system and becomes engrained in the public consciousness over time. Free and fair elections, that is crucial for success of democracy require a free media sector which can give candidates equal access and report the relevant issues in a timely, objective manner.

Importance of Media for Indian Democracy

The most important feature of a democracy is the freedom of speech and expression. Media is the tool that strengthens the concept of speech and expression in India's democracy. It is a watchdog of democracy. Media is important because of the following reasons

- It builds an informed citizenry. In order to participate freely in a polity, the citizen must be duly informed and must have the right to participate freely in a society. Media acts as a vital tool to disseminate such information to the citizen so that they are able to exercise their freedom.
- A free media improves the government functioning and helps it form public policies that are guided by public welfare. It informs the government of public demands and needs of sections of citizens.
- Media lets people voice their opinion on governance and reform and helps in building public consensus to bring about change.
- Media helps in exposing corruption in public and private agencies that are involved in public life. Investigative journalism motivates public authorities to act against corrupt people.
- Media influences the ideology of people as well as nations. It allows the people to choose from various ideologies and bring about necessary ideological changes required in public policies.

- Media strengthens the foundations of a democracy and democratic society. It acts as a catalyst for development and democratic values. It acts as an agent for bringing transparency and accountability in the public bodies.
- Media also plays an important role in giving voice to the marginalised. The poor and vulnerable people who are voiceless, are empowered when media allows them a platform to raise their concerns.

Challenges to Media in India

World Press Freedom Index puts India at 142nd rank in its 2020 report. This is alarming, seeing the significance of a free media for the smooth functioning of democracy. If media is corrupt and biased, democracy cannot function smoothly. Media in India forms the fourth pillar of democracy and is plagued with several issues. There is lack of freedom of media houses, control by large corporates, violence against journalists, paid and fake news etc. Media accountability has diminished and it does not provide holistic and comprehensive view of issues concerning public interest. Media has increasingly been seen favouring certain political ideologies and disrespecting others. The following are the challenges to a free media in India.

- **Paid News** The press council of India defines paid news as “any news or analysis appearing in any media (print & electronic) for a price in cash or kind as consideration.” In past few decades there is sudden growth in the number of news channels. Further there is unholy nexus between media personalities, politicians and corporates which has created a scenario where news is seen by many as a form of political advertisement.

Contrary to the past where media outlet were run for social cause and not for profit, today they have become another business enterprise where profits have become the sole motive. Additionally, the decline in autonomy of editors/ journalists due to emergence of contract system and poor wage levels of journalists has played a key role in rise of the incidences of paid news.

Innocent readers including voters, who rely on the truthfulness of a news article are constantly coming across such paid news in favour of a particular party or candidate. Such readers can hardly distinguish between actual news and advertisement of a particular party or candidate, published as a news article.

- **Fake News** Fake news is any misinterpretation of information, created to deliberately misinform or deceive readers. It can influence people’s views, push political agenda or cause confusion and chaos among different communities. Contrary to paid news which is limited to registered media houses, fake news is generally attributed to social media whose usage in India has increased manifold in past few years. Now India has largest number of social media users in the world across platforms such as Facebook, Instagram, WhatsApp, YouTube etc.

Fake stories and rumors spread through social media have been connected to various incidents of mob attacks and lynching in the country. Under pressure from the government and regulators such as the Election Commission, social media platforms have introduced various restrictions on sharing of posts and blocked accounts of many users involved in spreading misinformation.

- **Sensationalisation of News** Sensationalism is a type of editorial bias in mass media in which events and topics in news, stories and pieces are over-hyped to increase viewership or readership numbers. Sensationalism may include reporting about generally insignificant matters and events that don’t influence

overall society, as well as biased presentations of newsworthy topics in a sensationalist, trivial or tabloid manner. Sensational news reporting in the wake of Ayodhya verdict created discord among various groups and disturbed the social harmony.

- **Declining Press Freedom** Recently, India dropped to 142nd position in the World Press Freedom Index. Violence against journalists, attacks by Maoists and reprisals by criminal groups or corrupt politicians is one of the most striking characteristics of the current state of press freedom in India. A democracy cannot thrive if its media is shackled. Only a free media is capable of remaining un-biased, thus strengthening democracy.
- **Trial by Media'** 'Trial by Media' is a phrase popular to describe the impact of television and newspaper coverage on the reputation of a person by creating a widespread perception of guilt regardless of any verdict in a court of law. During high-publicity court cases like actor Sushant Singh Rajput case, the media are often accused of provoking an atmosphere of public hysteria which makes a fair trial, nearly impossible. As a result regardless of the result of the trial, the accused is forced to live the rest of their life with intense public scrutiny. This partisan behaviour is not in line with the media ethics.

Way Forward

Media is necessary for democracy and development. It helps in making public participation meaningful. If media is honest and committed in its job, democracy is bound to function more efficiently and the loopholes present in any democratic system can certainly be eliminated. On the contrary, if media is biased, corrupt and favours only a particular party or few individuals, it can prove to be very dangerous for the smooth functioning of democracy. Among the steps suggested to curb the menace of paid and fake news, breaking of media-corporate nexus through crowd funding for media institutions, encouragement to fact checking website for social media and monitoring of content being spread on social media through an autonomous organization will be instrumental in strengthening the quality of media. Certainly, there is still a lot of scope for improvement by which the media can fulfill the aspirations of the people for which it is primarily meant.

ROLE OF NGOS IN INDIA

Non Governmental Organisations (NGOs), are voluntary organisation because they are free from governmental control in their functioning. They are democratic and open to all those wishing to become member of the organisation and serve the society. They have assumed a significant space in civil society, which is fast emerging today due to the weakening of the state. We can further define NGOs as “formally registered not-for profit association of groups of individuals founded on the principles of equality, altruism and voluntary work spirit to promote human development (including environment and biodiversity) and nation building”. NGO is a popular term, which has gained recognition at global level and commands respect in society due to its welfare services in society. The organisation does seek financial assistance from the government but it operates, atleast theoretically, on its own principles and programmes. NGOs are, in principle, open to voluntary membership. Any one may become member by choice and resign from the organisation at one’s own will.

NGO’s Role in Government’s Five Year Plans

India is a very big country. Government since Independence has lacked sufficient man power and logistics to reach each and every segment of the society. The vacuum created by this absence has been taken up by NGOs. Over the years they have found place in the Five Year Plans of the government. Sometimes, it is in the form of their roles in the rural sector development and sometimes it is in the formation of self-reliant groups. When Integrated Rural Development Programme (IRDP) was launched in 6th Five Year Plan, they were at the forefront mobilising rural poor to avail benefits. Similarly, they served as crucial machinery for social audit of many schemes and programmes. In the success of White revolution, NGOs played a significant role in mobilising the rural women milk producer and urged them to form a cooperative.

They also took the government message of family planning programme to the rural India by organising many awareness programmes through Nukkad Natak. The NGO Akshay Patra has been a unique partner of government in universalisation of primary education by organising mid-day meals for millions of children. Similarly, Rashtriya Mazdoor Sangh of Rajasthan was at the forefront in making Right to Information a legal right for all the citizens of the country.

NGO’s Role in Protection of Women’s Interest

Non-government organisations are playing imperative role in the empowerment of women. They adopt multiple strategies to improve the condition of women. NGOs are training women in various aspects to make them to come out of their inhibitions and involve in fruitful activity. The past few years have seen a rampant increase in crime against women in the form of, physical, sexual and emotional abuse.

These horrifying incidents leave deep scars that young girls and women are unable to cope with. They lose their self-esteem and confidence. It is over here that many NGOs take the charge, counsel them, help gain their lost self-esteem and make them self-reliant. In fact, there are many NGOs which are fighting a legal battle on the behalf of the survivors.

Role of NGOs in Providing Awareness

NGOs have played a vital role in educating the farmers and introducing them to new techniques of farming. They make farmers aware of the new cost saving techniques, special variety of seeds and manures etc. Additionally, they also protect farmers from any price sludge in the market prices of their produce. NGOs were at forefront in successful mediation between potato grower farmers in Gujarat and PepsiCo.

As the volunteers of NGOs have the ability to develop a bond with a particular cause and the concerned entities, it helps in easy implementation and execution of different governmental schemes. They have played an important role in making people understand the importance of education, curbing the menace of social evils such as child marriage, sati etc. Night schools have become common in the rural areas where the children and working adults can come and study.

In the domain of health, important international bodies such as UNICEF, WHO and FAO have forged unique partnership with NGOs in India to teach and make the masses aware in inculcating various strategies to ward off many diseases. For instance making them aware about importance of washing hands, importance of vaccination among others. Infact in last two incredible feat achieved by India, the Pulse Polio Program and Swachh Bharat Initiative have been made only through unique partnership between NGOs and government. They transitioned this government scheme into Jan Andolan through people's participation.

The importance of NGOs has been mostly noted in the crisis caused by any disaster. Be it the Kerala flood or Cyclone Amphan in West Bengal, they were often the first responders. Apart from escorting the affected people to the safe places and ensuring food and other provisions, they also play crucial role in their post disaster resettlement. The way many NGOs have served an effective link for support be it financial or otherwise between prominent personalities and vulnerable section of the people in coronavirus crisis is worth appreciating.

Criticism of NGOs in India

- There are more than 25 lakh registered NGOs in India, many of them as reported in IB report in 'Internal security of India' had indulged in anti-India activities. Some of them serve as appendage of their home country and were involved in halting the construction of many infrastructure and mining projects by organising protest by indigenous people.
- There have also been allegation of money laundering on various NGOs in India. Meanwhile Government has come up with stricter compliance norms for them in Foreign Contribution and Regulatory Act (FCRA). They have also been brought under the ambit of RTI.

- During last few years, several new NGOs have come up in India that claim to work for the poor. These NGOs are not often engaged in serious social welfare work. Many of these are without serious intent and many are fraudulent.
- There are disproportionately large number of NGOs. There are issues of transparency and accountability which needs reforms. Allegations of corruption have also been levelled against the NGOs.
- Various NGOs have been purposefully indulging in undermining India's development activities. A report by the intelligence bureau has accused various international NGOs of partisanship and showing India in a bad light.
- NGOs have interfered with social customs and religious practices in India. PETA India fighting in the courts against the government for the Jallikattu festival is seen in this context.
- Several NGOs are accused of non-transparent and undemocratic functioning. Many NGOs do not file their annual financial statements and only a few do so. Though FERA and FEMA have been made stricter yet issues persists.

Conclusion

Charity and Voluntary service has been in ethos of India and NGOs as trust and not for profit companies have been nothing but its modern manifestation. Government on its part recognises their importance in good governance. Faced with an unprecedented Coronavirus crisis, government has constituted the Empowered Group (EG 6) chaired by CEO, NITI Aayog to leverage the network of NGOs. This EG 6 has succeeded in galvanising a network of 92,000 CSOs/NGOs to harness their strengths and resources, expertise in key social sectors such as nutrition, health, sanitation, education and extensive reach in the community. Going by their importance, the NGOs need to be respected, recognised and constituted in various sectors to meet the development aspiration of the citizens of India.

POVERTY IN INDIA

CAN WE EVER ABLE TO ERADICATE IT?

Poverty is a state or condition in which a person or community lacks the financial resources and essentials for a minimum standard of living. In other words, their income level is so low that basic necessities of life such as housing and food are beyond the capacity of individual and families. Each country has its own threshold of defining poverty. For some developed ones like Sweden or Norway ownership of a car or house may be the prerequisite whereas for developing and poor countries even availability of a two square meal is treated as being above the poverty line.

The Human Development Report of 2019 appreciated India's effort towards bringing 270 million of its population out of poverty from the year 2003 to 2015. However, this significant feat is now facing a grave challenge amid the pandemic caused by Coronavirus. Millions in India are now unemployed and have migrated back to villages from metropolitan cities. The economy is on downturn and many industries which employ huge labours are facing existential challenge. In this regard let's first understand the number of poor in India and how it is calculated.

Poverty Estimation in India

In India, NITI Aayog is nodal authority for estimation of poverty. It's precursor, the Planning commission had appointed many committees to decide the benchmark of poverty in India i.e. the Poverty line. These committees include National Planning Committee (1938), YK Alagh Committee (1979), Suresh Tendulkar Committee (2005) and Rangarajan Committee (2011). The NITI Aayog has accepted Tendulkar methodology for estimation of poverty line in India. This committee recommended to shift away from the calorie-based model and made the poverty line somewhat broad based by considering monthly spending on education, health, electricity and transport also.

India has the world's largest number of poor people living in it. Out of its total population of more than 1 billion, 350 to 400 million people are living below the Poverty line. The Global Multidimensional Poverty Report of Oxford, Poverty and Human Development Program of UN estimated that there were 36.4 crore poor individuals in India in 2015-16. According to the World Bank estimate, 21.3% of India's population falls below the International Poverty line of USD 1.90 a day. In the next section we will learn why our country is still poor despite harboring good amount of human as well as natural resources.

Main Causes of Poverty

There are a number of causes of poverty in India which are as follows

- Fast growing population has reduced the per capita income of India. Hence, the standard of living has also fallen considerably. If the country is overpopulated a large part of the income is spent on consumption and very little is saved for development activities.
- Unemployment is one of the important reason for poverty in India. Many people do not have job to sustain themselves and their families.
- 60% of population depends on agriculture in India. But the condition of agriculture sector is bad. Farmers are poor and uneducated. They have no good facilities of irrigation. They do not get seeds and fertilisers on time, all this leads to poor yield.
- The widening gap between the rich and the poor is also responsible for poverty in India. The rich are growing richer while the poor are getting poorer.
- Inflation also leads to poverty because income earned by poor people is not sufficient to buy basic necessities of life. A rise in price of a commodity forces them to remain in poverty.

Adverse Consequences of Poverty

Poverty also has adverse consequences on the country to a large extent.

It is the leading cause of insufficient diet and inadequate nutrition. The resources of poor people are very limited and its effect can be seen in their diet. Poverty is often characterised with income disparity and unequal distribution of national wealth between the rich and the poor.

Apart from this women are the worst victims of poverty as it effects greater number of women than men. The total of poor women outnumbers the total population of poor men. They are deprived of proper diet, medicines and health treatment.

Poverty is one of the strong reasons for increasing child labour in India. Due to low income of parents, their children are forced to indulge in various jobs which leads to child labour. Thus, poverty passes on to families and it becomes very difficult for children of poor parents to come out of poverty.

Various Poverty Alleviation Programmes

- **Integrated Rural Development Scheme (1980)** This was umbrella scheme which included allied programmes like Training of Rural Youth for Self-Employment (TRYSEM), Development of Women and Children in Rural Areas (DWCRA), Ganga Kalyan Yojana (GKY), Million Wells Scheme (MWS) and Supply of Improved Toolkits to Rural Artisans (SITRA). This scheme holistically covered each dimensions of rural development and intended to create employment opportunities and thereby reduce poverty in India. In 1999, this programme was recharacterised into Swarnajayanti Gram Rojgar Yojana.
- **Employment Assurance Scheme (1993)** This scheme was launched to create an additional wage employment opportunity during the period of acute shortage of wage employment through manual work for the rural poor living below the poverty line.

- **Pradhan Mantri Rojgar Yojana (1993)** The main objective of this scheme was to create and provide sustainable self-employment opportunities to one million educated unemployed youth in the country during the 8th five year plan period. With modification of some parameters of the scheme, it now covers all economically viable activities including agriculture and allied activities but excluding direct agricultural operations like raising crop, purchase of manure etc.
- **National Social Assistance Programme (1995)** This programme focuses on old age person, poor families and widows and provide cash assistance to improve their standard of living. Amid the COVID induced pandemic, the government gave three months of pension in advance to over 3 crore beneficiaries of this programme.
- **Mahatma Gandhi National Rural Employment Guarantee Act (2005)** This act is cornerstone among all poverty alleviation measures adopted by government of India. It enhances livelihood security by providing at least 100 days of guaranteed wage employment in a financial year to every rural household whose adult members volunteer to do unskilled manual work.
- **Pradhan Mantri Ujjawala Yojana (2016)** Under the scheme, five crore LPG connections are to be provided to the women of BPL households. It also provides a financial support of ₹ 1600 for each LPG connection to the BPL households, interest free loan to purchase stove and refill by Oil Marketing Companies.
- **Pradhan Mantri Garib Kalyan Yojana (2020)** This scheme was launched amid the Covid induced pandemic to provide for monetary assistance and food security to millions of households, whose livelihood has been hampered by subsequent job loss and migration. Under this scheme, government will provide ex-gratia sum of ₹ 500 to 20.80 crore women Jan Dhan account holder. In addition to it, 80 crore poor people will get 5 kg wheat or rice and 1 kg of preferred pulses for free every month till November.

Futher Steps to Eradicate Poverty in India

Apart from these government initiatives, several steps can be taken to reduce or eradicate poverty in India. The government has promised cheap credit to farmers, direct transfer of money to the poor and eased access to food security programmes through Atmanirbhar Bharat Abhiyan in May 2020. However these measures will help people who have some documentation or are registered.

With millions of impoverished Indians now in transit across the country, the food security situation is dire. India's economy was already growing at its slowest pace due to pandemic, the subsequent lockdowns has stalled business activities to a large extent. So, 2020 is going to be an extremely challenging year not only for governments and businesses but also for those on the border line of poverty.

Government should develop cottage, handicrafts and other small scale industries in the backward regions of the country. Moreover, this will transfer resources from the areas of surplus to the deficit areas solving the problem of urbanisation.

Therefore, one has to keep a thing in the mind that poverty is a menace and need to be checked. The above steps would be helpful to reduce poverty in India. It is a national problem and hence must be solved on a war footing. Eradication of poverty would ensure a sustainable and inclusive growth of economy and society.

Conclusion

Experts all over world, are predicting that the incredible feat achieved by India to get millions out of poverty in last few years is at risk. However, India has a unique ability to bounce back from any challenge. In this regard the recently launched Atmanirbhar Bharat scheme holds promise as it announces sweeping reforms in various industrial and service sector which will help them hire many unemployed and poor people. Further, the emphasis on MSME industries which remains backbone of Indian economy will also help in eradicating poverty from India.

22

CHALLENGES FOR WOMEN IN INDIA

AGAINST TIME AND SPACE

The status of women depicts the social, economic and mental condition in a nation. Women have been regarded as a symbol of spirituality in our scriptures. Nearly one-sixth of the world's women live in India. However, at present, challenges faced by Indian women is the result of the patriarchy, which is prevalent in Indian society. Women in India are discriminated against in various fields, such as health, education and jobs which can be regarded as socio-cultural discrimination. The situation is scary in the sense that more than the half women labour force is unpaid. They also constitute most of the informal sector, hence are vulnerable to various economic challenges and discrimination.

Challenges Faced by Women in Past

Indian history bears the testimony to the fact that Indian woman have always been treated badly and unequally to men. Social evils such as dowry, sati-system, child marriage and female infanticide were widely prevalent in the early ages.

In medieval India, the social evils like sati were prevalent. Furthermore, Purdah System was much common in this period. During the British rule, acts aiming at betterment of women were enacted, including Bengal Sati Regulation Act, 1829, Hindu Widows' Remarriage Act, 1856, Female Infanticide Prevention Act, 1870 and Age of Consent Act, 1891.

In post-independent India, various rights were granted to the women under the Constitution of India. It mainly includes equality, dignity, and freedom from discrimination. Additionally, India has various statutes governing the rights of women. As of 2019, some women have served in various senior official positions in the Indian government, including that of the President of India, the Prime Minister of India and the Speaker of the Lok Sabha.

However, many women in India continue to face significant difficulties. The rates of malnutrition are exceptionally high among adolescent girls and pregnant and lactating women in India, with repercussions for children's health. Violence against women, especially sexual violence, has been on the rise in India.

Challenges for Women Prevalent in India

In India, women continue to suffer discrimination, harassment, humiliation and exploitation inside as well as outside home. Theoretically, women might have been given more freedom but in practice, they still suffer many hardships, inhuman dignities and unworthy treatment everywhere. Some of the challenges which are being faced by women in India are as follows

- **Lack of Maternal Care** Maternal care in India is negligible. Lack of resource and infrastructure very often results in denial of the timely care to pregnant women. In addition, lack of information sharing pertaining to do's and don'ts during pregnancy often lead to mortality of mother and infant. This phenomenon is widely observed among weaker sections of society.
- **Lack of Health Care and Nutrition** Girl child while growing up, is subject to various complications. The livelihood of girl child might be at risk if she is denied timely interventions pertaining to nutrition and healthcare. Malnutrition and anemia among Indian girls is one of the biggest problems in the world. The lack of nutrition among girl child is widely attributed to the prejudices prevalent in Indian society where female child is discriminated against male child.
- **Lack of Education** Females in India have lower literacy rate corresponding to their male counterparts. This disparity in education can be traced to the time related constraint where girl as a child is asked to get involved in domestic duties. The practice is more common in rural areas. The denial of education to girl child further leads to difficulties in active participation in the workforce during adulthood. They are also devoid of satisfactory social life.
- **Child Marriages** Women face the challenge of child or early age marriages mostly due to family and social compulsions. In many cases, girls are married even prior to attaining sexual maturity. It burdens them with the duties of material life before their education is complete, thus, limiting their opportunities in future and denying them a chance of getting empowered. Child brides are neither physically nor emotionally ready to become wives and mothers. They face more risks of experiencing dangerous complications during pregnancy and child birth, contracting Sexually Transmitted Disease (STDs), domestic violence and sexual abuse.
- **Denial of Equal Opportunity in Jobs** The women are mostly deemed fit for women specific jobs such as teachers, nurses, receptionist, babysitter, lecturer etc., which have been stereotyped for women. Also, women in India face artificial barriers and informal boundaries, which prevent them from advancing upward in their organisation into management-level positions. This can be reflected in an increasing wage gap between men and women.
- **Sexual Harassment at the Workplace** Safety at workplace is major issue for women. Sexual harassment at workplace is an act or a pattern of behaviour that compromises physical, emotional or financial safety and security of a woman worker. In 2018-19, Me too Movement in India shed light on numerous instances of sexual harassment at the workplace. However, due to the slow judicial system, justice hasn't been delivered to these women.

- **Lack of Sanitation** Lack of toilets in households especially in rural India has rendered women vulnerable to various dangers. Risk of sexual molestation, rape is quite high in case of open defecation. Further, lack of privacy is another major concern and violates the dignity of the girls and women.
- **Lack of Political Participation of Women** Inadequate participation of women in governing bodies is manifestation of prejudice against women at various levels. At present, Women representation in Lok Sabha is only 14%.

Government Initiatives to Tackle Challenges

Government has launched various programmes and initiatives to tackle challenges which are being faced by women. The schemes aims to promote socio-economic development and gender equality while empowering the women. Some of them are as follows

- Support to Training and Employment Programme for women, 1986-87 (STEP) was launched to ensure sustainable employment and income generation for marginalised, rural and urban poor women.
- Pradhan Mantri Matru Vandana Yojana (PMMVY) was introduced in 2016 to extend financial support to pregnant women under maternity benefit programme.
- Government of India launched a campaign in 2015 with an aim to generate awareness and improve efficiency of welfare services intended for girls in India.
- National Mission for Empowerment of Women (NMEW) was launched by the Government of India in 2010 with the aim to strengthen overall processes that promote all-round development of women.
- Individual Household Latrine Construction (IHHL) construction under Swachh Bharat Scheme (2014) seeks to address the issue of open defecation.
- The Sexual Harassment of women at workplace (Prevention, Prohibition and Redressal) Act, 2013 was enacted to protect women from sexual harassment at the place of work.
- Protection of Children from Sexual Offences (POCSO) Act was also enacted in 2012 to deter the crime against children including female child.
- Reservation for women in Panchayati Raj System has already been guaranteed. A Women's Reservation Bill is also pending in the Parliament of India which proposes to reserve 33% of all seats in Lok Sabha and in all State Legislative Assemblies for women.

Conclusion

The change in social norms and mind-sets towards girls and women can be brought about through institutional initiatives. This involves the family, the community, religious and educational institutions. The state, as the largest public institution can initiate, strengthen and ensure implementation its economic and social policies for gender equality. This will have a strong and effective impact the subjective changes in perceptions and expectations towards girls and women. Change is needed at the macro and micro level with wider participation of people.

CAN CORRUPTION BE ERADICATED FROM OUR SOCIETY?

Corruption is the unethical act performed by a person or the group of people using power of position or authority to acquire personal benefits. It is a social issue which adversely affects the economy of nation. Corruption is the use of unethical methods to get some advantage by others. It has become one of the big factors which obstructs the development of the individual and country. It is like a poison which has been spread in the mind of people of the society, community and country and is one of the big reasons of inequalities in the society and community.

Presence of Corruption from Ancient Age

Corruption is a very old social malady. It always existed in human society in one or the other form. It is vital to note that 'Atharva Veda' warns people to refrain from corruption. Kautilya's 'Arthashastra' mentions forty modus operandi adopted by the corrupt people to misappropriate government funds.

The Sultan of Delhi, Alauddin Khilji had to considerably increase the pay of his land revenue staff to prevent them from indulging in corruption. Pandit Jawaharlal Nehru, in his book 'The Discovery of India' has written about widespread corruption during British rule in India.

In primitive period, the scope of public administration was minimum, as a result the scope of corruption was also limited. After Independence, with the concept of welfare state coming into existence, the scope of being corrupt widened. At the juncture of Independence a statesman like C Rajagopalachari called the PWD (Public Works Department) as the first enemy of the country in terms of the corruption that prevailed in that department. Nowadays, every department has become a Public Works Department.

The corruption has crept into every fabric of society in such a way that it was the theme of speeches made by the President, the Prime Minister, the Speaker of Lok Sabha during the Golden Jubilee celebrations of our Independence. Every Chief Election Commissioner since T.N. Sheshan holds the office, has advocated the dire necessity of electoral reforms to strike the corruption at grassroot level and some of the measures have already been taken by them to make elections fair.

Causes of Corruption

The causes of corruption are many and complex. Some of them are:

- Emergence of political elite who believe in interest-oriented rather than nation-oriented programmes and policies are responsible for the increasing corruption in politics.
- Acceptance of people towards corruption and the absence of strong public forum to oppose corruption allow it to reign over people.
- Vast size of population combined with illiteracy and the poor economic infrastructure lead to endemic corruption in public life.
- In a highly inflationary economy, low salaries of government officials compel them to resort to the road of corruption.
- Complex laws and procedures alienating common people to ask for any help from government.
- Big industrialist fund, politicians to meet the high cost of election. Bribery to politicians buys influence and bribery by politicians buys votes.
- The foremost reason of flourishing of corruption is the virtual change in the thinking of the people. A total disregard to the moral and ethical values and the feeling of attaining the things by any means whether wrong and right has encouraged most of the generation to adopt the means of corruption.

Forms of Corruption

Corruption is not only acceptance or giving of bribe. It has many other forms.

Corruption can be categorised into various forms. These forms are

- **Conventional Corruption** occurs when government officials, whether higher or lower ranks illegitimately receive or accumulate an undue advantage for their own personal use not regarding public interest.
- **Unconventional Corruption** exists where a government public official acts without consideration for public interests but there is no clear monetary or other transaction between the two parties. It includes misappropriation, theft, breach of trust etc.
- Grand and petty corruption are sub-categories of conventional corruption. **Petty corruption** involves public administration officials taking bribes for completing works of the public that fall under their control. **Grand corruption** involves higher ranking government officials and politicians who are in power. They exploit opportunities presented to them by government works.
- **Political Corruption** is considered as a type of grand corruption due to its seriousness and higher officials involved. It involves politicians preferring certain companies and industries over other. Here, companies and organisations that shapes and influences legislations or government policies.
- Corruption is also distinguished by its public or private nature. **Public corruption** involves public officials whereas private officials are involved in private corruption. **Public corruption** involves misappropriation of public funds whereas private corruption involves corruption in private sector that hurts citizens' interests.
- **Systemic corruption** exists where corruption is entrenched in a society. It exists where it is routine in dealings between the government and private businesses. In contrast to this, individual corruption exists where corruption is rare and consists of a few individual acts.

Eradication of Corruption

The basic question is ‘can the corruption be eradicated?’ It can only be possible if people understand and start to believe the values of ethics and morality in their life. To eradicate corruption from our society the fool proof laws should be made so that there is no room for discretion of politicians and bureaucrats. The role of the politicians should be minimised. Application of the evolved policies should be left in the hands of independent commission or authority in each area of public interest. Decision of the commission or authority should be challengeable only in the courts.

One of the common causes which enables corruption by public servants is to demand and obtain illegal gratification which is commonly known as speed money. To remove this in the administrative procedure, Madhya Pradesh Government passed a law known as the ‘Public Services Guarantee Act’ in 2010, laying down reasonable time limits for delivery of different Government services to the people. In 2011, Bihar Government also passed a similar act named as ‘Right to Services Act’. All other State Governments should also arrange to get similar acts so that no government servant gets the scope to extract speed money.

Measures Taken to Control Corruption

The Jan Lokpal Bill was passed by both the Lok Sabha and the Rajya Sabha in December, 2013 which aims to effectively deter corruption, compensate citizen grievances and protect whistle blowers. Cooperation of the people needs to be obtained for successful eradication of corruption. People should have a right to recall the elected representatives if they see them becoming indifferent to the electorate. Electoral reforms are crucial to eradicate political corruption.

Several reforms like state funding of election expenses for candidates making political parties get their accounts audited regularly and filing income tax returns, denying persons with criminal records a chance to contest elections should be brought in. More and more courts should be opened for speedy and inexpensive justice so that cases don’t linger in courts for years and justice is delivered on time.

Many systematic efforts are being made in current times to achieve reduction of corruption like The Black Money and Imposition of Tax Act, 2015 for foreign black money, Income Declaration Scheme, 2016 for unearthing domestic black money, Benami Transaction Bill etc. The Central Government has set up the following four departments as anti-corruption measures: (i) Administrative Vigilance Division (AVD) in the Department of Personnel and Training, (ii) Central Bureau of Investigation (CBI), (iii) Domestic Vigilance Units in the Ministries/Departments/Public Undertakings Nationalised Banks and (iv) Central Vigilance Commission etc. The government has also appointed the first Lokpal of India, Pinaki Chandra Ghose in 2019, March. The Lokpal (anti-corruption authority) will inquire into allegations of corruption against public functionaries. It will provide a new life to anti-corruption efforts in India.

Conclusion

The government has stressed on accountability now and India can be positive for future as making everything digital with programmes like Digital India will reduce corruption to greater levels as the middle man will have no place in the system and everything can be supervised directly by government. Yes, corruption is a big problem but it can be eradicated with systematic and right efforts.

24

URBAN POVERTY AND HOMELESSNESS IN INDIA

We are living in what is often described as the ‘urban century’ as over 50% of the world’s population now lives in urban areas. The world continues to urbanise and this growth is mainly led by growth of world population in low and middle income countries. Though the city life is largely perceived as comfortable and lavish yet the picture on the other side is not rosy. Many areas in the urban regions are characterised by poor quality, overcrowded houses, where there is lack of safe and readily available water supplies. Sanitation, drainage and solid waste collection is poorly developed. There is little access to affordable healthcare, emergency services and more risk of contracting deadly diseases. These are the regions where the urban poor reside. They are always at the risk of forced eviction by the government authorities or due to court orders.

According to 2011 census, almost 13.7 million people were living in slum areas which made up almost 17% of the total urban population of India. It is the mega cities of India where most of the growth in urban poverty occurs. Greater Mumbai, Delhi NCR and Kolkata have almost 40% of their urban population living in slum areas which are temporary spaces of living.

Characteristics of Urban Poverty and Vulnerability

The specific characteristics of urban poverty is related mainly with three distinct characteristics

- **Commoditisation** Urban poor population becomes more vulnerable as compared to the rural poor because in urban areas, people are integrated into a more formal cash economy where they are required to pay for their food and shelter, rather than relying on their own food production. They have to pay more on transport and education services as compared to the rural poor. Employment is not regularly available or may be highly insecure. Shelter is illegal and insecure. Many sections of urban poor who are not able to pay for these services become homeless. Further, they are vulnerable to various economic shocks and to macroeconomic policy adjustments in prices, wages and public expenditure.
- **Environmental Hazards** The urban poor are disproportionately affected by urban environmental problems such as inadequate water which is fit for drinking, inadequate sanitation, drainage, and solid waste management, poor quality of housing that doesn’t prevent them from the phenomenon of nature such as sunlight, rainfall etc.

There are densely populated shanty colonies which are overcrowded and poorly managed and these are built on marginal or degraded lands. All these factors increase the health risk of the poor and reduce their productivity. They have to pay high amounts for their healthcare, which further makes them vulnerable to poverty and homelessness.

- **Social Fragmentation** The vulnerability of urban poor is high because community and inter-household mechanisms are less likely to operate in urban areas as compared to rural areas. Urban areas are characterised by higher levels of violence, alcohol, drug abuse, exploitation, discrimination as well as there is another risk of motor vehicle accidents for the urban poor.
- **No Employment** Urban poor are less likely to gain employment in urban areas because of absence of skills as compared to rural areas. In rural areas, farming and agriculture are the most practised occupations but in urban areas, an individual can not engage in farming activities. He would need to be engaged in secondary or tertiary sector activities to get gainful employment. Hence, they become more vulnerable as compared to a rural poor.

Reason for Urban Poverty

Following are the reasons that are responsible for urban poverty

- **Rural Urban Migration** When people who do not have sufficient incomes migrate from rural areas to urban areas for earning a living, it leads to creation of informal settlements in the cities. Most of these people do not have adequate income or skills and thus they get involved in manual work. This type of work does not provide much income to live a decent life in such a big city. These people are forced to live in slums and shanties that are temporary shelters. These conditions give rise to urban poverty.
- **Lack of Jobs** Urban areas are highly competitive places with job opportunities for people. But high influx of people from rural areas leads to lack of job opportunities. The people from rural areas coming to urban cities for jobs and employment are not very skilled and lack any professional or vocational training. They are left with only an option to search for jobs in the informal sectors such as construction work, domestic workers, rickshaw pullers. This pushes them towards more informalisation and their poverty conditions are further worsened.
- **Lack of Affordability** Commodification of even the basic services such as food, shelter, water, sanitation, health etc. has led to rising prices of these commodities. The urban poor are required to pay for the services. When they are not able to pay for such services they become unaffordable to them. The land prices are increasing in urban areas and these poor people are not able to afford the high rent. Unless the urban poor people make money with employment and job opportunities, they are not able to afford an urban life.
- **High Population Growth** Higher population leads to scarcity of resources. If there are more members in a family, it becomes difficult for a family to meet all their requirements. Limited income and employment opportunities will not be sufficient for the urban poor to fulfil their basic needs. The poor families also lack access to contraceptive and birth control services. They have no access to health services which further pushes them towards the vicious cycle of poverty.

- **Lack of Education** Education plays an important role in survival. A well educated person is more likely to be better paid and have a secure job but the migrants coming from rural to urban areas are mostly uneducated. Lack of education for these people deprives them of various economic opportunities. Uneducated women are more vulnerable to the social ills of the society. They also face discrimination and harassment at the hands of the society.
- **Lack of Housing** Cheap and affordable housing is not provided to the poor people migrating from the rural to urban areas. These people are deprived of housing facilities alongwith basic services such as electricity, water, sanitation etc. This makes them vulnerable to diseases and affects their health. They are forced to live on pavements or in undocumented community lands which are in very poor conditions.

Ways to Tackle Urban Poverty in India

The following measures can be taken to fight urban poverty in India

- **Improving Rural Lives** In order to control large scale migration from rural to urban areas, the current state of rural infrastructure should be addressed. Small and medium scale industries can be promoted by incentivising rural people as well as other income generating opportunities should be started. These opportunities should be in the high income generating sectors that should satisfy the demands of the economy. More research can be carried out in the agricultural sector so that it can absorb more number of people and generate higher income.
- **Better Urban Planning and Slum Development** As the level of urbanisation will increase, informal slum development is going to take place at a faster rate. Slums are nothing but the result of lack of planning and proper cheap and affordable housing to large number of migrants that come to urban areas. If there is proper planning in urban areas, then these slums can be effectively rehabilitated and instead of shanty and temporary settlements, safe and decent homes for the poor can be provided.
- **Participation of Poor People in City Level Governance** Poor people should be able to participate in policy making that concerns their lives. The city governance should integrate the needs of the poor such as anti-poverty measures, health, education, increased allocation of resources etc. Participation of informal labour, slum dwellers, homeless people, women, elderly etc should also get due representation in city governance.
- **Need for Urban Poverty Departments** The mega cities where there is more proportion of urban poor, urban poverty departments should also set up so that specific needs of the urban poor people can be met. They should be provided with basic services such as food, education, health services, sanitation, work on daily wages etc. so that they are able to live a healthy and decent life.
- **Adequate Housing** Adequate housing facilities should be developed by the respective State Governments so that the poor people are not deprived of their right to shelter. These housing facilities must be available to the poor for very low costs and rents. There should also be provision for low cost basic facilities such as electricity, water supply, etc.

- Urban Poverty Programmes Urban poverty alleviation programmes on lines of MGNREGA of rural areas can be started. These type of programmes will tackle vulnerability of the poor people and improve the economy of urban areas. These programs can be used to build new urban infrastructures and improve the existing ones. They will surely provide a sense of security in terms of livelihood for the poor and improve their standards of living. Improvements in the standard of living of one generation results in improving future generation's lives and opportunities.

Conclusion

The trends in urban poverty suggests that the number of urban poor are likely to increase in the future in absence of a well-planned long term strategy. There must be effective participation of all the stakeholders such as the Central Government, State Governments, NGOs, rural as well as urban planning bodies, the vulnerable communities, job seekers as well as job providers and above all the policy makers and those who are responsible for implementing them on the grounds. The urban poverty challenge can be tackled and homelessness can be reduced by improving the lives of the people.

25

HUMAN TRAFFICKING

MODERN DAY SLAVERY

Human trafficking is one of the most heinous forms of organised crime and violation of human rights all over the world. There is a strong concern on the rising trend and multidimensional nature of this criminal phenomenon which victimises men, women and children. Traffickers take into account neither borders, laws nor national prejudices. The objective of human trafficking is profit whether through abduction or deception, they trap innocent people whose lives are then transformed into the worst of nightmares. Trafficking assaults human dignity, violates Fundamental Rights and erodes conscience.

Types of Human Trafficking

It is important to understand the various types of human trafficking prevailing in the world. People can be trafficked and exploited in many forms, including being forced into sexual exploitation, labour, begging, crime, domestic servitude, marriage or organ removal. Trafficking in children is likely for the purpose of either child pornography or bonded labour.

Trafficking in women for sexual exploitation affects every region in the world. Victims are often provided with false promises of decent employment and are transported to the other country to be forced into sexual slavery. A forced marriage qualifies as a form of human trafficking if a woman is sent abroad, forced into the marriage and then repeatedly compelled to engage in sexual conduct. Trafficking in humans for the purpose of using their organs particularly kidneys, is a rapidly growing field of criminal activity.

Human Trafficking is a Global Issue/Concern

'A Global Report on Trafficking in Persons' by the United Nations Office on Drugs and Crime (UNODC) offers the first global assessment of the scope of human trafficking. It is based on data gathered from 155 countries. According to the report, the most common form of human trafficking is sexual exploitation (79%). The victims of sexual exploitation are predominantly women and girls.

The second most common form of human trafficking is forced labour (18%), although this may be a misrepresentation because forced labour is less frequently detected and reported than trafficking for sexual exploitation. World wide almost 20% of all trafficking victims are children.

However, in some parts of Mekong region and Africa, children are the majority (100%). Bangladesh takes the first spot on the list of 155 countries with the highest rate of human trafficking in the world. Ghana in Africa has become a point of destination for a lot of trafficking in children who are forced to work as labourers in the mines, specially gold mines. In Uganda, children are either trafficked for forced labour or they are killed for their organs. Nepal is considered to be the busiest route in human trafficking where trafficking of women takes place. Some other countries like Sri Lanka, Pakistan and Haiti where forced labour and prostitution is on high rate. Women in Iraq are also vulnerable to crimes such as sexual assault and human trafficking while women from India (mostly from poor families) are generally sold to Saudi Arabia for marriage purpose.

The Consequences of Trafficking

The consequences of human trafficking are most directly felt by those who are its victims. Trafficking usually involves prolonged and repeated trauma. The victims are at great risk of HIV infection. On the other hand, there are economic consequences of human trafficking. The amount of money that countries spend in its prevention, the treatment and support of victims and the prosecution and apprehension of offenders is huge. According to estimates from the International Labour Organisation (ILO), every year the human trafficking industry generates 32 billion USD a large but non-taxable income.

Initiatives Taken by the United Nations

Initiatives have been taken worldwide to deal with the severe issue of human trafficking. These include

- (i) UN Office on Drugs and Crime (UNODC) assisted many NGOs in their fight against human trafficking,
- (ii) The United Nations Global Initiative to Fight Human Trafficking (UNGIHT) was conceived to promote the global fight against this crime,
- (iii) United Nations Voluntary Trust Fund for Victims of Trafficking in Persons, 2010, provide humanitarian, legal and financial aid to victims of human trafficking.

Human Trafficking in India

Human Trafficking has expanded to almost every state in India. Especially in the state of Jharkhand, human trafficking is wide-spread. Some Southern states like Tamil Nadu, Andhra Pradesh, Karnataka also lead in human trafficking. Delhi is the hotspot for illegal trade of young girls for domestic labour, forced marriage and prostitution. Children especially young girls and women mostly from North-East are taken from their homes and sold in faraway states of India for sexual exploitation and to work as bonded labour. Girls are forced to marry more than one man in some states where female to male sex ratio is highly imbalanced. New data released by Indian Government shows that reports of human trafficking rose by 20% in 2016 against the previous year. National Crime Records Bureau (NCRB) said that there were 8,132 human trafficking cases in 2016 against 6,877 in 2015, with highest number of cases reported in the state of West Bengal followed by Rajasthan.

Steps Taken by the Government of India

- Efforts have been made by the Government of India to combat the issue of human trafficking. It penalises trafficking for commercial, sexual exploitation through the Immoral Trafficking Prevention Act (ITPA), 1986 which prescribes penalty ranging from seven years to life imprisonment.
- India also prohibits bonded and forced labour through the Bonded Labour Abolition Act, the Child Labour Prohibition Act and the Juvenile Justice Act.
- Indian authorities also use Sections 366(A) and 372 of the Indian Penal Code prohibiting kidnapping and selling minors into prostitution respectively.
- An anti-trafficking nodal cell has been set-up under the Ministry of Home Affairs. The Home Ministry has also launched a web portal on anti-human trafficking and the Ministry of Women and Child Development is implementing 'Ujjawala', a programme that focuses on rescue, rehabilitation and repatriation of victims.
- Indian Constitution bans the human trafficking in person. Article 23, in the Fundamental Rights Section of the Constitution, prohibits "Traffic in human beings and other similar forms of forced labour".
- The government has launched a "Lost and Found" or "Khoya Paya" website to help families trace the tens of thousands of children in the country who go missing every year—often abducted for forced labour or sexual exploitation—and are never found.

Conclusion

Even though a large number of efforts are being made in India as well as in the world against this crime, it is still prevailing in the society to a large extent. More efforts are needed to drive away this evil from the society at large. Some stringent anti-trafficking laws and their right implementation is required. People should be educated on human trafficking issues and help the survivors to find security and happiness.

IS CAPITAL PUNISHMENT JUSTIFIED?

Capital punishment is the execution of a person by the state as punishment for a crime. Over the ages capital punishment has been given to criminals by using various methods such as lethal injection, hanging, electrocution, gas chamber etc. The question at hand is “Is capital punishment justified?”

Death sentence as a punishment has been subject to controversies since long. The basic reason is the moral and humanitarian questions attached to it. For this, one needs to understand the death sentence by itself.

Capital Punishment in Different Countries

Capital punishment or death sentence being one of the harshest punishments known to man has taken a gradual humanised change over the years. Being a mode of punishment prominently followed in most parts of the world for centuries, has now been abolished in many countries. India is one of only 58 countries that have the death penalty on their statute book. India seems to be stuck between the global trend to end death penalty and the few nations that still follow it. It has taken a very safe ground by giving a minimal provision and leaving it to the discretion of the judiciary to award the punishment in special circumstances.

The question that is constantly debated upon is that when should capital punishment be awarded or should it be awarded in the first place? What sort of crime or offence would demand a capital punishment? Should a serial killer with no conscience be incriminated?

Some say that life-imprisonment is an easy way out and it would also give chance to reform the criminal. Most of the people now feel that punishment for crimes like murders should not be death but some reformatory or deterrent sentence. Death sentence cannot reform a criminal. There is a huge uproar everywhere against capital punishment and death sentence, saying it is immoral and that it infringes the inalienable ‘right of life’ of an individual.

Universal Declaration of Human Rights by the UN

In 1948, the United Nations adopted the Universal Declaration of Human Rights, which is a pledge among nations to promote Fundamental Rights as the foundation of freedom, justice and peace in the world.

Article 5 of the Declaration states that no one shall be subjected to cruel and degrading punishment. Therefore, abolitionists insist that capital punishment should be ruled out because it is cruel, inhuman and degrading. The governments which have abolished death sentence, find that there is no increase in the number of murders in the countries after the abolition.

There are numerous arguments put forward against death sentence. The classic one is that society cannot show that killing is wrong by killing. Even Gandhiji said, "Hate the sin, not the sinner". It is further added that capital punishment is a vengeance rather than retribution and as such, is a morally dubious concept.

Arguments in favour of Death Penalty

The people who want to abolish death penalty claim that it violates the sanctity of life. So isn't the sanctity of victim's life more important than the convict's life. In our zeal to protect the rights of criminals, we should not minimise the rights of their victims. An innocent's life should be valued over the offender's. The most common place argument given is that executing a murderer will not bring the victim back. Justice is not about bringing back the dead. It is about enforcing consequences of one's own action. It is about preventing future misfortune and protecting the life of the vulnerable and about arming the weak.

Some people stress on the barbaric nature of the death penalty as a reason for its abolition, forgetting that the acts committed by the people sentenced are not exactly humane.

Arguments Against Death Penalty

Most importantly people should understand that certainty of punishment and not severity is the real deterrent to crime. The death penalty is unjust and inhumane. Miscarriage of justice is, in fact, one of the biggest concerns about the death penalty. Unfortunately, even in 21st century, someone could be wrongly hanged. Studies conducted by Amnesty International have shown that the process of deciding who should be on death row is arbitrary and biased.

It is a fallacy to think that one killing can be avenged with another. For, capital punishment is merely revenge masquerading as justice. Especially, in a country like India where free legal aid is, at best a mockery to the system, there is no denying the fact that most of those waiting death sentence are of weaker backgrounds.

Conclusion

The debate over capital punishment has been raging on for countless number of years. Yes, it is right that death sentence is not the solution to the increase in crimes. But, at the same time we should not ignore the fact that capital punishment has been used for thousands of years due to the fear it inflicts on the people who witness and learn about the death penalty. The use of this punishment has helped to reduce crime and alter the minds of future criminals to deter them against committing heinous crimes. But, it should be given in the rare of the rarest cases after proper investigation of the criminal's offence.

IMPACT OF ADVERTISEMENT ON SOCIETY

Before looking at the impact of advertisement we must understand what does advertisement mean. An advertisement is a form of marketing communication, which is used to promote or sell something, usually a business product or service. Advertising is nothing, but a paid form of non-personal presentation or promotion of ideas, goods or services by an identified sponsor with a view to spread information concerning an idea, product or service and sell the product or increase the sale volume. The real objective of advertising is effective communication between producers and consumers.

History of Advertisement

The history of advertisement dates back to 3000 BCE. In the Babylonian civilisation, historians and archaeologists have uncovered evidences where eye catching signs and paintings were displayed outdoors. Also, archaeologists have discovered evidences in Roman civilisation where signs were displayed outside homes offering property for rent.

Later on, during medieval times merchants employed 'criers' who read public notices and also praised about the goods sold by their merchants. In modern times advertisement is shown through print media *viz*, newspaper, magazines; digital platforms i.e. radio, TV, internet etc. Advertisement facilitates large scale marketing.

Positive Aspects of Advertisement

Some advertisements serve a public purpose by spreading awareness among the masses. They help in educating the viewer about an issue or a concern e.g. 'Jago Grahak Jago' campaign of Government of India. Lifebuoy advertisement spreading awareness about maintaining hygiene at home and its impact on people's health is another such example.

Another positive impact of advertisement is emphasis on social values through them e.g. awareness about the harmful effects of intoxicants such as tobacco or alcohol or drugs etc. Such advertisements have a social message for masses and it reaches far and wide all over the country.

Through advertisements we can spread information or benefits of a campaign at a speed and with far reaching consequences. Advertisement can help in educating people such as the advertisement about polio drops to be given to the children. In India, polio eradication programme has been successful with the help of advertisements only.

Negative Aspects of Advertisement

Advertising has some negative aspects also which can be harmful to people in many ways as products which are endorsed by a celebrity do not ensure its quality. Sometimes, the product may not be of an excellent quality but because a celebrity is advertising for it, common people tend to buy it which sometimes can be misleading. Another negative aspect of advertisement is the hidden cost attached to the product or services. Products which are heavily advertised become expensive due to the cost spent on advertising.

Advertisement is often deceptive and misguides consumers. Exaggerated and false claims are made in the advertisements. Bogus testimonials and other questionable means are used to sell goods. Indigenous or local products tend to lose their market as they are lost in the glamour of celebrities endorsed brands.

Ethical Advertising

Ethical advertising is about being truthful concerning about the product or service and never exaggerating the capabilities of a product/service or hiding its flaws. As the markets run at cut-throat competition therefore, it is necessary for private companies to spend huge amounts of money on advertisement. But at the same time they have a corporate social responsibility, moral responsibility and ethical responsibility by not pushing products or services which are detrimental to the society.

Products with adverse health benefits should be left to the wisdom of people. Governments as a welfare and responsible authority should intervene in such critical aspects. Similarly, it is also the responsibility of the celebrities to stop playing with emotions of people. We look up to them for many values, therefore they should not dupe people into using something which they do not believe in themselves.

Conclusion

Advertisements should therefore encourage choice, create awareness, lead us into living a better lifestyle. As these have a deep impact on the psyche of people therefore advertisements should be value embedded and ethical. The educative advertisements should be publicised much to create awareness among people. To sum up we may say that advertising has positive as well as negative impact on society. The balance of between 'what is more important' and what is really not needed' should be focussed more and practised accordingly.

NAXALISM

THREAT TO INTERNAL SECURITY

The term 'Naxalite' is derived from Naxalbari which is the name of the West-Bengal town from where India's Naxal movement began. It was a revolutionary movement of the peasants and the labour class. This movement was backed by the Communist Party of India (Marxist and Leninist) and Charu Mazumdar had led the first uprising of Naxalites. Initially, it was a mass movement of the peasants. Later, the peasants were taught new military strategies and guerrilla warfare. The peasants were trained for armed struggle against the rich and influential land owners.

Expansion of Naxalism

In initial years, Naxalites were active in West Bengal. This movement got strengthened with the aid from China and spread in the regions of Chhattisgarh, Odisha, Jharkhand, Andhra Pradesh, Kerala, Bihar and Madhya Pradesh. The area in India where support for Naxalism is maximum, has been referred to as red corridor. The States of Chhattisgarh, Jharkhand, Odisha, Bihar, West Bengal, Andhra Pradesh, Telangana, Maharashtra, Madhya Pradesh and Uttar Pradesh are considered affected, although in varying degrees.

The Weakening of the Movement and Later Resurgence

The movement was a result of the exploitation and ill-treatment of the peasants by the landlords and tea-garden owners. These peasants were treated like bonded labours by the rich and were living a pathetic life. The backward population wanted their share of land which was denied to them for years. Landless farmers and peasants felt cheated for being denied cultivable lands. Naxalite groups had capitalised on this resentment. However, there was a time when the Chinese Communist Party decided to cut off their funding to the Asian Maoists groups. There were brutal encounters by the police and the leader Charu Mazumdar was captured and kept captive by the police under life imprisonment. All these led to the weakening of the Naxalite movement. This happened in the 1970s.

However, the movement regained strength in the beginning of 2004. This was when the two largest Naxalite groups joined together to form a new organisation, the Communist Party of India-Maoist (CPI-Maoist). The creation of CPI-Maoist was a watershed event, ending the era of interfactional violence among the Naxalbari and paving the way for Naxalite resurgence.

How the Naxalites Function?

The Naxal movement is coordinated by the apex body of the CPI (M), that is, its Central Committee, which is a 32-35 member body. Out of the Central Committee, a 13-member Politbureau is formed. Like any national political party, the state committee secretary of every state and the secretary of a special guerrilla zone is automatically a member of the Central Committee. Of the total money collected by the State Committees and the Special Zones, 30 per cent goes to the Central Committee. The rest is retained for local expenses incurred by the State Committees. The procurement of arms is done at the central level and then distributed to states as per their needs. The main source of weapons continues to be looting them from the armed forces of the country.

Naxalites keep a lookout for people especially the youth, who have been the victims of government's inefficiency or injustice. Such people are lured into the movement either for money or for revenge. The Peoples Liberation Guerilla Army (PLGA), the armed wing of CPI (Maoist), has been created with this purpose in mind. In the first stage of insurgency, the PLGA resorts to guerrilla warfare, this primarily aims at creating a vacuum at the grass-roots level of the existing governance structures. This is achieved by killing lower-level government officials, police-personnel of the local police stations, the workers of mainstream political parties and the people's representatives of the Panchayati Raj system. After creating a political and governance vacuum, they coerce the local population to join the movement.

A strident propaganda is also carried out against the purported and real inadequacies of the existing state structure. In areas under Maoist domination, the absence of governance becomes a self-fulfilling prophecy since the delivery systems are extinguished through killings and intimidation. This is the first step in the strategy of the Maoists to seek to control the countryside.

The Front Organisation and its Working

Many Front Organisations are created to facilitate mass-mobilisation in semi-urban and urban areas through ostensibly democratic means. Most of the Front Organisations are led by well-educated intellectuals with firm belief in the Maoist insurgency doctrine. These ideologies function as masks to cover the violent nature of the CPI (Maoist) ideology. They also form propaganda machinery of the party.

The Front Organisations also skillfully use state structures and legal processes to further the Maoist agenda and weaken the enforcement regime. The important functions of these organisations include recruitment of 'professional revolutionaries', raising funds for the insurgency, creating urban shelters for underground cadets, providing legal assistance to arrested cadets and mass-mobilisation by agitating over issues of convenience.

The Front Organisations aim to provide short-term democratic subterfuge to cover-up the totalitarian and oppressive nature of the Maoist ideology. The CPI (Maoist) also have a strategic game-plan to create a 'United Front' with all like-minded insurgent outfits in India. Many of these outfits are supported by external forces opposed to India and the CPI (Maoist) consider such alliances as strategic assets.

The Difference between Naxalism and Maoism

There are many differences between Naxalism and Maoism. Naxalism focuses on mass organisations while the Maoism relies mainly on arms. Naxalism originated as a rebellion against the marginalisation of the poor forest dwellers and against the lack of development and poverty at the local level in rural parts of Eastern India. Maoism originated in China as a form of communist theory derived from the teachings of Chinese political leader Mao Zedong.

Government's Approach Towards Naxalism

The Naxalite movement highlights the internal weaknesses of the country. It hampers the economic development of the country, as the resources that must be used for the development of the country are diverted towards the management and control of naxalites and their activities. The conflicts between the armed forces and naxalites are the biggest threats to the common man. When the Naxal uprising began in 1967, the Indian Government looked at it as a law and order problem. It did not analyse the causes of the movement and the extent of mobilisation of people. Hence, it believed that it could and would put an end to it in short span of time using force.

But now government's approach is to deal with Naxalism in a holistic manner, in the areas of security, development, ensuring rights and entitlements of local communities, improvement in governance and public perception management. The Police and Public Order fall under the jurisdiction of States, action on maintenance of law and order lies primarily in the domain of the State Governments.

Important Steps to Control the Movement by Central Government

The Centre aims at enhancing the capacity of the State Governments to tackle the Maoist menace in a concerted manner. The Central Government closely monitors the situation and supplements and coordinates the states' efforts in several ways. These include

- Providing Central Armed Police Forces (CAPFs) and Commando Battalions for Resolute Action (CoBRA).
- Sanction of India Reserve (IR) battalions.
- Setting up of Counter Insurgency and Anti Terrorism (CIAT) schools.
- Modernisation and upgradation of the State Police and their Intelligence apparatus under the Scheme for Modernisation of State Police Forces (MPF scheme).
- Re-imburement of security related expenditure under the Security Related Expenditure (SRE) Scheme.
- Filling up critical infrastructure gaps under the Scheme for Special Infrastructure in the affected States providing helicopters for anti-Naxal operations.
- Assistance in training of State Police through the Ministry of Defence, the Central Police Organisations and the Bureau of Police Research and Development.
- Sharing of Intelligence and facilitating inter-State coordination.
- Assistance in community policing and civic action programmes.

Operation 'SAMADHAN' is the recent initiative on the part of the Union Government to deal with the problem of Naxalism. The Ministry of Home Affairs has also suggested the use of trackers for weapons, and bio-metrics in Smart Guns. The Union Government has also introduced the policy of "Surrender-cum-Rehabilitation" to usher in peace and development in the disturbed regions. Its objectives are many fold, which include efforts to bring back the youths and naxals who found themselves trapped in the network, to prevent the naxals who surrendered for joining the naxal movement again, and to prevent youths from joining the naxal groups. This policy has been evolved, keeping in mind the specific geographical and social landscape to help those naxalites who want to give up violence, surrender and join the mainstream.

Conclusion

Undoubtedly, Naxalism is a serious threat to the security of the nation. It becomes imperative for the government to increase the connectivity to the affected areas. This will be beneficial in creating strong ties and links between the outer world and the affected areas. The police force is still not capable of providing security. The government needs to provide better training and arms to the police forces. The civilians and media can play an important role in making the Naxalites realise that India is a democratic country and it offers legitimate forums for grievance redressal. An ideology based on violence and annihilation hampers the progress of the civil society. It is through a holistic approach focussing on development and security related interventions that the problem can be successfully tackled.

29

INDIAN CINEMA AND ITS IMPACT ON SOCIETY

The Indian cinema primarily emerged during the post-independence period. Before this period, India produced only a few films such as Dada Saheb Phalke's Raja Harishchandra (1913), the first silent film in India and Alam Ara (1931), the first talking film, which was a superhit. Movies were also made in regional languages such as Bengali, Telugu, Tamil, Gujarati, Malayalam, Oria etc. The post-independence period between 1940s and 1960s was regarded by film historians as Golden Age of Indian cinema. The films made during this period were thought provoking and emotionally enriching and delivering new ideas while keeping the basic Indian virtue intact. Those films created new expectations for the masses as the theme of films during this time was social issues and issues of national integration. Times and perception changed as filmmakers started producing films which people could easily associate and connect with.

Factors such as new economic changes changed the film industry. Events such as liberalisation of economy in 1991 and entry of satellite television in 1992 changed the industry of cinema in India. It became more liberal, bringing in Western way of life, depicting exploitation, criminality etc. Film makers have become bolder as now the cinema tries to present the clear black and white picture of even the controversial issues rather than venturing into the grey side which shows a hazy picture.

Value of Cinema for a Society

Indian cinema has an educative value. It exercise a deep influence upon the minds of the people. Cinema has the power to be an effective reformative instrument. It can expose the evils prevalent in the society such as girl foeticide, corruption, poverty, social unrest, illiteracy etc. The Indian cinema captivates the hearts and minds of young boys and girls, that is why it is essential to use this medium wisely. Today's filmmakers have a social responsibility along with their entertainment and commercial interests.

It is always good to see good quality cinema. It has a very positive and long lasting effect on the minds of people whereas movies that are shabby, affects the tender minds of people very badly. Bad cinema badly affects the thoughts of people. But it doesn't mean that cinema should be discarded from the society. It has several roles to play in building a prosperous society.

Cinema has great educative value. It can achieve splended results in the expansion of education. Various subjects can be taught with the help of cinema. Subjects such as history, geography, lessons on road sense, rules of hygiene, civic sense, respect for women, respecting diverse cultures etc. can be taught with the help of cinema more effectively.

Cinemas and films have the power to influence the thinking of people. Indian cinema is the world's largest producer of films in various languages, dialects, portraying the lives of people in different ways. Movies have changed societies and social trends. They have become trend setters by having direct impacts our social lives. Movies have been used by filmmakers for arousing national consciousness and also in utilising the energy of youth in social reconstruction and nation building. Movies have been made on good moral, social and educative themes. Cinema has been used to formulate and guide public opinion.

Several films have been adopted from literary works. These films have successfully spread good literature among the common masses. It has also spread the practices of various cultures among the people. It imparts knowledge and understanding of lives and traditions of the people. Movies are an important source of informations on History, civilisation, religions, social and economic aspects, politics etc. The social reality is depicted in the Indian cinema, sometimes realistically and sometimes according to the popular imagination. Thus, cinema is considered highly valuable for a society. As apart from entertainment medium, cinema has evolved itself into a diverse system that provides a large number of benefits to the society.

New Trends in Indian Cinema

Indian cinema has undergone various changes from the producer of masala content towards movies that are focussed upon social issues and spread the message on issues affecting Indian society. It has reached new heights and simultaneously underwent various trends and new changes. Some of these changes are

- Single screen cinema theatres have been replaced by multiplexes that has increased the outreach of Indian cinema industry.
- Digitisation and the infusion of over the top technological platforms that can stream directly to our homes in our mobile devices have changed the landscape of Indian cinema.
- These video streaming platforms are advantageous for the viewers as they allow the Indian viewer to watch specific content of their choice at their own convenience. As these platforms are unregulated so, they allow more freedom and creative expression as compared to the traditional movie theatre release.
- The new trend has been marketing the films for wider audiences rather than a particular segment. Now more movies are produced which are based on social cause and issues of several communities.
- More number of movies are being made on national issues that captures the imagination of people and highlights various political issues and opinions. Digital connectivity has enabled such movies to reach wider audience.
- Now large budget cinema is shifting towards low budget simple movies with modest cast rather than multi-hundred crore movies with star cast. The contribution of superstar cast movies has dropped and instead fresh talent has seen a rise.
- The cinema industry is also moving towards private producers from a predominantly production house dominated industry. In these individual movies, the producer has more creative freedom and takes lesser time to produce.

The Positive Effects of Cinema

The positive effects of cinema are as follows

- Cinema has enabled the people of India to creatively express themselves in a language that can be understood by everyone. As cinema impacts the minds of people, it has the power to positively influence their minds and inculcate values of empathy, kindness, love, peace etc.
- It aids in spread of cultures and it allows people to be more respectful towards diversity, understand the issues and specific needs of other cultures. It enables intermixing of people of one culture with the others and thus allows for the emergence of a common national composite culture.
- Cinema also acts as an inspiration for the viewers. It makes the youth more compassionate and inspires them to help others and to do good to humanity. It encourages us to fight our personal pains and teaches us to behave properly with our peers even in pain. It encourages people to help others without seeking anything in return.
- Movies have always been used by creators to spread social awareness about various issues affecting the Indian society. Movies made on issues of women, war, drug abuse, crimes etc. have led to the creation of awareness in the society on these aspects. It has enabled people to discuss and find solutions to these issues more openly.

- Movies are a reflection of the existing culture prevailing in the society. It allows us to reflect upon ourselves. When the prevalent beliefs and ideologies are challenged by the movies, it is easier to interrogate ourselves, our attitude towards others, our strength and weaknesses and enables us to become agents of change.
- Cinema is used to connect the modern world with the past. A movie on history of our culture, civilisation etc has the power to arouse our imagination and reflect back upon our history and society and their evolution till the modern times. It can be used to provide an alternative to a uniform culture promoted by one ideology. Thus, it helps us to recognise diversity in our history.
- Cinema is used to integrate the country on the basis of our common identities, simultaneously respecting and accepting the diversities. National issues and achievements are often reflected through the use of cinema and its production.

Negative Effects of Cinema

The negative effects of cinema are as follows

- Cinematic freedom has often been accused of overreach and promoting violence, nudity, racial discrimination, injustice, asympathy etc. Scenes full of violent behaviour are more common now in movies, which tends to influence young minds and makes them insensitive towards others.
- Cinema is used to stereotype religious practices, communities, gender roles, and creates tensions in the society. It is often abusive towards a particular community. It portrays one community against the other which may not be even the real picture but it can create social unrest.
- The actors are seen portraying a idealistic hero which may not be true of their personal characteristics in the real life. These actors are often viewed as role models but they are only acting for particular movie scenes. The young people create a false sense of idealistic men and women in their minds which proves detrimental when they discover realities.
- Commercialisation of cinema at a rapid pace also deprives it of the artistic values as it is only created for profitability. If focus shifts on the profitability of a movie rather than its content and then it becomes more of a commercialised movie rather than an artistic one. Often these movies portray controversies to get profitability which could create tensions in the society.
- The women are often used as commodities in popular cinema to gain more viewers. The growing tendency of film makers to use violent graphics, sexual imagery, vulgar scenes have further worsened the portrayal of women.

Conclusion

The Indian cinema has grown significantly after the Independence of India. It has influenced the people, society and culture of India since the beginning and in turn has been influenced by it too. It has become a powerful tool of mass communication, political mobilisation, social justice and opinion formation. The cinema of India has the power to address various social issues. The issue of piracy still affects Indian cinema. Moreover, films have also been accused of promoting harmful behaviours. Thus, there is need to work upon these issues so that cinema can play its role more effectively in a society.

EUTHANASIA

RIGHT TO DIE WITH DIGNITY

The term 'euthanasia' comes from the Greek word 'euthanatos' meaning 'good death'. It is an act or practice of ending the life of an individual suffering from a terminal illness or an incurable condition. It is also known as 'mercy killing' which is an act where the individual who has no chance of survival as he is suffering from painful life, ends his life in a painless manner. It is a gentle, easy and painless death. It is basically to bring about the death of a terminally ill patient or a disabled. Euthanasia is thus practised so that a person can live as well as die with dignity.

Types of Euthanasia

There are two types of euthanasia namely, active euthanasia and passive euthanasia. Active euthanasia or positive euthanasia refers to causing intentional death of a human being by direct intervention. It is a direct action performed to end useless life and a meaningless existence. For example, by giving lethal dose of a drug or by giving a lethal injection. On the other hand, passive euthanasia or negative euthanasia is intentionally causing death by not providing essential, necessary and ordinary care or food and water. It implies to discontinuing, withdrawing or removing artificial life support system. Passive euthanasia is usually slower and more uncomfortable than active.

Difference between Suicide and Euthanasia

Before moving further, it is important to note that there is a difference between 'Suicide' and 'Euthanasia'. In a suicide, a man voluntarily kills himself by stabbing, poisoning or by any other mean. It is an act of intentionally killing oneself due to depression or other reasons. On the other hand, euthanasia is an action of a person to bring to an end the life of another person. Another major difference to be studied is between 'assisted suicide' and 'euthanasia'. Assisted suicide is an act which intentionally helps another to commit suicide, For Example, by providing with the means to do so. When it is a doctor who helps a patient to kill himself by providing a prescription for lethal medication, it is a 'physician assisted suicide'. On the other hand, euthanasia may be active such as when a doctor gives a lethal injection to a patient or passive when a doctor removes life support system of the patient. Now, the matter of concern is the legalisation of euthanasia.

Allowance of Euthanasia in Some Countries

In countries like Belgium, the Netherlands and Switzerland, active euthanasia is legal. Passive euthanasia is allowed in the UK, the USA and Canada. In India, the question of legalising euthanasia came during the case of state of Maharashtra *v/s* Maruti Shripathi Desai. After the decision of Supreme Court in Aruna Shanbaug case, 2011, a nurse who was in a vegetative state for 37 years as a result of sexual assault, passive euthanasia was legalised in India.

Passive Euthanasia in India

India allowed 'passive euthanasia' in exceptional cases on 7th march, 2011 after a review by medical experts, while 'active euthanasia' is not allowed. This landmark decision legalised passive euthanasia, giving thousands of patients living in a persistent vegetative state all over the country, the right to have artificial life-support system withdrawn so as to enable them to end a life of misery. The court held that there is no right to die under Article 21 of the Constitution but causing the death of a person who is in a permanent persistent vegetative state, with no chance of recovery, by withdrawing artificial life support is not a 'positive act of killing'. Terming this 'passive euthanasia', a bench of justices Markandey Katju and Gyan Sudha Mishra held that this could be permitted on a case by case basis.

Guidelines for Passive Euthanasia

The court also laid down guidelines for passive euthanasia. The matter must be referred to the High Court for a decision and that the doctor or the parents or spouse of the patient must be one of the petitioner for the withdrawal of life support system. A special two-judge bench will be formed in every High Court to decide applications seeking permission for euthanasia.

A committee of three reputed doctors from a panel constituted by the High Court in consultation with the State Government will examine the patient and submit its report to the High Court bench. Notices will be issued to all those concerned with the doctor's report attached. After hearing everyone, the bench will give its verdict. The matter must be dealt speedily as delays prolong the agony of the patient. The Supreme Court declared passive euthanasia and the right of persons, including the terminally ill, to give advance directives to refuse medical treatment permissible. The Supreme Court in its judgement upheld that the Fundamental Right to a 'meaningful existence' includes a person's choice to die without suffering.

Euthanasia : Pros and Cons

It is in consonance with the Article 21 of the Constitution which provides for living with dignity and if that standard is falling below that minimum level then a person should be given a right to end his life. It not only relieves the unbearable pain of a patient but also relieves the relatives of a patient from the mental agony. It provides a way to relieve the intolerably extreme pain and suffering of an individual. On the other hand, many people are against legalising euthanasia. They believe that the human life is gift of God and taking life is wrong and immoral human beings cannot be given the right to play the part of God. Acceptance of euthanasia as an option could exercise a detrimental effect on societal attitudes and on the doctor-patient relationship. Miracles do happen when it is a matter of life and death, there are examples of patients coming out of coma after years. It is feared that if euthanasia is legalised then other groups of more vulnerable people will become at risk of feeling into taking that option themselves.

Conclusion

To conclude we may say that it has now been realised that this method to end unbearable pain and suffering of a being is no crime but it, certainly may lead to a crime if not monitored properly. As far as possible, efforts should be made to reduce the pain and suffering by means of treatment i.e. both physical and mental. Euthanasia has to be resorted to only when all the other options have been exhausted.

31

CASTE DISCRIMINATION AND EXCLUSION IN INDIA

Millions of people in India are born with existing scars that may not fade till their lifetime or over next generations. In the Hindu society of India, people are born in certain families, by the accident of birth, that are already looked upon as having lower status in the society. There are the shudras, also termed as Dalits or the untouchables. These people are socially stigmatised and economically backward as they are forced to perform menial jobs for the upper caste people. These people are discriminated and socially excluded, which means that they are not allowed to fully participate in the public and community life, which also has several adverse consequences upon their growth and development.

The caste system in Hinduism encompasses a complex ordering of social groups on the basis of ritual purity. A person is considered as a member of the caste into which he/she is born and remains within that caste until death. Differences in the status are traditionally justified by the doctrine of Karma, a belief that one's place in life is determined by one's deeds of previous lifetime. Though, the practice of untouchability has been abolished by the constitution, yet the imposition of social disabilities on people by reason of birth into a particular caste remains the part of lives of people in India. Discrimination and exclusion on the basis of caste is hereditary in India. If a particular caste is seen as untouchable, then all the members of that community face discrimination, whatever be the occupation of the member of that caste.

Forms of Caste Based Discrimination and Exclusion

Discrimination and exclusion have deeper roots in Indian society. That is why even when there have been various legislations that prohibit discrimination on the basis of caste, yet it has not been eradicated completely. This discrimination and exclusion manifests itself in several forms. These may be social, economic or political.

Social Disabilities

In the social hierarchy, the lower castes are ascribed the lowest status. It means that they are considered as unholy, inferior and polluting. Even their touch is considered as polluting by the upper castes. Hence, they are exploited and discriminated and often they are beaten if they come in contact with the people of higher castes. They were made to perform unclean jobs such as washing clothes, scavenging, tanning, shoe making, removing dead animals etc.

They were not allowed to use public spaces and avail facilities such as common wells, ponds, temples, schools, hostels, hospitals, dharamshalas etc. They were forced to live on the outskirts of the town and villages during earlier days. Even now, their houses are physically separated from those of the upper caste houses. They were allowed to work as labourers in the houses of the upper caste people but later the house was purified using cow dung or cow urine or holy river water.

In South India restrictions were imposed on the way of their dressing, types of their houses and even the ornaments they can wear. They were sometimes not allowed to cover their upper bodies. Higher education was denied to them. Even now many dalits face discrimination in educational institutions. They are not able to avail of opportunities that are available to the upper caste people studying in the same education institution. Even now the literacy levels among the scheduled castes is too low.

These castes have also been denied religious services. This practice exists even today and many people from the lower castes can not attend religious ceremonies in various temples of India. The Vedic mantras could not be listened to by the 'impure' castes. They were even denied burial ground in various regions of India.

Economic Disabilities

For centuries, the untouchables were not allowed to own land and houses of their own. It is after the democratisation of India after its independence that their right to property has been recognised. Still the propertied class among the untouchables is quite low. Majority of the workforce in India is engaged in agriculture but the dalits still own very less agricultural lands as compared to other castes.

Many of the untouchable castes today work as landless labourers. A large number of lower caste families are debt ridden. Though their economic conditions have improved but they have not improved in synchronisation with the changing times and changes in the economy. Hence, still they are economically exploited by the upper castes.

The caste system also imposes certain restrictions on the lower caste people. They are not allowed to mobilise up the social and economic ladder. Whatever traditional occupations they were carrying on, they are not allowed to change those occupations. They are forced to take up only those occupations which are reserved for them. Though seats have been reserved for them in various government sector occupations yet they make up only a small proportion of the overall workforce. Moreover, mostly the lower castes are occupying the lower level jobs in government services.

Political Disabilities

The untouchables rarely participated in the political matters. Earlier, they were not allowed to hold public positions. Political representation was denied to them. After independence, seats in the Parliament and State Legislatures were reserved for them. But they are yet to become a decisive force in the Indian politics. There has not been much influence of lower castes at the national level politics. Their influence has mostly been localised only barring a few political groups that have succeeded at the national level too. Mostly the lower castes have not been able to coherently organise themselves at the national level. Thus, they are still excluded from the political power sharing.

There have been only very few instances where a scheduled caste member has won a seat in Legislature or Parliament at the national level or at state level from a general category seat. Often the lower castes find themselves at the odd end in a quarrel between the upper and lower castes. In the power tussle they are made scapegoats and denied even the basic human dignity. It is a well-known fact that lower caste victims are often treated as perpetrators of crime and denied justice. Moreover, they are exploited, insulted and humiliated by the criminal justice system.

Effects of the Caste Based Discrimination and Exclusion

Caste system hinders national unity. People become conscious of their own castes and prioritise their caste and class interests over national interests. It is against the democratic spirit. India is seen internationally as the champion of democracy in the world. If the citizens are discriminating against each other, it defeats the spirit of democracy. Democracy is based on equal rights and respects but the castes system believes in a hierarchial arrangement where the upper castes enjoy more privileges and lower castes are looked as inferior. It results in suppression of individual liberty and dignity.

The dignity of the lower castes people is not respected as they are denied basic human rights such as right to livelihood and right to food. Inter-dining and inter-mixing of upper castes with lower castes was not allowed earlier and this practice is still prevalent in some backward regions of India. The caste system is thus against the idea of national development. In the national interest it is essential that all the sections of the society should contribute to the social welfare and national economy but the caste system views the lower caste people as unequals and denies them a voice in national development and economic advancement.

The hierarchial system of caste and the discrimination that the people of the lower caste face in their everyday lives undermines their abilities and aspirations. Acceptance of one's social status becomes mandatory and unquestionable. Thus, caste of the people is given more importance in the society as compared to their abilities and capabilities and one's ability, talent, personal endeavour becomes meaningless. It has also resulted in the monopoly of the upper castes over knowledge, education and wisdom. This has created a wide gulf between the upper and the lower castes. It is again a hinderance to the national development. Caste based discrimination has also led to the emergence of other forms of exclusions and discriminations. For e.g. women among the lower castes are more discriminated upon. They are exploited physically as well as mentally. They are forced to follow certain rituals against their wishes. Thus, the prevalence of caste based discrimination has made some citizens unequal as compared to others in a democratic nation.

How to Eliminate Caste Based Discrimination?

Though various legislations have been passed by the Parliament and the State Legislatures yet caste discrimination exists in India. The following measures can be taken to eliminate this evil from Indian society

- Policies should be designed and implemented that specifically aim to challenge the discrimination on the basis of caste. One important point to note here is that there must be effective participation and consultation of those communities that have been exploited for centuries on the basis of caste. Thus, this decentralised approach is necessary as compared to the earlier top down approach where policies were made at the top level without any representation from the affected castes.
- Platforms should be built at the national as well as local levels that should specifically be used to build the capacity of the communities who are victims of the caste based discrimination. These programs should be regularly monitored and their deficiencies should be analysed so that they can be improved. Providing reservations without further support will not work.
- Institutional discrimination should be tackled at every level. Institutions, be it government or private, which promotes caste based discrimination should be reprimanded and counselled so that a human rights approach can be promoted towards those people who are or have been discriminated and disabilities imposed upon them on the basis of caste.
- Good housing facilities with provision of basic services shall be built for the lower castes so that they are not deprived of their right to shelter. These houses should not be built on separate lands or lands away from the upper caste houses but they should be constructed in a way that the lower castes and upper castes live in the same piece of land and in complete harmony.
- Caste bias should be removed from the minds of public servants such as police, judiciary, civil servants, legislators etc, so that the lower caste discrimination is not institutionalised.
- To completely eliminate caste based discrimination, the current laws and justice providing institutions should be strengthened further so that the lower castes are not denied their equal rights as equal citizens of India. There should be a national level platform where dialogue between the representatives of upper and lower castes should be promoted so that the historical bitterness can be dissolved and a message of peace and harmony on the basis of democratic rights, equality and human dignity can be spread.

Conclusion

Despite many reforms and government regulations it is unfortunate that caste system in India still exists. We as citizens must take cautious steps and uphold discrimination as a serious offence. It is essential to eliminate caste discrimination before it eliminates the unity of India.

ROLE OF STUDENTS IN POLITICS

The polity of India is unique in the sense that it has involved the traditions of democratic debate and discussions. The Indian politics is continuously evolving. During the course of evolution of democracy, the Indian politics has witnessed a wider participation of different stakeholders including the students.

The role of the youth in shaping the course of any democracy is undeniable. More than 50 per cent of India's population is below the age of 25, and more than 65 per cent below 35. Given that democracy is the will of the majority, and the majority of India's population nearly 400 million voters is the youth, it is essential to look at the way this majority can be harnessed to participate in democracy and contribute towards the development of the country. Student politics aims to infuse the democratic principles among young generation.

Student Politics Scenario in India

Students and politics have always been the core of almost all the revolutions that have taken place. Once the student starts taking interest in the politics of his country, the change is bound to come.

- **Pre-independence Scenario** In India, student movements have more than 150 years of history. In 1848, Dadabhai Naroji founded the 'Student's Literary and Scientific Society', as a forum for discussion. This can be considered to be beginning of student movements in India. The first student strike happened at King Edward Medical College, Lahore, regarding academic discrimination between the English people and Indians. This strike was a complete success.

As the part of the freedom struggle there were so many student movements emerged and engaged in it. Swadeshi Movement (1905) was the beginning of the Indian Student Movement. This gave students a revolutionary outlook which called them to boycott colleges as well as British goods.

The All India College Students Conference was held at Nagpur in 1920 and the resolution on non-cooperation and boycott of schools and colleges is passed with an overwhelming majority. In addition to this, youngsters played an important role in shaping political discourse during Civil Disobedience Movement and Quit India Movement.

- **Post-independence Scenario** The Independence of our nation was one of the turning points of the student politics in India. There was a marked change of perspective within the leadership of the student movements. In the place of the mass student organisations, a number of local groups mostly of an ad-hoc nature developed.

Agitations have tended to be localised forced on university issues or local political conflicts, rather than on rational or broader ideological questions. The different student movements emerged in different states or a specified locality. The Nav Nirman Student Movement in Gujarat (1973), Bihar Student Movement (1974), Assam Student Movement (1979) and All Jharkhand Students Union (1986) are the examples of youngsters participating in political movement.

- **Current Scenario** Several Universities have witnessed a burst in student protests in last few years. The reason for students protest does vary owing to local or national issues. The student bodies like students union give representation to demands of students. The Jadhavpur University Protest (2014) that demanded an investigation into molestation of a female student, and the JNU protests (2019) against fee hike are the recent examples.

Need for Youngsters in Politics

Young people are often excluded or overlooked as political candidates. It is important to note that in the new democracies like India, the role of youth is of special importance. Politics is typically regarded as a space for politically experienced men. Young people are systematically marginalised because of their young age, limited opportunities, and projected lack of experience. However, the presence of young people in decision-making positions benefits all citizens and not just youth. They bring a wide array of ideas. The novelty which accompanies the youth must be welcomed in politics.

Statistics explain that even if half of the governing powers come under control of sensible educated people, then a combined effort of old experienced people as well as young educated minds would increase the development rates to 40%. Not just talking about Indian politics but also matters like inter country business or maintaining relations with other nations, it is important for the youth to take participation in it as they can think above the traditional ways and easily adapt to the modern ways of development.

Student as Enablers in Politics

The purpose of an educational institution is not only to instruct the curriculum but also to produce equally responsible and aware citizens by facilitating dialectical research. Students use their political platforms, under the norms and values of democracy. Student politicians question the laws and policies, if they are against larger good of society. Further, they advocate social justice.

Furthermore, student politics help in making aware of their rights and act as a link between masses and the administration. In the past, youth leaders like Gagan Thapa, JM Namgyal and others have tirelessly fought for progressive principles such as republicanism, federalism and inclusive democracy.

Student Politics as a Threat to Democracy

Student's groups participating in student politics are often blank in ideology and do not address the issues of national concern. The organisational structure and the activities of the student unions seem obsolete in the context of the social and political reforms in the country. Many student unions don't reflect the inclusiveness and wider participation from all sections of the society.

Also, many a times, student using the banner of a certain mainstream political party act as proxies and only push agenda relating to their ideologies, even at the cost of democratic ethos. Furthermore, many a times, students engage themselves in violence and abuse.

Way Forward

Before Independence it was repeatedly declared that youngsters must have a very acute and alert consciousness and be ready for any type of involvement to achieve freedom. After Independence, the picture seems to have changed and now it is being said that students' main concern is academic pursuits. However, students cannot live in isolation or in a sort of social vacuum. The student agitation on various issues resonates the same. Hence, the role of youth in politics is to interpret changes in society that are beneficial to all citizens.

33

TRANSGENDERS

CAN THEY EVER BE FREE OF DISCRIMINATION?

Transgender are individuals having a gender identity or gender expression different from their gender assigned at birth. Gender identity refers to a person's internal sense of being male, female or something else. Gender expression refers to the way a person communicates gender identity to others through behaviour, clothing, hairstyle, voice or body characteristics.

When a baby is born, a doctor, parent or birth attendant announces the arrival of a 'girl' or 'boy'. That second dictates multiple aspects of our lives. It is also something that most of us never question. But some people's gender evolve differently and might not fit rigid traditional notions of female or male. Transgender people have existed in every culture, race and class since the story of human life has been recorded. Therefore, we can say that transgender people are no strangers to society. The concept of not feeling comfortable in one's birth-assigned gender has been around from early time. The contemporary term 'transgender' arose in the mid 1990s from the grassroots community of gender-different people.

Discrimination Against Them

Transgender people have been discriminated for a long period of time. They are still looked upon as people of an alien-like nature as if they are some non-human species. Discrimination is their major problem because of which they face many other problems like unemployment, lack of educational facilities, homelessness, lack of medical facilities like HIV care and hygiene, depression, hormone pill abuse, tobacco and alcohol abuse, penectomy and problems related to marriage and adoption.

Indian Scenario

In India, there are a host of socio-cultural groups of transgender people like hijras/kinnars and other transgender identities like Shiv-shaktis, Jogtas, Jogappas, Aradhis, Sakhi etc and there are many more. The Constitution of India provides for the fundamental rights to equality and tolerates no discrimination on the grounds of sex, caste, creed or religion.

The Constitution also guarantees political rights and other benefits to every citizen. But the third community (transgenders) continues to be excluded. The Constitution affirms equality in all spheres but the debatable question is whether it is being applied. The transgender community is in a constant battle as they have to fight oppression, abuse and discrimination from every part of the society, whether it's their own family and friends or society at large. The life of transgender people is a daily battle as there is no acceptance anywhere and they are ostracised from the society and also ridiculed.

Supreme Court Judgement on Transgenders

The Supreme Court of India in its pioneering judgement by the division bench of Justice KS Radhakrishnan and AK Sikri in *National Legal Services Authority Vs Union of India* recognised the third gender along with the male and female. By recognising diverse gender identities, the court has busted the dual gender structure of 'man' and 'woman' which is recognised by the society. Justice KS Radhakrishnan told the Supreme Court while handing down the ruling that "Recognition of transgenders as a third gender is not a social or medical issue but a human rights issue."

The Supreme Court has given certain directions for the protection of the rights of the transgender persons by including a third category in documents like the election card, passport, driving license and ration card and for admission in educational institutions, hospitals etc. Human rights are basic rights and freedoms which are guaranteed to a human by virtue of him being a human which can neither be created nor can be abrogated by any government. It includes the right to life, liberty, equality, dignity and freedom of thought and expression.

Hardships faced by Transgenders

The transgender community faces stigma and discrimination and therefore has fewer opportunities as compared to others. They are hardly educated as they are not accepted by the society and therefore do not receive proper schooling. Even, if they are enrolled in an educational institute, they face harassment and are bullied everyday and are asked to leave the school or they drop out on their own. It is because of this that they take up begging and sex work.

Very rarely does a skilled individual from this community get into formal employment due to the policy of hiring only from either the male or female gender. Even if they do, they are ridiculed and ostracised and hence forced to leave their jobs.

Section 377 of IPC criminalised same sex relations among consenting adults. This is a colonial era law which makes the transgender community vulnerable to police harassment, extortion and abuse. In *Jayalakshmi Vs State of Tamil Nadu*, Pandian, a transgender was arrested on charges of theft by the police. He was sexually assaulted in the police station which ultimately led him to immolate himself.

Similar life experiences have been experienced by other members of the transgender community. Their vulnerabilities force them to compromise on their health and safety. But in September 2018, the Supreme Court of India struck down section 377 thus decriminalising same-sex relationships.

Recent Scenario

The recent scenario is that the Right of Transgender Persons Bill, 2014 was introduced in Rajya Sabha and was passed on 24th April, 2015 unanimously, with cross-party support. The rights guaranteed under the Bill are mostly substantive rights such as the right to equality and non-discrimination, life and personal liberty, free speech, to live in a community, integrity, along with protection from torture or cruelty and abuse, violence and exploitation. There is a separate clause for transgender children. The Bill envisages setting up a number of authorities and forums, National and State Commissions for Transgender Persons.

Conclusion

As a society we should take action to end discrimination against transgender people. We should provide emotional support for the transgender rather than discriminating them and raise voice for them, if we find someone treating them poorly. Make people aware that they are also humans and not aliens and should be treated like other people, create fair work places for them, help them wherever they need social support. We all need to work together to end this discrimination and try to change the attitude of society towards them. Everyone born on earth has equal right and no one can be discriminated on any basis.

34

OLD AGE POPULATION IN INDIA

TRAPPED IN ISOLATION, POVERTY AND ILLNESS

According to Census 2011, there are nearly 104 million elderly persons (aged 60 years or above) in India; 53 million females and 51 million males. Both the share and size of elderly population is increasing over time.

A report jointly brought out by United Nations Population Fund (UNFPA) and Help Age International says that India's population is likely to increase by 60% between 2000 and 2050 but the number of elders, who have attained 60 years of age, will shoot up by 360% and the government should start framing policies now else its consequences are likely to take it by surprise. India has around 100 million elderly at present and the number is expected to increase to 323 million, constituting 20% of the total population by 2050.

National Policy on Older Persons

Government of India adopted 'National Policy on Older Persons' in January 1999. The policy defines 'senior citizen' or 'elderly' as a person who is of age 60 years or above. Also, as per Maintenance and Welfare of Parents and Senior Citizens Act, 2007, senior citizen means any person being a citizen of India, who has attained the age of 60 years or above. The goal of the National Policy is the well being of older persons. It aims to strengthen their legitimate place in society and help older persons to live the last phase of their life with purpose, dignity & peace.

Problems Associated with Old Age

The traditional norms and values of Indian society laid stress on showing respect and providing care for the elderly. Consequently, the older members of the family were normally taken care of in the family itself. The advent of modernisation, industrialisation, urbanisation, occupational differentiation, education and growth of individual philosophy has eroded the traditional values that vested authority with elderly. Various social and economic problems are associated with the old age.

In modern society, improved education, rapid technical changes and new forms of organization have often rendered obsolete the knowledge, experience and wisdom of the aged people. Once they retire, elderly people find that their children are not taking advice from them. This realization often results in feeling loss of status, worthlessness and loneliness.

Now-a-days some children send their parents to old age homes, so that they don't have to take care of them. Family care of the elderly seems likely to decrease in the future with the economic development of the nation and modernisation.

The elderly, especially those who are weak and dependent, require physical, mental and emotional care and support. When this is not provided, they suffer from neglect, a problem that occurs when a person is left uncared for and that is often linked with isolation. If the elderly are economically dependent on children, the problem becomes worse. Financial insecurity is one of the most crucial challenge faced by the aged people. Pension and social security is restricted to those who have worked in the public sector or the organized sector. Old age is a period of disappointment, dejection, disease, repentance and loneliness. The best way to address neglect of the elderly is to counsel families, sensitise community leaders and address the issue at all levels in different forums.

Government Initiatives

These are many schemes that the Government of India initiated for the welfare of old age people in India.

- **Rashtriya Vayoshri Yojana (RVY)** This scheme is run by Ministry of Social Justice and Empowerment. It provides aids and assistive living devices to senior citizens belonging to BPL category. This scheme was launched in 2016.
- **Varishtha Pension Bima Yojana (VPBY)** Run by the Ministry of Finance, the Varishtha Pension Bima Yojana was launched in 2014. It is intended to give an assured minimum pension on a guaranteed minimum return on the subscription amount.
- **Pradhan Mantri Vaya Vandana Yojana (PMVVY)** The PM-Vaya Vandana Yojana (PMVVY) was launched in May 2017 to provide social security during old age. It assures minimum 8% per annum pension to old age people.
- **Vayoshreshtha Sammans** Conferred as a National Award for senior citizens and was launched in 2005. It is applicable for eminent senior citizens and institutes involved in distinguished services for the cause of elderly persons.
- **National Programme for Healthcare of Elderly (NPHCE)** Keeping in view the recommendations made in the National Policy on Older Persons, 1999 as well as the state's obligation under the Maintenance and Welfare of Parents and Senior Citizens, 2007, the Ministry of Health and Family Welfare had launched the National Programme for health care of the elderly during the 11th Plan period to address various health related problems of elderly people.

Resolution For the Problem

In today's fast moving world, old age homes should not be looked down upon totally. They can be a secure place for the parents of those children who are working out of India or in some other distant city where they cannot visit or look after their parents regularly. However to opt for a old age home, choice should be left to the parents. We can also opt for many creative ideas like play houses and old age homes to be made together so that the children also get old people to talk to and old people can also have a good time. Such ideas are always best for community as a whole.

Conclusion

There is no one who would not grow old. Every being on the earth inevitably follows the cycle, determined by nature, that takes him/her through variegated phases of childhood, adolescence, adulthood and maturity. Each stage has its own vigour, its set of responsibilities and its particular problems. So, we should work in a way that everyone is benefited and no one is isolated. The government cannot do everything; the community itself has to step forward to take this responsibility and come out with some out of the box ideas to make this earth a better place for everyone to live on, where everyone is taken care of.

35



YOUTH INVOLVED IN DRUGS



More and more young people worldwide are growing up in an environment that is increasingly becoming tolerant of various forms of substance use to promote a climate of 'solution by ingestion'.

The tobacco and alcohol industry has added to this environment by utilising their powerful marketing strategies influencing young people. Youth may also be influenced by their peer groups and if the peers are involved in any kind of substance or drug use, then it is highly likely that the individual will indulge in such behaviour.

Adolescent beliefs about drug use and risks tend to change rapidly with rising tolerance levels about drugs. Easy availability of drugs and access to them exacerbates the situations and puts the younger generation at risks. Even a single drug use experience, known as experimental dose may result in overdose, an accident or even criminal prosecution that has a profound impact on the minds of the young people.

What Drug Addiction?

The term 'drug' has now been given a new connotation. It was used originally to mean 'medicine'. However, nowadays the term 'drug' means not only medicine but also the fatal narcotics that include cocaine, heroin, brown sugar and many other specifications. All these drugs have their evil effects on the mind and body cells of the addicts. Drug addiction implies physical dependence upon a drug including the development of tolerance and withdrawal. The young generations particularly teenagers are the worst victims of evils of Drug Addiction.

When a drug is taken for the first time, it stimulates the pleasure centers of the brain. It is for sake of pleasure that most users first get accustomed to it. They take drugs to forget pain, sorrow, insult and to escape from reality. Drugs are taken in various forms. Some are taken through injection, some are smoked and some are chewed and swallowed.

An addict who develops tolerance requires more of the drug to transport him to the world of fantasies. If the addict is not allowed to take the drug, he suffers from painful and uncontrollable convulsions, vomiting, depression and various other maladies. It has been discovered that most people who struggle with drug addiction began experimenting with drugs in their teens. Many teens have heard about drugs and they are curious to experience them for themselves and later they become addicted to it. The addict becomes dependent on the drug, he uses it, despite having full knowledge of its harmful effects on health. There is uncontrollable desire or craving to consume the drug and they find it impossible to control the drug intake.

In case of drug abuse, people start taking drugs in larger doses than the recommended doses. The addict is not able to discharge his day-to-day responsibilities in an efficient manner as it affects physical as well as mental health of the person. Besides, ruining an addict morally, it also affects him physically.

Impacts of Drug Addiction on Youth

Drug addiction is associated with a range of short and long term physical as well as psychological effects. Drug addiction impacts almost all the organs of body in a significant manner. The effects of drug abuse and addiction include

- Drug abuse and addiction increases the risk of severe illness and infection as it weakens the immune response of the body.
- It leads to abnormal heart rates and heart attacks, and collapsed veins and blood vessels infections due to injected drugs.
- There is increased strain on liver, which puts the person at higher risk of liver damage and failure.
- There are memory losses, attention and decision making is affected, and increased chances of seizures, stroke, mental confusion and brain damage.
- Drugs alter the brain chemistry, causes loss of appetite, strength and stamina. Mood, behaviour and other essential cognitive functions are also affected by drug dosage. There is loss of self-control, impaired judgements, aggressiveness, paranoia etc.
- There is often impaired concentration and coordination, abnormal breathing, and increase in body temperatures.
- Drug addiction also causes lung, throat, mouth and tongue cancers, increased risks of infertility and damages to nasal passages.
- When the youth loses control over their minds and brain because of drug addiction, they often indulge in risky behaviours such as social crimes, anti-social activities etc.
- Young people often waste their academic and employment opportunities because of drug addiction. Addiction also results in damaged relationships that impact social well being of younger people.

Factors Responsible for Drug Addiction Among Youth

The following factors are responsible for drug addiction among youth.

- **To Fit In** Teenagers and young people use drugs because of the influence of their peers. They think that others are doing it and that is why they fear non-acceptance in a social circle that includes drug abusing peers.
- **To Feel Good** Drugs influence the neurochemistry of brain to produce feelings of pleasure and relieves the person from stress and anxiety. Adolescents particularly suffer from depressions, stress related disorders and physical pains. Using drugs is an attempt to lessen these feelings of distress. Stress plays a significant role in starting and sustaining drug abuse.
- **As Experiments** Adolescents and younger people are motivated to seek new experiences, particularly those which are thrilling or daring. This puts them at risk of drug addiction and later drug abuse because they seek to experiment with new substances.
- **Easy Access to Drugs** Drugs and harmful substances are easily accessible to young people. They are available to the younger people through hidden and illegal channels.
- **Low Self-Esteem** Low self-esteem in teenagers and young people leads to self-destructive behaviour to act or look like in a certain way. They lose confidence in themselves if they are unable to meet high standards. Drugs and alcohol seems like an easy option to them to escape this reality.
- **Popular Culture** Adults, under the influence of popular culture and to look and feel 'cool', use drugs and substances which are harmful to them. Movies, popular media, social media, TV shows etc. make drugs look like an acceptable act. This is why the popularity of drugs among youth has risen.

Solutions to this Problem

The processes of industrialisation, urbanisation and migration have led to loosening of the traditional methods of social control rendering an individual vulnerable to the stresses and strains of modern life. Drug addiction among youth can be prevented if the youth are taught of its harmful consequences. Also, support from family members is a must as they are the closest to the individual. Family should support their child to understand what he/she is going through and what compelled them to take such a risky step.

Parents should try to motivate their children and understand what they really want in life. Every child is different from the other and parents should really try to understand their children's expectation to avoid any cases related to alcohol or drug abuse.

Prevention programmes involving entities such as families, schools and the immediate communities are important in this regard. Media, especially the entertainment segment, also needs to understand its role in this context, glorification of drug use should completely stop. Role of NGOs is also important to fight this menace. There is an urgent requirement of strict laws and regulations in breaking the chain of hidden, illegal networks used to supply drugs to individuals. Each and every stakeholder involved in the fight against drug addiction and abuse should contribute towards the fight and establish a drug free society.

Conclusion

As a young person, there are many challenges in life. However, very few have the potential to affect our life in a more significant way than our own decisions. The decision the young people make about alcohol and drugs will influence their health, grades, relationship and everything which matters to them. So, it is better to stay away from these and live a life which matters. People should be strong and brave to solve their problems rather than trying to forget them using alcohol and drugs. The most sound advice to the younger generation is to keep calm and give it a thought before entering the world of addiction.

36



HONOUR KILLING

MOST HEINOUS CRIME



An honour killing is the homicide (murder) of a member of a family by other members as it is believed that the victim has brought shame or dishonour upon the family or the community he/she belongs to. Honour killing is one of the types of cultural crimes present in our country. Cultural crimes are basically the crimes that seek to take place within the context of culture or under the head of it.

Honour killing usually is committed by male family members against female family members, who are held to have brought dishonour upon the family. However men can also be the victims of honour killing. The term 'honour killing' applies to both men and women in cultures that practice it.

The distinctive nature of honour killing is the collective nature of the crime that means many members of an extended family or community plan the act together and then commit the crime. Honour killings are directed mostly against women and girls.

According to statistics, honour killings have been reported in Northern regions of India mainly in the states of Punjab, Rajasthan, Haryana and Uttar Pradesh. It is prevalent to a lesser extent in South India and the Western Indian states of Maharashtra and Gujarat. In West Bengal, honour killings completely ceased about a century ago, due to active steps taken by reformers.

Reasons Behind these Killings

There are various reasons why people or family members decide to kill the daughter in the name of preserving their family honour. The most obvious reasons are refusing to enter an arranged marriage, being in a relationship that is disapproved by their family, having sex outside marriage, being rape victim, dressing in a way which is viewed as inappropriate, renouncing a faith etc.

Sociologists believe that the reason why honour killings continue to take place is because of the continued rigidity of the caste system. Hence, the fear of losing their caste status through which they gain many benefits and earn a respect in society make them commit this heinous crime. The other reason why honour killings are taking place is because the mentality of people has not changed and they just cannot accept that marriages can take place in the same gotra or outside one's caste.

Role of Khap Panchayats in Honour Killing

The other side of the story points fingers towards the role played by Khap Panchayats in honour killing. These pachayats are self driven set ups that have gained wicked popularity for having paved a way for honour killing. Boycotting families from villages that choose to allow their children to get married by their choice and supporting the families in honour killing are some of the devilish activities of these panchayats.

The unlawful laws of the Khap panchayats are imposed through social boycotts where the victims are killed or forced to commit suicide. All these inhumane activities are done in the name of brotherhood and honour of the community. Love marriages are considered a taboo in these areas. The famous 'Manoj Bhabli' honour killing case in June, 2007, for the first time convicted the defendants for honour killing case. This killing was ordered by a Khap Panchayat in Haryana. On 30th March, 2010 for the first time in Haryana state history, a death penalty verdict was announced in this double murder case for the five accused.

Honour Killing Occurring in Many Countries

It is important to note that honour killing is not specific to India only. It continues to be prevailing in other parts of the world too. Reports submitted to the United Nations Commission on Human Rights (UNCHR) show that honour killings have occurred in countries like Bangladesh, Great Britain, Brazil, Ecuador, Egypt, Israel, Italy, Jordan, Pakistan, Morocco, Sweden, Turkey and Uganda.

'Honour killing' is a recognised form of violence against women in international human rights law because it violates women's right to life and security and as well as every other article in the Universal Declaration of Human Rights (1948). Honour killings also violate the convention on the elimination of all forms of discrimination against women (1979). This convention has been signed by 185 countries world wide over 90% of the members of the United Nations including most countries where 'honour killing' occurs. India is also a part of the signatories.

Indian Law Against it

In India, honour killings are homicide and murder which are serious crimes under the Indian Penal Code (IPC). The perpetrators can be punished as per Section 302 of the IPC. The members as well as the community can be prosecuted under Section 302 of IPC. Apart from this, honour killings also violates Articles 14, 15(1) and (3), 19, 21 and 39(f) of the Constitution of India. On the other hand the Supreme Court in a judgement on 19th April, 2012 has termed the Khap panchayats illegal and has directed the State Governments to take strong measures to prevent any atrocious acts by the Khap panchayats.

NCRB's Report Regarding Honour Killing

Alarmed by the rise of honour killings, the Government of India assigned the National Crime Records Bureau (NCRB) to collect data on honour killings since January 2014. The Commission has submitted its 242 pages report titled as "Prevention of Interference with the Freedom of Matrimonial Alliances". It has recommended for bringing a legislation namely "The Prohibition of Interference with the Freedom of Matrimonial Alliance Bill" to curb the social evil of the caste councils/panchayats interference and endangerment of the life and liberty of young persons marrying partners belonging to the same gotra or to a different caste or religion.

Conclusion

The need of the hour is to check such incidences with full force. The problem must be tackled at several fronts. Firstly, the mentality of the people has to change. The government too should make sincere efforts to educate the people and formulate the policies thereby strengthening the governance of rule of law. There is a need for media to lend a hand in creating local awareness about the horror of honour crimes. Therefore, honour killing is not justified in any manner and it should be stopped with immediate effect.

37

EDUCATING A GIRL CHILD

EDUCATING THE WHOLE FAMILY

It is rightly said that "If we educate a man, we educate a man only, but if we educate a woman, we educate the whole family". Education plays a major role in the social and economic growth of a nation. A nation can be educated in the real sense of the term, when its entire population is educated. Mostly people think that men's contribution in society is more than women. But now women are sharing equal responsibility in every field of society. So, female education is important for all round progress of a country. If we want to make democracy successful, woman must be educated. They are the real builders of happy homes.

Importance of Educated Mother in Society

Women education is very important because women are the first teacher of their children as they receive the very first lessons in their mother's lap. Hence, if mothers are educated, they can perfectly shape and mould their sons and daughters.

An educated mother will have high expectations for her children's educational success and will continuously encourage them to develop high expectations of their own. An educated mother is more likely to have health knowledge ensuring her children receive the proper vaccines for their health and provide healthy meals that are nutritionally beneficial.

Significance of Female Education in Different Fields

Education enhances the intellectual, social and emotional development of women and enables them to meet their basic needs of daily life. It helps in reducing inequalities in the society. Apart from this, educated women help to reduce the population of a nation as they have great confidence that enables to take right decisions. They also help to reduce child and maternal mortality. They are less likely to be taken advantage of and lowers exposure to domestic abuse. All this contributes in a positive way to the society and the nation at large.

Educated women can shoulder any kind of responsibility. See the examples like Kalpana Chawla, Kiran Bedi, Sushma Swaraj etc. they have earned a name in the society for themselves. Education for a girl child means making the next generation well educated, full of virtues, free from the useless superstitions, confident and capable to do something good for the family, for the society and for the country as a whole.

Reasons for Deprivation of Girl's Education

Till now female education is not given much importance in many parts of India. Some of the reasons are dowry, child marriage, caste system and purdah system prevalent in the society. Many people in the rural areas are of belief that money would be needed during her marriage to be given as dowry, so investing the money for her education is regarded as waste.

Another reason for the deprivation of girl's education is the child marriage. It is a great belief in India that for a girl it is more important to become perfect in household works than getting education. This forces the girl to focus towards household work. At many places the caste system is so strong that the girl of lower caste are not allowed to go to the schools where the girls of the high caste are studying.

Literacy Rate in India

If you look at the percentage of educated people, there is a huge gap between male and female literacy rate in India. According to the census 2011, the percentage of literate male is 82.14% and female is 65.46%. Among the states, the female literacy rate is highest in Kerala and Mizoram with 91.98% and 89.40% respectively whereas Rajasthan has the lowest female literacy with 52.66%.

The reason behind the high literacy rate of Kerala is the modern policies adopted by the governments and modern social beliefs that justifies girl's education. The aided-school policy adopted by the EMS Nambudiripad government paved way for private entrepreneurs to start up schools with government aiding. On the other hand, the reason for low female literacy rate in a state like Rajasthan is social belief that makes boy's education more important. The tradition of child marriage prevalent in the state is another factor for such a low rate.

Various Programmes and Policies Undertaken

The Government of India has initiated various programmes and policies to ensure that a girl does not miss out any opportunity of getting education. After independence, the government had set up a National Committee on Women's Education in 1958 and it recommended that female education should be at par with male education.

Some of the important schemes/policies initiated by the Government of India for girl's education are

- Sakshar Bharat Mission for female literacy launched in 2008 for promoting adult education especially among women under which Lok Shiksha Kendras were set up.
- Kasturba Balika Vidyalaya for establishment of residential upper primary schools for girl.
- National programme for education of girls at elementary level for reduction in the school dropouts by giving special attention to weak girls.
- Rashtriya Madhyamik Shiksha Abhiyan to provide infrastructure for girls hostel for secondary education.
- The Balika Samridhhi Yojana is a scholarship scheme designed to provide financial support to young girls and their mothers who are below the poverty line.
- Beti Bachao, Beti Padhao started in 2015 aims to generate awareness and improving the efficiency of welfare services meant for women.
- Sukanya Samridhi Yojana launched in 2015 under the Beti Bachao, Beti Padhao campaign to meet the expense of the girl child's higher education and marriage.

Conclusion

The present day girl is the mother of tomorrow. She is the most crucial and reverend entity. She must be given all the necessary education. Ignoring her, keeping her illiterate means we are creating an illiterate and ignorant generation. So, it is perfectly true that educating a girl child means educating a family. Development cannot be accelerated unless girls are given right education in right direction. Swami Vivekananda has rightly said, "Educate your women first and leave them to themselves, they will tell you what reforms are needed".

ELECTORAL REFORMS AND INDIAN DEMOCRACY

India has the distinction of being the largest democracy in the world and election is an integral component of the democratic system. A successful democracy is based on free and fair elections and not on the rigged and manipulated ones. While politics is the art and practice of dealing with the political power, the election is a process of legitimisation of such power.

Election Procedure in India

The Election Commission of India (ECI) is a permanent constitutional body that was established on 25th January, 1950. The ECI is the guardian of free and fair elections in India. Post independence, the elections are held after every five years at the state and national levels to choose the representatives of the people and to elect the government. The Article 326 of the Indian Constitution deals with election to the House of People and to the Legislative Assemblies of the state.

Significant Amendments in the Acts

Over the years, there have been a number of electoral reforms in India. The voting age was lowered from 21 to 18 years by the Amendment to the Constitution (Sixty-first Amendment) Act, 1988 and this enfranchised a whole new generation of voters. Under the Representation of People Act, 1951 a new Section 13CC was added, which provides that the officers or staff engaged in the preparation, revision and correction of electoral rolls for elections shall be deemed to be on deputation of Election Commission for the period of such employment and such personnel during that period, be subject to the control, superintendence and discipline of Election Commission.

Besides, the number of electors who were required to sign as proposers in nomination papers for elections to the Council of States and Legislative Council have been increased to 10 per cent of the electors of the constituency or ten such electors whichever is less to prevent frivolous candidates.

Introduction of Electronic Voting Machine (EVM)

The Electronic Voting Machines (EVM) were used as an experimental basis for the first time in Assembly constituencies in states of Madhya Pradesh, Rajasthan and New Delhi for the general elections in November, 1988. The Election Commission was empowered under Article 324 of the Constitution to use EVM during elections and it successfully accomplished the vital task of the introduction of photo identity cards for all the voters in the country. This has been successful in weeding out the bogus and duplicate entries during the elections.

The Concept of NOTA

The NOTA (None Of The Above Option) was used for the first time in the Assembly Elections held in five states in 2013. It was introduced in the electronic voting machines after the honourable Supreme Court delivered the landmark judgement in Peoples' Union for Civil Liberties vs Union of India Case. The option of NOTA upheld and recognised the rights of the citizens to not cast a vote while maintaining his secrecy during such abstinence. The true spirit of democracy lies in giving the citizens power to exercise their rights. NOTA replaced the process of filling the form 17(A), which was used in order to cast a negative vote.

Challenges of Electoral System

The elections have become synonymous with corruption, communalism, violence and power. The criminalisation of politics has led to the misuse of money and power. It is tough to expect fair and just decisions when the law breakers have become the law makers.

The inclusion of anti-social elements in the legislative assemblies have diluted the essence of democracy and led to a feeble electoral system. Money power has a baneful influence on the elections in the country.

In fact, it has undermined our democratic system. The voters are purchased like saleable commodities and caste and religion have a decisive influence on the ultimate wrong voting behaviour and election results.

The leaders elected on the religious and caste lines are apt to show favours to the adherents of their caste and religion. It has been seen and often reported that the employees preparing electoral rolls sometimes deliberately ignore certain section of voters by their names and not entering them in the electoral rolls at the insistence of interested parties. On account of emergence of the coalition era, stability of our governments both at the state and country level has gone to the winds.

Hence, there are too frequent elections and the voters develop a sort of electoral fatigue. Even the dead and absentee voters could be impersonated with the connivance of their families and some polling officers. Too many candidates in the fray for elections is said to be the glaring defect of electoral system in India because it spoils the chance of good candidates winning the elections.

All these defects of our electoral system induce our political analysts to clamour for electoral reforms so that our democratic edifice attains stability and the representatives elected may render dedicated service to the nation.

Contribution of Different Committees in Electoral System

A number of committees have been appointed to examine the issues and the major challenges affecting the Indian Electoral System. The committees include the Goswami Committee on Electoral Reforms (1990), the Vohra Committee (1993), the Indrajit Gupta Committee on State Funding of Elections (1998), the National Commission to Review the Working of the Constitution (2001), the ECI Proposed Electoral Reforms (2004), the Second Administrative Reforms Commission (ARC-2008) and the Law Commission of India.

All these committees pointed towards the divergence and irregularities in the election process and then made recommendations for its implementations. Despite several reforms initiated, these issues are still paralysing the Indian Electoral system for decades.

Criminalisation of Politics and Electoral System

The Section 8 of Representation of People Act strongly advocates for the disqualification of candidates with criminal background. But as per the Section 8, a person is disqualified from elections only on conviction by a court of law. The Election Commission has repeatedly proposed the amendment of this law to provide that any person who is accused of a punishable offence by imprisonment for 5 years or more should be disqualified from contesting the elections.

The Election Commission strongly advocates for the fact that this will play an important role in cleaning up the Indian political system. In July, 2013, the honourable Supreme Court gave a ruling that the MPs and MLAs who were convicted of serious crimes be barred from contesting elections. But the implementation of this clause has not been strictly adhered to in the Indian elections. The opponents of this law have been firm on the opinion that a person is presumed to be innocent until he is proved guilty by a court of law.

Funding Reforms to Strengthen the Electoral System

It is paradoxical that everyone including the Election Commission knows that the ceiling of the expenditures fixed for elections is just enough to cover up the small proportion of actual expenses. There are no means by which the Election Commission could check the expenditure done by the candidates and political parties during the elections.

During the election period, the State and Central Governments embark on the advertisement spree in the guise of providing information to the public. The expenditure incurred on these is recovered from public exchequer. This gives the government which is in power an edge over the others. The Union Government announced the Electoral Bonds Scheme in 2017-18 in Union Budget as part of certain electoral funding reforms.

These bonds will prompt donors to take banking route to donate, with their identity captured by the issuing authority. The paid news and political advertisements have risen exponentially in the regional and national media.

Election Commission has laid down a model that is Code of Conduct for the guidance of both the political parties and the candidates contesting elections. Some of these codes are

- (i) Since the announcement of elections, the ministers and other concerned authorities should not announce the financial grants in any form.
- (ii) Ministers, MPs and MLAs of the ruling party should not combine official visits with the electioneering work.
- (iii) The ministers and the other concerned officials shall not advance payments out of discretionary quotes after the announcement of elections.
- (iv) Criticism of other parties is to be kept confined to their policies, plans and their implementations etc.

These set of norms have been evolved with the consensus of political parties who have consented to abide by the principles embodied in the said code in its letter and spirit. But the bitter truth is that these rules are openly flouted and never abided. The predicament is not the lack of laws, but their strict execution and implementation.

Conclusion

Over the years, the Election Commission has conducted a number of laudable reforms to strengthen the democracy and conduct free and fair elections. However, there is still a lot that can be done. The Election Commission needs to be vested with more power and authority. It should have the power to penalise the politicians and political parties who disobey the electoral laws. The political parties need to show their will to abide by the reforms. It is high time that the citizens of India rise above the issues of religion, caste and community and vote on the basis of their convictions. The citizens must be aware of their rights and duties. An enlightened voter is the cornerstone of a successful democracy. All these reforms will go a long way towards making India a democracy in its true sense.

39

124TH CONSTITUTIONAL AMENDMENT

RESERVATIONS FOR ECONOMICALLY WEAKER SECTIONS

The 124th Constitutional Amendment was done to amend the Constitution of India to extend 10 per cent reservation in direct recruitment in government jobs and for admission in higher educational institutions to 'economically weaker' sections. The reservation seeks to provide for the advancement of economically weaker sections of all castes and communities including Christians and Muslims. It intends to help the poor among the upper castes.

In simple terms, reservation is about facilitating access to seats in the government jobs, educational institutions and even legislatures to certain sections of the population. In India, it is governed by government policies backed by the Indian Constitution.

Historical Context

The origin of reservation system is rooted in the age-old caste system of India. These sections of society especially those of lower castes have faced historical injustice due to their caste identity. Historically, William Hunter and Jyotirao Phule in 1882 originally conceived the idea of caste-based reservation system.

The reservation system that exists today was introduced in 1933 when British Prime Minister Ramsay Macdonald presented the 'Communal Award'. The award made provision for separate electorates for Muslims, Sikhs, Indian Christians, Anglo-Indians, Europeans and the Dalits. After long negotiations, Gandhi and Ambedkar signed the 'Poona Pact', where it was decided that there would be a single Hindu electorate with certain reservations in it. After independence, initially reservations were provided only for SCs and STs. OBCs were included in the ambit of reservation in 1991 on the recommendations of the Mandal Commission.

Increase in Demand for Reservation

The increase in demand for reservation can be traced to the fact that it is being seen as a remedy for the adverse effects of ill-thought out development policies. A number of factors are responsible for violent agitation associated with demands for reservation. These are acute agrarian distress, increase in unemployment and loss of jobs among many others.

A widespread demand for reservations among different sections of society is being made; this includes Marathas in Maharashtra, Jats in Haryana, Rajputs in Rajasthan, Kapus in Telangana and Andhra Pradesh and Patel Patidars in Gujarat among many others.

Increasing reservation demands among upper castes are also arising from the fear of losing privilege and the inability to cope with change. Thus, upper castes have begun to feel disadvantaged especially in context of government jobs as they don't get similar advantages like the backward classes.

Constitutional Provisions for EWS Reservation

In a significant move to address demands of the Economically Weaker Sections (EWS) of the society who were earlier not covered by any of the existing schemes of reservation. The 124th Amendment to the Constitution, 2019 was brought so as to provide 10 per cent reservation for the weaker section of general category in direct recruitment for government jobs and admission to higher educational institutions. The Act amends Articles 15 and 16 of the Constitution, by adding a clause which allows state to make special provision for the advancement of any economically weaker sections of general category. Accordingly, Articles 15(6) and 16(6) have been inserted in the Constitution to effect the reservation for EWS.

Eligibility for EWS Reservation

The Union Government has set certain criterion to be eligible for reservation in EWS category. The reservation benefits can be availed by those persons who are not covered under the scheme of reservation for SCs, STs and OBCs and whose family has gross annual income below ₹ 8 lakh. Income shall also include income from all sources i.e. salary, agriculture, business, profession, etc., for the financial year prior to the year of application. Also, persons whose family owns or possesses any of the following assets shall be excluded from being identified as EWS, irrespective of the family income

- 5 acres of agricultural land and above.
- Residential flat of 1000 sq. ft and above.
- Residential plot of 100 sq. yards and above in notified municipalities.
- Residential plot of 200 sq. yards and above in areas other than the notified municipalities.

The property held by a 'Family' in different locations or different places/cities would be clubbed while applying the land or property holding test to determine EWS status. The term 'Family' for this purpose will include the person who seeks benefit of reservation, his/her parents and siblings below the age of 18 years as also his/her spouse and children below the age of 18 years. Further, the states will also determine the reservation criterion accordingly depending upon local factors. The applicability of the reservation is for both jobs in the government sector as well as for seats in higher educational institutions i.e. colleges and universities.

Challenges to Constitutional Status for EWS Quota

As the Constitution stands amended, the only constitutional challenge left is conformity to the basic structure doctrine. So far, it has become an established principle that reservation shall have a cap of 50%. In the Indira Sawhney Case (1992), the Supreme Court said that such quotas cannot be provided for poverty alone. It has to be poverty plus social and educational backwardness and the backwardness should reflect historic injustice through generations. The court then said that reservations beyond 50% will hit Article 14 (Right to Equality). Half of jobs and seats in educational institutions must, therefore be for the general merit category. Equality is part of the basic structure, the court insisted. Hence, this step will also violate the Supreme Court ruling of Kesavananda Bharati Case which said that any amendment which offended the basic structure of Constitution would be ultra vires.

Conclusion

Reservation is fair, as far as it provides appropriate positive discrimination for the benefit of the downtrodden and economically backward sections of the society. However, it also leads to associated problems, such as passing the benefits to only a privileged group who have already been benefited by reservation. The communities excluded from reservations often harbour animosity and prejudice against the castes included in the reservation category. When more people aspire for backwardness rather than of forwardness, the country itself stagnates. A strong political will is indispensable to find equilibrium between justice to the backwards, equity for the forwards and efficiency for the entire system.

40

TRIPLE TALAQ

A WAY TOWARDS UNIFORM CIVIL CODE

Triple talaq, also known as *talaq-e-biddat*, is a form of instant Islamic divorce which has been practiced by Indian Muslims. The practice of instant triple talaq was held unconstitutional by the Honorable Supreme Court in August 2017. The use and status of triple talaq in India has been a subject of controversy and debate. Those questioning the practice have raised issues of justice, gender equality, human rights and secularism. The debate has involved the Government of India and the Supreme Court of India, and is connected to the debate about a Uniform Civil Code (UCC) mentioned in Article 44 of the Constitution of India. In July 2019, the Parliament of India declared the practice of triple talaq as illegal, unconstitutional and made it a punishable act. In fact, many countries across the globe have already banned the triple talaq. Islamic countries which have banned the triple talaq include Pakistan, Indonesia, Egypt, Turkey and Bangladesh among many others.

Forms of Talaq

There are three forms of talaq or divorce that is *Absan*, *Hasan* and *Talaq-e-Biddat* (triple or instant talaq). *Absan* and *Hasan* are revocable whereas *Biddat* when pronounced in one go by the husband is irrevocable. When a man declares talaq thrice in one sitting, or through phone or writes in a *talaqnama* or a text message or whatsapp, the divorce is considered immediate and irrevocable, even if the man later wishes to re-conciliate.

The only way for the couple to go back to living together is through a *nikah halala*, where a Muslim divorcee marries a man and divorces him to get re-married to her former husband.

Triple Talaq Violates Fundamental Rights

The practice of *talaq-e-biddat* or triple talaq is considered awful in theology. However, it was earlier upheld as valid by law. Similarly, *nikah halala* violates the women's dignity. The practice was against the basic tenet of Right to Life as prescribed by the Indian Constitution (Article 21) and violative of women's dignity. *Talaq-e-biddat* was also against the Article 14 of the Constitution (which guarantees equality before the law). The practice amounted to gender discrimination and was not in line with the modern principles of human rights. The practice also wreaks havoc in the lives of divorced women and their children, especially those belonging to the weaker economic sections of the society.

Historical Timeline Leading to an End of Triple Talaq

Some of the cases pertaining to the issue of triple talaq are as follows

- In 1985, in the Shah Bano case, the Supreme Court granted Shah Bano, a 62 year old woman the right to alimony from her husband.
- In 1986, the government passed the Muslim Women (Protection of Rights on Divorce) Act which diluted the positive impact created by the Shah Bano Case.
- In 2001, in the Danial Latifi and Anr vs Union of India Case, the SC upheld the validity of the Shah Bano judgement.
- In August 2017, a five judge bench of the SC declared the triple talaq as unconstitutional in a majority 3:2 judgement. This was the culmination of a petition filed by Shayara Bano, whose husband had divorced her through a letter where he pronounced talaq three times, to declare the divorce as void.

Criminalisation of Triple Talaq : A First Step to UCC

The Parliament passed the Muslim Women (Protection of Rights on Marriage) Bill, 2019, thereby criminalising the practice of instant triple talaq. It is truly a watershed moment in women empowerment in India. The court has given progressive thoughts enshrined in the Constitution which take precedence over personal law in society. Furthermore, the Supreme Court ruling that arbitrary personal laws cannot seek refuge under the 'Freedom of Religion' right and that 'Equality before Law' is supreme has once again brought the issue of the Uniform Civil Code (UCC) in forefront. A Uniform Civil Code is one that would provide for one law for the entire country, applicable to all religious communities in their personal matters such as marriage, divorce, inheritance, adoption, etc. Article 44, one of the directive principles of the Constitution lays down that the state shall endeavour to secure a Uniform Civil Code for the citizens throughout the territory of India.

Supreme Court View on Triple Talaq and UCC

With Supreme Court upholding the dignity of Muslim women by abolishing the discriminatory triple talaq, similar gender justice may be on the anvil for women across the religious groups. In October, 2015, Supreme Court of India asserted the need of a Uniform Civil Code and said that, “This cannot be accepted, otherwise every religion will say it has a right to decide various issues as a matter of its personal law. We don’t agree with this at all. It has to be done through a decree of a court”.

The Law Commission is exploring how to reform seemingly defective practices in personal laws of other religious denominations as well. Having recognised such ‘defects’, the Commission is considering whether the two-year period of wait for finalising a divorce for Christian women violates their Right to Equality. The Commission is also considering if the waiting period should be made uniform across all marriages.

Conclusion

The practice of triple talaq is not in consistence with basic human rights. It does affect the right to life of women. In India, personal laws on matters such as marriage, divorce, inheritance, alimony, etc. vary with an individual’s religion. Indian Muslims have Sharia-based Muslim Personal Law, while Hindu, Christian and Sikh Indians live under common law.

However, declaration of triple talaq as illegal can be considered as gateway to a uniform civil code. Uniform Civil Code for a state would be an ideal safeguard of its citizen’s rights. Its adoption will be a progressive legislation. With changing times, the need has arisen for having a Common Civil Code for all citizens, irrespective of religion, ensuring that their fundamental and Constitutional rights are protected.

WOMEN'S RESERVATION BILL

A FORGOTTEN ISSUE

The reservation for women in Indian Parliament is an attempt to acknowledge the internal complexities within the category of women by recognising their respective deprivation points derived from social inequalities. The 17th Lok Sabha that has been elected in 2019 has witnessed the highest number of women ever in the Parliament with 78 women MPs (Member of Parliament) elected from all over the country. Women's representation in the Lok Sabha has increased from 11.3 per cent in 2014 to 14 per cent in 2019, coming across as a positive development.

Background to Women Reservation Bill

Women's Reservation Bill was first presented in 2008 by the UPA Government as the 108th Constitutional Amendment Bill. The Bill was passed in Rajya Sabha in 2010. However, the introduction was also attempted previously in 1996 but it failed to see the light of day in any house. In the last two decades, various efforts have been put by the different governments. But the effort, to our dismay, has met a dead end.

Reservation for any group is an 'affirmative action' by the state to promote or empower or emancipate the group. As in almost every case, these groups have faced subjugation in the past due to systematic or social discrimination. In this context, when the 73rd Constitutional Amendment was passed in India, providing for grassroot democracy at the Panchayat level, 33% seats were reserved for women. This provision has substantially changed the face of villages in our country. Women getting elected as a leader, have become an agent of change and have contributed towards the well being of other women too.

Provisions of the Women Reservation Bill

In the Indian Parliament, Women's Reservation Bill (108th Amendment) was introduced with the aim to provide 33% reservation for women in Parliament and State Assemblies. The Bill also has a provision where one third seats will be reserved for women from the seats reserved for Scheduled Caste and Scheduled Tribe in Parliament and State Assembly. Reservation of seats in the constituency will be allotted by rotation in Parliament and State Assembly. An authority will be appointed by Parliament which will determine the allocation of reserved seats. Also the Bill highlights that the provision will cease to exist after 15 years from the commencement of the Act. The Bill was passed in the State Assembly in 2010 but remained pending in Lok Sabha due to which it has finally lapsed in Parliament.

Why Women Should Get Reservation?

India was ranked low at 112th position out of 153 countries in Global Gender Gap Index 2020. Apart from this, there is widening of its gender gaps in political empowerment as well as in life expectancy and basic literacy. The Inter-Parliamentary Union (IPU) and UN Women released a world ranking of the number of women parliamentarians, in which India is ranked 148th among 193 countries. Looking at the data released, IPU Secretary-General Martin Chungong backed up the call for reservation of women in governing bodies which could speed up the process for achieving gender equality.

Another reason why women should be given reservations in Parliament and State Assembly is because the female parliamentarians and State Legislators will be more sensitive to the issues plaguing the lives of women. Indian society is mostly a patriarchal society. Crime against women in the form of rape, dowry, domestic violence, systematic marginalisation, female foeticide etc. are rampant across the length and breadth of the country. Therefore, to attain gender parity and reduce crimes against women, women themselves have to act as an agent of change.

Positive Impact of the Bill

When women representation increases in the Parliament, it will indirectly or directly also facilitate the other related goals. It will create environment for positive social and economic policies for realisation of full potential of women. It will lead to de-jure and de-facto enjoyment of all human rights and fundamental freedom. It will facilitate equal access of females to health, education, employment, social security, etc. It will change the societal attitude and community practices which block freedom and empowerment of women.

Criticism for Women Reservation Bill

There is furious opposition against the Bill. Some consider it as a step backward and a move in the wrong direction. They suggest that there will be pseudo representation. It has been observed at the Panchayat level that the seats which get reserved for women, are filled by a candidate who is either wife or a female relative of the male representative. In reality, when these female candidates are elected, their male counterparts run a puppet show. Therefore, there is no actual empowerment. Also it is argued that reservation will stifle choice for voters, leaving the meritorious candidates behind. As a result, it will create a wider chasm and gender inequality will further perpetuate. Resentment will flow among male candidates and as a result of this, women will be further marginalised. Political commentators are of the view that the provision may not guarantee a trickle down effect where its benefit reaches the lowest strata of the society. The politically, economically and socially affluent women will grab the seats thereby bringing no change and maintaining status quo.

Conclusion

Women Reservation Bill has been pending for a very long period of time. But before the Bill get passed by the Parliament, groundwork needs to be done for real result. Otherwise, it will meet fate where marginalised will remain marginalised and power will accrue in the affluent. Thus, it is concluded that the Women's Reservation Bill will indeed be a milestone towards achieving the goal of a true and enlightened democracy and must be enacted at the earliest possible opportunity.

EDUCATION QUALIFICATIONS FOR POLITICIANS

NECESSARY OR SUPERFLUOUS

Indian democracy was born on 26th January, 1950 when the Constitution of India came into effect. The people of India chose Parliamentary democracy, based on the British parliamentary model to constitute a sovereign, socialist, secular, democratic and republic state through the adoption of Constitution that became a model for all those who were striving to build a humane, just and egalitarian society based on equality. In a representative democracy such as India people surrender their rights to an elected body chosen through periodic elections. They allow their representatives to make laws and policies affecting their interests. The representatives are known as MPs or MLAs or councillors.

They represent the people of the constituencies from which they have been duly elected. Through representation, people indirectly participate in the functioning of the government. If the representatives are unable to act responsibly, it results in injustice against the people.

Democratic principles envisage that a person who seeks to be a representative should take responsibility. Thus, the representatives of people in a democracy should have a good moral character, should be empathetic and be mindful of the interests of the people of his constituency. In today's politics, the trust of the electorate is repeatedly violated, morality has become a myth and politicians have become over concerned with capturing power. The degradation of political culture is due to the loss of responsible character among our representatives. This has called for our representatives to be more informed and educated. Demands have been put to make educational qualifications necessary for contesting elections to be representatives of the people. But this recommendation requires a thorough discussion of the advantages as well as disadvantages of this step.

Necessary Conditions for Contesting Elections in India

In India, for contesting elections, there are currently no educational qualifications, only simple qualifications are required to represent any Constituency. These include

- A person should be resident citizen of the country.
- The person should be atleast 25 years of age.
- The person should be registered as a voter in any Constituency.
- He/she should not be convicted of any offence and sentenced to an imprisonment of 2 years or more.
- He/she should not hold any office of profit.

Thus, no educational qualifications have been prescribed for contesting elections and representing the constituency. This is because it is argued that the most relevant qualifications for a MP or MLA is the ability to understand the people's concerns and represent their interests. If they are more educated but fail to represent the interests of the voters adequately, they will be voted out of power whereas if a candidate is not highly educated but keeps the interest of his electorate supreme, then there is not a better representative than him/her.

When the issue of necessary educational qualifications came up before Constituent Assembly, it was decided that educational qualifications should not be made mandatory for contesting elections for the politicians as large number of freedom fighters dropped out of their school and college education to serve national cause. Also, most of the Indian electorate were illiterate which would have deprived them from representing the nation. So, it was decided that political sense and capability and social awareness in an individual should be the most decisive factors in allowing a person to represent the interests of the fellow citizen.

Arguments in Favour of Educational Criteria for Contesting Elections

Education is the most important aspect in the present world for an individual. Our representatives are our leaders. People look upon at their representatives as guide who can properly work for their interests. Thus, educational qualifications are also necessary for politicians seeking to contest elections. Following arguments, can be given in support of educational qualifications for our representatives

- It would enhance the policy-making quality in India as better educated and specialised politicians will be able to better understand the needs and aspirations of the people. They would be in a better state to understand and predict the policy measures required to get rid of the current and future problems of Indian population.
- Less qualified politicians will not be able to cope up with the global changes and will not be able to understand diplomatic situations with other countries of the world as well as world leaders.
- It would attract some of the most brilliant minds from the country for contesting elections because they will perceive the election battle ground to be familiar and welcoming when they will see politicians with qualifications similar to theirs.
- Educational qualifications would also raise the general level of education in the country. More people would become inspired to get literate and educated if the political leaders will start to do so.
- Currently, most of the politicians are non-specialised. They work for the general welfare of the people. The task of specialised activities is left to the civil servants and committees who are allowed to frame more specific rules and regulations. Educated politicians will be able to better understand the administration and specialised tasks which are currently delegated to the bureaucracy.

- The great Greek philosopher Aristotle had said that the educated differ from the uneducated as much as the living differ from the dead. Thus, education is seen as providing an advantage to an individual if he wants to serve the people of his/her country.
- Currently, in politics, winning elections has become the primary motive of the politicians. The candidate's winnability and economic wealth is considered as decisive factors in deciding whether the candidate will be able to serve the interests of his/her constituency or not. If education is prescribed as a criteria for contesting election, it would reduce the influence of these factors in politics.

Arguments Against Necessary Educational Qualifications for Politicians

Though there has been a favourable wave towards prescribing minimum educational qualifications for politicians, yet there are various aspects of the disadvantages of this move, which can not be ignored. These are -

- Education is one of the fundamental rights of every citizen in the country. Providing education to each and every citizen is the duty of the state. Thus, it is the state that has failed to provide education, and for failure of the state citizens can not be punished. They can not be deprived of their right to contest elections because of the failure of state.
- Educational qualifications have not been prescribed under the Constitution, except for a very few posts that involve specialisation. Thus, the Constitution makers did not envision any educational qualifications for any posts except for a few.
- It is believed that more than education, character and commitment for politicians are important. A strong and well built character will be effectively able to represent the interests of the people who have voted them to power. Correct and just use of power does not require any educational qualifications but a good moral character and ethical behaviour is required.
- As most of the people in India are still illiterate, prescribing minimum educational qualifications will deprive majority of the common people from contesting elections. Thus, if majority of the people will get disqualified from contesting elections, it will result in inequality of opportunity in contesting elections, that is against the constitutional principles of equality before law.
- Prescribing minimum disqualifications would deprive a large number of females from contesting elections as it is the females that drop out of schools and colleges to take care of the household chores and family.

Thus, minimum educational qualifications for politicians may be required but it must address the existing concerns that come in the way of democratic rights of the illiterate and poor citizens of India who will be affected the most if such educational classifications are made mandatory. The largest concern is that if educational qualifications are made mandatory then majority of the existing legislators will also become ineligible to contest elections.

Way forward

It is not doubtful that certain minimum educational qualifications are necessary for politicians so that the best of minds should govern our country. Yet it cannot be enforced upon the country with the blink of an eye. The minimum educational qualifications that should be prescribed shall be left to the wisdom of the common people and the politicians.

Simultaneously, various other reforms can be initiated to clean the political system of the country and ensure that people with good moral character having good education enter politics.

These reforms and suggestive measures are

- Political parties should reform their structure of election of members to the party. If men who are highly educated having ethical and moral principles enter into politics, it would lead to the betterment of existing political system.
- Criminalisation and money and muscle power should be reduced in the elections. More awareness should be spread among the electors so that they themselves choose candidates that are educated and not the ones having criminal background. Role of money can be reduced by putting limits on the election expenditure and strictly implementing the code of conduct.
- Spending in education, health and similar social services should be raised so that general level of education can be raised. This will automatically improve the elected representatives in the longer term because more educated people will join politics.
- Student politics should be strengthened and more students should be encouraged to participate in the public political life. More number of university students coming into politics will challenge the existing political system and the elected as well as unelected leaders will try to reflect upon their own capabilities.

Thus, a well informed individual, having a powerful will and strongest moral character represents the interests of the people most effectively. Though educational qualifications are required for politicians yet they are not necessary. Education helps in decision-making and without education it can be difficult for politicians to solve the problems of society. So, if more educated citizens with good moral character enters the politics, they can be better leaders who would work for the interests of people that they represent.

E-GOVERNANCE IN INDIA

CONCEPT, INITIATIVES AND CHALLENGES

The term 'governance' is wider than the term 'government'. Governance may be defined as an activity of governing or controlling a country by its government, controlling of an organisation or a company by its CEO or Board of Directors or controlling of a household by the head of the house. 'e-Governance' can be defined as governing of a country, organisation, company or a household with the help of Information and Communication Technology (ICT). e-Governance facilitates an efficient, speedy and transparent process of disseminating information to the public, and other agencies and for performing government administrative activities. The National e-Governance Plan (NeGP) is an initiative of the Government of India to make all government services available to the citizens of India *via* electronic media.

India's Progress Towards e-governance

India started its own e-Governance initiative with the establishment of National Informatics Centre (NIC) in 1977. But the main thrust for e-Governance was provided by the launching of NICNET (National Informatics Centre Network) in 1987 which was the national satellite-based computer network. This was followed by the launch of the District Information System of the National Informatics Centre (DISNIC) programme to computerise all district offices in the country for which free hardware and software was offered to State Governments. NICNET was extended *via* the state capitals to all district headquarters by 1990.

A large number of e-Governance initiative were taken at the union and state levels. In 1999, the Union Ministry of Information Technology was created. By 2000, a 12-point minimum agenda for e-Governance was identified by Government of India for implementation in all the Union Government Ministries/Departments.

Importance of e-governance

e-Governance is the application of Information and Communication Technology (ICT) for delivering government services, exchange of information, communication transactions, integration of various stand alone systems and services between

- (i) Government-to-Customer (G2C), (ii) Government-to-Business (G2B)
- (iii) Government-to-Government (G2G).

A brief study of these systems will highlight the importance of e-Governance.

The goal of Government-to-Customer (G2C) e-Governance is to offer a variety of ICT services to citizens in an efficient and economical manner, and to strengthen the relationship between government and citizens using technology.

Under G2C, various projects *viz* Bhoomi project by Karnataka Government, Lokvani project by Uttar Pradesh Government, E-Mitra by Rajasthan Government, E-Seva by Andhra Pradesh Government, Gyandoot by Madhya Pradesh Government, UMANG App by the Union Government have been launched.

Government-to-Business (G2B) is the online non-commercial interaction between local and Central Government and the commercial business sector with the purpose of providing business information and advice. G2B refers to the conduction through the internet between government agencies and trading companies. Under the projects like E-Procurement of Andhra Pradesh Government, MCA-21 implemented by Ministry of Corporate Affairs were launched.

Government-to-Government (G2G) is the electronic sharing of data and/or information systems between government agencies, departments or organisations. The goal of G2G is to support e-government initiatives by improving communication, data access and data sharing. Some successful G2G projects are North-East Gang Information System (NEGIS), *Khajane* of Karnataka Government, Smart Government of Andhra Pradesh. Apart from these, Central Government introduced Mission Mode Projects (MMPs).

Mission Mode Projects (MMPs) and Different Divisions

A Mission Mode Project is an individual project within the National e-Governance Plan (NeGP), that focuses on one aspect of electronic governance, such as banking, land records or commercial taxes, etc. With NeGP, 'mission mode' implies that projects have clearly defined objectives, scopes and implementation of timelines and milestone, as well as measurable outcomes and service levels.

NeGP comprises 31 Mission Mode Projects (MMPs) which are further classified as Central, State and integrated MMPs. Central MMPs include Banking, Central Excise and Customs, Income Tax (IT), Insurance, MCA 21, Passport, Immigration, Visa and Foreigners Registration and Tracking, Pension, E-office, Posts, VID.

State MMPs include Agriculture, Commercial Taxes, E-District, Employment Exchange, National Land Records Management Programme (NLRMP), Municipalities, E-Panchayats, Crime and Criminal Tracking Network and System (CCTNS), Road Transport, Treasuries Computerisation, PDS, Education and Health. Integrated MMPs include CSC, e-Biz, e-courts, e-Procurement, EDI for e-Trade, National e-Governance Service Delivery Gateway, India Portal etc.

Some Recent Initiatives in the Field of e-governance Taken by the Government of India

Some of the recent initiatives taken by the Government of India in the field of e-Governance in the country includes

- **Arogya Setu Application** The Arogya Setu application was launched in April, 2020 by the Union Government to map the spread of Covid-19 infection. Apart from contact tracing, Arogya Setu application was used for providing citizen services such as e-pass for travel and entry into a number of facilities such as metros and airports.

- **TRACKPDS** It was developed by the state of Haryana to capture food grains request during the Covid-19 lockdown period from the distressed residents. It was integrated with state helplines, district headquarters and unorganised labour portals. It also provides facility to manage the beneficiaries.
- On 22nd June, 2020, Jammu and Kashmir Governor launched e-Application-cum-Issuance of Domicile Certificate developed by JaKeGA. It is meant to speed up public delivery mechanism through minimum human intervention, besides ensuring efficiency, transparency and reliability of such services.
- BHIM (Bharat Interface for Money) mobile app launched in 2016 to facilitate e-payments directly through banks.
- Aadhaar Enabled Payment System (AEPS) allowing online interoperable financial inclusion transaction through the business correspondent of any bank using the Aadhaar authentication.
- Digital India Programme aiming to transform the country into a digitally empowered society and knowledge economy.
- Direct cash transfer to facilitate disbursements of government entitlements like MGNREGA, social security pension, etc. of any Central or State Government bodies, using Aadhaar as supported by UIDAI (Unique Identification Authority of India).
- *e-Kranti* scheme for linking the internet with remote villages in the country launched in 2014.
- Survey of India has launched a new web portal called *Nakshe* to make open series of maps available to Indians for free. These maps are meant for development activities in the country and can also be used to plan scientific expeditions, research etc.

Some states *viz*, West Bengal, Odisha and Andhra Pradesh have implemented e-Government modules in Panchayat. MMPs for e-Governance in Municipalities is implemented under Phase I of Jawaharlal Nehru National Urban Renewal Mission (JNNURM) and applicable to 65 Mission cities. The government has to publish all the information online through websites. This can be facilitated through centralised storage of information, localisation of content and content management. The information of government is public information, therefore the citizens are entitled to know every piece of information of the government, because the government is of the people, by the people and for the people.

Challenges Faced by e-Governance

Despite its advantages, e-Governance faces many challenges in various ways. Universal access to the internet is still far away in India. India has a wide digital divide between rural and urban India, thus, the reach of e-Governance initiative is very limited. Lack of proper infrastructure particularly in rural areas, restricts the people from reaping the benefits of e-Governance.

Illiteracy of the users and their lack of ability to use computers is also a great impediment. Other hinderances include public concern over the cyber security, not providing e-mail address due to the fear of spam and government retention of transaction or interaction history, etc. States like Maharashtra, Gujarat and Kerala are ahead in e-Governance, but others like Bihar, Jharkhand, North-East are lagging behind.

Conclusion

A vision is required to implement the e-Governance successfully in India. To meet the vision the challenges in the implementation of e-Governance should be overcome. Then, the environment needs to be developed for the effective implementation of e-Governance in India. In spite of many challenges India has number of award winning e-Governance projects like Andhra Pradesh's rural *e-Seva* Project, *e-Panchayat*, etc. Therefore, we can say that, e-Governance is the key to the 'good governance' for the developing countries like India to minimise corruption, provide efficient and effective or quality services to their citizens.

44

FUNDAMENTAL RIGHTS

BEDROCK OF INDIAN DEMOCRACY

Fundamental rights are defined as those rights which are essential for intellectual, moral and spiritual development of individuals. All these rights are essential for existence of individuals, hence called Fundamental rights. These are universally applicable to all citizens, irrespective of race, birth place, religion, caste or gender. The origin of Fundamental rights can be traced to England's Magna Carta, the United States' Bill of Rights and France's Declaration of the Rights of Man.

Fundamental Rights Under the Indian Constitution

The Part III of the Constitution of India gives a detailed description on a charter of rights called the 'Fundamental Rights'. It is described as the Magna Carta of India. These Fundamental Rights guarantee civil freedom to all the citizens of India to allow them to live in peace and harmony. These are the basic rights available to every Indian citizen irrespective of their caste, creed and religion, place of birth, race, colour or gender. These Fundamental Rights include Right to Equality, Right to Freedom, Right to Freedom of Religion, Cultural and Educational Rights, Right against Exploitation. The Fundamental Rights were included in the Constitution because they were considered essential for the development of every individual and to preserve human dignity. They are justiciable i.e. any violation of these rights can be questioned in the court of law (the Supreme Court and High Court) through writs. Changes in Fundamental Rights require a constitutional amendment. The Constitution originally laid seven rights including the Right to Property, but the 44th Amendment of 1978 deleted the right to property, though it still is a constitutional right. Long after the deletion of the Right to Property, Right to Education was added to the list of Fundamental Rights under Section 21A on 2nd April, 2010.

Significance of Fundamental Rights

The concept of Fundamental Rights limits the power of government and prevents the executive and the legislature from becoming authoritative or dictatorial. It also provides an opportunity for the individual for self-development. Constitutions that did not contain such provisions have resulted into dictatorial rule. Hence, the philosophy and concept, underlying the Fundamental Rights is that constitutional limitation on the power of the government is the only way of ensuring and safe-guarding the basic human freedoms and so the dignity and self-respect for the individuals.

Categories of Fundamental Rights

The Fundamental Rights have been listed under seven sections from Articles 12 to 35, which include

- **Right to Equality** guarantees to all persons (citizens as well as other) equality before the law and equal protection of law. It prohibits discrimination between citizens on ground of religion, race, caste, sex, place of birth, or any of them. All citizens have equal access to shops, public entertainments and places of public resort, which are maintained wholly or partly by the state. However, special provisions may be made in respect of women, children, socially and educationally backward classes and scheduled castes and scheduled tribes. The Constitution guarantees equal opportunities relating to public employment to all citizens, but some posts may be reserved for backward classes. It abolishes untouchability and also abolishes the system of conferring titles by the state, except military and academic distinctions.
- **Right to Freedom** includes a variety of rights such as right to speech and expression, right to assemble peacefully or to form association, right to move freely throughout the territory of India, right to life and liberty, right to reside and settle in any part of India and so on.
- **Right Against Exploitation** ensures that seeks to ban trafficking in human beings, begar or any other form of forced labour. Employment of children below 14 years of age in any factory or mine or other risky occupations is also prohibited by law.
- **Right to Freedom of Religion** ensures that all citizens have been guaranteed freedom to profess, practice and propagate any religion. Every religious group has been given the freedom to manage its religious affairs and to own, acquire and administer property for religious or charitable purposes.
- **Cultural and Educational Rights** guarantees to the minorities the right of conserving their language, script and culture, to receive education and administer educational institutions of their choice.
- **Right to Constitutional Remedies** guarantees the right to move the Supreme Court for the enforcement of Fundamental Rights. This right can, however, be suspended during the operation of a proclamation of emergency by the President.

There are certain Fundamental Rights which are granted only to citizens of India and not to foreigners. These include protection from discrimination on the grounds of religion, race, caste, sex or place of birth (Article 15), equality of opportunity in matters of public employment (Article 16), freedom of speech and expression (Article 19), Protection of language, script and culture of minorities (Article 29), and cultural and educational rights (Article 30).

Writs Under Article 32

It is important to note that the Fundamental Rights given in Article 12-35 of the Indian Constitution cannot be violated. In case of its violation, it can be questioned in a court of law through certain writs under Article 32. These writs include

- **Habeas Corpus** It is a command of the court to a person who is detaining another person, to bring the body of the person in his custody at a stipulated time and place for a specified purpose.
- **Mandamus** It is an order that commands a person or a body to do what constitutes his or its duty as legal performance.
- **Prohibition** It is issued to prevent a subordinate court not to exceed its jurisdiction or act contrary to the norms of natural justice.
- **Certiorari** It is used to order the shifting of a suit from a lower court to higher court to prevent an excess or abuse of jurisdiction before the commencement of the trial.
- **Quo Warranto** It restrains a person from acting in an office to which he is not entitled. The court may declare the office vacant.

Criticism of Fundamental Rights

Ever since its adoption, the chapter on Fundamental Rights in the Constitution has been under criticism, both in India and outside. The critics argued that some important rights such as Right to Work etc. were not included. It was also pointed out that the spirit of the whole chapter was spoiled by taking away much of the freedoms or rights provided through the insertion of many preventive provisions such as preventive detention, suspension of the right to constitutional remedies etc.

Some Judgements on Fundamental Rights

In 2017, the nine-judge Constitution Bench of the Supreme Court headed by former Chief Justice of India JS Khehar in a landmark unanimous decision has declared Right to Privacy as an intrinsic part of Right to Life and Personal Liberty under Article 21. Another landmark judgement with regard to the protection of Fundamental Right is the passing of Muslim Women (Protection of Rights on Marriages) Bill 2017 by Lok Sabha which declares Triple Talaq illegal and criminalises it with up to three years of imprisonment for husband. The majority of judges found Triple Talaq violative of the Constitution and Fundamental Right under Article 14 (Equality before Law).

Conclusion

The success or failure of a democracy depends largely on the extent to which civil liberties and basic rights are enjoyed by the citizens.

A democracy must aim at the highest development of the individual, which can certainly be achieved through the Fundamental Rights. Only a free society wherein individuals feel dignified, enjoy basic rights can assure the all round and quick progress of its members and thus of the nation itself. Herein lies the importance of Fundamental Rights in the success of democracy.

RIGHT TO INTERNET AS A FUNDAMENTAL RIGHT

Fundamental rights are enshrined in Part III of Indian Constitution from Article 12 to 35. Fundamental Rights in Part III is rightly described as the Magna Carta of India. The fundamental rights are aimed to promote ideal of political democracy in India. They prevent the establishment of an authoritarian and despotic rule in country and to protect the rights and liberties of people against the invasion by states. The fundamental rights are guaranteed to all persons without any discrimination. They uphold the equality and dignity of individuals, the larger public interest and unity of nation.

Internet being an ocean of information, helps in developing informed citizens. An informed citizen is more aware of its fundamental rights. They help in keeping the excesses of the Government in check, thus, preventing the establishment of a despotic rule in the country. With the Right to Freedom that guarantees the Freedom of Speech and Expression as fundamental right, there has also been demand to declare Right to Internet as a fundamental right in view that people must have access to internet while exercising their Rights of Freedom and Speech.

Need for Recognising Right to Internet as a Fundamental Right

It is time that we recognise the Right to Internet access as a fundamental right. Internet broadband and mobile internet services are a lifeline to people in India from all walks of life. While the internet is certainly a main source of information and communication, it is so much more than that and people working in the technology based economy like the thousands of delivery workers for Swiggy, Amazon etc., and the cab drivers of Uber and Ola depend on the internet for their livelihoods. It is a mode of access to education for students who do courses and take exams online. Access to the internet is important to facilitate the promotion and enjoyment of the Right to Education.

The internet provides access to transport for millions of urban and rural people; it is also a mode to access to health services online. More than anything, it is a means for business and occupation for thousands of small and individual owned enterprises which sell their products and services online. Thus, the access to the internet is a right that is very similar to what Supreme Court held with respect to the right to privacy in the Justice KS Puttaswamy judgement, a right that is located through all our fundamental rights and freedoms. These include the Right to freedom of speech and expression, freedom of peaceful assembly and association; freedom of trade and occupation and the Right to life, education, health, livelihood, dignity and privacy under Article 21.

Current Status of Right to Internet

Kerala High Court in *Faheema Shirin vs State of Kerala* (2019) declared the Right to Internet access as a fundamental right forming a part of the Right to Privacy and the Right to Education under Article 21 of the Indian Constitution.

In present digital world where almost every service is being digitised, it is important to recognise the Right to Internet access as an independent right. Court observed that the internet acts as a learning tool and nobody can impose restrictions on it, citing discipline.

Human Rights Council of the United Nations also regards the Right of access to the Internet as a fundamental freedom and a tool to ensure the Right to Education. Also, the Supreme Court has declared that access to the internet is protected under Article 19 of the Constitution. In response to a plea against the suspension of internet services in Jammu and Kashmir since last August, the court affirmed that the Right to freedom of speech and expression, as guaranteed to all citizens under the first section of that article, covers the right to go online. In effect, even if left unsaid, this would make internet access a fundamental right.

Challenges Before Uniform Internet Access

Though, the recognition of such a fundamental right is laudable, it does have 'reasonable restrictions' under specified circumstances. The judgement gave administration space to restrict internet access on the condition that it's proportionate to the problem identified. This formulation seems fuzzy and could provide enough scope for administration to justify internet snap-offs in various cases. Further, a digital divide in the economy would render a sizeable proportion of the population unable to enjoy the fundamental right to Internet. This will eventually lead furthering of social disparities. Moreover, the rising number of cyber related crimes would leave more people susceptible in absence of proper guidelines related to the Right to Internet access.

Conclusion

Internet itself is a great force which has shackled the monotony and global order by its brute force. Anything which has power can be used in both good and bad ways. As we know internet can be a boon and bane at same time. It rests with the people after recognising internet as fundamental right how to utilise the power that comes with internet. Both good and bad powers have large implication on the lives of people. As both Supreme and High Courts through various judgements in country have to strike balance between rights of individuals and right of state, preservation of balance should be of utmost importance to enable individual to become a balanced and responsible citizen.

The Right to Internet access and digital literacy will empower citizens with increased access to information, services and the creation of better livelihood opportunities.

PANCHAYATI RAJ AND RURAL DEVELOPMENT IN INDIA

Panchayati Raj was a pious dream of our great leader Mahatma Gandhi who wanted to strengthen the democracy at the grassroots level by this system. In our country, 70 per cent of the population is in rural areas and the panchayats have been the backbone of the Indian villages since independence. Panchayati Raj refers to the system of rural local self-government in India.

The History of Panchayati Raj

The history of Panchayati Raj goes back since the days of our independence. Efforts were made to strengthen the system of Panchayati Raj in order to give citizens a sense of participation in the nation building programme. It was in pursuance of this objective that community development programme was launched in 1952. It was an effort to provide and encourage development and employment in rural areas, use of scientific methods of agriculture, encourage cotton and small scale industries among other things.

Different Committees Reports Regarding Panchayati Raj

To evaluate the effects of community development programme Balwant Rai Mehta Committee was set up in 1953, that suggested setting up of Panchayati Raj Institutions.

The underlying idea was to usher in an era of 'Democratic Decentralisation'. Few other committees that were formed on Panchayati Raj were : VT Krishnamachari, 1960; Ashok Mehta Committee, 1977; GVK Rao Committee, 1985; LM Singhvi Committee, 1986. Finally, in 1993 through 73rd Constitutional Amendment Act, Panchayati Raj Institutions were established.

Three Tier Structure of Panchayati Raj

The Constitution provides for a three tier structure of Panchayati Raj. The District Panchayat or Zila Parishad at District level, a Block Panchayat at the intermediate level and a Gram Panchayat at the village level. In most of the states, members of Gram Panchayat constitute a body called Gram Sabha and all the voters of this constituency are members of this body. Gram Sabha is not a tier of the system. It doesn't have any executive function and operates only as a recommending body.

Areas of Work of Panchayat

Almost all the states have delegated powers and responsibilities in varying degrees to the panchayats. Article 243G of the Constitution has broadly outlined areas of functions for preparing plans for socio-economic development of their areas. These areas are explicitly highlighted in the 11th Schedule of the Constitution. The functions highlighted are ensuring safe drinking water, maintaining community assets, health and sanitation, rural electrification, physical infrastructure *viz* roads, bridges, waterways etc.

There are many changes that these institutions have brought about. Under Articles 40 and 246 (3), the Constitution grants powers to the states to make laws to enable the functioning of the self-government units. Haryana and Rajasthan are the states who mandate to fix minimum education qualification for those contesting in Panchayati Raj Institutions (PRI's). In August 2015, the Bihar Assembly also passed amendments making it mandatory for candidates contesting Panchayat Polls to have toilets in their homes.

Through Gram Panchayats, activities in MGNREGS (Mahatma Gandhi National Rural Employment Guarantee Scheme) are handed out and auditing of work is done. MGNREGS has brought a sigh of relief for rural populace as rural distress was brewing due to unemployment. MGNREGS has become a cog in the wheel of growth and development. Gram Sabha acts as a pivotal body that is involved in building infrastructure and providing employment to people in rural areas.

Different Schemes Implemented by It

Many State and Central Government schemes have been implemented at the grassroot level by these bodies. Schemes of rural housing (Pradhan Mantri Awas Yojana), rural electrification (Gramin Vidyut Abhiyantas), health and sanitation (ICDS and Swachh Bharat Mission), physical infrastructure (Pradhan Mantri Gram Sadak Yojana) etc., have made conspicuous difference in rural areas.

These schemes have been implemented with the assistance of the Panchayati Raj Institutions. Similarly, Gram Panchayats have worked as the first response entity during the times of disaster. Mock drills, awareness programme have enabled these bodies to respond quickly during the needful times.

Significant Role Played by Panchayati Raj Institutions to Transform the Face of Rural India

Panchayati Raj Institutions have broken the caste, age and gender structures of village. No more higher caste people, old members and males are at the helm of decision-making. The provision of 33% reservation for women and provision for reservation for SC/ST in the body has enabled villagers and the government to achieve parity in the village. This has broken the age old structures and has mainstreamed the marginalised.

Among the states that already follow 50% reservation for women in Panchayati Raj are Bihar, Uttarakhand, Madhya Pradesh, Himachal Pradesh and Maharashtra. The reservation of seats for women, Scheduled Castes and Tribes in Panchayats is a welcome step, for it would make the institution of Panchayat more democratic, representative and balanced.

Similarly, in the field of agriculture, these bodies have contributed enormously. Awareness about organic farming, soil health card scheme has been implemented with the help of Gram Sabha. Similarly, many infrastructure projects, animal husbandry activities, fisheries etc., have been carried out by these bodies. Cooperatives like AMUL were conceived at these levels. Therefore, pooling of resources and efforts have been their hallmark.

Similarly, concepts of social forestry, agroforestry have been encouraged by panchayats. The government has planned to set up formal markets which would remove the intermediaries. So, that the maximum share of profit lands in the hands of farmers. Panchayats will be an enabling factor in this scheme. Also, panchayats have mandate to make plans and implement them in the areas of small scale industries, food processing industries, khadi and cottage industries. These industries require proper planning and financing. With coordination among Central, State and Panchayat level bodies it will help in realising the full potential.

Challenges Faced by Panchayati Raj institutions

Panchayati Raj in India has not been an absolute success. Its functioning all these years has demonstrated numerous shortcomings. These include

- (i) The inadequacy of funds has stood in the way of successful working of the Panchayati Raj Institutions.
- (ii) The tendency on the part of the higher structure to treat the lower structure as its subordinate is markedly visible.
- (iii) Participation of the people hardly happens in reality since the key administrative and technical positions are manned by the government officials.
- (iv) The performance of Panchayati Raj Institutions has been vitiated by political cum caste factionalism, rendering developmental projects into chimeras.
- (v) These bodies also experience several administrative problems like politicisation of local administration, lack of coordination between the popular and bureaucratic elements etc.

These structural and functional issues, which have created impediment in realising the full potential, needs to be dealt with strong hand.

Conclusion

Panchayati Raj Institutions have enormous potential to transform the face of the rural India. But, there are some structural and functional issues which have created impediments in realising the full potential. Thus, the Panchayat System in India assumes a very significant role. This system is quite rational, practicable and in perfect harmony with the spirit of democracy and should be further strengthened and encouraged. It should be made economically viable and self-sufficient by providing adequate resources, funds and generous grants.

MORAL ETHICS OF PUBLIC SERVANT

Ethics can be defined as the moral principles that govern a person's behaviour or the conducting of an activity. Morals are the normally acceptable standards and principles of the right and the wrong. The public servants are the government's employees who are working for the welfare of the people of the country. The public servants are expected to adhere to ethical norms and values while fulfilling their duties. Although the government and our law lay down the guidelines and regulatory criteria for them, these cannot be imposed on an individual. These have to be guided by one's own conscience which comes from within.

Constitutional Expectations for Transparency

The Constitution expects the civil servants to be fair and transparent in their public dealings. They need to act without any prejudices while implementing the policies of the state. All the citizens of the country should be equal in their eyes irrespective of their social stature. It is important for them to reflect, understand their roles and responsibilities and align them with their ethics and morals. The public servants are the guardians of the sensitive and confidential information of the people and government. It is their duty to keep it safe and not disclose it until it is important and unavoidable.

Morality and Courage : Prerequisites of Public Servants

A public servant needs to display exemplary courage to stand for something which is morally correct. This may invite strong protests and opposition from the different dominating sections of the society but they need to stay strong and committed towards their duties.

The role and duty of a public servant is under a constant scrutiny from the people and government. A public servant has the power to take the decisions which have direct impact on the lives of the people. While taking the decisions, they need to keep the benefits of a larger section of the society in mind. The personal biases and choices must be kept separate from the welfare of the people and the decisions must be taken rationally.

Democracy and Public Servants

With the changing times, the role of public servants has evolved. Their roles have become significant in the socio-economic development of the country. They have an important role in maintaining India's democratic set up and at the same time nurturing the economic and social well-being of the people and the country. The government has appointed the public servants for the welfare of people. In fact, the people of the society also look up to them for the same. They are an important part of the nation building activities.

Fair and Just Dealings

There are numerous young people who are aspiring to join the public service department. The public service department is known by the group of people who are working for it. The reputation and success of the governance depends upon the conduct of the public servants and public's perception about them. Thus, it becomes important for them to be fair and just in their public dealings. Their personal interests need to take a backseat in front of the interests of the masses.

Corruption and Nepotism Dominated System

In the past few years, the issues of corruption and nepotism have dominated the system. The practice of nepotism involves the appointment of relatives, friends and acquaintances to the public service department, irrespective of their merit and credibility. This is weakening the roots of the system as the people tend to lose their faith in the bureaucracy.

The impact of the actions of the public servants on the masses is so significant that the people have adopted the same ideology. They are resorting to unfair means to get their work done. The people are ready to bribe the persons in order to get the right work done at the right time. This is how the vicious cycle of corruption has entered our system.

Service, Value and Integrity of Public Servants

Strong morals and ethics protect the individuals from becoming vulnerable and falling prey to greed and desires. They are the guiding light of the individual in the dark times. It is true that bending the rules and principles will pave way for quick professional success. But the actual professional success of a public servant is measured on the basis of his services, values and integrity.

Conclusion

Ethics in public service is not just an idea, but also an imperative and mandatory practice. Citizens depend on public servants to be professional, honest and most importantly ethical. The public officials and departments form the cornerstone of the development of a country. It is high time that they value the power and position conferred to them. They need to use these constructively to make our country a truly developed economy.

NATIONAL REGISTER OF CITIZENS (NRC) AND ITS IMPLICATIONS

The National Register of Citizens (NRC) is an official record of all the legal citizens of India. So far, Assam is the only state with such a document. It is governed by the Citizenship Act, 1955 and the Citizenship (Registration of Citizens and Issue of National Identity Cards) Rules, 2003 (amended in 2009) and a 2010 order of the Ministry of Home Affairs, published in the Gazette of India. It will include persons whose names appear in any of the electoral rolls upto the midnight of 24th March, 1971 or National Register of Citizens, 1951 and their descendants.

The NRC preparation was the biggest exercise in India carried out under the supervision of the Supreme Court to identify illegal immigrants, as well as their descendants, settled illegally in state of Assam.

Difference between NRC and Census

The NRC is different from a census as the census is conducted every decade on a national level and gives the state a window into the size and nature of Indian population. There is no obligation with the citizens to prove their citizenship claims and rights in a census.

However, the NRC is a unique exercise, in which onus to prove citizenship lies with the citizens. They have to, through documentary evidence, show how they have come to be citizens of India living in Assam. The NRC has its roots in the Memorandum of Settlement or the Assam Accord signed between the Assam State Students Union and the Government of India in 1985.

The Assam Accord

The Assam Accord was a Memorandum of Settlement signed between representatives of the Government of India and the leaders of the Assam Movement in New Delhi on 15th August, 1985. The accord was an outcome of the violent anti-migrant movement from 1979-85. It contained provisions that all 'foreigners' who came to Assam after 25th March, 1971 should be detected and deported under the Illegal Migration (Determination by Tribunals) Act (IMDT), 1983. Those Bangladeshis who came between 1966 and 1971 had to be barred from voting for ten years and the international borders would be sealed and all persons who crossed over from Bangladesh after 1971 were to be deported.

History of NRC

The process of NRC update was taken up in Assam as per a Supreme Court order in 2013. In order to stop cases of illegal migration from Bangladesh and other adjoining areas, NRC updation was carried out under The Citizenship Act, 1955 and according to rules framed in the Assam Accord. The Citizenship Act of 1955 was amended after the Assam Accord for all Indian-origin people who came from Bangladesh before 1st January, 1966 to be deemed as citizens.

Those who came between 1st January, 1966 and 25th March, 1971 were eligible for citizenship after registering and living in the state for 10 years while those entering after 25th March, 1971 were to be deported. In 2014, the Supreme Court asked the state government to update the 1951 NRC in a time-bound manner. Present exercise has been conducted under the supervision of the Supreme Court.

Process of NRC

The verification process involved house-to-house field verification, determination of authenticity of documents, family tree investigations in order to rule out any false claim of parenthood and separate hearings for married women. Existence of name in the legacy data which is the collective list of the NRC data of 1951 and the electoral rolls upto midnight of 24th March, 1971 and proving linkage with the person whose name appears in the legacy data serve as a citizenship proof for the exercise. The excluded people had about 120 days to appeal against their exclusion to the foreigner tribunals. To speed up the process 200 new tribunals had been made functional in addition to the already existing. If they are not satisfied with the tribunals, people can also move to High Court and the Supreme Court for redressal.

Challenges Related with NRC

This exercise of compiling the NRC has sparked a debate around its social, political and economic consequences of migration and the resulting outbreaks like there are concerns that NRC may end up incorrectly including or excluding people from the list. There is also an issue related to D voters (Dubious voters or Doubtful voters) i.e., those who are disenfranchised by the government on the account of their alleged lack of proper citizenship credentials and their inclusion will depend on decision of the Foreigners Tribunal.

There is also a fear that this may end up targeting minorities in the country. On top of that Citizenship (Amendment) Act, 2019 which makes illegal Hindu, Buddhist, Jain, Parsi and Christian migrants from Afghanistan, Bangladesh and Pakistan eligible for Indian citizenship further creates apprehensions about alienation of minorities in the process. Also there are apprehensions that India will end up creating the newest section of stateless people, raising the spectre of homegrown crisis that will echo that of Rohingya people who fled Myanmar to Bangladesh. It is tough to differentiate illegal immigrants from the genuine and legitimate citizens of Assam, as the language spoken by illegal immigrants from Bangladesh and the indigenous Bengali speaking Muslim of Assam, is similar.

Impact of Illegal Migration on Assam

Large areas of forest land was encroached upon by the immigrants for settlement and cultivation. The state experienced declining per cent of land area under forest from 39% in 1951-52 to about 30% now.

The Commission on Integration and Cohesion found that tension usually exists with the presence of high levels of migration combine with other forms of social exclusion like poverty, poor housing etc. The influx of immigrants created a crisis of identity among the indigenous people. Their cultural survival will be in threat, their political control will be weakened and their employment opportunities will be undermined by such illegal migration. The recent Bodo-Muslim violence in the Bodoland Territorial Area Districts has its root in the issue of illegal migration.

Immigration has increased pressure on the part of state government, as the government has to increase the expenditure on education and health facilities to the immigrants. There is a fear particularly during a recession that immigrants take jobs which would otherwise be taken by local people. In particular place and circumstances, there can be competition and conflict. Immigrants in every year have been adding a good number of people in Assam. It is one of the main reasons of population explosion. Due to this, there is a possibility of decreasing wage level. Most of the Bangladeshi immigrants have got their names enlisted in the voting list illegally, thereby claiming themselves as citizens of the state. The immigrant's population act as a vote bank for the political parties in Assam. Pakistan's ISI has been active in Bangladesh, supporting militant movements in Assam. It is alleged that among the illegal migrants there are also militants, who enter into Assam to carry out the terrorist activities.

Significance of NRC

Despite all the repercussions and challenges that an NRC will have, it is very much in the good faith of the nation. It will provide a long-term solution to curb illegal migration from Bangladesh, by diplomatic and border management efforts to yield desired results, as Bangladesh does not recognise any infiltration taking place from its territory to India and the porous border between India and Bangladesh hinders effective border management. The fear that illegal immigrants will change the demography of state from the mind of locals will be removed. It is also expected to deter future migrants from Bangladesh from entering Assam illegally as publication of the draft itself had created a perception that staying in Assam without valid documentation will attract detention/jail term and deportation.

Way Forward

Thus, India has a very complex task ahead, to comply with the basic tenets of the Constitution i.e. safeguard the Fundamental Rights of the legitimate citizens of the country without violating the basic human rights of the migrants who may be excluded after the exercise as non-citizen class. The bordering states of the nation must be made secure of future illegal cross border movement as it is the foremost step in checking illegal immigration through porous borders.

Hence, it will need comprehensive border management, bilateral treaties with neighbouring nations to identify and deport such migrants. In doing so, India can actively engage International Bodies like UN High Commissioner for Refugees (UNHCR), International Organisation for Migration (IOM), etc., for experience and expertise. India can also initiate for the signing and ratification of the Refugee Convention of 1951 by members of SAARC. The road ahead amidst of all its apprehensions, the NRC is a forward-looking step in documenting India's citizens and detects and deters infiltrators. The cooperation of the states will be the key for the success of NRC.

RIGHT TO INFORMATION (RTI) ACT

REVOLUTIONARY TOOL IN DEMOCRACY

Right to Information (RTI) can be defined as an act of Parliament of India, “to provide for setting out practical regime of right to information for citizens.” Right to Information Act, 2005 mandates timely response to citizen requests for government information. It is an initiative taken by Department of Personnel and Training, Ministry of Personnel, Public Grievances and Pensions to provide a RTI Portal Gateway to the citizens for quick search of information on the details of first Appellate Authorities, PIOs etc., amongst others, besides access to RTI related information/disclosures published on the web by various public authorities under the Government of India as well as the State Governments to promote transparency and accountability.

Evolution of Transparency Regime : Historical Background

Supreme Court landmark judgement in *Mr Kulwal vs Jaipur Municipal Corporation* 1986 case directed that freedom of speech and expression provided under Article 19 of the Constitution, clearly implies Right to Information, as without information the freedom of speech and expression cannot be fully used by the citizens. This led to new dawn of governance by providing information. In 2004, United Progressive Alliance (UPA) government initiated drafting of RTI Act under National Advisory Council (NAC), with Aruna Roy as torchbearer for RTI Act formulation.

National Campaign for People’s Right to Information (NCPRI) played an active role in by arguing and compelling government to introduce Act which aims to improve transparency and accountability of government. Finally, RTI Act was passed in 2005 in Parliament thus, introducing a regime of transparency and accountability and re-establishment of faith in democracy.

Important Provisions of Law

The act is applicable to whole of India (including Jammu and Kashmir which was not applicable earlier). Some important provisions of law are:

- The Section 2(f) of act says that information means any material in any form, including records, documents, memos, e-mails, opinions, advices, press releases, circulars, orders, logbooks, contracts, reports, papers, samples, models, data material held in any electronic form and information relating to any private body which can be accessed by a public authority under any other law for the time being in force. This in a way has led to transfer of democracy into the hands of people.

- Under Section 2(j) of the act, Right to Information means the right to information accessible under this act which is held by or under the control of any public authority.
- Most important feature of the act under Section 4(2) is that it put onus on government to provide disclosure of information by public authority. A time period of 30 days is assigned to public authority to furnish the information from the receipt of application. If information sought concerns the life or liberty of a person, it shall be supplied within 48 hours.
- Every public authority is under obligation to provide information on written request or request by electronic means. Three bodies are created to hear the application of information that is Public Information Officer, First Appellate Authority and Central Information Commission (CIC). Maximum time gap for 1st appeal is 30 day and time period for Appellate Authority is within 30 days or in exceptional cases 45 days from the date of receipt by public authority. Maximum time gap for 2nd appeal is 90 days since limit of supply of information is expired.
- Central Information Commission shall consist of 1 Chief Information Commissioner and upto 10 Central Information Commissioners. The Chief Information Commissioner shall hold office for a term of five years from the date on which he enters upon his office and shall not be eligible for reappointment.
- However, Section 8(1) contains provisions which restricts disclosure of information which would prejudicially affect the sovereignty and integrity of India, the security, strategic, scientific or economic interests of the state, relation with foreign state or lead to incitement of an offence. RTI relaxes restrictions placed by Official Secrets Act, 1923.

RTI Amendment Bill, 2019

The Right to Information Act, 2005 was amended through Right to Information (Amendment) Act, 2019. The Act has amended the provisions of salaries and services conditions of Information Commissioners at Central as well as State levels.

Further, the term of Chief Information Commissioner (CIC) and Information Commissioner has also been changed. Now, appointment will be for such term as may be described by Central Government. However, many critics are arguing that RTI amendment will undermine the independence of CIC.

Need of RTI

The RTI Act is regarded among one of the most successful laws of independent India. Importance of RTI can be ascertained from the fact that nearly 60 lakh RTI applications are being filed every year. RTI has been seen as the key to strengthening participatory democracy and ushering in people centred governance.

The act is essential for enjoying fundamental right guaranteed under Article 19 to make informed choices while exercising the choice during voting. The act ushers in transparency and accountability by arming citizens with a vital tool to inform them about what the government does with revenue it generates from them. The act was responsible for unearthing huge scams like Commonwealth Games and 2G Spectrum Case.

Challenges Before RTI

- Lack of awareness about Act can be understood from the fact only 36 per cent in rural and 38 per cent urban areas have heard of the RTI Act.
- Long Pendency of cases both at national as well as state level. Most Information Commissions signals casual approach towards RTI. Dilution of supplementary laws such as the one for Whistle-Blower Protection Act creates situation where witness turns hostile.
- Political parties which receive substantial funding from government remains out of the ambit of RTI Act which is serious flaw as they clearly comes under definition of public authority.
- Most of the time unnecessary information are sought thus, undermining the purpose of Act. Amendment to RTI Act increases the scope of political executives meddling in affairs of appointment and transfer of the Commissioners which can significantly alter the functioning of Act.

Suggestions to Make RTI More Effective

The success of RTI act depends largely on how the people are united, organised and aware of their surroundings and their capacity to fight against corruption and unlawful activities. Further, it is suggested that every public authority should computerise their records for wide dissemination and to proactively publish certain categories of information so that citizens need minimum recourse to request for information formally. It is also advised to the officers to provide the information which is brief, true and easily understood by citizens, this will avoid further complaints resulting into wastage of time, energy and money. All public information officers and appellate authorities need to be fully trained on what their responsibilities are under the law, how to manage applications and how to apply and interpret the law.

The exemptions should be minimised so that there is more transparency. Section 26 of the Act states that the appropriate government authority may develop and organise educational programmes to advance the understanding of the public, especially disadvantaged communities, regarding how to exercise their rights. The government may resort to the major sources of awareness like radio, social media, television and newspapers.

Conclusion

RTI is a significant step in the direction of good governance as it promotes transparency and accountability in the governance. Effective implementation of this act will make India as corruption free and inclusive society. The former Chief Information Commissioner of Jammu and Kashmir once said that “RTI is like a 10 rupee Public Information Litigation (PIL) for citizens” which underscores the importance of RTI in achieving social justice.

IS THE COALITION GOVERNMENT A SUCCESS STORY IN INDIAN POLITICS?

Coalition government is a practice where a number of political parties join hands or form an alliance to run the government. Coalition politics is possible when the constituent political parties have some sort of commonality in their ideology. The concept of coalition politics in India is suitable because of its geographical diversity in terms of different physical regions, large population, diversity in culture and aspirations etc. In the Indian context, the concept of coalition politics started in late 1970s, but came into existence in late 1980s. Indian political parties have fragmented over years on the issue of ideology. Therefore, theorising the coalition politics essentially underlines the plurality, vastness and complexity of India.

Need of Coalition Government

In a parliamentary democracy, it is assumed that the political party with majority would form the government and the rest would function as opposition. However, in a parliamentary system which allows for multi-party democracy, the problem arises when no political party is able to stake claim because of lack of majority numbers. It is then that political parties cobble up a coalition to stake claim for forming a government. When political parties came to this reality they also started forming coalition or alliance before election process. With mutual consent, they would contest only a limited number of seats. Therefore, the concept of coalition evolved with every passing year.

Coalition Government in Pre-Independence Era

India's engagement with coalition government came in 1937, in the pre-independence era. Jinnah appealed to Congress to form a coalition in Uttar Pradesh, but it did not materialise. However, coalition government became a reality in Punjab and NWFP (North-West Frontier Province) when Congress made an alliance with regional parties. At the national level in 1947 the interim government under the stewardship of Nehru was the first coalition among Congress, Muslim League, Hindu Mahasabha and many others.

Coalition Government in Post-Independence Era

In the post independence era, the face of Indian politics changed in 1969. At this time, certain members of Congress withdrew support and congress became a minority government but with the support of Communist Party of India (CPI) and Dravid Munnetra Kazhagam (DMK) from outside the Congress Government survived the scare.

However, the 1967 election was a major watershed in the Indian politics. Causes such as intra-party factionalism, conflicts, defections, secession led to the demise of Congress in many states. The Congress rule remained intact at the centre till 1977. However, Janata Party came at the helm in 1977. Technically, it cannot be said to be a coalition government, but the way it made its exit was typical of a coalition party. Various aspiring leaders and factions in the party pulled the amorphous grouping apart. In its true sense, political commentators mark the year 1989 as the advent of coalition politics.

In 1989, a coalition of National Front under the leadership of VP Singh was formed. The government was supported by BJP, CPI, CPI(M) from outside. The coalition survived only for 11 months as the constituent parties parted ways on the issue of ideology. Another short lived coalition came immediately after when Chandra Shekhar formed government with the support of Congress, AIADMK, BSP etc. The coalition dissolved over the issue of government doing surveillance of Rajiv Gandhi. Another coalition government at the centre came up when HD Deve Gowda formed government of United Front. A group of political parties had the support of Congress, SP, DMK, etc. The Congress withdrew support on the issue of lack of communication between the coalition and Congress.

Next coalition came under the Prime Ministership of Inder Kumar Gujaral. The coalition survived only for 11 months after INC withdrew support. The next coalition was led by AB Vajpayee in 1998-99. BJP led coalition was supported by AIADMK, BJP, Akali Dal etc. Since, BJP was unable to fulfil demands of AIADMK, the government fell down. With AIADMK opting out of coalition this led to a vote of no confidence motion in Parliament that government lost by one vote (272-273), leading to fresh election in 1999. The next coalition was the most successful experiment of Indian politics. The National Democratic Alliance survived for 6 years under the leadership of Atal Bihari Vajpayee. The constituents were BJP, AIADMK, TDP, TMC etc. Since 1999, all the governments formed were coalition government including the governments formed during 2004, 2009 in general election under the leadership of Dr Manmohan Singh and United Progressive Alliance.

Reasons For Coalition Government in India

For three decades, until 2014, Indian voters refused to give any single largest political party a majority in Parliament. It was also the era of transition of the Indian economy. The country opened up, reformed and lifted hundreds of millions of people out of poverty. It is noteworthy to mention that the previous United Progressive Alliance government had trouble from left parties who held out on key legislative issues. The single rate Goods and Services Tax (GST) although introduced by the UPA government never found enough support to get validation. In most of these cases, the unholy nexus is fructified out of the greed of power and not as a convergence of ideology. There are several reasons for coalition politics. One of them is the inability of national parties to represent regional aspirations. Also they are not able to truly represent the diversity of India. Another reason is lack of leadership. Post independence, the leadership commanded respect and trust. People started identifying themselves with regional leaders.

Also, the Mandal politics gave rise to caste based political parties. Moreover, political parties with religious identity also existed in India. These factors created a mass base in different parts of India. This also gave rise to regional political parties.

Positive and Negative Aspects of Coalition Government in India

Coalition government has its own inherent merits and demerits. When coalition governments are formed, several advantages are witnessed which include

- Better representation of diverse ideas.
- Serve the nation or state well.
- In a coalition government that includes regional party, the regional demands are met adequately.
- The system becomes more democratic and power concentration comes under check.
- Voters have more than one choice.

On the other hand, it also has its negative effects which include

- Defection takes place after election gets over.
- Parties resort to unethical means, offer critical government ministries in exchange for support. Sometimes, the ministers' merit is not in accordance with the demand of ministry.
- It gives rise to money and muscle politics.
- As cobbling up a coalition requires these factors. Many times it has been seen that parties withdraw support when some unreasonable demands are not met.

Conclusion

Indian politics has therefore made a full fledged foray into the world of coalitions. Therefore, Hung Parliament and Hung Assembly has become a norm. However, coalition governments can truly represent the aspirations of citizens. To resolve the problem of legislators switching parties for political gains, the Parliament passed the 52nd Amendment in 1985, laying down the process by which legislators may be disqualified on grounds of defection. It will be a successful experiment when a coalition is formed on ideological congruity and not for vested interests. But coalition government concept has a long way to cover. With the increasing role of regional parties, the experiment will become more challenging.

ONE NATION ONE ELECTION

IS INDIA READY?

One Nation, One Election is the method of holding single election for both Lok Sabha and State Legislatures instead of separate and continuous elections. In an all-party meeting in the first session of the 17th Lok Sabha, Prime Minister invited heads of all parties to discuss the 'One Nation, One Election' but the push for 'One Nation, One Election' came from Prime Minister Narendra Modi in 2016. Ever since, there have been widespread discussions on holding simultaneous polls, with the Bharatiya Janta Party making a strong pitch for it.

The idea of One Nation, One Election envisages a system where elections to all the States and the Lok Sabha will have to be held simultaneously. This will involve the restructuring of the Indian Election Cycle in a manner that elections to the states and the center synchronise. This would mean that the voters will cast their vote for electing the members of Lok Sabha and the State Assemblies on a single day, at the same time (or in a phased manner as the case may be).

Few of the many reasons that are cited for the conduct of simultaneous elections include massive expenditure, diversion of security and civil staff from primary duties, impact on governance due to the model code of conduct, disruption to normal public life etc.

Historical Background

Simultaneous elections is not a new concept. They were followed till 1967. But with dissolution of some Legislative Assemblies in 1968 and 1969, followed by Lok Sabha in December 1970 resulted in confusion. Since then, separate elections to State and Parliament are held.

The idea of reverting to simultaneous polls was initially mooted in the annual report of the Election Commission in 1983. The Law Commission's Report also referred to it in 1999. The Law Commission submitted a Draft Report to the government on 30th August, 2018, endorsing the proposal. It even recommended changes to the Constitution and the Electoral law so as to enable holding simultaneous polls and sought five Constitutional Amendments to get this off the ground. The Election Commission of India (ECI) has also favoured the concept in recent times.

Suggestive Ways to Implement the Idea

One proposal was to shift to simultaneous polls in a phased manner, where General Elections, State Assemblies and Union Territories elections were pending in 2018 or 2019 to be synchronised in 2019. These states were Andhra Pradesh, Arunachal Pradesh, Odisha, Sikkim, Telangana, Haryana, Jharkhand, Maharashtra, Chhattisgarh, Madhya Pradesh, Mizoram, Rajasthan and Union Territory of NCT (Delhi).

For such a synchronisation to happen, besides political consensus and extension of term upto six months in some states, amendments to the Constitution have to be made. Elections to the remaining State Legislative Assemblies and Union Territory with Legislature (Puducherry) will be synchronised by the end of 2021. Thereafter, elections to the Lok Sabha, all the State Legislative Assemblies and Union Territories (with legislatures) will be held simultaneously from 2024.

The second option involved synchronisation in two batches. First, elections to the 12 State Legislative Assemblies and one Union Territory would have been synchronised with elections to the Lok Sabha in 2019. Next, elections to the remaining State Legislative Assemblies shall be synchronised with that of one Union Territory by the end of 2021. This would have made elections across the country synchronised in such a manner that they shall be held twice every five years. Unfortunately both the proposals could not materialise. In 2019, General election and state elections were held separately.

Challenges of Simultaneous Elections

Some of the challenges of simultaneous elections are given below

- **Logistics Cost** The conduct of elections for the largest democracy in the world with nearly one billion voters is a gigantic task in itself. Hence, it needs to properly take care of the democratic values and ethical election mechanism without hindering the daily life cycle of common man and compromising with the developmental activities. At present, one voting machine is being used at every poll. For holding simultaneous elections, there shall be requirement of two EVM and VVPATs each, in addition to additional requirement of the polling staff and better security arrangements. Currently, ECI is already facing problems in storing EVMs after election.
- **Legal Issues** The process will also be unrealistic without any Constitutional Amendments and changes in the Representation of People Act, 1950 and 1951, which involve changes in the form of governance, basic feature and election mechanism in the country. This requires a deep political consensus and high public support which is tough to achieve given differing ideologies, thinking and perceptions.
- **Breakdown of Federal Structure** Holding simultaneous elections will also add to losing the relevance and mixing up of local issues with the national ones. National issues will be given higher priority over the local ones. There is also clear empirical evidence that most Indian voters tend to choose the same party when elections are held simultaneously to both Centre and State, with the relationship diminishing as elections are held farther away. Under a simultaneous elections regime, the state will be beholden to the Union Government for elections to its state, which goes against the very grain of political autonomy under the federal structure. The trend may also give birth to a personality cult in the Indian political arena which will hamper the tenets of governance.

- **Accountability** The right of a voter to exercise his/her choice twice in a span of five years and hold governments accountable is more important than just casting vote once and having no option to express opinion for the next five years.
- **Parliamentary Form of Government** The core problem area which is coming in the way of implementing this is the Parliamentary form of Government which India practices. In this, the Government is accountable to the lower house, be it at the level of the State Assemblies or in the Lok Sabha. If the government is accountable to the lower house, given the nature of the Parliamentary form of Government, the Government can fall before it completes its term and the moment the government falls, there has to be fresh elections.
- **Distance Between Voters and Representatives** Apart from that, it also has several intrinsic consequences like decrease in the public-politician interaction as frequent elections in the country bring politicians back to public frequently whereas cutting down on elections would mean making them lazy for the rest of the term. The terms of various state governments and center have to be matched, as against irregular ones currently. This requires extension of and early dissolution of few state assemblies which is against the constitutional mandates and may involve political favouritism.

Benefits of Simultaneous Elections

Though, the road to simultaneous elections is not an easy one, but it does provide several merits to soothe and the ailments of the hurdles. The process will leave the election process easy, less expensive and more productive as the unprecedented cost, manpower and time wasted on multiple elections at frequent intervals will be cut drastically.

The precious money from tax payers pocket will be better spent on developmental activities rather than movement of election equipments, security forces and manpower for election. Parties individually spend a lot on election campaigning, the amount that could be put to better use if they have to do that only at once for the general election as well as the state election.

The government can focus more on development and welfare policies as half of the time spent concentrating on strategies for the upcoming election will reduced. If elections are conducted at a designated interval, politicians will focus more on long-term development. Security forces also have to be less diverted for the electoral work as terrorism remains a strong threat to India.

Conclusion

One Nation, One Election would be a good change if it could be carried out with the proper execution of policies and rules, taking care of the rising need for good administrative staff and security. The Standing Committee has said that solutions should be found to reduce the frequency of elections in India so that government machinery, as well as Election Commission, can get sometime for other administrative works.

JUDICIAL ACTIVISM IN INDIA

The term 'Judicial activism' was coined for the first time by Arthur Schlesinger Jr in his article 'The Supreme Court : 1947', published in Fortune magazine in 1947. Though, the history of judicial activism dates back to 1803 when the concept of judicial review was evolved by Chief Justice Marshall in celebrated case of *Marbury vs Madison*. The emergence of judicial review gave birth to a new movement which is known as judicial activism.

Judicial activism refers to a philosophy of judicial decision-making whereby judges allow their personal views about public policy, among other factors, to guide their decisions. The Constitution of India divides the powers of the government into three branches i.e. legislature, executive and judiciary. It is when the judiciary steps into the shoes of the executive and the legislature and embarks on the work of law making rather than interpreting laws, it is deemed to be judicial activism.

Scope of Judicial Activism in Indian Constitution

Unlike American Constitution, Indian Constitution itself provides scope or space for emergence of judicial activism by virtue of Articles 13, 32, 226, 141 and 142.

- Article 13 conferred wide power of judicial review to the Apex Court.
- Article 32 and Article 226 makes the Supreme Court and High Court respectively as the protector and guarantor of the Fundamental Rights.
- Article 141 indicates that the power of the Supreme Court is to declare the validity and constitutionality of law and not enact it, but in the course of its function to interpret the law, it alters the law.
- Article 142 enables the Supreme Court in exercise of its jurisdiction to pass such order or make such order as is necessary for doing complete justice in any cause or matter pending before it.

The causes which give rise to judicial activism include expansion of rights of hearing in the administrative process, excessive delegation without limitation, expansion of judicial review over administration, promotion of open government, indiscriminate exercise of contempt power, exercise of jurisdiction when non-existent, over extending the standard rules of interpretation in its search to achieve economic, social and educational objectives and passing of orders which are unworkable.

History of Judicial Activism in India

Judicial activism in India, in its truest sense, dates back to the commencement of the Constitution. Hence, the study of judicial activism in India from the historical perspective is confined from the period-1950 to 1977, the period of 1978 onwards being the post-emergency era or the present perspective.

The term judicial activism was explained and recognised by the Supreme Court in Golaknath's case wherein the court laid down the judicial principle of prospective overruling by giving wider beneficial interpretation of Article 13 of the Constitution. But in real sense, the history of judicial activism in India began in late seventies with the introduction of Public Interest Litigation (PIL).

Introduction of PIL

The concept of PIL in India was started by justice Krishna Iyer and justice PN Bhagwati. The term 'Public Interest Litigation' means any litigation conducted for the benefit of public or for removal of some public grievance. In simple words, it means any citizen seeking public welfare can move the court for the public cause by filing a petition in the Supreme Court. The concept of PIL is in consonance with the principles enshrined in Article 39A of the Constitution of India to protect and deliver prompt social justice with the help of law. Justice Bhagwati in *SP Gupta vs Union of India* case 1981 (judges transfer case) firmly established the validity of the Public Interest Litigation.

If we look at the decision given by the Supreme Court in several PIL, it is evident that most of the PIL extends to environmental pollution, convicted prisoners under trials, personal liberty, corruption etc. The court has given several important directions to the executive as well as to the legislature at the instance of the PIL.

Criticism Against Judicial Activism

One of the criticisms is that the PIL strategy is a status-quo approach of the court to avoid any change in the system. Another criticism is that judicial activism is coming in between the concept of separation of power. It is also believed that the PIL will further aggravate the issue of pending cases in the court. According to another view, the misuse of PIL has reached ridiculous stage and petitions are filed over petty issues like student-teacher strike, shortage of buses, painting of road signs and so on.

Reason for Judicial Activism in India

Judicial activism has risen mainly due to the failure of the executive and legislatures to act according to the laws framed and bills passed. Secondly, it has arisen also due to the fact that there is a doubt that the legislature and executive have failed to deliver the goods and promises as expected by the citizens of this country. Thirdly, it occurs because the entire system has been plagued by ineffectiveness and inactiveness. The violation of basic human rights has also led to judicial activism. Finally, due to the misuse and abuse of some of the provisions of the Constitution, judicial activism has gained significance.

Judicial Overreach and Judicial Activism

Article 50 under Directive Principles of State Policy (DPSP) talks about separating judiciary from the executive in the public services of the state. This means that both Judiciary and Executive should not interfere in their respective domains. Judiciary should remember this guideline of the Constitution at the time of delivering judicial decisions. Many a times, it has been seen that in the name of justice and judicial activism, judiciary has overreached its domain and entered in the legislative domains e.g. banning liquor shops on National Highways. These types of orders have the character of a law which is exclusively a domain of legislature however under Article 142, Supreme Court can do anything in the course of complete justice.

Examples of Judicial Activism

The recent example of Judicial activism is when Supreme Court took cognisance of migrant workers issue in the COVID-19 lockdown and saw inadequacies and lapses in dealing the crisis. The court ordered the centre and the states to immediately provide transport, food and shelter free of cost to the stranded migrant workers. The Supreme Court directed that no fare should be charged from migrant workers and the fare must be shared by the states, both originating and receiving.

During the past decade, many instances of judicial activism have gained prominence. Bhopal gas tragedy and the Jessica Lal murder case are among the top two ones. The latter was open and shut case for all. Money and muscle power tried to win over the good. But lately, it was with the help of judicial activism that the case came to a strong decision. In the 1980s, two remarkable developments in the Indian legal system provided a strong impetus to judicial activism in India. There was a broadening of existing environmental laws in the country and judicial activity through public interest litigation began in earnest in India.

The famous case of judicial activism in India is the majority judgement in the Keshavananda Bharati case (the Fundamental Rights case). Further, the case of National Human Rights Commission vs State of Arunachal Pradesh, 2G Spectrum case 2012 are important cases of judicial activism.

Supreme Court's Directions on Judicial Activism

Recently, Members of Parliament united against 'judicial activism' criticising the judiciary for allegedly interfering in day-to-day administration of the government. In view of such allegations and to prevent 'judicial activism' being converted into 'judicial overreach', the Supreme Court issued the following directions

- The court must encourage genuine and bonafide PIL and effectively discourage and curb the PIL filed for extraneous considerations.
- The court should prima facie verify the credentials of the petitioner before entertaining a PIL.
- The court should be fully satisfied that substantial public interest is involved before entertaining the petition.

Conclusion

In a nutshell, the power of judicial review is recognised as a part of the basic structure of the Indian Constitution. The activist role of the judiciary is implicit in the said power. Judicial activism is absolutely necessary for democracy because without an alert and enlightened judiciary, the democracy will be reduced to an empty shell. When our chosen representatives have failed to give us a welfare state, let it spring from the judiciary. Only thing the judiciary must keep in mind is that while going to deliver justice to common man, it must not overstep the limitations prescribed by the Constitution.

53

RESERVATION POLICY IN INDIA

DOES IT NEED REVIEW?

Reservation is a form of affirmative and supportive action taken by the government, where some seats and posts in private and government institutes, governance and legislature, employment and other public goods and services are reserved for socially and educationally backward communities, castes and tribes. Reservation occupies an important place in our Indian Constitution. It was provided under the Constitution to help the deprived section of the society. The main purpose of reservation policy was to rectify the situation created by historical social and caste system and the economic deprivation, which is the reason for the backwardness of the marginalised sections of the country.

In simple terms, it is about facilitating access to seats in the government jobs, educational institutions and even legislatures to certain sections of the population. These sections have faced historical injustice due to their caste identity. As a quota based affirmative action, the reservation can also be seen as positive discrimination. Before 2019, the reservation was provided mainly on the basis of social and educational backwardness.

Historical Background

Historically, William Hunter and Jyotirao Phule in 1882 originally conceived the idea of caste-based reservation system. The reservation system that exists today, in its true sense, was introduced in 1933 when British Prime Minister Ramsay Macdonald presented the 'Communal Award'. The award made the provision for separate electorates for Muslims, Sikhs, Indian Christians, Anglo-Indians, Europeans and Dalits. Later, Poona Pact was signed by Gandhi and Ambedkar that provided for a single Hindu electorate with certain reservations in it.

After Independence, Constitution of India provided for the reservation of seats for SCs and STs in Lok Sabha and Rajya Sabha on the basis of population ratios. The initial reservations were only for SCs and STs under Article 15(4) and 16(4). OBCs were included in the ambit of reservation in 1991 as per the recommendations of Mandal Commission under Article 15(5). In 2019, Economically Weaker Sections were also provided with reservation under the Article 15(6) and 16(6) through 103rd Constitutional Amendment Act.

Constitutional Mandate

The Preamble of our Constitution proclaims the resolution of people of India to constitute India into a Sovereign, Socialist, Secular and Democratic Republic and to secure to all its citizens Justice, Liberty, Equality and Fraternity.

The concept of equality, enshrined in the Preamble has also found expression as a Fundamental Right in Article 14 to 18. The following constitutional provisions cover enhancement of the social and educational advancements of the deprived sections are

- Article 15 (4) of the Constitution puts an obligation on the state to frame any special provision for the advancement of any socially and educationally backward classes of citizens or for the Scheduled Castes and the Scheduled Tribes.
- Article 16 (4) ensures participation of backward classes in employments or posts or appointments to public offices in the state, if they are not adequately represented.
- Article 46 of the Constitution states that “the state shall promote with special care the educational and economic interests of the weaker sections of the people and, in particular of the Scheduled Castes and the Scheduled Tribes and shall protect them from social injustice and all forms of exploitation”.
- Articles in the Part XVI of the Indian Constitution deal with reservation for Scheduled Castes (SC), Scheduled Tribes (ST) and Anglo-Indians in the State legislative assemblies, Lok Sabha and District Autonomous Councils.
- Article 334 specifies the duration for which reservation is to be applicable.
- Article 338 provides for a National Commission for Scheduled Castes and Article 338A and 338B provide National Commission for Scheduled Tribes and National Commission for Other Backward Classes (OBCs) respectively with a purpose to provide safeguards against the exploitation and to promote and protect their social, educational, economic and cultural interests.

103rd Constitutional Amendment Act, 2019

The Economically Weaker Sections (EWS) class within the unreserved category was created in 2019 by the Union Government in order to provide benefits to the economically backward sections and classes of the country. Consequently, the 103rd Constitutional, Amendment Act was enacted in 2019 to ensure 10% reservation for them taking the tally to 59.5% in Central educational institutes and public employment. Thus, after the 103rd Constitutional Amendment, economic backwardness is also considered for providing reservation.

Why Reservation Policy Needs Review?

The system of reservations in education has caused division of the student community on caste-basis much like it has divided the society on same terms. Instead of having the feeling of coming from one nation, students mostly pay loyalties to their caste-based identities. Students who put in their best to make it to the merit list of reputable institutes are disheartened if they fail to get an admission. They get discouraged and depressed and such situations lead to frustration.

Reservation policies in India have consistently attracted outrage from some sections of the society. Jats, the dominant community, spread over Haryana, Punjab, Rajasthan and Uttar Pradesh who already have reservation in Haryana, Rajasthan and Uttar Pradesh wanted inclusion in the centre's OBC list as well. The Central government had given them this status but the decision was struck down by the Supreme Court on 2018.

Contrastingly, the Maratha Reservation Quota act which provides for 16% reservation to Maratha community in State of Maharashtra was upheld by the Bombay High Court in 2019, though it sought reduction in the quota. Rajput in Rajasthan, Kapus in Telangana and Andhra Pradesh and Patel Patidars in Gujarat are among many others in the list of those demanding reservations in the various categories.

Some of the reasons why the policy needs review are

- Reservation destroys self-respect, so much so that competition is no longer on to determine the best but the most backward.
- Reservations are the biggest enemy of meritocracy which is the foundation of many progressive countries.
- It has become a tool to meet narrow political ends through invoking class loyalties and primordial identities.
- The dominant and elite class within the backward castes has appropriated the benefits of reservation and the most marginalised within the backward castes have remained marginalised.

Though, caste-based reservation will help the backward students to get equal opportunities, reservation in higher educational institutions will affect not only the quality of the education but the standard of the institutions and the overall development of the country as well. Caste-based reservation only helps politicians to create vote banks.

Conclusion

Reservation is fair; as far as it provides appropriate positive discrimination for the benefit of the downtrodden and economically backward sections of the society. However, when it tends to harm the society and ensures privileges to some at the cost of others for narrow political ends, it should be done away with, as soon as possible. When more people aspire for backwardness rather than of forwardness, the country itself stagnates. Meritocracy should not be polluted by injecting relaxation of entry barriers, rather than it should be encouraged by offering financial aid to the underprivileged. A strong political will is indispensable to find equilibrium between justice to the backwards, equity for the forwards and efficiency for the entire system.

AYUSHMAN BHARAT

WORLD'S BIGGEST HEALTH COVER INITIATIVE

Health is a resource for the physical, social and mental well being for living a life full of prosperity. Ensuring healthy lives and promoting well being for all at all ages is important for building prosperous societies. Healthy people are the foundation for healthy economies as healthy populations live longer, are more productive and save more. So, a nation needs to ensure healthy lives. Ensuring healthy lives for all requires a strong commitment by the nation states. The benefits of strong health initiatives outweighs the cost.

Indian Constitution under Article 47 directs the state to raise the level of nutrition and standard of living of its people and mentions the improvement of public health among its primary duties. On the health parameters, India has made a great improvement over the past decades. The life expectancy has crossed 69 years, infant mortality rate, under five mortality rate and the rate of disease incidence are declining. Many diseases such as polio, guinea worm diseases, yaws and tetanus have been eradicated.

Yet the poor, marginalised and the vulnerable people are not able to avail healthcare and are deprived of good quality health services. It is in this context that the government launched the Ayushman Bharat health initiative so that the marginalised and the downtrodden are able to get healthcare benefits and medical treatment free of cost in any government or private empanelled hospital all over the country. The family will be eligible for secondary and tertiary healthcare facilities.

The State of Healthcare in India

With the raging coronavirus outbreak in the world that adversely affected India, healthcare for all is considerably difficult in a country where only 20% of the population has health insurance coverage. There is a large group that is missing out. India has a vast healthcare system, but there remains many differences in quality between rural and urban areas as well as public and private health care.

Indian healthcare system is run by both public and private healthcare providers but they have their own limitations. Public sector hospitals in India are overburdened; under staffed and also faces shortages of drugs and equipments.

The private healthcare system is responsible for providing majority of healthcare in India but it is very expensive. According to data published by National Sample Survey Office, 55 million Indians are pushed into poverty in a single year because of having to fund their own healthcare. Out of this, 38 million fall below the poverty line due to spending on medicines alone.

Role of Government

To overcome inefficiencies and achieve a healthy nation with high standard of living and improved quality of life, Indian government is continuously working to formulate health promoting laws. The National Health Policy launched in 2018 which mandated a comprehensive healthcare scheme to achieve the vision of Universal Health Coverage (UHC) is an example of such an effort. The policy has been put in place with launch of the initiative known as Ayushman Bharat in 2018. This initiative has been designed to provide comprehensive healthcare coverage to the citizens and meet the Sustainable Development Goals (SDGs) and its underlining commitment, which is 'leave no one behind'.

Ayushman Bharat

Ayushman Bharat also known as Pradhan Mantri Jan Arogya Yojana is a health insurance scheme to cater to the poor, lower section of society and the vulnerable population. It is a dedicated attempt to move from segmented approach of healthcare service delivery to a comprehensive need-based healthcare service. It aims to undertake path breaking interventions to address healthcare issues covering prevention, promotion and ambulatory care, at primary, secondary and tertiary levels.

Components of Ayushman Bharat

The scheme has two interrelated components known as Health and Wellness Centres (HWCs) and Pradhan Mantri Jan Arogya Yojana (PM-JAY). Over 1.5 lakh Health and Wellness Centres (HWCs) will be setup by transforming existing Sub Centres and Primary Health Centres. These centres would deliver Comprehensive Primary Health Care (CPHC) that will bring healthcare closer to the homes of people. It will be covering both maternal and child health services and non-communicable diseases. The main aim is disease prevention and health promotion to curb the increasing epidemic of non-communicable diseases. There will be free essential drugs and diagnostic services. It will emphasise on keeping people healthy by choosing healthy behaviours and make changes in their lives that reduce the risk of developing chronic diseases.

The second component under Ayushman Bharat is PM-JAY (Pradhan Mantri Jan Arogya Yojana), which aims at providing health insurance cover of ₹ 5 lakhs per family per year for secondary and tertiary care hospitalisation. It aims to cover over 10.74 crores poor and vulnerable families (approximately 50 crore beneficiaries), which makes it the largest health cover initiative in the world. There is no gap on family size and age. It will create a system of demand-led healthcare reforms that meet the immediate hospitalisation needs of the eligible beneficiary family in a cashless manner, thus, insulating the family from catastrophic financial shock. It will help the poor families by providing financial protection for selected secondary and tertiary healthcare hospitalisations. This will reduce catastrophic out of pocket health expenditure, improve access to quality health care and meet the unmet need of the population for hospitalisation care.

PM-JAY will cover the bottom 40% of poor and vulnerable population. The households included are based on the deprivation and occupational criteria of Socio-Economic Caste Census 2011 for rural and urban areas respectively. PM JAY will secure those who have pre-existing illness and makes treatment in all public hospitals mandatory. This means that those who require medical treatment can not be turned away.

Funding and Implementation

The scheme is completely funded by the Government, and cost of implementation is shared between Central and State Governments. At the implementation level, the States are given the flexibility to use their own database if they were already implementing a health insurance/assurance scheme and were covering more families than those eligible as per the Socio Economic Caste Census, 2011 database.

As the new initiative is comprehensive, it will provide cashless cover of upto 5 lakh per family under the following components-medical examination, treatment and consultation, pre-hospitalisation, medicines, non-intensive and intensive care services, diagnostic and laboratory investigations, medical implant services (where necessary), accommodation benefits, food services, complications arising during treatment and post-hospitalisation follow-up care upto 15 days.

Awareness Generation Under Ayushman Bharat

Since, it is an entitlement-based scheme where there is no advance enrolment process, making beneficiaries aware of the scheme is the most critical aspect. Information, education and communication activities are also carried out to educate beneficiaries about the scheme. Various modes of communication such as leaflets, booklets, hoardings, TV, radio spots etc are being used for creating a comprehensive communication strategy for spreading the desired messages across the target audience. A detailed communication strategy has been developed by NHA (National Health Authority) which is to be implemented at both National and State levels. NHA is also working on the overall cooperation and capacity-building with the states for implementation and development of communication strategy required for increasing awareness at the state level.

Implementation Model

The scheme is being implemented under two models : Assurance model and Insurance model. Under the assurance model, the scheme is directly implemented by the State Health Agency without the intermediation of the insurance company. The financial risk of implementing the scheme is borne by the Government in this model. Under the Insurance Model, the State Health Agency competitively selects an insurance company through a tendering process to manage PM-JAY in the State. Based on market determined premium, it pays premium to the insurance company per eligible family for the policy period and insurance company, in turn, does the claims settlement and payments to the service provider.

The financial risk for implementing the scheme is also borne by the insurance company in this model. National portability is one of the key positive under Ayushman Bharat. It is a positive step towards achieving the goals of universal healthcare. By this, the beneficiaries can move throughout the country for their treatment. There is a provision for Pradhan Mantri Arogya Mitra (PMAM). Its main function is to guide, identify and assist the beneficiaries in availing the treatment.

Benefits of Ayushman Bharat

When implemented fully, this huge initiative will help India progressively achieve Universal Health Coverage (UHC) and Sustainable Development Goals (SDG). It will also ensure improved access and affordability of quality secondary and tertiary care services through a combination of public hospitals and private healthcare providers. This will significantly reduce out of pocket expenditure for hospitalisation and reduce the financial risk arising out of catastrophic health related illness and impoverishment for poor and vulnerable families.

Limitations of Ayushman Bharat

Though Ayushman Bharat is a welcome step taken by the government for universal health coverage but it has certain limitations. Funding is the main concern to run this scheme smoothly. Shortages of Doctors and Specialists are also one of the major concern, most of the hospitals across India have this problem. This scheme is confined only to weaker sections of society identified as per the Socio-Economic Caste Census, 2011. Hence, it will not be called as universal coverage in true sense. Many states lack internal capacities and sophisticated procedures for implementing national portability which is a key feature of PM-JAY.

Another limitation is that it requires the states to contribute 40% of the expenditure but most states are under a poor fiscal situation. The infrastructure is already severely stressed in the Tier II and Tier III cities. There is also an urgent need to strengthen the healthcare professionals, skilling & reskilling programs.

Conclusion

Ayushman Bharat is not only a positive step towards universal health coverage, it will also help in poverty reduction and employment generation. By providing health coverage to all, it keeps the disease out of door. Thus, the initiatives like Ayushman Bharat are boon to society which helps to achieve good health to harness the potential of demographic dividend.

Referring to the Ayushman Bharat scheme, World Health Organisation (WHO) Chief Tedros Adhanom Ghebreyesus has stated that, "COVID-19 pandemic, which has presented challenges for several nations could be an opportunity for India to speed up the health insurance scheme such as Ayushman Bharat."

SIGNIFICANCE OF GEOGRAPHICAL INDICATIONS IN INDIA

Geographical indications are development meter, preserver of environment, employment generator, protector of traditional knowledge and export booster. They are the tools to make life better. Intellectual Property Rights (IPRs) have never been more economically and politically significant or controversial than they are at present. In a knowledge based economy, there is no doubt that an understanding of IPRs is indispensable in informed policy making in all areas of human development.

One of the budding field of intellectual property is Geographical Indications (GI). Every region has its claim to fame and it has to be protected. Geographical indications are generally traditional products, produced by rural, marginal or indigenous communities over generations, that have gained a reputation in the local, national or international market due to their specific unique qualities.

What is Geographical Indication (GI)?

A Geographical Indication (GI) refers to a name or sign used on products that have a specific geographic origin and possess qualities or a reputation that are due to that origin. GIs have been defined under Article 22(1) of the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement as “Indications which identify a good as originating in the territory of a member or a region or a locality in that territory, where a given quality, reputation or characteristic of the good is essentially attributable to its geographic origin.” GIs are typically used for agricultural products, foodstuffs, wine and spirits drinks, handicrafts and industrial products.

As the qualities depend on the geographical place of production, there is a strong link between the product and its original place of production.

The use of a geographical indication acts as a certification that the product possesses certain qualities like it is made according to traditional methods, or enjoys a certain reputation, due to its geographical origin. The GI tag ensures that none other than those registered as authorised users are allowed to use the popular product name.

In the recent times, there are few new products that have got GI tag. These are as follows

- In April 2020, Black rice of Manipur, also called the 'Chakhao', Gorakhpur Terracotta and Kodaikanal Malai Poonda of Tamil Nadu got its GI tag.
- Kashmir saffron which is cultivated and harvested in Karewa (highlands) of J&K, has been given the GI tag in May 2020. The spice is grown in some regions of Kashmir, including Pulwama, Budgam, Kishtwar and Srinagar.
- The famous Banarasi Paan, Banarasi Langra (Mango variety), Barabanki handlooms of Uttar Pradesh are ready to get GI tag soon, as notified by the government.

Protection of GIs

The GIs had to be protected because of widespread imitation and ineffective protection in different countries. These products had to fight for their reputation for market access using their names because of a large number of imitated products. Thus, to prevent GI from becoming generic and establish a rule based system which is open, fair and provides for an enforcement mechanism, protection of GIs became essential. A Geographical Indication can be protected by three approaches i.e. 'sui generis' systems (i.e. special regimes of protection), using collective or certification marks and methods focusing on business practices, including administrative product approval schemes.

Among the major developing economies, India has an efficient GI tagging mechanism. India on becoming a signatory to Trade Related Aspects of Intellectual Property Rights (TRIPS) as a member of the World Trade Organisation (WTO), enacted the Geographical Indications of Goods (Registration and Protection) Act, 1999 which has come into force with effect from 15th September, 2003.

The objectives of this act is three fold

- First is to have a specific law governing the geographical indications of goods in the country which could adequately protect the interest of producers of such goods.
- Second is to exclude unauthorised persons from misusing geographical indications and to protect consumers from deception.
- Third is to promote goods bearing Indian geographical indications in the export market. Further, India has set a Geographical Indications Registry with All India Jurisdiction in Chennai under the Registrar of Geographical Indications, who is also the Controller General of Patents, Designs and Trademarks.

Significance of GI Tag

The benefits of geographical indications are numerous. The first GI tagged product in India was Darjeeling tea which attained this status in 2004-2005. Currently, there are more than 500 GI tagged products in India. GI registration is beneficial for India as it confers legal protection to geographical indications in India and prevents unauthorised use of a registered geographical indication by others which helps in boosting exports of such products. This promotes economic prosperity of producers. Also, it enables a country in seeking legal protection in other WTO member countries. With the protection assured by GI registration, the market is developed and encroachment of market by pirated and counterfeit products is prevented.

Further, it ensures consumer of the genuineness of the product and of quality assurance and promotes brand building. GIs are strongly connected to socio-economic development, along the lines of sustainability in countries rich in traditional knowledge.

The recognition and protection in the markets of the names of these products allows the community of producers to invest in maintaining the specific qualities of the product on which the reputation is built. It enhances the capacity of producers to invest economic gains into higher quality products and access niche markets.

This drives a virtuous circular economy. The application of circular economy will ensure socio-economic returns in the long run to attain sustainable growth.

Geographical indication contributes to rural development encompassing environmental protection, economic development and social well-being. It helps in strengthening sustainable local food production and supply, structuring of the supply chain around a common product reputation linked to origin and give a higher retail price benefit percentage to raw material producers for better distribution.

Geographical indication helps in preservation of traditions and traditional knowledge, builds identity based prestige and boosts tourism. It helps in environmental protection as it promotes preservation of the natural resources on which the product is based.

It boosts the economy via its spill-over effects. GI registration helps to prevent unauthorised use of the product and promotes financial gain to the producers. It helps in stabilisation of prices, improving marketing strategy, generating employment and income.

Challenges Relating to GI Tag

The issues of GI tag has been debated in India and globally at various forums like the World Trade Organisation (WTO). The major challenges faced by goods applying for GI status are-origin of the goods for identifying geographic territory, registration of GIs, monitoring and controlling specified processes, procedure and quality of GI protected goods, protection of GIs from infringement and enforcement of intellectual property rights.

Indian products are still learning to explore the idea of GI in their fullest and are battling to reap the benefits of our art, heritage and food that could bring us on the international trade scenario. Even with our GI regime being over 15 years, with GIs for more than 300 Indian products like Rasagolla, that triggered a bitter tussle between West Bengal and Odisha, and Basmati Rice, Navara rice, Kolhapuri Chappal etc. are shared by multiple states. It results in conflicts among communities due to similar and competing products.

India's GI legacy started with Darjeeling tea, which was a good step to check authenticity and promote a premium product in the market and among the people. However, government need to make strong efforts like EU and USA do for their premium products. It is worth mentioning that 80% of French champagne have GI tags, with the government's active promotion.

Conclusion

GI is a powerful tool for economic development and wealth creation particularly in the developing world. GIs have potential to be our growth engine. The benefits of GI tag is realised only when these products are effectively marketed and protected against illegal copying. Effective marketing and protection requires quality assurance, brand creation, post-sale consumer feedback and support for prosecuting unauthorised copiers etc.

Thus, the government should make efforts to familiarise people about GI and its benefits in improving the quality of life. This will help in improving the standard of living of rural communities which are lacking behind in developmental activities as compared to the mainstream India due to poor socio-economic condition and geographical location.

56



SKILLING INDIA : A NECESSITY



India has a huge number of young people as compared to the leading economies of the world where the population is ageing. 63% of India's population is in the age group of 15-59 years. It is estimated that this working age population will be at its peak around the year 2041 when working age people are expected to be around 60% of the population. If India is able to reap the benefits of this demographic dividend, it would result in great economic growth. If right policies are made in terms of social and economic spheres, so that health and education can be improved, then this young population has the potential to generate enormous wealth.

The most important ingredient required for reaping this demographic dividend is 21st century skills so that these young people can be empowered and their aspirations can be fulfilled. These skills should be imparted to every young person who seeks to be employed after completing his/her academics, irrespective of their caste, class, gender, race, ethnicity, etc.

Present Scenario of Skill Development

Skills and knowledge are the driving forces of economic growth. Investments in skilling the young men and women of the country is much better than investments in any other sectors. Unfortunately, at present, only about 4.6% of India's workforce has received some formal training as compared to the workforce in countries such as Germany where over 75% of people in the total workforce have received some formal training. This value is over 95% of the total workforce for South Korea.

Thus, there is a huge mismatch between skills, academic training, and employment, where employers are not able to discover suitably trained people and youth are not able to find the kind of jobs that they aspire for. According to Indian Skill Report (2019), only 46% of youth graduating from colleges are employable in some sector of the economy.

The ICE 360° Survey on skill level in India classified skills into four types

- Level 1-skills involving simple and routine physical or manual tasks. For eg. hawker, street vendor, gardener, cook, construction worker etc.
- Level 2-skills involving operations of machinery and electronic equipment. For eg. plumber, electrician, mechanic etc.
- Level 3-skills involving written records of work, simple calculations, good personal communication skills. For eg. clerical, supervisory level etc.
- Level 4-skills involving decision making eg. doctors, lawyers, scientist, engineer etc.

The Survey report states that nearly 56% of the labour market is dominated by people from Skill level 2 whereas about 30% of the people are at Skill level 1 only. Skill levels 1 and 2 are mainly associated with low paid informal sector jobs. The India of 21st century requires higher level skills. Level 3 and 4 skills are associated with higher educational qualifications. But there is also a need to reskill the level 1 and level 2 workers so that they can also align themselves, with the needs of the 21st century. Thus, skilling India requires both-filling the gap in skilling the informal workers and producing more skills required for formal sector jobs.

Changing Employment Scenario in India

India is among the fastest growing economies of the world. India's economy has changed significantly in the last 20 years. The shift of employment generation is towards the service sector. It is estimated that 110 million additional skilled individuals will be required across 22 key sectors by 2022. Manufacturing would contribute towards half of these additional jobs. The key sectors where additional skills will be required include sectors such as Auto and Auto components, Electronics and IT hardware, Food processing, Healthcare, Tourism, Agriculture, Leather, Capital goods, Telecom, Security, Rubber goods, Textiles etc.

Many of these sectors employ unorganised sector migrant labourers. Formalising these sectors to improve the skills of these workers should be a high priority. The sectors which are growing fast will require new skills that are relevant to the demands of the 21st century.

The sectors which are well established will also undergo transformation and will require newer skills relevant to the demand for these jobs. Most of the employment in India is in the agriculture and informal sector. These two sectors will require upskilling of the workforce on a prioritised basis. In this direction, efforts will be taken by both the Union and the State Governments through their organisations involved in skill development such as Industrial Training Institutes (ITIs), government funded programs like Kaushal Vikas Yojana and privately funded bodies sponsored by the government.

Issues in Skill Development

There are various issues in skill development that need to be resolved.

The issues are

- **Skills Mismatch** There is a wide skills mismatch between the skills needed by industry to employ the people and skills imparted by college or school education. This is mainly due to the lack of industry faculty interaction that the skills provided by traditional educational and training institutes do not end up suiting industry needs. As a result of this scenario, though people are skilled but they do not get suitable employment in the industry.
- **Insufficient Capacity** The current infrastructure facilities required to skill the youth in India are inadequate. There are not many trained and highly skilled trainers available in the country. There is an urgent need to cultivate highly educated and skilled teachers so that skills can be imparted to the students quickly and efficiently.
- **Unorganised Sector** Almost 93% of workforce is engaged in the unorganised sector. Providing skills to these people and mapping their existing skill set is not possible. On the other hand, the rate of job growth in informal sector is estimated to be twice that of the formal sector.
- **Poor Quality Skilling Programs** The existing grant based, free training programs available today have their own limitations in terms of quality and employability. The focus is on quantity of people trained as opposed to the quality of training. This leaves essential gaps in skills of individuals who are enrolled in these programs. Many of these programs remain unaligned to demands of the industry. Hence, they defect the objective of skilling.
- **No-Industry-Academia Linkages** Efforts in skill development ecosystem have largely been devoid of industry/employer linkages. This has created gaps in terms of specific needs of skills and competency required by the employer and those possessed by the trainee. If industry and academia will not collaborate, it will not be able to fill in the gaps between demand and supply of existing skills.
- **Multiplicity of Programs** Skill development programs of the Central and State governments are overlapping with each other. Multiple ministries and departments are engaged in skilling initiatives and it is without any coordination. This lack of coordination has resulted in multiplicity of norms, procedures, curriculum, certifications etc.
- **Low enrollment** The enrollment capacity of our skilling institutes is quite large but still there is low enrollment in these institutes such as ITIs and polytechnics. This is due to low awareness among youth about the skill development programs.

Resolving the Issues in Skill Development in India

There is an urgent need to impart newer skills to the youth in India. The following measures should be taken to provide skills to youth in new India

- **Enhanced Expenditure on Training and Education** Government allocation on education sector is very low. The spending is only 2% of the total GDP as compared to developed countries which spend higher amounts on their education sector. In the long run, only providing skills will not be sufficient. Skilling India will require investment in education and training. Vocational education shall become a part of education system itself so that the younger students can be provided and introduced to the industry relevant skills in their lives earlier.

- **Providing Training to the Trainers** India needs expert and efficient trainers that can provide skills to the youth. India lacks trained professional trainers that becomes a major hinderance in skilling youth. Teacher training programs should be started both at the central as well as the state level so that well trained skill providers can be produced.
- **Skill Survey** A skill survey should be done at the unorganised sector so that the skill deficiencies of our unorganised workers can be measured and the gap can be filled. The skill survey can map the required skills level and accordingly capacity of institutions for planning the skill development programs can be built.
- **Increased Participation and Collaboration** Industry and academics should participate and collaborate with each other such that the demand and supply gap between higher education institutions and industry can be filled up. This gap filling and collaboration will ensure that quality of skills can be maintained according to the changing requirements of the economy.
- **Women Participation** There is a gender imbalance in the job market both in terms of numbers of individual of both genders as well as their payscale. Skilling India will require enhanced participation of women in skill training institutes. This would ensure that the gender which makes up almost 50% of the population of India does not remain isolated. Thus, women participation should be raised to realise full potential of India's youth.

Way Forward

Increased participation of stakeholders, mobilising adequate investments, support of the government etc is necessary for skill development. There is a need for coordinated effort from all stakeholders including government ministries at the state and central level, industry, educational and training institutes and students, trainees and job seekers. Newer technologies will surely help in fulfilling the objectives of a skilled India. The movement of skilling India should focus on skilling in emerging technologies to enable India to transition into a global knowledge economy.

LAND REFORMS IN INDIA

AN UNFINISHED AGENDA

An agrarian country like India where more than 50 per cent population is dependent on agriculture as means of employment and sustenance, 'land' plays a very important role. Land reform usually refers to equitable distribution of land between all the strata of society. Before independence our agrarian society was governed by semi-feudal principles. This society was broadly divided into four classes: the cultivating holders, the intermediaries cum cultivating holders, tenants-at-will and agricultural labourers. The agricultural labourers were the unemployed, underemployed and seasonal employed class of the agrarian society. Other classes constituted small and large land owners. This feudal structure of society led to the backwardness of society and sheer poverty among the rural masses, as land is the major source of wealth and social hierarchy.

Land Revenue Systems in Pre-Independence Era

In the pre-independence era three types of land revenue systems existed in India, namely: 'Ryotwari, Zamindari and Mahalwari'. The Ryotwari system started in Madras in 1772. Under this system, the government had set responsibility of paying land revenue to the cultivator. In this system no middleman existed.

On the other hand, Zamindari system which started in 1793 under Lord Cornwallis, was the most harsh one. It went on to create intermediaries between state and the cultivator. Started in West Bengal and later on adopted in other states, the system remained in existence till our independence.

Landlords owned the land and rented them out to cultivators. However, the landlords never cultivated the land themselves but only collected revenue from the cultivators. The Company fixed the revenue at a very high rate which the zamindars extracted from the poor cultivators. Ultimately the farmers suffered greatly. The revenue was fixed regardless of the harvest. It made rent collection as a perennial problem. Similar to these two, a third system was Mahalwari system. 'Mahals' signified villages.

This system mostly was in practice in Western Uttar Pradesh, Madhya Pradesh, Punjab etc. Here, the whole of village or mahal was responsible for payment of land revenue to the state. Therefore, the ownership of land was under a village body. The system was started by Lord William Bentick.

Recommendation of Agrarian Reforms Committee (Post Independence)

After Independence in order to get rid of the discussed rigidities, a committee was set-up under the Chairmanship of JC Kumarappa which was known as Agrarian Reforms Committee. It submitted its report in 1949 and became the main plank of land reform in our country. The committee suggested abolition of intermediaries; fixing land ceilings holding and redistribution of surplus land among the marginalised. However, the time lag between passing the law and its implementation allowed for finding loopholes in the legislation. Intermediaries continued to exist even after abolition of Zamindari as they made legal or illegal transfers of land in the name of their relatives without actually being the cultivator of the land. Agrarian reform also suggested for tenancy reforms. It prohibited any system of cultivation by the tenants.

The Planning Commission of India and its Objectives

The Planning Commission of India sums up the objectives of the land reform in two comprehensive steps. *First*, to remove the impediments which hinders the agricultural production. *Second*, to eliminate all elements of exploitation and social injustice within the agrarian system. It will provide security to the cultivator and assure equality of status and opportunity to all the sections of the rural population. The Constitution makers also understood the importance of land. Therefore, land was made a Fundamental Right under Article 31. But due to innumerable litigations being filed in this regard, 1st Constitutional Amendment changed the provision and made it a legal right.

Other Notable Efforts in the History of Land Reforms

Some other notable efforts towards land reform in India are Consolidation of land holdings, Bhoodan movement and Cooperative farming. Consolidation of land holding is aggregating of small fragments of land in an area and then purchasing it from the owner. Due to inheritance of land, the property gets smaller with passing generation as land is passed from the father to his sons and daughters and so on. Therefore, to make agriculture viable, government resorted to this technique. One of the most important events in the history of land reform is the Bhoodan Movement of 1951 that was started by Acharya Vinoba Bhave. He made an emotive appeal to rich landlords and appropriated almost 54.60 lakh acres of land. But this effort was not successful, land donated were mostly not conducive for agriculture and only 25% were distributed. Similarly cooperative farming was also promoted to solve the problems of sub-division and fragmentation of land holdings. However, in India the concept failed miserably as people were not agreeing to part with their land for community welfare.

Failure of Land Reform Programme

After independence several land reform programmes were started with great enthusiasm which was soon lost as these programmes failed. The principal reasons behind this were lack of political will, absence of presume from the poor peasants, apathetic attitude of the bureaucracy, absence of up-to-date land records etc. Some states like West Bengal and Kerala took steps to better the fate of the agriculture labourers by providing security of employment to them, ensuring prompt payment of wages to the workers and also by regulating the working hours.

In the Eleventh Five Year Plan tenancy was legalised in a limited manner. It provided security to the tenant for the contractual period, which could be long enough to encourage long-term investment by the tenant. Again one of the main objective of the Twelfth Five Year Plan is to move Indian agriculture from a low productivity staple producing system to a rising productivity commercially oriented sector.

Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013

This act was a landmark legislation for land reforms in India. It provides for land acquisition as well as rehabilitation and resettlement. The main features of this Act are

1. A social impact assessment survey, preliminary notification stating the intent of acquisition, a declaration of acquisition and a fair compensation to the people affected by acquisition.
2. Compensation to be provided to the owners of the acquired land shall be four times in rural areas and twice in urban areas.
3. In case of land acquisition for use by the private companies or public-private partnerships, consent of 80% people will be required.

This act has ensured that people are paid a fair amount of compensation and rehabilitated when the government has acquired the land for public welfare and national prosperity.

Conclusion

As we are in a phase of achieving sustainable economic development in the years to come, land and its contribution plays an active role in achieving this target. Since we are moving from an Agrarian economy towards an Industrial economy, the government needs to ensure the appropriate use of land to meet this gap. Shortage of food supply in many areas and other land related problems which still exist tells us about unfinished agenda on land reforms.

Land reform should include the people who will be affected by it. People should be the centre piece of any reform. The purpose of any reform will be positive if it is strongly implemented. Land should not become a tool of politics or violence rather it should be a facilitator of growth and development. The main purpose of land reforms is to help weaker section of society and do justice in land distribution that land should be allocated to the actual cultivator.

TOURISM IN INDIA

OPPORTUNITIES AND CHALLENGES

Tourism is the world's largest and fastest growing industry. It is an invisible export, which earns valuable foreign exchange without any significant or tangible loss of internal resources. Tourism in India has immense potential of developing into a high profit making industry. India is a popular tourist destination and has been successful in attracting domestic and international tourists. The picturesque landscape, hill stations, historical sites, architecture and monuments, beaches and enchanting backwaters, places of religious interests make India a preferred destination for the tourists from all over the world.

Growth of Tourism in India

The growth of tourism in India is evident from the fact that India has moved up six places to rank 34th on World Travel and Tourism Competitiveness Index 2019, driven by rich natural and cultural resources and strong price competitiveness. India showed the greatest percentage improvement to its overall Travel and Tourism Competitiveness Index (TTCI) score, which has helped it become the only lower-middle income country in the top 35.

Better connectivity of transport and communication, improved standard of living and value for money to the foreign tourists have led to the increase in the domestic as well as international tourists.

Tourism Policies of India

The first Tourism Policy was announced by the Government of India in November, 1982. The aim of first tourism policy was to promote sustainable tourism as a means of economic growth and social integration. It was also to promote the image of India abroad as a country with glorious past, a vibrant present and a bright future. This policy revolved around six broad areas such as *Swagat* (welcome), *Suchana* (information), *Suvidha* (facilitation), *Suraksha* (safety), *Sahyog* (cooperation) and *Samrachana* (infrastructure development).

The next major tourism policy was announced by the Government of India on 2002. The policy took into consideration one more key area, that is *Safai* (cleanliness) apart from other six areas mentioned in the first Tourism Policy, 1982.

The government proposed to diversify the Indian tourism products and sustainability, improve the quality of tourism infrastructure, marketing, visa arrangements and air travel. Along with the policy, Incredible India Campaign was also launched to promote India as an attractive tourist destination by showcasing different aspects of Indian culture and history.

Steps Taken by the Government to Promote Tourism

The Government of India is taking keen interest in promoting the different forms of tourism such as, 'rural tourism', 'eco tourism', and 'spiritual tourism', 'spa tourism', and 'adventure tourism' etc. However, India still needs to enhance its enabling environment, tourist service infrastructure and environmental sustainability. Prime Minister Narendra Modi in his Independence Day speech on 15th August, 2019, made a strong pitch for domestic tourism and urged citizens to visit at least 15 destinations by 2022.

The Government of India launched 'Swadesh Darshan' and 'National Mission' on Pilgrimage Rejuvenation and Spiritual Augmentation Drive (PRASAD) in order to boost tourism. The Swadesh Darshan focused on theme based tourist circuits and integrated infrastructure development.

There are twelve circuits which have been identified under this scheme for the development. These are Buddhist, Coastal, Desert, Eco, Himalayan, Krishna, North-East India, Ramayana, Rural, Spiritual, Tribal and Wildlife circuit. Under the PRASAD programme, 41 cities in 25 states have been identified for development of infrastructure. These cities are important pilgrimage sites and enjoy domestic as well as international tourists throughout the year.

The 'Incredible India' campaign by the Government of India is instrumental in promoting India as a holistic tourist destination in the domestic and international markets. There are specialised international media campaigns under 'Incredible India'. Celebrities have been roped in to make 'Incredible India' a success even in foreign lands.

Besides, the 'Clean India' campaign under which cleanliness has become an indispensable norm at all the tourist destinations is also utilised to promote tourism. Swachh Iconic Place awards further promotes the culture of cleanliness in archaeologically important tourist sites. Regular studies are being undertaken to analyse the market, identify the key factors, income figures, holiday habits and psyche of people in order to identify the key drivers in the tourism industry.

The government has made the facility of e-Tourist Visa available to the citizens of 150 countries arriving at 16 designated international airports in India. The visa has a validity of 60 days and the procedures are much easier.

The government has gone a step further to permit foreigners to visit India on an e-Tourist Visa for attending short term yoga programmes. This visa will be for the purpose of short duration medical treatment under Indian systems of medicine. This visa allows holders of Electronic Travel Authorisation (ETA) to enter and stay anywhere in India for 30 days.

Initiatives Taken by the Tourism Ministry and Other Ministries

The Tourism Ministry has played an important role in the development of the tourism. The different functions of Ministry of Tourism are carried out by 'India Tourism Development Corporation' (ITDC).

The Department of Tourism, Indian Institute of Tourism and Travel Management, National Council for Hotel Management and Catering Technology work towards the development of tourism in the country. ITDC hotels are situated at prime locations of important tourist destinations and provide comfortable and affordable boarding and lodging.

The Ministry of Tourism provides central financial assistance to the states, union territories and other Central agencies for the overall development of tourism in their area. The aim is to promote the culture and natural beauty of different regions and pilgrimage sites. The states at their level have been deploying measures to promote tourism. The Tourism Advisory Board recommends important measures for promotion of tourism. It reviews the tourist trends and suggests appropriate measures.

Railway Ministry has also taken initiatives to promote tourism in India. Indian Railway, Catering and Tourism Cooperation (IRCTC) is a wing of railway to promote tourism in India. The railways have offered many luxury tourist trains, semi-luxury tourist trains, Buddhist special trains, Bharat Darshan trains, Astha circuit trains, Palace on wheels and toy trains of Shimla and Darjeeling to attract domestic and international tourists. Many private companies like Make My Trip, Sterling Holidays, Club Mahindra etc., arrange domestic as well as foreign trips.

Benefits of Tourism Industry for India

The tourism industry has become one of the major contributors to the GDP of the country. It has the potential to generate mass employment and raise the income levels thereby contribute significantly to the economic development of the country. In the era of liberalisation, privatisation and globalisation, the tourism industry in India has grown into a multibillion industry. It has led to significant improvement in the transportation and infrastructure facilities across the country.

The allied sectors such as aviation, transport, horticulture and handicraft have been benefitted. The hotel industry is another allied industry of tourism which has a vast potential to generate employment and help in earning foreign exchange.

Medical tourism has become an important source of revenue for the healthcare sector. Most of the foreigners from the Western countries such as United States, United Kingdom, Canada, and neighbouring countries such as Bangladesh, Pakistan etc. are turning towards India for the affordable and world class healthcare services and treatment.

Domestic tourism is growing and air connectivity has improved with regional connectivity scheme, but the government needs to adopt more holistic approach to support this sector. The concept of heritage hotels has gained popularity in India as the tourists get the experience of the exotic life style of a bygone era. Many historical havelis, castles, and forts built during the ancient times have been converted into heritage hotels. As expected, they have turned out to be major tourist attractions which also earns significant foreign incomes and raise the status of India as an excellent tourist destination.

Tourism has played an important role in the revival of India's art and culture. The foreigners are fascinated by the rich culture and heritage of India. Seeing the keen interest of tourists in the rich culture and heritage of India, the government is taking steps to preserve it. The works of craftsmen and artisans are greatly appreciated and bought by the foreigners. This boosts their morale and adds to novelty. Regional tourism helps to maintain the cultural identity of the minority groups.

Issues and Challenges in the Tourism Sector

Lack of proper infrastructure like roads, hotels and hospitals is one of the main challenges faced by tourism industry in India. There is scarcity of skilled manpower in hospitality and tourism sector.

The COVID-19 pandemic has placed the tourism industry under immense financial strain due to most of the border closure, travel restrictions and lockdowns. Airlines, cruise operators and hotels are seeing instant effects of the pandemic. Apart from this, there are certain challenges/barriers in tourism in India. These are

- **Infrastructure and Connectivity** There are still certain deficiencies in infrastructure like sanitation, living facilities, hotels etc and inadequate connectivity which becomes a barrier for tourist visits to heritage sites.
- **Cumbersome Process for Visa Facility** Many visitors in India find the e-visa facility, the process of applying for a visa as a cumbersome or difficult one. Low awareness of the e-visa facility makes the entry process quite difficult for tourists.
- **Safety** Tourists have frequently been cheated and robbed in India. Women safety becomes another challenge for government as many cities in India have low levels of safety for the women tourists.
- **Sanitation and Health** There are still many places in India where lack of sanitation facilities turn off foreign tourists. It causes negative impact on Indian tourists places.
- **Accessibility** Majority of the tourist sector in the country are not accessible to poor, women and elderly. This is because of high costs of travelling, poor connectivity and a series of permission required. It is a fact that Divyangs, who constitutes more than 2 per cent of the population, cannot access many of the tourist spots in the country.

Conclusion

Tourism industry for India is a beautifully prospering field. Taking sufficient measures and further enhancing the prospects can guarantee unlimited chances and development of the nation. Tourism sector not only creates jobs in the tertiary sector, it also encourages growth in the primary and secondary sectors of economy. Hence, it is high time, the government should encourage the participation of the private sector in a big way for the all round development of the tourism sector that has the potential to act as the key driver of inclusive growth.

RISING INCOME INEQUALITY IN INDIA

India has achieved excellent growth in its economy after the introduction of liberalisation reforms in early 1990s. These reforms have led to increase in GDP growth, stimulated industrial production in India, has put on curbs on fiscal deficit of the Central Government, and to a large extent reduced poverty in India. On the other hand, this unprecedented growth has been accompanied by rising inequality of income and wealth in India. Inequality is defined as domination of a higher or wealthier class over less wealthy and weaker class. Though there can not be perfect equality in any society but inequality shall not rise to such levels so that the fruits of the hard work of the poor people are not enjoyed only by the rich at the top.

Rising inequality may affect the abilities of poor people. They may not invest in education, their health and other essential social services that have positive influence on their lives. It also affects the level of trust between the common citizen. Social capital get restricted as people tend to maintain relations not beyond their own income group. The elite groups may also exclude the 'outsiders' from the economic opportunities they generate. Thus, income and wealth inequality tend to create several problems for the existing social-economic order in the country.

Extent of Inequality in India

Inequality has been rising in India sharply from the last three decades. The rich are getting richer at a faster rate whereas the poor are still struggling to earn even a minimum wage. According to Oxfam, an international organisation, the top 10% of people in India have 73% of total wealth of the country, whereas the bottom 50% of indians which are almost 67 million in number have seen only 1% rise in their incomes. Between 2018-2022, India is estimated to produce 70 new millionaires every day. The number of billionaires have increased from 9 in 2000 to 119 in 2019. The wealth of all the billionaires of India is more than entire Union Budget of India for the year 2018-19.

Due to high inequality, many ordinary Indian citizens are not able to access healthcare services that they need. 63 million Indians are pushed into poverty because of rising healthcare costs every year. This equals to almost 2 people per second. The extent of inequality is such that it would take almost 900 years for a minimum wage worker in rural India to earn what a top paid executive at a leading company in India would earn. Rising inequality in wealth is further aggravated by lack of essential services such as clean water, clean air, lack of education, health, sanitation etc.

Causes of Economic Inequality in India

In India several factors are responsible for the existence of economic inequality within a society. These factors are

- **Market Based Labour Wages** After the economic liberalisation, the wage rates are purely determined by markets. Inequalities are caused by differences in supply and demand of various kinds of works. The labour markets are inefficient in providing equal opportunities to everyone due to unequal competition, uneven distribution of information and inequalities in the level of education and capabilities.
- **Abilities of People** Differences in abilities such as intelligence, motivation, strength, etc., largely play an important role in determining individual's wealth. Individuals with higher capabilities are able to work more efficiently as compared to people which are less capable.
- **Tax System** The level of tax rate in a system has a direct impact on the level of inequality within a society. If tax is progressively applied on the income, it tends to reduce inequality whereas regressive taxes promote inequality. Thus, progressive taxation, coupled with good planning can lead to more equal societies and vice-versa.
- **Education** Education is an important criteria in creation of inequality. Sectors of economy where there is high demand for higher education jobs, creates higher wages. But people with lower levels of education tend to fall behind. Lack of education leads to lower incomes as well as lower savings and investments in one's health, education etc. This creates a vicious cycle in which even the upcoming generations tend to be poor because of lower productivity and income of the existing generation. This phenomenon continues for generations.
- **Technological Advancements** Technological advancements such as new machines, robots, automation of processes, artificial intelligence, machine learning, neural networks etc., seek to replace low level jobs. This reduces the demand for these jobs and reduces the incomes of the common workers. This also improves the efficiency of manufacturing and consequently more profits for the elite class. This further leads to rise in inequalities.
- **Neo-liberalism** Economic neo-liberalism, coupled with deregulation by the governments has become one of the sources of income inequalities in India. This has also led to reduced organisation of the labour class, which is exploited by the capitalists, thus inequality increases.
- **Wealth Condensation** Wealth condensation is a process by which a newly created wealth is concentrated in the possession of already wealthy individuals and entities. These people who already have enough wealth, also find new avenues of wealth creation to raise their existing income levels. Thus, people who are already wealthy becomes more wealthy.

Consequences of Inequality in Wealth

Inequality and its disproportionate rise has several harmful consequences for the society. Rising income inequality worsens the conditions of the poor labour class and people who are engaged in lower income generating employments such as agriculture and farming. This has following effects

- There is distress migration from the poorer regions of the country towards the wealthier regions. Cities are flooded with migrant labour in India. This puts enormous pressure on the cities of India. The city infrastructure cannot bear such huge burden and often city governance collapses. Cities are filled with heaps of dust, a poor drainage system, closed compact living spaces etc due to rising income inequality.

- Increasing inequality also increases the burden on Government for providing subsidies for the poor. Various kinds of subsidies are provided by the government on food, fuel, free health services, education etc. to reduce inequality and redistribute wealth among the people. Thus, as inequality rises, burden on government expenses rise.
- Increase in inequality also leads to decreasing trust level among the citizen. This may also take the form of social unrests and civilian movements to demand special rights. For eg. OBCs demanding their rightful quota under the affirmative action policy of government.
- Increase in inequality of income also leads to rise in poverty levels and inter-generational inequalities. This forms a vicious cycle of rise in inequality and poverty that cannot be broken without intensive and disruptive interventions.
- The pace of economic reforms is slowed down because of rising inequality. The previously successful reforms also start bearing fruits of inequalities and the national level gains in various social indicators are lost.
- Rising income inequality also deepens political inequality. Political power tends to concentrate in the hands of few wealthy. The poorer section is deprived of its right to participate in political processes and express their opinions.
- Overall it leads to deterioration in human capital of the country as due to lower incomes, the health, wealth and education of the poorer class is deteriorated. It leads to overall de-development of the country in real sense even though the economic growth may rise in numbers.

Way Forward

Inequalities of income may exist in any developing or developed economy. They may not get completely eliminated but it can be reduced. One step that can be taken in this direction is to fix minimum wages and enforce the laws on minimum wages strictly. The minimum wage should not just be calculated on paper but its effects on the lives of the people should be determined to ensure a decent and minimum standard to living. Social security measures such as free and cheap education, cheaper health facilities, sickness compensation, schemes of social insurance etc. should be provided to the poorer class. The taxation system should be improved so that who earns more should be taxed accordingly whereas those who earn less shall pay nominal taxes. There must be ceilings on large agricultural holdings, which may help in reducing inequalities in the rural areas of the country. The government should promote the agenda of more inclusive growth so that the economic growth and rise in GDP levels can be complemented by equal rise in the standard of living of the people. Labour reforms should also be started to ensure that labour productivity is not affected.

Emphasis should be laid upon skilling of labour and skilling of school children so that they get ready to face the job market as soon as they complete their academic careers. The difference between haves and have nots should be reduced and domination of one class of people should be stopped. A more equal India would be a more prosperous India.

BLACK MONEY

GRAVE MENACE FOR THE NATION

Black money is a term used for the funds earned through illegal activity and otherwise legal income that is not recorded for tax purposes. The illegitimate money may have been generated through illegitimate activities not permissible under the law, like crime, drug trade, terrorism and corruption, all of which are punishable under the legal framework of the state.

Black money, often called unaccounted income or parallel economy has crippled Indian economy. Black money causes financial leakage as unreported income that is not taxed caused the government to lose revenue. It has led to deep penetration of the roots of corruption and led to the human greed. Apart from this, it leads to erosion of societal values of honesty, truthfulness, faith and fulfillment of one's duty. The web of black money overshadows transparency, accountability, efficiency and reliability.

Menace of Black Money in India

There have been several estimates regarding the extent of black money economy in India. A former CBI Director of India claimed that total black money in India is estimated around \$500 billion. Although black money in India is a decades old problem, it has become real threat after the liberalisation era. Illegal activities such as crime and corruption, non-compliance with taxation requirements, complex procedural regulations, cultural and social practices, globalisation, weak institutional policy, legal and implementation structures have given rise to and sustained the black money economy.

The criminal component of black money is build up by proceeds from trafficking in counterfeit and contraband goods, smuggling, illicit trade etc. The corrupt component of the black money nurtures from leakages from government social spending programs, black marketing of price controlled services etc.

Sources of Black Money

Black money is circulated, utilised and the profits earned are further invested in other sectors to generate further money. The black economy of India is sustained through various sectors. This includes the real estate sector which creates incentives for tax evasion through under-reporting of transactions in real estate. The bullion and jewellery sector gives the buyer an option of converting black money into gold and bullion, which can be evaded from the eyes of the tax authorities.

Public procurement has grown phenomenally over the years in volume, scale and variety as well as complexity. The Competition Commission of India had estimated total public procurement figure for India at around 10 to 11 lakh crore per year which has provided ample scope of corruption due to rigged procurement process, generating black money. The Financial Action Task Force (FATF) highlights black economy prevalent in non-profit organisations where taxation laws that allow certain privileges and incentives for promoting charitable activities are misused and manipulated. Further, unregulated cash economy, tax havens, hawala transactions and offshore financial centers specialising in non-residential financial transactions all are prone to generating black money. Apart from this Trade-based Money Laundering (TBML) also contributes to black money as it involves covering up the proceeds of crime and moving a certain amount of money through the use of trade transactions in an attempt to legitimise their illegal origins.

Impact of Black Money

The portion of country's income tied to black money affects the economic growth of the country. It also affects the investment pattern in the economy. Private investments are done mostly in the high end and luxury goods such as clubs, spa or bars, which results into shortage of funds for expenditure in social sector, that includes health and education. There is huge loss of taxes amounting to billions to the exchequer. Black money leads to further corruption by creating a vicious cycle of circulation of the illegitimate money in the economy. Investments that must have been made in the country giving the necessary boost to economy are invested elsewhere. It dilutes the policies of the RBI that targets inflation as RBI doesn't take into account the effects of black economy on the money supply in the economy. Forward trading of goods by speculators funded by black money cause fluctuation in prices of various commodities due to hoarding. It also threatens National security because black money is used to finance criminal activities. Black money generated from drugs and smuggling is used to operate terror networks.

Steps Taken by Government

With an aim to curb the black money, the government has initiated Tax Reforms such as rationalisation of income tax to improve and widen the tax base and lower the effective taxes. Further, the government allows reporting black money generated through tax evasion in a given time frame by the Voluntary Disclosure Schemes. Also, to remove the existing unaccounted and illegitimate wealth from the economy, the government demonetised the currency in 2017. Cashless transactions are being encouraged by various incentives so that more transactions can be carried out by the formal banking systems.

Legislative framework to fight with black money has been strengthened. This includes Prevention of Money Laundering Act, 2002, Benami Transactions Prohibition Act, 1988, Lokpal and Lokayukta Act, Prevention of Corruption Act, 1988 and the Undisclosed Foreign Income and Assets (Imposition of Tax) Bill, 2015. Institutions to deal with black money have been made more effective. Institutions such as Central Board of Direct Taxes, Enforcement Directorate, Financial Intelligence Unit, Central Board of Excise and Customs, Central Economic Intelligence Bureau and Other Central Agencies such as National Investigation Agency (NIA), Central Bureau of Investigation and Police Authorities have been given extensive powers to deal with the menace of black money.

International cooperation has also been sought to deal with black money. Multilateral Convention on Mutual Administrative Assistance in Tax Matters has been signed. India has always stood beside the principles laid down in the United Nations Convention against Corruption, United Nations Convention against Transnational Organised Crime, United Nations Convention against illicit traffic in Narcotic Drugs and Psychotropic Substances etc.

Evaluation of Steps Undertaken by Government

Under pressure from India and other countries, Switzerland has made key changes in its local laws giving assistance to foreign nations in their pursuit of black money allegedly stored in Swiss Banks. These amendments, would allow India and other countries to make 'group requests' for information about suspected black money hoarders which will make it easy for the Indian authorities to catch the hoarders.

Various steps undertaken to fight black money shows mixed results and these are as follow

- The government has been able to recover black money of ₹ 69,350 crore under the Income Declaration Scheme and Black Money and Imposition of Tax Act. Another ₹ 5000 crore was recovered under the Pradhan Mantri Garib Kalyan Yojana (PMGKY).
- Around 650 people declared money worth ₹ 4,100 crore deposited in foreign banks as the black money under Undisclosed Foreign Income and Assets Act, 2015.
- Demonitisation which declared 86% of currency notes all in ₹ 500 and ₹1000 denominations invalid in one go, is considered to be a failure by critics. Around ₹ 16000 crore (out of ₹ 15.44 lakh crore) returned to banks, whereas RBI had to spend ₹ 21000 crore to carry out this massive exercise.
- The amended Benami Transactions (Prohibition) Act of 1988 in 2016 recorded provisional attachments in more than 1600 benami transactions involving benami properties valued at over ₹ 4300 crore.

Conclusion

Despite all the efforts, the black money problem in India is still unresolved and lot more needs to be done to tackle it. There should be appropriate legislative framework related to Public Procurement, Prevention of Bribery of foreign officials, Citizens' Grievance Redressal, Whistle Blower Protection, UID Aadhar etc.

Institutions dealing with illicit money shall be strengthened. Developing an Integrated Taxpayer Data Management System (ITDMS) and 360 degree profiling, setting up of Cyber Forensic Labs and Work Stations will also be helpful. As elections are one of the biggest channel to utilise the black money, there should be appropriate reforms to reduce money power in elections.

Black money severely affects the progress of a nation and generate economic and social imbalance. It is a fight that no government can fight alone. The people also must be cooperative and vigilant to fight against any kind of financial fraud or illegal activities.

INDUSTRIAL DEVELOPMENT IN INDIA

Today India is one among the top ten industrial nations of the world. Industrial development has changed India's economic status from underdeveloped to developing country. Industrial development today is considered as prerequisite for modern economic development. That is why all countries of the world, whether big or small, rich or poor and developed or developing are channelising their resources to promote rapid industrialisation. Before the rise of the modern industrial system, India had a flourishing state of cottage and household industries and Indian manufacturers had a worldwide market. Indian muslin, cotton and silk fabrics, calicoes, artistic wares etc were in great demand all over the world.

Beginning of Industrialisation

The real beginning of modern industries in India started with the establishment of cotton textile industry at Mumbai in 1854. But post independence witnessed a change in character and purpose of industrialisation. Identifying the need of a well-developed industrial sector, in 1951 India's Prime Minister Jawaharlal Nehru announced that India had to become industrialised as fast as possible. The policy-makers did everything they could to improve the state of the manufacturing sector in India.

Manufacturing sector is critical to Indian economy as it promises to provide gainful productive employment, shift of surplus agricultural labour to industries, reduce import bill and hence rationalise fiscal and current account deficit along with earning in export sector through promotion of Special Economic Zones.

Phases of Industrialisation

The industrial growth before 1991 can be categorised into three main time periods. These are

- (i) **Phase-I** (1950-65) Major industries were sugar, cotton textiles, jute, iron and steel smelting, chemicals, petroleum, non-metallic mineral products, basic items etc.
- (ii) **Phase-II** (1965-80) Major industries were basic goods, capital goods, high technology industries, ferrous metal, construction material and mechanical engineering industries.
- (iii) **Phase-III** (1980-91) Major industries were consumer durables, export-oriented industries, modern technology based industries, petroleum products, non-electric machinery, food beverages etc.

Industrial Resolutions

To realise the dream of development of industries, Indian Government adopted certain industrial resolutions and Five Year Plans. The First Industrial Policy Resolution, 1948 contemplated a mixed economy, reserving a sphere for the private sector and another for public sector.

Then it was Industrial Policy Resolution, 1956 which laid down new classification of industries (Schedule A, Schedule B and Schedule C), fair and non-discriminatory treatment of private sector, encouragement of village and small industries removing regional disparities. This policy was based upon Mahalanobis model of growth which suggested that there should be an emphasis on the heavy industries and led the Indian economy to a higher growth rate.

The 1956 Resolution was followed by Industrial Policy 1977, 1980 and the most important Industrial Policy of 1991. The 1991 policy envisages to culminate the gradual liberalisation since 1956 and unshackle the Indian economy from cobwebs of bureaucracy, introduce liberalisation, remove restriction on direct foreign investment and free the domestic entrepreneur from restrictions of Monopolistic and Restrictive Trade Practice (MRTP) Act. Indian economy hitherto a closed economy was opened to the forces and elements of globalisation. The abolition of industrial licensing, dismantling of price controls, dilution of reservation of small-scale industries and virtual abolition of monopoly law enabled Indian industry to blossom.

Five Year Plans

Apart from industrial policy, the Five Year Plan devised by the Planning Commission also shaped industrial development in India. Though the First Five Year Plan was predominantly agricultural plan, industry was not totally neglected. Hindustan Machine Tool, Integral Coach Factory, UP Government Cement Factory etc were set up during the First Five Year Plan.

The tempo of industrial development gathered momentum during Second Five Year Plan which adopted Mahalanobis Model with major industries like Rourkela Steel Plant, Bhilai Steel Plant etc. The subsequent plans also focused on industries but were without considerable success. It was the Eighth Five Year Plan which followed Industrial Policy Resolution 1991 and the popular reform liberalisation, privatisation and globalisation ignited the fire for the industrialisation in India which continued in all the subsequent plans.

Small-scale industry is recognised by the Government of India as a priority sector as it paves way for rapid industrialisation. It is a prerequisite for balanced growth, is employment intensive and export earning. Measures towards its development have been taken since First Five Year Plan and received special emphasis in Eleventh and Twelfth Five Year Plan. The Twelfth Five Year Plan envisaged capacity building, credit guarantee, launch of venture capital etc for Micro, Small and Medium Enterprises (MSMEs).

Government Schemes

In 2015, the NDA Government announced Make in India scheme, a major national initiative designed to foster innovation, enhance skill development, protect intellectual property and build best in-class manufacturing infrastructure.

But Make in India cannot be sustained without encouragement to entrepreneurship, hence, Startup India took birth. To encourage entrepreneurship amongst Scheduled Caste, Scheduled Tribe and women, Startup India was launched which also promised additional boost to MSME sector and add to the MUDRA scheme for refinancing micro finance sector.

The National Manufacturing Policy also envisaged developed National Investment and Manufacturing Zone (NIMZ) as integrated industrial townships with state of the art infrastructure and land use.

Government has also provided a push to the khadi, village and coir industries by providing them with improved equipment, common facility centres, business development services, training, capacity building, design and marketing etc. under the Scheme of Fund for Regeneration of Traditional Industries (SFURTI)

A Scheme for Promotion on Innovation, Rural Industry and Entrepreneurship (ASPIRE) aims to create new jobs, reduce unemployment, promote entrepreneurship culture in India, boost grassroots economic development at district level and facilitate innovative business solutions for unmet social needs.

The credit linked subsidy scheme facilitates technology upgradation of small scale industries, by providing 15% upfront capital subsidy. It will help in upgrading plant and machinery of small enterprises with state of the art technology. The Credit Guarantee Scheme for micro and small enterprises also facilitates MSMEs by providing free credit facilities.

Conclusion

Though industrialisation in India has come a long way from planning age to NITI Aayog (ensuring Cooperative Federalism), Revolutionary Industrial Policy, Manufacturing Policy, but still there is way ahead to go. The Economic Survey has categorised India as refuge of stability and outpost of opportunity. This stability and opportunity should be realised earliest to ensure Indian manufacturing sector shine brightly in the international domain.

Education has to be linked with industries (vocational education) so that Indian youths are skilled, without which indigenisation of industry would remain a distant dream. The new mantra of industrialisation in 21st century should be to inculcate skills along with a hospitable and encouraging environment to improve ease of doing business in India. In the 21st century when science and technology have gained unquestionable supremacy, the level of the industrial development of a country has become an important factor to judge its actual development.

MICRO, SMALL AND MEDIUM ENTERPRISES ENGINES OF GROWTH

Growth of any country is dependent on the health of its industrial sector. The industries not only provide goods for internal consumption of the country but also for the exports. Industries also offer employment opportunities for the young people of the country. The micro, small and medium enterprises plays important role both in manufacturing useful products for the country as well as generating employment for such a large population of India. The reach and extent of this sector is so large that it employs almost 11 crore people in the country and contributes to around 18% of GDP.

These small units have enough potential to provide sustained growth for any economy. These enterprises also sustain the rural economy as many products are developed indigenously in rural areas. Due to low production costs and informal work environment, these industries can hold themselves up even during economic instabilities. If adequate infrastructural facilities are developed for them and these units are provided with latest technologies, skills, training and entrepreneurial calibre, they have the capability to give Indian economy a big leap forward and become pillars of growth.

Definitions of Micro, Small and Medium Enterprises

In India, the micro, small and medium enterprises in the service and manufacturing sector are classified on the basis of both investment in the plant and machinery as well as the turnover of the enterprise.

Those enterprises where investment is not more than 1 crore and annual turnover is not more than 5 crores, are classified as micro enterprises. Those enterprises where investment is not more than 10 crore and annual turnover is not greater than 50 crore are classified as small enterprises. Those enterprises where investments are less than 50 crore and annual turnover is not more than 250 crores are classified as medium enterprises. According to this criteria, there are around 6.3 crore MSME units in India. The micro enterprises in the country account for 99% of MSMEs. The small and medium units only account for 0.52% and 0.01% of the estimated number of enterprises in India.

MSMEs contribute to employment on a huge basis. This sector is second largest employment provider after the agriculture sector. The highest employment is in the trade sector followed by manufacturing. It accounts for nearly 33% of total manufacturing output per year and half of the country's exports. Thus, these units have the ability to make India self-reliant or atmanirbhar.

Challenges Faced by MSMEs in India

The MSMEs play a major role in the socio-economic development of the country. This sector has registered higher growth rate as compared to other sectors but they face several challenges in the liberalisation era. These units have to continuously upgrade themselves to meet the emerging challenges. They face the following challenges

Irregular Raw Material Supply The small industrial units are dependent on local sources of raw material. They have to purchase raw materials in smaller quantities and often on credit basis. They are not able to compete with large enterprises due to fragmented procurement of raw material because of lack of working capital. These industries have to pay higher prices for inputs and suffer uncertainty in procurement. Unlike the large industrial units, they are not able to take advantage of economies of scale due to bulk purchase.

Shortage of Finance and Credit Scarcity of finance is a major obstacle in the development of small industries. The capital base of small enterprises is weaker and often they have to procure credit at a high rate of interest. Difficulties arise in formal loan documentation and lack of collateral. Lack of finance and credit affects their ability to expand their operations and ensure economies of scale. When economy is not maintained, it leads to high running costs and subsequent losses.

Lack of Infrastructural Support Small industrial units are often deprived of infrastructure such as adequate power supply, transport and communication services. Lack of these necessary services results in slowing down of their growth and hinders their expansion. Lack of these services also results in hindered development of ancillary and subsidiary industries. They are often not able to transport their manufactured products on time due to lack of efficient transportation.

Lack of Technical and Managerial Skills The small industrial MSMEs lack in trained and experienced managerial personell. Most of the MSMEs do not have the capacity to hire trained and experienced managers. These MSMEs operate on the basis of local experiences and locally available personell. Most of these are family enterprises which do not apply modern techniques of manufacturing and service delivery in their operations.

Marketing Problems Access to adequate marketing facilities and opportunities becomes a major concern in terms of profitability of these enterprises. Though this sector produces a large volume of industrial output yet they are vulnerable to volatility in demands. There is no concept of advertising in this sector and links with national or international markets are quite weak. These enterprises operate locally as well as they procure their raw materials locally. The demands for higher standard products in the national and international markets are not fulfilled by these small enterprises due to marketing problems.

Obsolete Technology The techniques of manufacturing and service delivery in MSME sector are obsolete. This has led to a condition where these units produce less at higher costs. Technology is one of the most critical element in success and sustainability of these enterprises. If technology is not upgraded, these enterprises will loose their competitive edge in the international markets.

Relevance of MSMEs for Indian Economy

The MSME sector is creating nearly 11 crore jobs across the country. This sector is rightly known as India's engine of growth. Despite various constraints this sector has grown by over 8% over the years after being hit by the COVID 19 pandemic. These smaller enterprises are very important for Indian economy. These encourage the growth of both rural as well as urban areas.

The micro, medium and smaller enterprises in India generate employment for a large number of people. They also help in reducing the poverty rate. Rural urban gap is reduced by these MSMEs as most of the migrant labour is employed by the MSME sector. If local MSMEs are opened in the rural sectors, it may also lead to balanced economic growth between rural as well as urban areas. This can also help in reducing the large scale rural to urban migration. If MSME clusters are developed regionally, it would encourage regional development.

MSMEs are major contributors to India's export sector. The share of MSMEs in the exports of India stands at almost 40% of the total exports. This also indicates that MSME products are being accepted globally. Thus, MSMEs help in boosting exports from India.

MSMEs are also model industries for promoting inclusive growth in India as a large number of poor and low income groups spanning across classes, castes, gender, religion etc. are associated with the MSMEs. MSMEs increases the industrial and manufacturing capacity of India. It forms an essential component of the economy that can help in achieving self-sufficiency in manufacturing and service sector.

MSMEs manufacture diverse range of products from clothing to automobile parts, home appliances, cottage products such as honey, coir etc as well as various ancillary components used in other industries. Thus, a large number of daily use components are provided by the MSME sector to the 1.3 billion Indian population at lower costs.

The service sector MSMEs cater to the needs of the large manufacturing base of India as well as international firms that have outsourced their work to Indian MSMEs in the service industry. If the MSME sector of India is protected from foreign competition as well as provided institutional support, it surely can become the engine of growth of the Indian economy and propel the economy to newer heights.

Way Forward

The MSME sector, collectively, is much larger than the organised sector. To support the growth of MSMEs, the governments should earmark separate lands for the MSME sector which can be rented to them so that their running costs can be reduced. Registration and opening of MSMEs should be simplified so that it doesn't disincentivise the startups from opening businesses that have the potential to grow and compete with even the international businesses.

The current credit gap in the MSME sector should be assessed and gaps should be filled by creating a specialised financial institution that could provide loans at cheaper rates to the MSMEs. The major deterrent in getting credit is collateral. If collateral limits can be reduced, more credit could flow towards MSME sector. Availability of adequate long-term and working capital is necessary for the development of MSMEs.

For improving access to infrastructure and ancillary services, the government shall setup innovation hubs (so that research and development facilities shall be promoted) and MSME clusters (so that better infrastructure can be made available to MSMEs). For improving the quality of MSME products, the State Governments should collaborate with MSME entrepreneurs and facilitate these industries with upgraded technologies.

Marketing facilities can be developed with the help of a national portal that can enable the MSMEs in finding competitive deals through web interface. To facilitate international marketing, the Government must provide a comprehensive analysis on product wise export potential of various countries.

There must be a systematic approach to support MSMEs through their life cycle as the level of support varies at various stages. MSMEs are backbone of Indian economy. This should be nurtured and made more competitive to integrate them with the global market supply chains.

BANKING SECTOR REFORMS IN INDIA

A PILLAR FOR INDIA'S GROWTH

Banks are financial institutions which are licensed to take deposits from public and grant them loans. In that sense they differ from the traditional money lenders. The banking sector reforms in India are aimed at introduction of best international practices and technological changes for making the Indian banking sector competitive globally.

The Indian Banking System is more efficient and stable today. Consequently, there has been a rapid increase in the number of banks in country. The banking horizon is changing because of the increasing number of private banks and the foreign banks. Apparently there is a cut throat competition between the banks. Banks diversify their services as part of their corporate strategy to cater to various customer segments.

Structure of Banking in India

The Indian Banking System is classified into scheduled and non-scheduled banks. Scheduled banks are those which are included in the Second Schedule of Banking Regulation Act, 1956. The Scheduled banks are then classified as State Cooperative Banks and Commercial Banks. The Non-scheduled banks are classified as Central Cooperative Banks and Primary credit societies and the Commercial Banks. The origin of banks in India in modern sense dates back to 18th century, when the Bank of Hindustan was established.

Banks in India have passed through different phases and have adopted itself to ever-changing economic conditions of the country. The largest and the oldest bank, State Bank of India (SBI) came into being in 1921 after the merger of Bank of Madras and Bank of Bombay. SBI commands the largest number of banks in India along with a clutch of eight associated banks known as its subsidiary banks or associated banks.

Reserve Bank of India is the Central Bank which looks after the monetary policy. RBI in India's controls the supply of money in the economy. The major purpose of monetary policy is to check inflation and regulate interest rates with liquidity infusion or quantitative squeeze.

Need for Reforms in India

Until recently, the lack of competitiveness vis-a-vis global standards, low technological level in operations, over staffing, high NPAs and low levels of motivation had shackled the performance of the banking industry. As the international standards became prevalent, banks had to unlearn their traditional operational methods of directed credit, directed investments and fixed interest rates, all of which led to deterioration in the quality of loan portfolios, inadequacy of capital and the erosion of profitability.

Thus, banking sector reforms were needed to provide necessary platform for the Indian banks to operate on the basis of operational flexibility and functional autonomy, thereby enhancing efficiency, productivity and profitability. Further, the reforms help in enhancing the competitive element in the market through the entry of new banks. Reforms lead to increase in transparency of the bank's balance sheets through introduction of prudential norms and increase in the role of market forces due to the deregulated interest rates.

Banking Sector Reforms in India

Banking sector reforms undertaken in India are as follows

1. Reform Before New Economic Policy (1991)

- **Nationalisation of Banks** In the year 1969, government with banking companies (Acquisition and transfer of undertakings) ordinance nationalised 14 banks. The second nationalisation process of commercial banks took place in 1980s in which 6 more private banks were nationalised. The nationalisation process transitioned them from class banking to mass banking. In this way, these banks were aligned with the fiscal policy of government.

2. Reforms after New Economic Policy

- **Liberalisation and Privatisation of Banks** Another watershed reform in banking sector came in 1990s. In order to align with the new economic policy of government, the banking sector was liberalised. Licenses were given to private banks which changed the outlook of banking sector. Banks were now offering best practices available across the globe with the help of technology and management practices. ICICI, HDFC, Axis Banks were and still are pioneers in private sector banking.
- **Setting Up of Committees on Banking Sector Reforms** After the economic crisis of 1991, two committees under the chairmanship of M Narasimham were formed. It recommended wide ranging reform measures for the banking sector. The Indian banking system has witnessed a substantial improvement in both stability and efficiency parameters such as capital position, asset quality and overall profitability after adopting reform measures. Various committees were set up even after that as well like Damodaran Committee, Khandelwal Committee, Nachiket Mor Committee and Urjit Patel Committee to bring the best practices and changes in banking sector.
- **Mission Indradhanush** In the wake of bringing new reform in the banking sector, Mission Indradhanush was launched in 2015. It is a 7-stage plan to address the challenges faced by Public Sector Banks (PSBs). Many of the measures taken were suggested by PJ Nayak Committee on banking sector reforms. The 7 parts include appointments, banks board bureau, capitalisation, de-stressing, empowerment, framework of accountability and governance reforms.

The strategy, Indradhanush (Rainbow), focuses on systemic changes in state-run lenders, including a fresh look at hiring a comprehensive plan to de-stress bloated lenders, capital infusion, accountability incentives with higher rewards including stock options and cleaning up governance. Bank Board Bureau is set up to advise the banks on how to raise funds and how to go ahead with mergers, acquisitions and ways to address bad loans.

- **Steps Taken by RBI** In 2003, the RBI introduced a framework of Prompt Corrective Action (PCA) under which banks falling short of predetermined critical levels of capital adequacy, percentage of Non-Performing Assets (NPAs) and return on assets would automatically trigger some mandatory corrective action and possibly also further non-mandatory actions. RBI also decided to setup Public Credit Registry (PCR), an extensive database of credit information which is accessible to all stakeholders. This would breed transparency in bank credit culture.
- **Resolution of Bad Loans** The Parliament passed the Insolvency and Bankruptcy Code, 2016 to streamline the resolution process of defaulting companies. The code helped in reducing the time taken for resolution of non-performing assets of banks.
- **Setting up of MUDRA Banks** Another area with a promising future is Micro Units Development and Refinance Agency (MUDRA). MUDRA Bank was unveiled by the government to provide credit to Micro, Small and Medium Enterprise (MSME). A specialised bank for this sector will go a long way ensuring smooth flow of credit. On the other hand, small banks under differentiated license is expected to provide a whole suite of banking but in a limited area. The objective is to increase penetration of bank in the untouched areas. RBI has provided for Cash Reserve Ratio (CRR) and Statutory Liquidity Ratio (SLR) norms for these bank's prudent operation.

Suggestions for the Improvement in Banking Sector

Though, major reforms have been undertaken to improve the condition of banking sector, a lot needs to be done to abate current and future risks that surround banking sector. Banking sector for the time is stressed mainly due to its rising NPA. The NPAs might rise further due to loans made under the government's flagship schemes like Pradhan Mantri Mudra Yojana and the Kisan Credit Card. Further, challenges like cyber-theft, banking frauds and decentralised currency (such as Bitcoins) pose a threat to banking sector which needs to be addressed.

The NBFCs have caused credit crisis in the financial sector. Default in IL and FS bonds (Infrastructure Leasing and Finance Services) sparked a liquidity crunch on other NBFCs. Having sound regulation for NBFCs, which is vital to India's overall growth, will help India's financial sector.

The World Bank has suggested that India must undertake financial reforms in three key areas

- Sound regulations for Non-Banking Financial Companies (NBFCs).
- Allow private sector banks to expand in the banking sector.
- Deepen capital market to aid growth.

Conclusion

Financial sector is the mainstay of any economy and it contributes immensely in the mobilisation and distribution of resources. Financial sector reforms have long been viewed as significant part of the programme for policy reforms in a nation. The Banking Sector reforms have provided the economy with a lot of resilience and stability and have boomed nearly every sector of the economy. Now banks are playing significant role in resource mobilisation. Financial experts suggest that effective reforms keep an economy competitive and attractive from investors across the world. Openness to reforms and innovations and improvements in the government structure will allow for faster growth in banking sector.

64



MEGA MERGER OF BANKS IN INDIA



Increasing Non-Performing Assets (NPAs) and outstanding loans coupled with the problems of structural asset-liability mismatch and governance issues in management led to the need for structural remodelling in the banking sector. In this light, Central Government has initiated the process of reorganisation of banks in public sector. In 2019, Finance Minister Nirmala Sitaraman announced the merger of 10 Government of India undertaking banks into four mega-banks. After the merger, total number of public sector banks is set to become 12 from earlier 18.

However, government's plan to recapitalise public sector banks could be hit badly as bad loans would increase and credit quality weaken because of the lockdown in the economy. It will depend upon the success of ₹ 20 lakh crore package to revive the economy.

In India, the mergers of bank is not a new concept. In past, merger of banks have been undertaken so as to reform the banking system. The decision to merge the banks will not only fulfill the objectives of financial inclusion but will also result in better NPA and risk management. Further, the merger will reduce the dependence of Public Sector Banks (PSBs) on the government for capital since it will increase the role of internal and market resources.

Meaning of Merger

Merger is a process of bringing two or more separate business entities under common ownership through a series of legal and administrative measures. Usually the merger results into more competitiveness and provide economies of scale. Further, the wealth of a company, diversification of services and share in market is also increased. Bank merger is a process in which previously distinct banks are consolidated into one institution. When a merger occurs, an independent bank loses its charter and becomes a part of an existing bank with a unified control.

History of Bank Mergers in India

Modern banking system in India originated under the British rule. In the beginning of 19th century, British East India company founded three banks-Bank of Bengal (1809), Bank of Bombay (1840) and Bank of Madras (1843). The three banks were merged in 1921 to form the Imperial Bank of India, which upon India's Independence, became State Bank of India in 1955. Reserve Bank of India was established in 1935. In 1969, the Indian government nationalised the 14 major private banks. In 1980, 6 more private banks were nationalised.

The idea of bank merger first emerged in 1991 when former RBI Governor MNarasimham suggested the government to merge banks into a 3-tiered structure. Later, mergers of Indian Banks were initiated following the recommendation of the Narasimham Committee which was tasked with progress review of the implementation of the banking reforms. In 2014, the PJ Nayak Panel suggested that the government should either merge or privatise state owned banks.

In 2017, five associates of State Bank of India and Bhartiya Mahila Bank were merged with SBI. This resulted in SBI being one amongst the 50 largest banks in the world. The government merged Dena Bank and Vijaya Bank with Bank of Baroda, thus, creating third largest bank by loans in the country in 2018.

With the announcement of mega merger in 2019, ten public sectors banks are set to become only four large banks. Punjab National Bank, Oriental Bank of Commerce and United Bank will be merged together. Canara and Syndicate Bank are to be merged with each other. Merger of Union Bank of India, Andhra Bank and Corporation Bank has also been announced. In addition to these mergers, Indian Bank and Allahabad Bank will also be merged.

Need for Merger of Banks

The Indian banking sector has been facing multiple challenges in recent past. The need for banking merger has arisen due to the following reasons

- Accumulation of Non-Performing Assets (NPAs) have become a matter of grave concern for banking sector. It has impacted credit delivery of banks to a great extent.
- Twin balance sheet problem has further aggravated the deteriorating economic situation in India. Twin balance sheet problem refers to the stress on balance sheet of banks due to Non-Performing Assets (NPAs) on one hand and heavily indebted corporates on the other hand.
- The ever increasing responsibility of PSBs in providing credit facilities to agriculture, capital intensive risky sectors such as steel, cement etc and frequent loan waivers by government, further deteriorates the credit culture in India.

- Political Interference in functioning of PSBs is a matter of grave concern. It reduces the bank's efficiency.
- Other issues like long gestation period of projects, lack of timely environment clearance for projects, lack of thorough study of the business before disbursing loans and poor debt recovery architecture in the country also aggravate the problems of PSBs.

These issues need to be addressed through strengthening of the capital base of banks. This can be achieved through mergers and acquisitions. Merger of banks is one of the remedies for the ills of Indian Banking System.

Process of Bank Mergers

Bank consolidation procedures are governed by the Banking Regulation Act, 1949. Any two PSBs can initiate merger discussions. However, the merger scheme is finalised by the government in consultation with RBI pending Parliament's approval. Parliament has the right to modify or reject the merger scheme. Parliamentary approval is also necessary for merger of public sector bank and a private bank.

Advantages of Bank Mergers

The number of PSBs in India is high. These all banks usually cater the needs of customers belonging to similar domain and area. More often, this results in unnecessary and irrational competitive environment which ultimately affects the economy. India needs the merger of banks in order to become a global leader. Bank mergers have following advantages

- Mergers in banking sector will help in achieving the economies of scale and scope.
- Merger of two weak banks with a strong bank will enable a faster and less costly way to improve the profitability.
- The consolidation of banks through merger will allow big banks to enter the global financial market and to survive in the high risk field of competition with foreign giants.
- As the size increases, the efficiency of the system is also set to increase and the large scale of operation will enable the banks to bring down the operative cost substantially.

Challenges in Merger

The merger might also pose some challenges. Some of the difficulties are as follows

- Confusion and lack of clarity among employees.
- With considerable number of positions being abolished due to merger, there are chances of employees becoming jobless.
- With staff from participating banks coming together, there will be surplus staff at many branches.
- Integration of technology platforms and managing HR and cultural values of participating banks remains a critical issue.
- With the increase in the number of bank branches, it will be difficult for the head office of the merged entity to regulate and monitor all activities.

Conclusion

Mergers are important for the consolidation and expansion purposes. They are also crucial for economy as they are most of the times successful in saving weak banks which fail in meeting expectations. There are few other measures by which banking system in India can be strengthened.

The Union government on 24th June, 2020 approved to bring 1482 urban cooperative and 58 multi-state Cooperative Banks under the supervision of RBI. However, merger also creates variety of problems which can cause great damage if the process of merger is not carried out cautiously. If merging is required, it must be carried out in a manner which leads to an environment of trust and agreement among the people of both the organisations. If people, work culture and vision are blended together nicely, merging will definitely have synergic effects and create a win-win situation for all.

65

CHALLENGES IN INDIAN AGRICULTURE AND POSSIBLE REMEDIES

India is an agrarian economy and the agriculture sector is one of the major contributor to the GDP. Agriculture is the primary source of livelihood as 58% of population depend upon it directly or indirectly. India has largely achieved self-sufficiency in production of food grains, delivering strong and fast economic growth for past several years. The country has unique competitive advantages with the largest arable land area which is 60.44% of an estimated 179.8 million hectares and diverse agro-climatic conditions supporting the cultivation of various crops. The share of agriculture sector in the country's total export is 11.76% in 2018-19.

After Independence, agricultural development was given the top most priority to attain self-sufficiency in food grains to feed the rapidly increasing population. Several public policies and investment decisions were taken particularly with regard to irrigation, fertilizers, land reforms and community development. Adoption of Green Revolution in 1960s saw significant increase in food production and encouraged by the success of green revolution, successive governments have introduced many initiatives for agricultural sector. However soaring rate of suicides, distress migration from rural to urban areas and rural indebtedness tells about the general state of agriculture in India. It is engulfed by many challenges.

Challenges to Indian Agriculture

Some of the challenges faced by Indian agriculture are as follow:

- **Dependency on Nature** India's agriculture sector is highly dependent on monsoon which results in large imports of edible oils and pulses etc., whereas the exports of agriculture based products is very low.
- **Involvement of Middlemen** Middlemen are involved in the selling of farmer's produce in the farmer's market. This cuts down the profits which would have otherwise gone to the farmers. In many cases, the fertile lands are being sold to real estate builders for industrial purposes.
- **Multiple Regulation** India's agricultural sector is considered to be highly regulated with extensive involvement of government. In many cases, the Minimum Support Price (MSP) fails to reach the farmer, who ultimately has to bear the loss of crop failure.

There are several restrictions on internal and external trade which has led to high cost marketing and trading options for the agricultural commodities. On a careful analysis, one can deduce that the investment of the private sector is comparatively low in the agricultural domain.

- **Fragmentation of Land Holding** In India the average size of land holding is declining. There is continuous sub-division and fragmentation of agricultural land due to increasing population.
- **Cropping Pattern** There are two types of crops produced by the farmers such as food crop and cash crop. As cash crops have been more profitable than the food crops, hence, more land has been used for producing cash crop or commercial crops. It may lead to food crisis.
- **Use of Traditional Farming Techniques** Most of the farmers are still using the traditional tools and equipments like woodenplough. It results in low productivity.
- **Lack of Proper Inputs** Inputs like fertilizers, high yielding variety seeds are not used by Indian farmers in proper amount.
- **Lack of Irrigation Facilities** Indian agriculture still lacks artificial irrigation facilities. Thus, Indian farmers have to depend much on the rainfall which is neither regular nor even.
- **Lack of Organised Agricultural Marketing** Due to lack of proper organised markets, Indian farmers are facing the problem of low income. Agricultural marketing in India is facing the problem of marketing farmer's produce due to inadequate transportation and communication facilities.
- **Highly Fluctuations in Agricultural Prices** Fluctuation in the prices of agricultural products poses a big threat to Indian agriculture. It promotes the habit of growing one or two crops which provides guaranteed return. It is detrimental for soil health as well as nutritional requirements of masses. For instance Rice and Wheat are preferred over coarse cereals such as millets.
- **Agricultural Indebtedness** It is one of the major problem of Indian agriculture. According to All India Rural Finances Survey 2016-18 conducted by NABARD, 52.5% of the agricultural households had an outstanding debt and their average outstanding debt is almost as high as the average annual income of agricultural households.

Measures Taken by Government

Government, after taking cognizance of above challenges, has started many initiatives which ensures that farmers are provided with quality seeds, better irrigation and fertilizer facilities, credit and insurance support among others. The government of India has come up with many schemes and measures to address the problems faced by farmers. Some of the schemes launched and measures taken are given below

- National Food Security Mission (NFSM) covers cluster demonstration of rice, wheat, pulses and coarse cereals, distribution of hybrid seed varieties, soil management methods, efficient water management and farm mechanisation.
- Mission for Integrated Development of Horticulture (MIDH) focuses on providing quality seeds, product improvement techniques of horticulture plants like fruits, vegetables, spices, dry fruits, flowers and plantation crops like bamboo and coconut. National mission on oilseeds and oilcrops aims to improve the yield of oilseeds crops by using agricultural techniques like intercropping and use of fallow land.
- National Mission for Sustainable Agriculture (NMSA) aims at making agriculture more productive and sustainable. Paramparagat Krishi Vikas Yojana is another new scheme which motivates groups of fifty or more farmers to switch to organic farming.
- Farmer's often suffer as they are not able to get a fair price for their produce. The e-Nam or National Agriculture Market was launched to introduce market reforms in agriculture sector. It is an online platform for trading agricultural commodities in India.

The online market platform facilitates farmers, traders and buyers with online trading in agriculture commodities for better price discovery and provide facilities for smooth marketing of farmer's valuable produce.

- Pradhan Mantri Krishi Sinchai Yojana (PMKSY) provides end-to-end solutions to irrigation related problems. It was launched with the motto of 'Har Khet Ko Paani' for providing an efficient irrigation supply to the farmers. Apart from assured irrigation, the scheme also focusses on creating protective irrigation by harnessing rain water at micro level through 'Jal Sanchay' and 'Jal Sinchan'. Micro irrigation forms an important component of the scheme with the aim of 'Per drop-More crop' that will involve using micro irrigation techniques to improve irrigation efficiency and reduce the input cost of irrigation to the farmer.
- Pradhan Mantri Fasal Bima Yojana was launched to ensure comprehensive crop insurance coverage from pre-sowing to post harvest losses against non-preventable natural risks. In this scheme, premium rates are extremely low which are payable by farmers at 2% for Kharif crops, 1.5% for Rabi Crop and 5% for annual horticultural crops.
- Pradhan Mantri Kisan Maan-Dhan Yojana (PM-KMY), launched on August 2019, is an old age pension scheme for small and marginal farmers in the country. It ensure a monthly pension of ₹ 3000/- on attaining the age of 60 years.
- The new scheme of Mega Food Park started by Government of India is a robust mechanism to link agricultural production to the market by bringing together farmers, processors and retailers so as to ensure increased income of farmers. The Mega Food Park Scheme is based on 'cluster' approach and envisages creation of state of the art support infrastructure in a well-defined agri/horticulture zone in rural areas.

Conclusion

In the words of Mahatma Gandhi, “Indian Agriculture is a way of life, a culture for a significant population of India”. The Indian Government has left no stone unturned in pursuance of doubling the farmer’s income. From increasing MSP prices to crop insurance, every component of agriculture is now focused upon.

Further to enhance private investment in agriculture, model contract farming act has been enacted. Government is also working upon the model of Agricultural Export Zone (AEZ) based on the concept of Special Economic Zone (SEZ). A large population with rising middle class is further driving the demand. All this holds the key for ‘economic transformation of farmers and emergence of an Inclusive India’.

66



MAKE IN INDIA

BIG BOOST TO INDUSTRY AND EMPLOYMENT



The ‘Make in India’ programme was launched by Prime Minister Narendra Modi on 25th September, 2014. The ‘Make in India’ programme aims at promoting India as an important investment destination and a global hub for manufacturing, design and innovation. The initiative not only target manufacturing sector alone, but also aims at promoting entrepreneurship in the country. India was the 9th largest recipient of Foreign Direct Investment (FDI) in 2019 according to World Investment Report 2020 by UNCTAD (United Nations Conference on Trade and Development).

Make in India seeks to encourage foreign investment that brings latest technology, expand knowledge base and inculcate research and development in the country. The government needs to motivate people to contribute their share to the ‘Make in India’ campaign. It is only with the collaborative efforts of the people and government that India can secure the title of a global manufacturing hub.

In line with the programme, The Ministry of Commerce and Industry has announced on 23rd June, 2020 that the Government e-Marketplace (GeM) portal has made it mandatory for seller to submit the country of origin while registering any new product on the online procurement portal. This will complement the Atmanirbhar Bharat programme, that has been started to push for locally made products.

Background of the Programme

The 'Make in India' programme was a result of initiatives of the Department for Promotion of Industry and Internal Trade (DPIIT) and is a collaborative effort of different departments and ministries. This was followed by national level workshops on sector specific industries in December, 2014.

These workshops brought Government ministries and industry leaders together in order to draw an action plan that aimed at raising the contribution of manufacturing sector to 25% of the GDP by 2020. The resultant plan was presented to the Prime Minister, Union Ministers, industry leaders and associations.

The Public Private Partnership is the hallmark of the 'Make in India' campaign. In line with the Make in India, individual states launched their own local initiatives, such as 'Make in Odisha', 'Tamil Nadu Global investors meet', 'Vibrant Gujarat', 'Happening Haryana', 'Magnetic Maharashtra', 'Momentum Jharkhand Global Investor Summit.

Aims and Objectives of the Programme

The 'Make in India' idea is not new. Factory production has a long history in the country. This initiative, however, set an ambitious goal of making India a global manufacturing hub. The three major objectives were:

- (a) To increase the manufacturing sector's growth rate to 12-14% per annum.
- (b) To create 100 million additional manufacturing jobs in the economy by 2022.
- (c) To ensure that the manufacturing sector's contribution to GDP is increased to 25% by 2022 (revised to 2025) from the current 16%.

The initiative is aimed at creating a conducive environment for investment, modern and efficient infrastructure, opening up new sectors for foreign investment and forging a partnership between government and industry through positive mindset. The initiative was simultaneously launched in all state capitals and in several Indian Embassies. It is a part of a wider set of nation building initiatives and aims to attract the top investors across the world to invest in India.

'Make in India' programme further aimed to reduce the level of unemployment faced by the youth of the country. The aim of launching this campaign in India is to make India a world level manufacturing powerhouse which will definitely help in solving some of the biggest issue of Indian economy. Other aim of 'Make in India' programme is to do away with red tapism i.e. delayed regulatory and procedural clearances.

The government plans to give time bound clearances to the projects through a single online portal. This will create a conducive environment for the business. Besides, the government is taking into consideration the skill mapping and manpower demand for specific sectors. This will ensure that right kind of training is given to people across the sectors in order to boost their employability.

The 25 Key Sectors Identified under Make in India

The 25 key sectors identified under the 'Make in India' initiative include automobile, automobile components, aviation, biotechnology, chemicals, construction, defence manufacturing, electrical machinery, electronic systems, food processing, IT and BPM, leather, media and entertainment, mining, oil and gas, pharmaceuticals, ports and shipping, railways, renewable energy, roads and highways, space, textiles and garments, thermal power, tourism and hospitality, wellness.

The National Skill Development Authority (NSDA) is working on creating a Labour Market Information System. This will be helpful for the industry to source its manpower requirement for the Make in India campaign.

Make in India at Key International Events

The initiative has been highlighted at key international events. The Make in India programme was the key message on Brand India at the annual meeting of the World Economic Forum at Davos (2015). The India Pavilion set up by the India Brand Equity Foundation (IBEF) was inspired by Make in India programme. Make in India was also the theme for India's participation as partner country at Hannover Messe in Germany.

Benefits of Make in India Campaign

The campaign aims to eliminate the hurdles and difficulties which have become synonymous with the country's business environment. The validity of the industrial license under the programme will be extended beyond 3 years. The FDI caps will be raised in a controlled manner. Recently, Indian government has opened up 100% FDI for telecom sector, for single brand retail. Exports done by manufacturing units help in lowering the trade deficit.

The government also intends to develop industrial corridors and smart cities, create world class infrastructure with state of the art technology and high-speed communication. Better infrastructure will give a major push to the 'Make in India' initiative. Industry experts and analysts have given a thumbs up to the 'Make in India' campaign. According to financial analysts, India's Foreign Direct Investment (FDI) has increased by 40% since the announcement of the programme. Companies like FOXCONN (manufacturer of i-Phones) etc., have all opened their manufacturing units in India. Fiat, Airbus and Hitachi are some other companies that have actively showed interest in the 'Make in India' initiative.

Challenges to the Make in India Initiative

There are a number of challenges that the government needs to overcome in order to make this programme a success in real term. India needs to be ready to tackle elements that adversely affect the competitiveness of manufacturing sector. Special tax concessions need to be given to the organisations and countries which are ready to set their establishments within the country. Although this will reduce the government's income earned through taxes, it will contribute a great deal in procuring foreign investment and technology to boost the campaign.

A number of technology based companies have not shown enthusiasm for the campaign launch and hence preferred to continue to getting their components manufactured by China. Make in India campaign is at the loggerheads with the Make in China deal. It is major rival to India when it comes to the outsourcing, manufacturing and services business.

Many economists and experts states that India rather needs to focus on Make for India since export-led growth strategy will not work for India as it did for Asian economies, including China. Therefore, the government should rather focus on creating an environment where all sort of enterprises can flourish and it is able to compete with rest of the world. This would encourage foreign producers to come and take advantage of our environment to create jobs in India. Red tapism, corruption, poor infrastructure are another major areas of concern.

The initiative has set out too ambitions growth rates for the manufacturing sector (12-14%). Historically, India has not acheived it and a quantum jump will be needed to achieve this goal.

Future Course of Action

The major manufacturing economies of the world have reached the top positions by making factor costs more advantageous if the product were made in their countries rather than made elsewhere.

Government need to focus on futuristic segments such as robotics, genomics, chemical feedstock etc. Making in a country must provide a 'competitive advantage' to the manufacturer. For promoting Make in India and reducing import dependency, it is essential that developers in transmission, thermal, hydro, distribution and renewable sectors need to join the National campaign of 'Atmanirbhar Bharat' and wholeheartedly adopt the 'Make in India' policy of Government. Policy requirements and regulations at the Central, State and Local level need to be government's top priority.

Conclusion

In conclusion, the 'Make in India' campaign acknowledges that no other sector does more to generate broad-scale economic growth and ultimately higher standard of living than manufacturing. The Make in India programme has the potential to transform India into a manufacturing hub by creating conducive environment for ease of doing business, skill development, innovation and investment. Make in India is not a brand nor it is a slogan but it is a new national movement as it covers the whole spectrum of our government, society and business. As highlighted by our Prime Minister from rampants of Red Fort that skill, talent, discipline and determination of new India can help usher a 'New Industrial Revolution'.

FOOD FORTIFICATION INITIATIVE

SECURING NUTRITIOUS FOOD FOR EVERY INDIAN

Health is wealth and nutrition plays an important role in earning this wealth. Nutrition helps to keep the body healthy and in good shape. However, the food that is available is not nutritious and does not eradicate hunger. India suffers from malnutrition, both undernutrition and overnutrition, which leads to deficiency diseases and obesity respectively. India is ranked 102 out of 117 countries in the Global Hunger Index 2019, behind its neighbours Nepal, Pakistan and Bangladesh. Indian diets are rich in staple, provide calories but not nourishment. Food quality, safety and security are of paramount importance as malnutrition is responsible for numerous deaths.

Definition of Food Fortification

Food fortification is the process of adding micronutrients (essential trace elements and vitamins) to food. It can be carried out by food manufacturers, or by governments as a public health policy to reduce the number of people with dietary deficiencies within the population.

According to the definition of World Health Organisation (WHO) and Food and Agricultural Organisation (FAO), fortification refers to “the practice of deliberately increasing the content of an essential micronutrients like vitamins and minerals (including trace elements) in a food, so as to improve the nutritional quality of food supply and to provide a public health benefit with minimal risk to health”.

Need for Food Fortification

To push for development, growth and productivity, a country needs to have population that has food consisting of nutrients. This will help in reducing morbidity and injecting positive health trends in population. India has made great progress while dealing with the prevailing hunger and malnutrition. India has a very high burden of micronutrient deficiencies caused by vitamin A, iodine, iron and folic acid leading to night blindness, goitre, anaemia and various birth defects. Over 70% of the Indian population still consumes less than half of the Recommended Dietary Allowance (RDA) endorsed micronutrients. This is a major contributing factor to prevalent health concerns such as stunting, low immunity, cognitive losses and physical impairments.

According to the National Family Health Survey (NFHS-4) 58.4% of children (6-59 months) are anaemic, 53.1% women in the reproductive age group are anaemic and 35.7% of children under 5 are underweight. Food fortification can help to address the issue of these micronutrient deficiencies. It is a scientifically proven, scalable and cost-effective strategy to improve the health and nutritional status of the most vulnerable sections of our society.

Types of Food Fortification

There are mainly three types of food fortification. They are

- Commercial and industrial fortification like wheat, flour, corn, meat, cooking oils.
- Biofortification i.e breeding crops to increase their nutritional value.
- Home fortification i.e an innovation aimed at improving diet quality of nutritionally vulnerable groups such as children. For example, vitamin D drops.

Benefits of Food Fortification

Food fortification is considered an efficient public health strategy because it can reach wider susceptible populations through existing food delivery systems without requiring major changes in existing consumption patterns. It acts as an effective short-term approach to address the nutrition gaps within a population. The long-term, sustainable approach would be to diversify people's dietary patterns by encouraging higher consumption of locally produced, seasonal food.

Compared to other nutrition interventions, food fortification is more cost-effective, if it is coupled with existing technology and large-scale distribution systems such as the MDM Scheme, ICDS, PDS, etc. The food fortification also help us to reduce the health care costs related to nutritional disorders. Thus it becomes necessary to move in a direction where fortified food is available and easy to access by all. It helps to improve the health of a large section of the population, all at once as the nutrients are added to the widely consumed staple foods.

Steps Taken By Government

Article 47 of Indian Constitution directs the state to raise the level of nutrition and standard of living in people and improve public health as among its primary duties. Thus, India has launched nutrition security measures such as the Public Distribution System (PDS), Mid-Day Meal (MDM) Scheme, Integrated Child Development Scheme (ICDS) etc. The National Nutrition Policy, 1993 has identified and placed fortification of essential food as a short term direct nutrient intervention and states that essential food items shall be fortified with appropriate nutrients. Some of the measures taken by the government are

- **National Policy on Salt Iodisation** India is one of the first countries in the world to start a public health programme to address iodine deficiency disorders based on salt iodisation. A national policy of universal salt iodisation was started in India in 1986 which prohibits the sale of non-iodised salt for human consumption. Later, in order to combat iron and iodine deficiencies, India implemented double fortification of salt, iron and iodine.
- **Five Year Plans** Promoting food fortification has been part of 10th, 11th and 12th Five Year National Plans of the country. To keep up the spirit to achieve nutritional security, India has secured micronutrients for beneficiaries by including fortified foods as an additional supplement to nutritious meals for which it has launched Food Fortification Initiative.

- **FSSAI** Food Safety and Standards Authority of India (FSSAI) has been authorised for setting the standard for fortification of food articles like wheat, flour, rice, milk, edible oil and salts with vitamins and minerals. At present, all the major oil producers in the country are voluntarily fortifying at least one brand in their product portfolios.

The Draft Food and Standards (fortification of food) Regulations, 2016 stipulate that FSSAI may from time to time mandate fortification of any food article. It can be done on the direction of government of India or recommendations of the states/UTs. Under Food Safety and Standards (prohibition and restrictions on sales), sale of only iodised salt is permitted for direct human consumption. It also provides that Vanaspati shall contain synthetic vitamin A. FSSAI has established Food Fortification Resource Centre (FFRC) in collaboration with Tata trusts to promote large scale fortification of food.

- **Efforts of Central Government Ministries** Ministry of Women and Child Development and Ministry of Human Resource Development have advised the use of double fortified salt (Iron and Iodine), wheat flour (with Iron, folic acid and vitamin B-12) and edible oil (with vitamin A and D) under their schemes.
- **Movements for Behavioural Change** India has set its pace to end all forms of malnutrition by 2030 for which it has started 'The Eat Right Movement'. This movement brings together three ongoing initiatives of FSSAI i.e. 'Safe and Nutritious Food Initiative', which focused on social and behavioural change around food safety and nutrition at home, school, workplace and 'The Eat Healthy Campaign', which focused on reduction of high fat, sugar and salt foods in the diet and 'Food Fortification', which focused on promoting five staple foods i.e. wheat flour, rice, oil, milk and salt that are added with key vitamins and minerals to improve their nutritional content.

Issues and Challenges

There is a need to create a policy environment for making compulsory fortification a national agenda. The other issue is the partnership with industry to set up the translatable technologies. Behavioural change communication is required to mitigate stakeholder's reluctance to change. Shelf life and packaging for fortified rice (stored rice) is also a great challenge. Effective monitoring is required for the careful consideration of the effect of other fortified foods and supplements. Several organisations like WHO, FAO have acknowledged that there are limitations to food fortification. Fortification of nutrients in food may deliver excessive amount of nutrients to some individual with side effects. For example, Flouride can cause irreversible staining to the teeth. Iron might be beneficial for women but it might result into over consumption in case of men. Besides, there are several human rights issue like consumers right to choose if they want fortified products or not.

Actions Required to Overcome the Challenges

Some of the future course of action are given below

- There is a need to engage stakeholders to understand the importance of more comprehensive and up to date databases on food and nutrient intakes.
- There is a need for better tracking/reporting systems to look for potential adverse effects of excessive nutrient exposures.
- More research is needed to quantify the nano materials as fortificants.
- There is need to understand the link between consumption and outcomes of the changes occurring as a result of food processing.

Conclusion

Sustainable approaches in bringing diversity in the dietary habits of the citizens, food fortification can be seen as one of the important ways forward in improving the health of the citizens of the country. Further, there is need to develop wide consumer outreach to build awareness and sensitise people to the need and importance of fortification. The need of the hour is to strengthen measures of food fortification and harness fully the benefits of food fortification to place India on the path of sustained growth, prosperity and well-being.

68

CRYPTOCURRENCY

NEW FORM OF MONETARY SYSTEM

Cryptocurrency is a digital asset designed to work as a medium of exchange that uses cryptography to secure its transactions, to control the creation of additional units and to verify the transfer of assets. Cryptocurrencies are a type of digital currencies, alternative currencies and virtual currencies. The first decentralised cryptocurrency was Bitcoin, created in 2009. Since then numerous other cryptocurrencies have been created.

How Does Cryptocurrency Work?

Cryptocurrencies use decentralised control as opposed to centralised electronic money and central banking systems. The decentralised control of each cryptocurrency works through a blockchain, which is a public transaction database, functioning as a distributed ledger. Transactions are sent between peers using software called cryptocurrency wallets (for storing, sending and receiving digital currency). The person creating the transactions uses the wallet software to transfer funds from one account to another. To transfer funds, knowledge of password associated with the account is needed. Transactions made between peers are encrypted and then broadcast to the cryptocurrency's network.

It is then put in a queue to be added to the public ledger. Transaction are then recorded on the public ledger *via* a process called 'Mining'. All users of a given cryptocurrency have access to the ledger if they choose to access it. The transaction amounts are public, but who sent the transactions is encrypted. Many transactions are added to a ledger at once. Then 'blocks' of transactions are added sequentially by miners. That is why the ledger and the technology behind it are called 'block chain'. It is a 'chain of blocks' of transactions. The validity of each cryptocurrency's coins is provided by blockchain. It is a continuously growing list of records, called blocks, which are linked and secured using cryptography.

Advantages of Cryptocurrency

Cryptocurrencies are gaining popularity because they provide privacy protection, cost effectiveness, lower entry barriers which can be used as alternative to banking systems and fiat currencies, open source methodology and public participation and also immunity to government led financial retribution. Every transaction is transparent, autonomous and secure.

Cryptocurrencies are digital and hence cannot be counterfeited or reversed arbitrarily by the sender. Cryptocurrency uses a 'push' mechanism that allows the cryptocurrency holder to send exactly what he or she wants to the merchant or recipient with no further information. Decentralisation is one of the main advantage of cryptocurrency as it is managed by its own network and not any central authority.

Since cryptocurrency is not bound by exchange rates, transaction charges or other charges of any country and hence it can be used at an International level without any problem. It is eco-friendly as it is paperless. Anonymity is one of the greatest advantages provided by cryptocurrency as one need not to reveal its identity. Due to these benefits cryptocurrency started to gain acceptance world wide.

Facebook has officially launched its virtual currency named 'Libra'. It will be governed by the Libra Association, a Swiss Group including 28 members. It would run on a block chain on which cryptocurrency payments take place.

Disadvantages of Cryptocurrency

Cryptocurrencies have their own set of associated risks. Most people are not aware of how to use cryptocurrency and hence become vulnerable to hacking.

Cryptocurrencies are highly volatile in nature. There is a lack of central issues, which means that there is no legal formal entity to guarantee in case of any bankruptcy.

There is not a way to get a refund of the amount paid mistakenly by someone. If a person has stored digital currency on his phone or computer then it is better to remember the passwords and not lose these devices. Losing one's coin means one would not be able to retrieve it.

Cryptocurrencies are being denounced in many countries because of their use in grey and black markets. There are two sets of interconnected risks, one being to the growth and expansion of these platforms in the uncertain policy environment and the other being the risks these platforms pose to the users and the security of the state. They also have the potential use for illicit trade and criminal activities and can be used for Terror Financing. They also have the potential for tax evasion.

Global Scenario

The acceptability of cryptocurrencies as a legal instrument currently varies from country to country. While some are in the process of formulating laws and measures, others are yet to respond to this disruptive change. Some countries like Algeria, Bolivia, Egypt etc have completely banned the cryptocurrencies. An 'implicit ban' has been applied in another 15 countries like Bahrain, Bangladesh, China etc. Bank of Thailand announced its plans to create its own cryptocurrency. UNICEF accepts cryptocurrency donations.

Slowly, cryptocurrencies are coming under the regulatory net in order to check misuse. Japan became the first country to regulate cryptocurrencies, the US is quickly laying down regulatory guidelines. The UK and Australia continue to work on the formalities while China has recently banned Initial Coin Offerings (ICO) due to various reasons, including various ICOscams around the world.

The burgeoning use of cryptocurrencies in terror financing, ransoms, illicit drugs or arms trade and cybercrime has also raised red flags among the security and law enforcement agencies. They may well have the potential to displace the existing financial systems which enable electronic flow of money across different political boundaries.

Position in India

India plays a relatively small role in the global cryptocurrency market as it has only 2% of the global cryptocurrency market cap. The Reserve Bank of India has been keeping a tab on the increasing use of cryptocurrencies and it had issued an advisory in this regard in 2013, cautioning users, holders and traders of virtual currencies to its potential financial, legal and security related risks. The Ministry of Finance also held a public consultation on regulating virtual currencies in May 2017.

In March 2020, Supreme Court of India declared the April 2018, notification of RBI that had banned the transactions through virtual currencies, as unconstitutional. This may lead to increase in the use of cryptocurrencies in India.

If authorised as an electronic payment system or designated a legal instrument, cryptocurrencies will fall under the purview of the RBI; capital gains and business transactions will be liable to tax, and foreign payments are also going to fall under the purview of Foreign Exchange Management Act. Regulated cryptocurrencies will enshrine robust consumer protection provisions.

Conclusion

Owing to this unstable and nascent phase of cryptocurrencies and less realisation of its worth due to limited use, it is foreseen that while people of India are eager and looking forward to transparent, quick and high return currencies but the Indian Government has its own stand which believes in knowing and exploring more about the cryptocurrency.

Overall cryptocurrencies have a long way to go before they can replace credit cards and traditional currencies as a tool for global commerce. People need to be educated about it as many people are still unaware of cryptocurrency. Businesses need to start accepting it so that it can gain wider acceptance.

The future appeal of cryptocurrencies lies in allowing our ultimate control over our money, with fast secure global transactions and lower transactions fees when compared to all existing currencies. But the government will have to take considerable steps, given the risk from possible use of cryptocurrencies in terror financing, money laundering and tax evasion.

CHANGING PACE OF DIGITAL INDIA

Digital India is an initiative launched by Prime Minister Narendra Modi on 2nd July, 2015 with the aim to connect rural areas with high speed internet networks and improving digital literacy. Digital India comprises various initiatives under the single programme, each targeted to prepare India for becoming a knowledge economy and for bringing good governance to citizens through synchronised and coordinated engagement of the entire government.

This programme has been envisaged and coordinated by the Department of Electronics and Information Technology (DeitY) in collaboration with various Central Ministries/Departments and State Governments. The Prime Minister as the Chairman of Monitoring Committee on Digital India monitors activities under the Digital India initiative. All the existing and ongoing e-Governance initiatives have been revamped to align them with the principles of Digital India.

The Coronavirus (COVID-19) outbreak indirectly helped in enhancing centre's vision of Digital India, as many service providers, including banks and telecom operators have significantly reduced their offline operations and are asking their customers to embrace the digital form for any assistance.

The COVID-19 pandemic has played as a catalyst in the growth of digital payment platforms in India, with more number of people adopting e-transaction modes. In fact, companies have witnessed addition of a high number of new users of digital payment gateways during this time.

Steps Towards Digital India

There are certain services associated with Digital India Programme. These include

- **Digital Locker** It is a facility that will help citizens to digitally store their important documents like Pan card, passport, marksheets and degree certificates. Digital locker will provide secure access to government issued documents.
- **MyGov.in** A platform to share inputs and ideas on matters of policy and governance. It is a platform for citizen engagement in governance, through a 'Discuss', 'Do' and 'Disseminate' approach.
- **Swachh Bharat Mission (SBM) Mobile app** It is being used by people and government organisations for achieving the goals of Swachh Bharat Mission. e-sign framework allows citizens to digitally sign a document online using Aadhaar authentication.

- **e-Hospital** The application provides important services such as appointment, online diagnostic reports, enquiring availability of blood online etc.
- **National Scholarship Portal** It is a one-step solution for end to end scholarship process right from submission of student application, verification, sanction and disbursement to end beneficiary for all the scholarships provided by the Government of India.
- **e-Sampark** It is a mechanism to contact citizens electronically, sending informational and public service messages *via* e-mails, SMS and outbound dialing.
- **Digital India Platform (Deity)** DeitY has undertaken an initiative namely Digitise India Platform (DIP) for large scale digitisation of records in the country that would facilitate efficient delivery of services to the citizens. Policy initiatives have also been undertaken (by DeitY) in the e-Governance domain like e-Kranti Framework, Policy on Adoption of Open Source Software for Government of India, Framework for Adoption of Open Source Software in e-Governance Systems etc.
- **Bharat Net** Another initiative taken in this regard includes Bharat Net, a high speed digital highway to connect all 2.5 lakh Gram Panchayats of the country. BSNL has introduced Next Generation Network (NGN) which is an IP based technology to manage all types of services like voice, data, multimedia/ video and other types of packet switched communication services.
- **BPO Policy** This policy has been approved to create BPO centres in different North-Eastern states and also in smaller towns of other states. Electronics Development Fund (EDF) Policy aims to promote Innovation, R and D and Product Development to create a self-sustaining eco-system of Venture Funds.
- **National Centre for Flexible Electronics (NCFlexE)** is an initiative of Government of India to promote research and innovation in the emerging area of Flexible Electronics.
- **National Agriculture Market (NAM)** It a Pan-India electronic trading portal which networks the APMC mandis to create a unified national market for agricultural commodities.
- **International Support** In the month of April 2019, Google provided free Wi-Fi at 500th station in India, one of the largest public Wi-Fi networks in the world. Microsoft also provides broadband connectivity to five hundred thousand villages in India and make India its cloud hub through Indian data centres. The programme has been favoured by multiple countries including the US, Japan, South Korea, the UK, Canada, Australia, Malaysia, Singapore, Uzbekistan and Vietnam.
- **e-cabinet** Inspired by the developments of a Digital India, taking a step further, the Andhra Pradesh government has launched the first paperless digital cabinet, known as e-cabinet, in India. The ministers can access the entire agenda of cabinet meetings via an application.
- **Digital Unlocked** It is an initiative by Google in collaboration with the Indian School of Business and Ministry of Electronics and Information Technology to promote digital awareness and to help small scale businesses to go digital.
- **Social Endeavour for Health and Telemedicine (SEHAT)** It is a health initiative in India launched by the government to offer telemedicine in rural areas where people can consult doctors online and order telemedicines.

Achievements of Digitalisation Initiatives

One of the most successful outcomes of the 'Digital India' initiative has been the runaway success of Jandhan-Aadhaar-Mobile (JAM) initiative, which has provided a digital identity to more than a billion Indian citizens as well as access to the banking system to millions of Indians who were earlier excluded from the formal economy. The government's Direct Benefit Transfer (DBT) scheme now caters to around 350 million Indians liberating them from bureaucratic impediments, while ensuring that process leakages are a thing of the past.

Following the success of DBT initiative, efforts are underway to provide more public services online, in an 'anytime, anywhere' mode, thus, converting the ubiquitous mobile phone into an instrument of economic and social empowerment as well as access to livelihoods and information.

In the realm of digital literacy, the government's Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA) has ambitions of making 60 million Indians digitally literate and it is anticipated that this programme will attain greater traction in the days ahead.

Challenges to Achieving Complete Digitalisation

Though, the achievements of the programme have been commendable, it continues to face multiple challenges in successful implementation due to lack of clarity in policies and infrastructural bottlenecks.

The major challenge faced by Digital India are

- **Regulatory Roadblock** The issues pertaining to taxation and other regulatory guidelines have proved to be roadblocks in advancing with the programme. Some of the common policy hurdles include lack of clarity in FDI policies, which have impacted the growth of e-commerce.
- **Digital Divide** A study has observed that for Digital India to have a large scale impact on citizens across the nation, the digital divide needs to be addressed through last mile connectivity in remote rural areas, as currently, over 55,000 villages remain deprived of mobile connectivity. This is largely due to fact that providing mobile connectivity in such locations is not commercially viable for service providers.
- **Poor Connectivity** Various reports have estimated that India needs over 80 lakh hotspots as against the availability of about 31,000 hotspots at present to reach global level of one wi-fi hotspot penetration for every 150 people.

Fear of cybercrime and breach of privacy has been a deterrent in adoption of digital technologies. Most of the technology including cyber security tools is imported from countries such as China. There is no sufficient skill to inspect for hidden malwares. India needs 1 million trained cyber security professionals by 2025. The current estimated number is 62000.

Conclusion

The technological revolution in India has benefitted the already privileged class of Indians. It is also difficult to scale up initiatives involve all Indians, as fundamental attitudinal and institutional change is still an issue. The governments must find solutions for the specific political-social context of the nation and technology must be accompanied by significant changes in policy and institutions in order to have meaningful impact.

The Digital India Movement is a giant technological leap which is lubricating the wheels of India's economy during this crisis situation. This shift is bound to drive India's digital mission. Remote working and e-services have become the new norm. This digital transformation will further aid in fulfilling India's Digital Mission. The programme will generate huge number of IT, Telecom and Electronics jobs, both directly and indirectly. Success of this programme will make India Digitally empowered and the leader in usage of IT for the delivery of services related to various domains such of health, education, agriculture, banking etc.

70

THE PROBLEM OF UNEMPLOYMENT IN INDIA

In 2019, India became the youngest country in the world. The median age for the entire Indian population is 29 years. This holds the huge significance for India as the average age in most developed countries is approaching in late 40s. It tells us that our country is endowed with huge human resource. With human resource we understand any personnel of the country possessing significant skills and abilities. But are we unleashing the full potential of our human resource? The answer is no. Unemployment has been a major concern for our country since decades.

For a country where 1.2 crore people enter the workforce every year, the pace of job creation to utilise their human resource remains far below what is needed. Unemployment is defined as “a situation in which the person is capable of working both physically and mentally at the existing wage rate, but does not get a job to work”. In other words, unemployment is a condition where a person is willing to work but does not get a job to work. Before moving to the status and different causes and effects of unemployment, let's understand about different types of unemployment.

Types of Unemployment

There are different types of unemployment prevailing in India which include

- **Disguised Unemployment** in which more people are doing work than actually required. Even, if some are withdrawn, production does not suffer. Agriculture is the best example of this type of unemployment.
- **Seasonal Unemployment** occurs during certain seasons of the year. People engaged in industries like holiday resorts, ice factories and so on may remain unemployed during the off-season.
- **Cyclical Unemployment** is caused by trade cycles at regular intervals. There is greater unemployment when there is depression and a large number of people are rendered unemployed.
- **Educated Unemployment** arises when many are underemployed because their qualification does not match the job.
- **Structural Unemployment** arises due to drastic changes in the economic structure of a country.
- **Frictional Unemployment** caused due to improper adjustment between supply of labour and demand of labour.

Status of Unemployment in India

The Periodic Labour Force Survey (PLFS) report which was released by the National Statistical Office (NSO) on 1st June, 2019 states that India's unemployment rate stood at 6.1 per cent, a four decade high. It also showed that the unemployment rate for male was higher at 7.1 per cent in urban area as compared to 5.8 per cent in rural areas. According to the report of Pew Research Centre, about 18.6 million Indians were jobless and another 393.7 million work in poor-quality jobs vulnerable to displacement. According to the report of International Labour Organisation (ILO), unemployment is rising in India and the unemployment rate in the India stands at 3.5 per cent in 2018 and 2019.

Factors Responsible for Unemployment

There are number of factors which are responsible for the high unemployment rate in India are given below

- **Growing Population** The most important cause is the growing population in India. The population of India has reached to 1.3 billion making it the second most populous country in the world. Growth of population directly encourages unemployment by making a large addition to labour force.
- **Limited Land Resources** Another reason for unemployment is the availability of land which is limited. Indian population is increasing rapidly, therefore, land is not sufficient for the growing population. As a result, there is heavy pressure on land. It creates the situation of unemployment for a large number of people who depend on agriculture in rural areas.
- **Education System** The present education system in India is also responsible for the growth of unemployment. The day-to-day education is very defective and confined within the classroom only. The system is not job oriented, it is degree oriented. Thus, young people even with degrees do not get jobs as the market conditions are different.
- Apart from this, in villages, unemployment is due to lack of cottage industries. The cottage industries are in a winding state. They give whole time occupation to only a small fraction of people.

Effects of Unemployment

Unemployment is a big problem which affects the economic growth of the country. It has following bad effects

- **Exploitation of Labour** Due to unemployment labourers are exploited. They have to accept low wages and work under unfavourable conditions.
- **Industrial Disputes** Industrial disputes have adverse effects on employer-employee relations. Further, it also leads to unemployment.
- **Political Instability** Unemployment often results in political instability in the country. Unemployed persons engage themselves in destructive activities.
- **Social Disturbances** Many social evils like dishonesty, gambling and immorality etc., are attributed to the problem of unemployment. It endangers law and order situation of the country. It also causes social disruption in the society.
- **Increase in Poverty** Under the situation of unemployment a man has no source of income. Unemployment causes poverty, burden of debt increases, consequently, economic problems also increases.
- **Loss of Human Resources** Due to unemployment, human resources go waste. No constructive use of labour force is made. If human resources are properly used, economic growth of the country will increase.

Initiatives by the Government

Government of India has taken several initiatives to tackle with the issue of unemployment in India. Some of the schemes are as follows

- **Startup India and Standup India, 2016** With the aim of transforming the youths from job seeker to job creator and to provide entrepreneurship support, both the schemes were launched. Under Startup India, government provides a strong eco-system for nurturing innovation and Startups in the country that will drive sustainable economic growth and generate large scale employment opportunities. Apart from providing funding support and incentives to the startup, the government also intends to provide industry academia support and incubations to the startups in India. Under Standup India, government facilitates bank loans between ₹ 10 Lakh to ₹ 1 crore to at least one Scheduled Caste (SC) or Scheduled Tribe (ST) borrower and at least one women borrower per bank branch for setting up a new enterprise.
- **Aajeevika-National Rural Livelihoods Programme, 2011 (NRLM)** Aajeevika-NRLM is a poverty alleviation project implemented by Ministry of Rural Development, Government of India. The scheme is focused on promoting self-employment and organisation of poor in rural area. The basic ideas behind this programme is to organise the poor into Self Help Groups (SHGs) and make them capable for self- employment.
- **Mahatma Gandhi National Rural Employment Guarantee Act, 2006 (MGNREGA)** MGNREGA aims at enhancing livelihood security of households in rural areas of the country by providing at least one hundred days of guaranteed wage employment in a financial year to every household whose adult members volunteer to do unskilled manual work. The Act came into force in February, 2006. In MGNREGA, all rural districts are covered.

- **Pradhan Mantri Kaushal Vikas Yojana, 2015 (PMKVY)** PMKVY scheme seeks to provide skill training to 1.4 million youth. The plan is implemented through the National Skill Development Corporation. It will focus on fresh entrant to the labour market, especially class X and XII drop outs.
- **Deendayal Antyodaya Yojana-National Urban Livelihood Mission (DAY-NLRM), 2013** This scheme was launched to reduce poverty and vulnerability of the urban poor households by enabling them to access gainful self-employment and skilled wage employment opportunities. This mission would also address livelihood concerns of the urban street vendors by facilitating access to suitable spaces, institutional credit, social security and skills to the urban street vendors for accessing emerging market opportunities.
- **Pradhan Mantri Mudra Yojana (PMMY), 2015** To create employment opportunities in non-farming activities, this initiative provides loans at concessional rates. The collateral free loans under Shishu (up to ₹ 50000), Kishor (From ₹ 50000-up to ₹ 5 lakh) and Tarun (from ₹ 5 lakh-up to ₹ 10 lakh) will be provided for entrepreneurship development.
- **National Career Service, 2015** This scheme was launched with an objective to bridge the gap between those who need jobs and those who want to hire them and between people seeking career guidance and training and those who can provide the counselling and training.

Conclusion

Complete utilisation of human resource is a prerequisite for growth of any country. In India, unemployment is a structural issue which remains a major hindrance for inclusive growth in the country. Lack of industrial reform along with the poverty and over-population has further aggravated the problem of unemployment in India. Along with the focus on employment generation, the government needs to focus on enriching the youths of the country with industry relevant skill, education and training. This investment in human resource will pave the path for prosperous India, where fruit of development is equally shared among its population.

GLOBALISATION AND ITS IMPACT ON INDIAN SOCIETY

The term 'globalisation' means integration of economies and societies through cross country flow of information, ideas, technologies, goods, services, capital, finance and the people. The essence of globalisation in a broad sense is connectivity in all aspects of human life. Although, economic forces are an integral part of globalisation, it would be wrong to suggest that they alone produced it. It has been driven forward above all by the development of information and communication technologies that have intensified the scope and speed of interaction between the people all over the world.

Globalisation in India

India became independent as one of the poorest countries of the world. The British colonial rule had destroyed the self-sufficient agrarian economy. The then Prime Minister of India, Jawaharlal Nehru preferred mixed economy for planned economic development of the country. As a result of this, public sectors were set up along with the number of private enterprises, but like the socialistic model of economy, the mixed economy of India did not produce profitable results. A number of public sectors became sick and the growth rates of production began to fall.

While the poverty of the people continued to grow at an alarming rate, there was an acute balance of payment crisis and due to low domestic savings, there was no adequate capital for investment. There was also the shortage of resources to provide educational and health facilities to a large growing population. Moreover, there was high rate of inflation and the balance of payment deficit was around \$10 bn. In such a situation, PV Narsimha Rao government was compelled to introduce the policy of liberalisation, privatisation and Dr Manmohan Singh, the then Finance Minister played an instrumental role in the adoption of New Economic Policy (1991). In the midst of all these developments, globalisation was adopted by Indian Government during 1990-91 when Indian economy was in a very bad shape. It was, however, adopted not as a solution to deteriorating Indian economy but to enable itself to get further foreign exchange loans from World Bank as its foreign exchange reserves were reduced to mere 3 weeks outflow.

To rectify its ailing financial health, government simultaneously decided to amend its economic policies and go for privatisation and liberalisation of its economy. These decisions had immediate positive effect. However, globalisation has proven to be double edged weapon. It did help government temporarily meet its urgent need of foreign exchange but it has, as a by product, caused some permanent damage to Indian economic system and Indian social structure.

Impact of Globalisation on Indian Economy

For thousands of years, different countries have been doing trade with one another. But the process has got a tremendous boost in about last two decades due to high handed policies of International Monetary Fund, World Bank and World Trade Organisation who have been working on the agenda of developed countries like USA.

With the opening of Special Economic Zones, the availability of new jobs has been quite effective. There has been a considerable rise in employment. The foreign companies brought in highly advanced technology with them and this helped to make Indian industry more technologically advanced. There is an International Market for companies and for consumers there is a wider range of products to choose from. Increase in flow of investments has been used for economic reconstruction.

Globalisation has intensified interdependence and competition between economics in the world market. This is reflected in interdependence in trading of goods and services. As a result, domestic economic developments are not determined entirely by economic policies and economic conditions. Rather they are influenced by both domestic and international policies and economic conditions. This constrained the policy option available to the government which implies loss of autonomy to some extent in decision making at the National level.

Apart from these positive aspects, there are some negative developments also which are attributed to globalisation process only. Due to the interdependence of Indian economy and world economy, it has become very difficult for the Government of India to insulate its economy from the world economy. Indian people now prefer global brands over Indian brands because they are cheap, more fashionable and easily available. Steep and fast reductions in custom duties have snatched large part of Indian market from Indian industry and passed it on to imports from established global players. For its survival in the face of global competition, Indian industry has transformed itself from labour intensive to capital intensive by adopting global technologies and automatic machinery, which has resulted in the high rate of unemployment in India.

Socio-Cultural Impact of Globalisation in India

Improved economic conditions, increased recognition of human rights, unprecedented mobility and interaction of people from different countries have dented local cultures of people the world over. India is not an exception in this case. Indian family system is shifting towards nuclear family system instead of the joint family system.

These nuclear families are getting further divided due to strained relations of partner. Old and handicapped persons in the families are being forced to support themselves without any support from their children.

Globalisation has undermined the traditional role of women in homemaking, farming, handicrafts, handlooms etc., and resulted in a relatively better environment for women. Today, women are working in all spheres of Indian economy and are enjoying the fruits of 'empowerment process' brought in by globalisation. At the same time, their security has become a major issue in this changing scenario and they are bearing the double burden of family as well as that of the job because the role of men in India has not changed much.

People today, especially the young, have developed an identity that gives them a sense of belonging to a worldwide culture, which includes an awareness of events, practices, styles and information that are a part of the global culture. There is the development of a bicultural identity or a hybrid identity, which means that part of one's identity is rooted in the local culture while another part stems from an awareness of one's relation to the global world.

Conclusion

We cannot say that the impact of globalisation has been totally positive or negative. It has been both. However, it becomes a point of concern when, an overwhelming impact of globalisation can be observed on the Indian culture. Every educated Indian seems to believe that nothing in India is to be approved unless recognised and recommended by an appropriate authority in the West. This should be checked in order to preserve the rich cultural diversity of India and to ensure the fulfilment of the principle of self-sufficiency.

72

STARTUPS IN INDIA

In the recent decades, startups have received much attention all over the world. In India, the startups have become stronger as more and more support has been made available to them in all aspects. These startups are now widely recognised as important engines of growth and for generation of jobs. Startups in India started emerging in the 2000s but the ecosystem was not mature as only few investment opportunities were available and supporters such as incubators and startup accelerators were limited in scope. In the last 10 years, the number of startups have increased at a faster pace and more support systems have been generated by industry as well as the government. Bengaluru has emerged as the primary startup hub but the startups of India are also present significantly in Mumbai, NCR and other regions.

While startups are mainly focussed upon technology driven solutions but there are various startups that are non-technical, social and micro enterprises which provide innovative ideas and solutions. India ranks third in the world in the startup ecosystem. Startups are expected to create nearly 2-2.5 lakh jobs in the coming years.

How are Startups Defined?

Due to subjectivity and complexities involved in defining startups, there is no clear definition of startup existing in India. A startup is a young company that is beginning to develop and grow, is in early stages of operation and it is usually financed by an individual or a small group of individuals. The company could be an entrepreneurial venture or a new business, partnership or temporary business organisation. The startups mostly searches for a new business model in order to disrupt existing markets or create new ones.

Stages of a Startup Life Cycle

The stages of startup Lifecycle includes Pre-startup stage, startup stage and Growth stage.

Pre-startup Stage

- The startup discover a potential product or service idea for a big enough target market.
- The service or product discovered launches in the market, looking for clients who are ready to accept the product and pay for it.

Startup Stage

- The startup begins to define his/her business model and looks for ways to increase their consumer base.
- The growth of business is such that it has the capacity to grow in a sustainable manner.

Growth Stage

- The entrepreneur seeks to maximise benefits and acquires huge resources or collaborate with large industry players so that the brand continues growing while going through this life cycle. It is supported by research organisations, the team members of startup, investors, mentors, advisors, other enter preneurial people, people from related organisations, angel investors, venture capital funds, government schemes, programs and various incubators.

Issues of Startups in India

Some of the major issues and challenges before startup in India are

- **Financial Resources** Availability of finance is critical for the startups. The requirement of funds increases as the business progresses. Only limited avenues for financing are available for the startups such as family members, friends, loans, grants. As startups do not have collateral, availability of formal bank loans is limited.
- **Revenue Generation** Several startups fail due to poor revenue generation at early stages. As the business grows, expenses increases with reduced revenues, forcing startups to focus on funding aspect rather than business fundamentals. The lack of revenue also reduces efficiency of the business, there by affecting overall sustainability.
- **Lack of Human Resources** Startups usually consist of trusted members with complementary skill set. Failure to have a coherent team could become a major reason for the failure of startups. For job-seekers, joining startups as employees is not an attractive career as young job-seekers prefer to work in large corporations where there is security and stability in jobs. Also, while hiring employees, startups have to invest significantly in the training of the untrained professionals whom they hire.

- **Lack of Supporting Mechanisms** A number of support mechanisms such as incubators, science and technology parks, business development centres are inadequately developed in India. This also reduces their efficiency and working ability. It increase the risk of failures of startup at early stages.
- **Lack of Markets** Startups often fail to take off due to lack of sufficient market mechanisms. The market environment for a startup is very difficult due to its unique product that seeks to disrupt the markets. The situation worsens if the product is altogether new as it has to build everything from beginning. The startup also needs to have thorough domain knowledge of the counter competition with appropriate strategies.
- **Regulations** Starting a business requires a number of permissions from the government agencies. Regulations for labour laws, intellectual property rights, dispute resolution etc are rigorous in India. Startups often feel burdened with the bureaucratic procedures which are very complex for a startup to fulfil. The process of registration is lengthy and costly. Tax policies are also considered unfriendly for the startups.
- **Lack of Startup Friendly Policies** Though many government schemes and programmes have been started but still there exists a gap in startup friendly policies that comprehensively promote startup ecosystem in India. Even after the establishment of a startup, the startup has to comply with the state as well as central rules and regulations to sustain and survive the initial risks.
- **India's Diversity and Information Gap** India has diversity of cultures, languages, ethnicities and religions. This makes the Indian customer base diverse and it creates limitations for the startups in setting up a PAN India business. Most of the startups are started in urban areas, whereas 68% of population of India lives in rural areas. This creates a disconnect between the startup owners and the consumers for whom they aim to build products.

Realising the Potentials of Startups in India

The Indian market provides a diverse range of opportunities for startups to solve problems that are unique to India.

The startups in India will realise their potentials because of the following reasons

- **India's Large Population Size** India is a country of 1.3 billion people with a significantly large size of young population. The startups offer plethora of opportunities for this young population to create products that are useful for solving problems which are plaguing India. The startups, engaging with the young Indian people can work as a tool to provide a major push to the Indian economy, catering to diverse needs of Indian people.
- **Changing Aspirations of Working Class** In recent years, working class has become more aspirational. Rather than working in traditional occupations, the working class wants more challenging jobs, that have problem solving aspects. Several high profile executives also shift their jobs to work for startups. Number of students joining startups and e-commerce companies have considerably grown in the recent years. This offers great opportunities for startups in India.

- **Huge Investments in Startups** Huge investments in Indian startups from foreign as well as Indian investors is taking place. As the government has pushed for an enhanced role of startups in the Indian economy, more angel investors are now ready to invest in new technological startups that have products to disrupt the existing markets. New investors are now more confident of investing in the startup ecosystem as they have trust in the new age entrepreneurs of India. This creates a good base for the startups to realise their potentials.
- **Increasing Innovation** India has great potential for innovation. It has its own challenge of education, health, infrastructure and gap between its rural and urban population and rich and poor. It provides an important platform for Indian startups to innovate, create and make future leaders. There is a huge gap which needs to be fulfilled, which can be fulfilled by Indian startups. The middle class of India provides a rich consumer base for the Indian startups to get successful and simultaneously solve problems that India faces.
- **Government Support** The government of India has been active in providing necessary support for the startups in India. It has run various schemes and programs so that startups can be nurtured. This idea is to improve the startup ecosystem and nurture entrepreneurial spirits. The biggest program is the Startup India Scheme that was launched in 2016. This aims at simplification of processes and handholding for startups, providing funding support and incentives and Industry-Academia partnership and incubation. A 10,000 crore startup funding pool has been setup under this scheme.

The government has several other schemes such as ASPIRE scheme for promotion of innovation and rural entrepreneurship. It aims to promote startups in rural regions. Atal Innovation Mission was, started by NITI Aayog to create cooperation between centre, state and local innovation schemes and promote entrepreneurial spirit from the school level. A credit guarantee scheme for startups has also been started that aims to provide financial stability to startups. Other schemes such as e-Biz portal, MUDRA loan scheme etc. have been operating to provide aid to startups in India and promise a rapid growth.

Way Forward

The government should promote measures to raise educational levels by creating programs that will increase the awareness about entrepreneurship. If entrepreneurial skills are developed at the level of schools and colleges, it will provide an early push for startups in India.

A comprehensive push for the startups by creating more government friendly schemes, policies, providing support to startups at early stages, setting up more incubation centres etc. will provide a necessary support for startups. Investment in creating infrastructures such as rural roads, colleges, schools, better urban areas, etc. will increase the markets for newer startups. Their risks can be reduced by providing supports at every stage of the startup life cycle, till it becomes self-sufficient.

Policies that aim to increase ease of doing business, easy labour regulations, lesser time for registrations and easier compliance mechanisms throughout the startup life is required. If the startups in India grow, it will support a large and diverse Indian population, improve their standards of living and create jobs for Indian economy.

CYBER WARFARE

THE NEXT FRONTIER OF WAR

In the present digital world where internet has become more important and it is being integrated into industrial and defence related networks around the globe, it has become increasingly important to focus on cyber warfare networks. Cyber warfare uses internet as a weapon against the enemy state without having any physical presence and thus making it one of the most deadly weapon to be used in the 21st century. The contemporary states are using the internet as a foreign policy tool. The internet, powered by satellites and under sea cables has become more relevant in aiding national security, such as in the development of remote radars and national security communication systems.

The use of internet in an integrated and connected world has made it possible to attack the enemy nation with the click of a keyboard key. Thus, the internet forms the basis of cyber warfare in the present world.

What is Cyber Warfare?

Cyber warfare refers to virtual warfare conducted in the cyberspace through the means of internet and cyber methods. The cyberspace can be described as globally interconnected network of digital infrastructure which involves the information and communications infrastructure such as computer systems, internet and telecommunications network, and digital information transmitting devices that mainly uses internet.

Cyber warfare involves agencies that are organised along nation state boundaries, in offensive as well as defensive operations by the use of computers, which are used to attack other computers or networks through electronic means. The impact of cyber warfare varies according to the target and severity. Through disrupting networks, the cyber attackers target real world infrastructures such as International airports, power grids etc. The nation states are increasingly getting dependent upon internet networks from financial services to transport networks. Dependence on the internet networks has made them more vulnerable to cyber attacks. The cyber attacks can be launched instantly from any distance with no evidence or traces of any path that could be travel back, which makes retaliation much harder. Though cyber attacks are mainly carried out by non-state individuals but if these attacks are aided by state machinery, they take the form of cyber warfare. Cyber warfare involves secret operations over the internet and there is equivalent destruction and damage as in a conventional warfare operation.

Types of Cyber Warfare

Cyber warfare can present multitude of threats towards any nation. At the fundamental level, cyber warfare is used to support traditional warfare. But various other modes of cyber warfare also exist. These are

Espionage Cyber warfare techniques are used for espionage where critical information is stolen from the enemy servers via communication networks. Out of all cyber attacks, 25% are espionage based cyber attacks where information is related to a country's infrastructure such as transport, power, etc. The cyber attackers steals classified and sensitive data to gain advantage over the rival country. Many of the cyber attacks uses Advanced Persistent Threats (APTs) as their tools to secretly enter networks or systems and remain undetected for years. This gives advantage to the attacking side of initiating an attack whenever it wishes to.

Sabotaging Sabotage attacks are made on useful and strategic infrastructure of a country. Components of military and defence are usually connected and integrated to national level control systems that run via satellite networks. Sabotaging is an act of disrupting this important system to undermine military and defence capabilities of a country. In addition to the military infrastructure, other types of infrastructure such as communication networks, power grids, transport networks, fuel and water supplies, port infrastructure as well as coal and nuclear power plants are also at risk of disruption.

Denial of Service Attack Denial of Service (DoS) attack or Distributed Denial of Service (DDoS) attacks are an attempt to make a machine or network resource unavailable to its intended user. These attacks targets services such as banks, financial systems, payment gateways etc. to cause financial disruption and loss to the country. It either consists of buffer overflow attacks which sends more traffic to a network address than it can handle. This leads to a crash in the network. When multiple systems are used to cause a synchronised attack to a single target, it is considered as a Distributed DoS (DDoS) attack. It makes the location of attack undetectable.

Cyber Propaganda Cyber warfare also includes cyber propaganda to control information and influence public opinion in a country. It is a form of psychological warfare and it uses social media, fake news and other digital means that are accessible by a large number of people. It is a form of long term warfare and it uses a deliberate, systematic technique to shape perceptions, manipulate minds and change or modify behaviours in a manner that a propagandist would like.

Phishing Attacks A phishing attack sends fake attractive offers to the people in an attempt to obtain financial details. Other form of details such as secret and classified information can be obtained through these attacks. To make the attacks more convincing the attacker uses spear phishing that looks more formal as it uses detailed information such as a proposal with a banner, logos, website addresses etc. which makes it easier for the attacker to obtain credible information. Phishing attacks can be used by countries to obtain information from government sources as well as private sources which are providing essential services to the government ministries and departments at the central as well as state levels.

The Challenges of Cyber Warfare

The unique nature of cyber warfare presents many challenges that require special mechanisms to cope-up with. These challenges are

No Physical Boundaries The cyberspace has no boundary limitations. It is not bound by geography and time. A cyber attack can be carried out from thousands of kilometers, without any physical presence. The increasing connectivity makes a cyber attack possible in any country from any place. Cyber attacks have also replaced traditional military attacks in several countries.

Increasing dependence on Information Technology Networks Today countries are dependent upon IT networks for banking and finance infrastructure, telecommunications infrastructure, electric power distribution systems, energy systems, transport management systems, strategic military and defence systems. This has made countries vulnerable as with a single click, the whole of critical infrastructure of a country can be disrupted.

No Battlefield There are no general battlefronts in cyber warfare. It can be carried out from anywhere on any network with the use of World Wide Web and satellite communication. Thus, traditional war techniques are being replaced by cyber war techniques that have potential to create blackouts, rail crashes and disruption at the financial institutions of a country such as the stock exchanges.

No Physical Damage Cyber warfare does not involve any physical strike or damage to any infrastructure. It only involves disruption of systems to create loss to the rival nation. It also makes it difficult to detect a cyber attack. Several times, it is not even possible to tell whether the disruption was due to a cyber attack or a systematic fault.

Easy to Organise It only requires a couple of computers with good internet access to organise and launch cyber warfare. Hackers often use tools that are free and simple to operate. It is much cheaper to finance cyber warfare as compared to conventional warfare.

Difficult to Trace The cyber attacks are very difficult to trace as they do not leave any evidence of any attack. The point of origin can not be tracked because it is launched by hacking into other computers. Even if the origin is traced, it is not easy to launch a counter offensive.

Difficult to Defend In conventional warfare, there are counter offensive and defensive techniques that are installed in a country's land boundaries but in cyber warfare, there are not any defensive systems that could be installed to defend against a cyber attack. Thus, it makes the cyber attack more complex and difficult to defend.

Conclusion

At present, there are no rules of engagement either at the national or international level. Thus, cyber space warfare has remained a borderless and complex entity that has the potential to create more damage than even the traditional military warfare. It is considered as a modern form of warfare that has anonymity as the biggest advantage associated with it. The rapid expansion of cyber war techniques puts the people in developing countries like India at much greater risk. Organisations such as DRDO has developed high grade cryptographic techniques to safeguard Indian networks against internal as well as external attacks. Partnerships with the private sectors is an essential step as majority of country's cyber assets are controlled by entities outside the government. There is an urgent need to train more cyber security experts so that Indian cyber space can be made more secure. India is fortunate to have an expert talent pool, which can be employed to make India free from surprise threats.

GENE EDITING

CUTTING THE UNWANTED

Human beings have always strived for a disease free life. We have achieved great scientific progress through which it is now possible to alter the fundamental genetic code of life. It has enabled us to modify genomes of all types of living creatures, including animals, plants, and even humans. The Gene editing technology, also known as Genome editing or Genome engineering is a technique through which DNA is inserted, deleted, modified or replaced in the genome of a living organism.

The gene editing techniques affect different areas such as disease management, biomedical research, agricultural and environmental research, etc. Gene editing has transformed research and human disease cures. Agricultural scientists are interested in the technology's potential to edit crops so that they can be made much more nutritious as well as drought resistant. Significant improvements have also been made in gene editing which has made it more precise.

Various harmful species of pests have been eliminated without altering ecological balance. In future it might make it possible to eliminate harmful disease affecting humans that will reduce human sufferings. It will also prove effective in de-extinction efforts and may also create new and healthier foods that will reduce hunger and malnutrition. Thus, it has huge potential that could make the world a better place to live.

Cutting and Pasting DNA-CRISPR

The editing of genetic material is done using CRISPR-Cas 9 technology, also known as molecular scissors. It is a dynamic and precise tool that allows scientists to essentially cut and paste DNA at any location and potentially repair or alter defective genes. It is used to remove, add or alter specific DNA sequences in the genome.

The CRISPR-Cas 9 system consists of two key molecules that introduces changes in the DNA. These are

- **Cas 9** It is an enzyme that can cut the DNA strands at specific locations so that the desired bits of DNA can be added or removed to obtain desired results.
- **Guided RNA** This is a small piece of pre-designed RNA sequence located within a longer RNA which binds to DNA and guides the Cas 9 enzyme towards the right part of the genome. It makes sure that the Cas 9 enzyme cuts the DNA at a precise point.

- The RNA guide is designed to find and bind to a specific sequence in the DNA. The RNA guide has RNA bases that are complementary to the target DNA sequence. This means that guided RNA will bind to the target sequence only. The Cas 9 enzyme follows the guide RNA and makes cut in the DNA. At this stage, the cell recognises that DNA is damaged and tries to repair it through mutation. For decades, the scientists used chemicals or radiations to cause mutations. However, there was no way of controlling where in the genome the mutation would occur. The CRISPR-Cas 9 technology has given them a versatile tool to edit the gene wherever they desire to. The CRISPR Cas 9 method is the most reliable and cheapest tool to cut and paste DNA at specific points.

Emergence of Gene Editing

The CRISPR clustered regularly interspaced short Palindromic repeats, were discovered in genomes of prokaryotes such as E. coli Bacteria in 1987 by Japanese scientist Yoshizumi Ishino. But, its use was successfully demonstrated in 2012 by a group of scientists who discovered that by designing guide RNA to target a specific region in the genome, the CRISPR Cas 9 system can be used as a cut and paste tool to modify genomes. Since then, it has been used to seamlessly cut and paste DNAs to switchoff trouble making genes.

It was recognised that E.coli bacteria has a built-in gene editing system that they respond to invading pathogenes such as viruses. Using the CRISPR, the bacteria cuts the part of virus DNA and keep a bit of it behind to help them recognise and defend against the virus the next time it attacks. Scientists adapted this system so that it could be used in other cells from animals, plants, humans etc. The CRISPR gene editing technology has been used for various purposes to make human lives better.

Uses of Gene Editing Technology

The CRISPR technology has enabled humans to experiment with newer techniques as the technology for editing genes has come far. The gene editing technology has following applications

- **Agricultural Improvements** Gene editing has resulted in improvements in agriculture all over the world. It has improved plant yields, crop quality and enabled us to make more disease resistant and better quality crops. It has enabled us to domesticate wild crops that are useful for eradicating hunger and malnutrition. Using this tool, a large number of crop varieties have been cultivated that have improved agricultural performance. There have been sweeping changes to agricultural technologies in breeding. This technique has the potential to create plants that are disease free. With climate change, the world requires more crops that can tolerate a wide range of weather conditions. Gene editing has the potential to create such crop varieties.
- **Genetic Research** CRISPR gene editing tool has been used to deliver superior genetic models for fundamental disease research, drug screening and therapy development. There have been improvements in rapid diagnostics, in-vivo editing and correction of heritable conditions. It also holds potential in treating various complex conditions such as cancer, tuberculosis as well as HIV infections. The genetic research is currently focussed on single gene disorders such as systic fibrosis, haemophilia and sickle cell disease. Scientists are working to boost the functions of immunity T-cells so that immune systems can detect and kill the cancer cells.

- **Medical Treatment** Gene editing technologies have potential to alter disease causing genes and treat severe medical conditions. Researchers have been able to edit genes in human embryo to try to correct a faulty gene which caused an inherent blood disorder. It was not accepted to the scientific community due to ethical and moral concerns but it has showed that gene editing technologies have huge potential in resolving issues and diseases that have been plaguing the human civilisation for long periods.

The removal of faulty gene and cure of hereditary diseases has been proven to be a blessing for even the future generations of children. This also will lead to lower incidence of diseases in the world.

- **Manufacturing Cleaner Biofuels** CRISPR gene editing technology has been used to alter gene of algae with high biofuel yield. This has enabled the researchers to double the yield of biofuel from the algae. The oil has been processed in existing refineries and used like a conventional fuel. This has enabled the researchers with a new tool to fight global warming through the use of more environment friendly and less degrading fuels. Gene editing has the potential to solve Global energy crisis.
- **Developing New Drugs** New and more effective drugs and medicines can be made using gene editing technology. These medicines can be used to treat heart diseases, blood disorders so that these diseases can be completely eliminated from human species. Many partnerships have been made with pharmaceuticals companies to develop modern age drugs to cure existing disease and cure future diseases in humans.

Concerns with Gene Editing

Several issues are associated with gene editing. These include

- **Issues with GM Crops** Genetically modified crops have higher yields and better nutrition but concerns related to GM crops have not been addressed properly. These foods have been said to create allergic reactions in many people and thus their efficacy has not been tested fully on people of all ages, genders etc. Issues have also been highlighted in various researches that CRISPR Cas 9 edited agricultural crops are also said to have triggered cancer in various people. In India where there are a diversity of races having different genetic composition, issues related to the effects of GM crops on these diverse people should be addressed.
- **Illegal Experiments** Gene editing technology has been used to carry out illegal experiments by editing genes and creating 'designer babies'. These experiments do not have certificates and authorisation from the scientific medical community. These experiments are not certified and may cause potential harm to the gene edited embryo. Altering human being genes without any approved technique may have unintended consequences for human lives. Though there are no guidelines on editing genes in human embryos but scientific community has evolved a general consensus that clinically gene editing should not be used on human embryos for experimentation.
- **Genetic Inequality** Through gene editing technology, wealthy parents can afford to edit the genes of their offsprings and lead to genetic haves and have nots. It would lead to greater inequality than the present world already lives with. This could also lead to genetic discrimination among the poor and the rich. Thus, inequality will be established opposite to what the technology is to be used for.

- **Germline Modification** Germline editing means changing the genes passed on to the children and future generations, creating genetically modified people. The changes made in germline would be passed on to future generations, thus, passing on the modifications to even new people that would be added to the current generation. Germline modification has been considered unsafe and socially unacceptable. It would lead to random mutations, extrapolation of the genetic changes, harmful consequences for the future generations, negative impact of social perception among the members of the society.

Conclusion

Gene editing has taken technological innovations to newer levels. A lot of progress is still to be made as technological and ethical hurdles still stand between humans and the use of genome editing applications. Experiments and tests should be conducted so that it is subject to appropriate scrutiny by the regulators and their use must be controlled to prevent commercial misuse. While scientists are still working to determine whether the gene editing technology is safe and effective for use of the people, the current application of the technology must be regulated for safe use. It must be remembered that any technology is for the betterment of humankind. It must be ensured that social concerns are addressed before the use of gene editing. The government, private sector and scientific community must work together to make gene editing safe for use.

75



STEM CELLS

REGENERATING ORGANS



Modern medical therapies are capable of miracles that humans have sought to solve problems of their lives. Stem cell research has also opened up a wide range of opportunities for medical sciences. Using stem cells, damaged tissues and organs can be replaced, new drugs can be safely tested and opportunities can be created in research for genetic defects and even cancer. It has wide potential in healthcare for curing different types of diseases and improving the state of human body in general.

Stem cells provide new cells for the body as it grows, and can replace specialised cells that are damaged or lost. They have unique properties to carry out cell division again and again to produce a new cell and as they divide, they can change into other types of cells that make up the human body.

History of Stem Cell

The term 'stem cell' was coined by Theodor Boveri and Valentin Hacker in the late 19th century. But the key properties of stem cells were identified by two scientists in early 1960s at university of Toronto.

They did a pioneering work by using bone marrow cells in mice. The first therapy using stem cells was a bone marrow transplant performed by French Oncologist in 1958 on five workers who were critically affected by accident. These workers survived.

In the year 1981, embryonic stem cells were first isolated and successfully cultured using mouse blastocysts by two British Biologists. In 1998, scientists were able to derive stem cells from Human embryos and grow stem cells in a laboratory. These cells were known as Human Embryonic stem cells. In 2006, another breakthrough was achieved that allowed the scientists to reprogram adult cells genetically so that they can be converted into stem cells. The biology of these mysterious cells are yet to be understood and lot more research is needed before new therapies using stem cell can be applied.

Types of Stem Cells

There are several types of stem cells that can be used for different purposes. These are

- **Embryonic Stem Cells** Embryonic stem cells are derived from human embryos that are 3 to 5 days older. They are harvested during a process known as Invitro fertilisation. This involves fertilising an embryo in a laboratory instead inside the female body. Embryonic stem cells are pluripotent stem cells which means that they can give rise to virtually any other type of cells in the body.
- **Non-Embryonic (Adult) Stem Cells** These stem cells come from developed tissues and organs in the body. They are used by the body to repair and replace damaged tissues in the same area in which they are found. Hematopoietic stem cells are type of stem cells found in the bone marrow. They can make new red blood cells, white blood cells, and other type of blood cells. Doctors have been performing stem cells transplants for decades using the Hematopoietic stem cells. Adult stem cells cannot differentiate into as many other types of cells as embryonic stem cells can.
- **Induced Pluripotent Stem Cells** Adult stem cells can be converted into pluripotent stem cells. These new type of cells are called induced pluripotent stem cells. They can turn into any type of specialised cells in the body which means that they can potentially produce new cells for any organs and tissues. Scientists reprogram the adult stem cells so that they can be used as embryonic stem cells. These cells can be turned into islet cells to treat diabetes, blood cells to create new blood which is free of cancer cells, or neurons to treat neurological disorders. It is a groundbreaking discovery which can become the foundation for the new regenerative medicine in humans for treating a dysfunctional organ or any tissues.
- **Cord Blood Stem Cells** Cord blood stem cells are harvested from the umbilical cord after childbirth. These cells can be frozen in cell banks for use in the future. They have been used to treat various life threatening diseases but more research is required to understand the potential use of these cells.

Uses of Stem Cells

Stem cells are important in medical research for many reasons. They have high potential applications in following areas

- Stem cells are used to understand the developments of complex organisms from a fertilised egg. It can be easily identified that how does stem cells become increasingly specialised, making skins, bones, brain and other cell types. Serious medical conditions such as cancer, birth defects can be understood in a better way.
- Stem cells are used to replace damaged cells and treat diseases. Stem cell therapy can be used to treat extensive skin burns, and to restore the functioning of blood systems in patients with Leukaemia and other blood disorders. These cells can be used to replace the cells lost in many life threatening diseases for which currently there are no suitable cures. If stem cells can be directed to differentiate into specific cell types, various diseases such as stroke, heart disease, diabetes can be cured.
- Stem cells are used to test new medical treatments. New medicines can also be created by testing their safety on humans rather than animal based testing. The cells can be modified to model various types of diseases in the laboratory and get a better understanding of what goes wrong while curing the diseases. Causes of genetic defects can be easily understood with the help of stem cells.
- Pluripotent stem cells can be used to create an unlimited supply of cells, tissues or even organs that could be used to restore functions without the requirement for toxic immunosuppressants. Several types of transplantation such as Bone marrow transplantation could become more safe and cost effective. Growth and transplant of tissues such as skin, heart, nervous system etc. can be carried out with ease.
- Stem cells can be used for treating immuno-deficiency diseases. These diseases are characterised by an unusual susceptibility to infection and often associated with anaemia, arthritis, diarrhea etc. The transplantation of stem cells could result in restoration of immune functions and effective normalisation of life span and quality of life for these people.
- Mental diseases can be cured effectively with stem cells. Diseases such as Parkinson's can be cured by treating brain cells that are specifically causing the disease to emerge. Human clinical experiments have demonstrated the potential effectiveness of this approach to treatment.

Challenges Related to Stem Cell Treatment

Stem cell treatment is essentially a new type of therapy, the consequences of which have not been sufficiently investigated. Hence, the reliability of stem cell therapy is not yet established. It is subjected to following challenges

- The cost and production of stem cells is still being debated. As it is a newer therapy, it would be resulting in inequalities where the rich can afford these therapies whereas the poor people can not. It is not yet clear from where the stem cells can be commercially produced and used for research on a large scale and treatments.

- Currently, the stem cells experimental practises are used without any preliminary verification of efficacy of those practises. Many cases have shown that the experiments based on stem cell treatments have been riskier and ineffective, even putting lives on the line.
- There is currently poor standardisation and regulation of stem cell therapies. Thus, different kinds of results are differently interpreted by various scientists. Lack of standardisation also results in practical hurdles in applying the results successfully to patients.
- Stem cell therapies also has moral issues. It presents itself with two dilemmas- the duty to prevent or alleviate sufferings or the duty to value human life. To obtain embryonic stem cells, an embryo has to be destroyed. It means destroying a potential human life. But it could also result in discoveries of new techniques that could save human lives or make them better. Thus, this dilemma has to be resolved before applying stem cell treatment.

Conclusion

The advancements in science have transformed human lives. Stem cell therapy research is a similar scientific achievement that has the potential to transform human lives. Whether stem cell research can have life saving effect on humans is yet to be determined. The current research should be aligned towards the uses of stem cell as to improve human lives and end its miseries. The work of scientists should be driven by public welfare and should not ignore public morality. Any kind of research should respect public sensitivities and public concerns. It is through a broad participation of all stakeholders that the effects of stem cell treatments can be carefully measured, improved and further applied to better treatments for various incurable diseases. Stem cells offer various opportunities as well as various challenges that should be overcome to make it successful and friendly to human life.

BLOCKCHAIN TECHNOLOGY

PROMISES AND CHALLENGES

Blockchain technology is an emerging technology that has the potential to improve security in banking, supply chain and other transaction networks. It reduces the risk of fraudulent transactions, save time and eliminate intermediaries. It is the safest mode of recording transactions between people. The technology in its present use allows the consumers and suppliers to connect directly, removing any needs of intermediaries.

It provides a decentralised database or digital ledger of information that everyone on the network can see. It ensures security as well as transparency. Once an information is stored on a blockchain, it becomes extremely difficult to change or alter it. It has opened doors for creating a distributed consensus of digital online world. This allows the participating entities to certainly know that a digital event has occurred. There are disruptive opportunities that have been created by the use of this technology.

What is a Block Chain?

A Block chain is a digital network that stores various kinds of information. Each block in a blockchain network stores information with the hash of its previous block. A hash is a digital code which belongs to the specific block in the network. If information in any block gets modified, the hash is also modified. The connection of blocks through unique hash keys makes the blockchain secure.

A blockchain network makes use of public and private keys in order to form a digital signature which ensures security and transparency. Blockchain allows the participants of network to perform digital verification and reach a consensus to agree on a particular value. While making any transfer, or uploading any information on the blockchain network, the sender uses their private key and announces the transaction on the network.

As transaction is made or information is uploaded on the network, the block is created. As information gets created in a network, the block is required to be validated by reaching a consensus. As soon as the information gets validated the block gets verified and is added to existing blockchain. In this way, the updated information is stored securely over the network.

Advantages of Blockchain Technology

The following advantages makes the block chain technology attractive for future applications.

Decentralised Nature Block Chain is decentralised in nature, meaning that no single person or a group of persons holds the authority of overall network. Everybody in the network has the copy of distributed ledger with them but nobody can modify it on their own, without the consent of people on the network. This approach of blockchain technology allows transparency as well as security to the people in the blockchain network. Decentralisation also allows for independent operation between users rather than being regulated by any authority.

Peer-to-Peer Networks Blockchain makes the interaction between two parties easily possible via peer-to-peer network. The P2P protocol enables the people on the blockchain network to hold an identical copy of transactions. There is no requirement of a third party and any transaction can be done without involving any extra charges being paid to any third party that is regulating the network.

Permanent Storage of Data Any data can be permanently stored in a blockchain network. Once any data has been processed, it can not be changed or altered due to the distributed nature of the ledger. If anyone in the network tries to change the data, they will have to change the hash of the previous blocks because each block contains a hash that is a unique digital address of that particular block. It is extremely complicated for someone to change all the hashes as it requires complicated operations. Hackers also cannot alter the data due to this reason.

Tamper Proof It becomes easier to detect tampering of any data. Blockchains are tamper proof because changes in one block can be detected and fixed smoothly. As the hash of one block is linked to the next block, in order to tamper with the data, anyone will need to change hash of every block, which makes it impossible to do so. It prevents fraud in financial operations as well as data storage of any kind. If any editing in transactions take place, it can be easily audited.

Accountability Blockchain offers higher degree of accountability to the people because every person on the network is able to see what kind of data is being uploaded or updated in the network. The network itself is not reliant upon any third person or any regulator. It removes any error in the uploading of data by creating unalterable ledger or blocks of information. Several core banking platforms are working on blockchain technologies to remove any error in transaction values.

Applications of Blockchain Technology

Blockchains have been primarily used for cryptocurrencies, which are decentralised currencies that work independently of the Central bank of a country. The nature of blockchain has allowed businesses all over the world to explore technology's potential. The potential use of blockchain are

Smart Contracts The terms of engagement between two parties involved in any business transaction is signed by them in the forms of agreements or contracts. The paper-based contracts are prone to fraud or errors which affects the trust between parties. Smart contracts are digital contracts that have been made using the blockchain technology. When any condition that is mentioned under the contract is not met, then the smart contract is automatically deployed. Smart contracts have been used for different industries such as financial agreements, health insurance, real estate property documents etc.

Digital Elections Blockchains offer a potentially safe application in digital elections conducted using Electronic Voting Machines (EVMs). EVMs are not tamper proof and can be manipulated. But blockchain systems can be used to store election related data which can not be manipulated. Chances of any manual errors can be eliminated using blockchain technology. Thus, it allows greater reliability in choosing our representatives with fairness of the process.

Healthcare Uses Blockchains can be used to store information related to a patient's medical records. When a medical record is made, it can be incorporated into the system using blockchain which provides the patients with a proof that the health record can not be manipulated or changed. These personal health records can also be stored on the blockchain with private key encryption so that they are only accessible by certain individuals.

Banking Applications By integrating blockchain into banking system, customers will be able to see their transactions processed in few minutes rather than days. With the safety of blockchain, banks have the option to safely and securely transact funds between institutions without any fraud, efficiently and in quick time. The banking transactions involve huge costs, but blockchain technology can be used to transact easily without involving any large transaction costs.

Property Records The process of property records is cumbersome and involves frauds and manipulations. But blockchain can be used to efficiently store property records with ease. The technology has the potential to eliminate the need for physical manual entries which are error prone. Blockchain can be used to store data related to property without any error.

Supply Chains Blockchain can be used to store data related to sales and purchases in supply chains. This allows the companies to verify the authenticity of their products. Blockchain is already being used in the food industry to track the path and safety of food through farm to user journey of the food product.

Issues in Blockchain Technology

Several industries have applied blockchain technology to make their systems more reliable, fast and efficient. But the use of blockchain technology is not free of challenges. Various concerns associated with blockchains are

Higher Costs The costs of blockchain technology is very high for smaller firms. Firms need large amounts of computational power, which requires huge investments in buying hardware as well as software technologies.

Speed The transactions using blockchain technology are slower as compared to the transactions channels. Transactional channels can perform much faster transactions than blockchains.

Illegal Activities Blockchain technology can be used to perform illegal activities because it is fully encrypted and unregulated. These activities can not be tracked easily because new blocks will keep adding in the current network.

Security and Privacy Identities created in a blockchain network are encrypted. This, along with the decentralised system of blockchain makes it insecure and privacy concerns arise. To drive public acceptance of blockchain networks, privacy and security concerns should be addressed.

No Regulations There are currently no regulations and governing mechanisms for blockchain networks. It reduces government oversight and its impacts on businesses cannot be properly understood and managed if the whole system works outside the existing regulatory structure.

Conclusion

Blockchain has immense potential due to its diverse uses and various applications. Different types of problems can be solved with the help of blockchain technology. Blockchain provides security and trustworthiness in several ways. It has been widely claimed that blockchain will revolutionise the business and redefine companies and economies. A blockchain led transition is still years away due to the risks and concerns it poses. Blockchain has the power to transform ways in which people trade, get medical services, transform supply chains, and make technology more accessible and transparent for everyone. It will lead to improvements in people's lives if blockchain's potential are really fetched.

77

INDIA'S NUCLEAR
PROGRAMME

India being a peace loving country promotes civilian use of nuclear technology and has devised a strategy to tap this energy source for developmental purposes. Thus, India's peaceful ways of using nuclear energy is termed as Indian Civil Nuclear Strategy. Since our Independence our first Prime Minister Pt Nehru took a very vocal stand against nuclear weapons but being aware of its utility, modernist Nehru asserted for its use in national development.

Nuclear energy is the energy which is derived from any radioactive material. It can be derived through two processes i.e. nuclear fission and nuclear fusion. Nuclear fission is a process where the nucleus of a radioactive element breaks down and energy is released and on the other hand, Nuclear fusion is the process where two elements combine to release energy. The former is a controllable process and is used in civil nuclear energy. The latter is a process which is difficult to control but produces enormous amount of energy. The nuclear fusion process takes place in the Sun and provides continuous energy to it.

Beginning of Nuclear Programme in India

India's journey in the field of nuclear energy began with the formation of Department of Atomic Energy in 1954. The aim of Nuclear programme of India was to harness nuclear resources for peaceful purposes. Under the Nuclear Energy Programme of India, an agreement was signed with USA to setup India's first Nuclear Power Station in 1963 at Tarapore in the state of Maharashtra. Tarapore marked the beginning of India's nuclear power development.

As an effort to promote nuclear energy, another agreement was signed with Soviet Union to setup another nuclear plant at Kudankulam in 1988. In the earlier stages, electricity generation was the primary focus of the India's nuclear energy programme. From the beginning, India's nuclear energy programme paid priority and attention to indigenous nuclear energy production. India's nuclear weapon program was later started with the Pokhran I and Pokhran II tests.

For the nuclear energy, the design, development and manufacturing responsibility for power plant equipments were taken up by Indian industries on their own. Companies such as BHEL, L&T, Godrej industries took major responsibilities for supply.

Pokhran Nuclear Tests

The year 1974 marked a watershed in India's Nuclear Development Programme. India conducted its first nuclear detonation on 18th May, 1974 in Pokhran Range, Rajasthan. Pokhran I, coded as 'the Smiling Buddha', scripted our nation's name in the list of nuclear weapon possessing countries. This was also the first confirmed nuclear test by a nation outside the five permanent members of the United Nations Security Council. The soils and sacredness of the Rajasthan once again experienced a nuclear test in 1998. It was Pokhran II which earned pride and fear from world nations. It consisted of five detonations, of which, the first was a fusion bomb and the remaining four were fission bombs. These nuclear tests resulted in a variety of sanctions against India by a number of major countries, including Japan and the United States.

Agencies for Nuclear Programme in India

India's two giant scientific establishments, the Department of Atomic Energy (DAE) and the Defense Research Development Organisation (DRDO) began to synergise their strength. By 1989, India refined its ability to drop nuclear bombs using combat aircraft. By the time, the 1995 tests started, the DRDO and the atomic energy team had made major changes in the bomb. The weight was reduced considerably and the yield was increased. Elaborate safety packages for delivery had been taken care of. Missiles were also developed as delivery vehicles. The first nuclear power plant was installed in 1969 in Tarapur, Maharashtra with two units of 160 MW each. At present, there are 21 nuclear power plants operational in India. By 2050, India aims to supply 25% of electricity from nuclear sources.

India's Three-Stage Nuclear Power Programme

India's Nuclear Power Programme was conceived as a three stage cycle as envisaged by Dr Homi Bhabha. The first stage was the Pressurised Heavy Water Reactor (PHWR) utilising natural uranium to produce electricity. The spent fuel was Plutonium-239 as a by product.

The second stage was Fast breeder reactor which used mixed oxide made from by product of first stage i.e. Plutonium-239. Fast breeder reactors are the ones which produce more fuel than it consumes. The third stage as envisaged was Thorium based reactor which involved self-sustaining fuel model comprising of Thorium-232 and Uranium-233 as fuel. Large deposit of Thorium has been discovered in Malabar coast of India, making it the natural choice of fuel for the third stage.

India and International Scenario

As India is not a signatory to the discriminate Nuclear Non-proliferation Treaty, due to its weapons programme, it was excluded from trade in nuclear material and nuclear plant technology.

This had hampered its civil nuclear strategy till 2009. Since 2009, India's civil nuclear path changed as we signed the India-US Civil Nuclear Agreement also known as 123 Agreement. Also, with the support of USA, Nuclear Suppliers Group (NSG) granted waiver to India to access nuclear material and nuclear technology.

In pursuance of the exemption granted to India, the Parliament passed Nuclear Liability Act, 2010. In 2016, India signed Civil Nuclear Agreements with 14 countries to carry out nuclear commerce to be used as fuel for power generation. India also became the member of Missile Technology Control Regime (2018), Wassenaar Agreement (2017) and Australia Group (2018). The inclusion of India has further strengthened the candidature of India as member of Nuclear Suppliers Group (NSG).

Significance of India's Nuclear Energy Programme

India's population has grown from only 350 million to 1.3 billion today. Commercial energy consumption has increased which is fulfilled mainly by coal power and hydropower. India requires a sustainable source of energy for meeting the requirements of its large population. Almost 33% of India's population resides in urban areas of the country that have high energy consumption requirements. This rapid pace of urbanisation combined with increasing industrialisation has pushed up India's energy demands. Such enormous amount of energy supply can be provided effectively with the help of nuclear energy only. Thus, investing on a sustainable basis in the nuclear energy programme becomes more important.

Moreover, due to the exhaustible nature of coal, petroleum and natural gas resources for producing India's energy, these are limited in their scope and extent. Hence, nuclear energy programme to produce nuclear energy in a safe manner becomes significant.

Conclusion

India has emerged as a global super power. To maintain pace of development, it is important to build a constant and reliable supply chain of nuclear materials. India has succeeded in pushing its nuclear programme in right direction through its political will, bilateral agreements and NSG waiver for nuclear trade. In this regard, India is set to touch new horizon with agenda of development through its nuclear programmes.



ISRO

THE TORCHBEARER OF INDIAN INNOVATION



The Indian Space Research Organisation (ISRO) is the space agency of the Government of India founded with a vision to “harness space technology for national development while pursuing space science research and planetary exploration”. Indian Space Research Organisation (ISRO) was formed in 1969. The headquarter of ISRO is located at Bengaluru, Karnataka. Since its inception, ISRO has accomplished 77 launch missions including Scramjet-TD and RLV-TD, 109 spacecraft missions including 3 nano-satellites, 1 micro-satellite and 2 Re-entry missions. ISRO has also launched 319 foreign satellites till date.

In a historic decision, the Union Government on 24th June, 2020 opened India’s space programmes for private players. The Cabinet approved the newly formed Indian National Space Promotion and Authorisation Centre (IN-SPACe), which will act as an arm of the Indian Space Research Organisation (ISRO). IN-SPACe will be functional in six months and will provide level playing field to private companies in the country’s space programmes. IN-SPACe, in consultation with ISRO, will also guide and promote the private companies in their endeavour in space activities after assessing their needs and demands.

Genesis of ISRO

India started its journey to space with the formation of Indian National Committee for Space Research (INCOSPAR) in 1962 with Dr Vikram Sarabhai at its centre. INCOSPAR set up the Thumba Equatorial Rocket Launching Station (TERLS) in Thiruvananthapuram for upper atmospheric research. Dr Vikram Sarabhai provided the necessary direction to ISRO in its nascent stage. ISRO then embarked on its mission to provide the Nation space based services and to develop the technologies to achieve the same independently.

Mission Statement of ISRO

ISRO has listed following in its mission statement

- Design and development of launch vehicles and related technologies for providing access to space.
- Design and development of satellites and related technologies for Earth observation, communication, navigation, meteorology and space science.
- Indian National Satellite (INSAT) programmes for meeting telecommunication, television broadcasting and developmental applications.

- Indian Remote Sensing Satellite (IRS) programme for management of natural resources and monitoring of environment using space based imagery.
- Space based applications for societal development.
- Research and development in space science and planetary exploration.

Successful Missions of ISRO

Throughout the years, ISRO has upheld its mission of bringing space to the service of the common man, to the service of the nation. In the process, it has become one of the six largest space agencies in the world. Brief timeline of some of the successful missions of ISRO are as follows

- The first Indian Satellite, Aryabhata was launched in 1975. It provided the means of using space communications system for TV broadcasting. It led to creation of project Satellite Instructional Television Experiment (SITE). It was a one-year programme covering Indian villages and districts. The main purpose of SITE was to experiment usage of satellite broadcasting to educate the masses.
- In 1977, Satellite Telecommunication Experiments Project (STEP) was launched using satellite technology to enhance domestic communication. SLV-3 placed Rohini satellite in orbit, thereby making India the sixth member of an exclusive club of space-faring nations.
- The first indigenously created satellite vehicle was launched from Sriharikota range in Andhra Pradesh in 1980.
- Indian National Satellite System (INSAT), the largest domestic communications system in the Asia Pacific was launched in 1983. INSAT was commissioned to work on broadcast, telecom, meteorology and rescue.
- The first Indo-Soviet manned space mission was launched in 1984. Rakesh Sharma flew in the Soviet rocket Soyuz T-11, as part of a three member Soviet-Indian crew.
- The Augmented Satellite Launch Vehicle (ASLV) programme launched in 1987 which supported a large payload with four developmental flights.
- First lunar mission was launched by ISRO in 2008 using the spacecraft named Chandrayaan that discovered a large number of water molecules on Moon.
- In 2014, Mangalyaan, India's first interplanetary mission was launched. The successful accomplishment made the ISRO fourth space agency in the world to reach Mars. It was recognised as the least expensive Mars mission.
- In 2017, ISRO launched 104 satellites in a single rocket (PSLV-C37), thus, setting a world record. Further, ISRO also launched its heaviest rocket, Geosynchronous Satellite Launch Vehicle-Mark III (GSLV-Mk III), placing a communications satellite GSAT-19 in its orbit. With this launch, ISRO became capable of launching 4 tonne heavy satellites.
- In 2019, ISRO conducted its second lunar mission through Chandrayaan-2 mission with an aim to land on the lunar surface. Although, attempt to soft land on the lunar surface failed, the mission was mostly successful in achieving its objective.

Inter-Planetary Missions

So far, ISRO has undertaken 3 inter-planetary missions which are as follows

- **Chandrayaan-I (2008)** Chandrayaan-1 was India's first mission to the Moon. The robotic lunar exploration mission included a lunar orbiter and an impactor called the Moon Impact Probe. Chandrayaan-I mission was successful. Moon Impact Probe was successful in discovering water on the Moon.

- **Mangalayaan (2013)** The Mars Orbiter Mission (MOM) or Mangalayaan was launched into Earth's orbit on 5th November, 2013, by the Indian Space Research Organisation (ISRO). It entered Mars orbit on 24th September, 2014. India became the first country to enter Mars orbit in its first attempt.
- **Chandrayaan-II (2019)** Chandrayaan-2 was the second mission to the Moon. Chandrayaan-2 was launched on a Geosynchronous Satellite Launch Vehicle Mark III (GSLV-MkIII) on 22nd July, 2019. It consisted of a lunar orbiter, the Vikram lander, and the Pragyan lunar rover which were indigenously developed in India. Chandrayaan-II mission was the first mission meant to explore the lunar South Pole region.

Another objective of the Chandrayaan-II mission was to demonstrate ISRO's ability to soft-land on the lunar surface and operate a robotic rover on the surface. However, the soft landing of Vikram lander could not be accomplished. The lunar orbiter was efficiently positioned in an optimal lunar orbit, extending its expected service time from one year to seven years.

Future Missions of ISRO

Future plans of ISRO include the development of a Unified Launch Vehicle (ULV), development of a reusable launch vehicle, human spaceflight, controlled soft lunar landing, interplanetary probes and a solar spacecraft mission. The core objective of a ULV is to design a modular architecture that could eventually replace the PSLV, GSLV Mk I/II and LVM3 with a single family of launchers.

Thirty (30) Polar Satellite Launch Vehicles (PSLVs) and ten (10) Geosynchronous Satellite Launch Vehicles (GSLV MK III) rockets are targeted to be in space by 2022. There will be another attempt for soft landing on moon by late 2021, but without an orbiter in its mission named Chandrayaan 3.

ISRO plans to carry out a mission to the Sun by the year 2022. The probe is named Aditya-L1 and will have a mass of about 400 kg. It is the first Indian space-based solar coronagraph to study the corona of the Sun in visible and near-IR bands. ISRO will also fly Indian astronauts into space for the first time on board 'Gaganyaan' mission by 2022. Gaganyaan is an Indian crewed orbital spacecraft intended to be the formative spacecraft of the Indian Human Spaceflight Programme.

Conclusion

ISRO has contributed to space science and science education in the country. Various dedicated research centres and autonomous institutions for remote sensing, astronomy and astrophysics, atmospheric sciences and space sciences in general function under the aegis of Department of Space.

Since India has opened up its space industry for private players, it is a first ever step in the same direction as NASA went long back and is now the biggest space agency in the world with its budget running into billions.

Future readiness is the key to maintaining an edge in technology and ISRO endeavours to optimise and enhance its technologies as the needs and ambitions of the country evolve. Thus, ISRO is moving forward with the development of heavy lift launchers, human spaceflight projects, reusable launch vehicles, semi-cryogenic engines, Single and Two Stage to Orbit (SSTO and TSTO) vehicles, development and use of composite materials for space applications, etc.

CHANDRAYAAN-2

INDIA'S MOON MISSION INSPIRED THE WORLD

India's space mission seeks to harness space technology for national development. In this regard, India's space programme took a giant leap when Chandrayaan-2 mission in a bid to land on lunar surface was attempted. Chandrayaan-2 was a follow-up mission to Chandrayaan-1, which was launched in October 2008 and orbited around the moon for 312 days till August, 2009. It discovered water in the form of ice in various parts of the moon, which was a path-breaking discovery in the world of space science. It also discovered minerals such as magnesium, aluminium and silicon on the lunar surface.

Chandrayaan-2 was launched to further explore the Lunar surface. Thus, the objective of the Chandrayaan-2 mission was to explore and perform studies in the South Pole region of the moon which had not been explored previously. The mission consisted of a lunar orbiter, lander and rover. One of the objectives of Chandrayaan-2, was to demonstrate the ability to soft-land on the lunar surface and operate a robotic rover on the surface. Its scientific goals included studies of lunar topography, availability of minerals and water in the form of ice.

Components of Chandrayaan-2

The Chandrayaan-2 spacecraft included three components: a Lunar orbiter, the Vikram lander and the Pragyan lunar rover, all of which were indigenously designed and developed.

The **Lunar orbiter** carried eight scientific instruments, which includes a high resolution camera for finding a hazard free spot for the lander and other equipment for mapping the lunar surface for presence of minerals as well as the presence of water in the form of ice. It has an electric power generation capability of 1000 watts and a weight of 2379 kg. Its life is expected to be more than seven years.

The **Vikram lander** had to detach from the orbiter and descend to a low lunar orbit of 30 km x 100 km by using its main engines. It was to then perform a comprehensive check of all its on-board systems before attempting a soft landing that would have deployed the rover and enabled it to perform scientific activities for approximately 14 Earth days. It had the capability to communicate with Earth as well as with the Orbiter and Rover. It had all the equipment to select a suitable landing site and slow down its speed to enable a soft landing. However, it failed to slow down sufficiently to enable the Pragyan rover to carry out its work of exploring the lunar surface. The lander had an electric power generation capability of 650 watts and a weight of 1471 kg, which included the rover having a weight of 27 kg.

The **Pragyan lunar rover** was a 6-wheeled robotic vehicle which could travel a distance of upto 500 metres for exploring the moon's surface. It also had an electric power generation capability of 50 watts. It was capable to communicate with the lander. Its primary objective was to identify and determine the abundance of elements near the landing site.

Timeline of the Mission

The mission was launched on a Geosynchronous Satellite Launch Vehicle Mark III (GSLV Mk III), popularly known as Bahubali, from Satish Dhawan Space Centre, on Sriharikota Island on 22nd July, 2019. It is primarily designed to launch communication satellites in Geostationary Transfer Orbit (GTO).

Initially, the spacecraft was placed in Earth's orbit for a while, its orbit was raised using on-board propulsion over the next 22 days. After 29 days from its launch, the Chandrayaan-2 spacecraft entered lunar orbit on 20th August, 2019. After performing a lunar orbit insertion operation, it was placed into an elliptical orbit that passes over the polar regions of the Moon.

This was followed by separation of the lander from the orbiter on 2nd September, 2019. After selecting a suitable landing site, the lander separated from the orbiter on 6th September, 2019. In 15 minutes, communication with the lander was lost, as it had made a 'hard' landing due to a software glitch.

Importance of Chandrayaan-2 Mission for India

Even though the mission has not completed all its stated objectives yet it has boosted the national pride of India. It will motivate the youth to develop scientific temper and undertake real life applications of science and technology. The mission is going to improve the understanding of the Moon and benefit India as well as the whole humanity. It will also provide a push to the home grown indigenously developed space technology that will be critical to future launches and technology missions. It is crucial for inculcating a spirit of scientific temper, innovation and higher standards of manufacturing in India's space sector. ISRO's partnership with the Indian startups in the space sector such as 'Team Indus' will also nurture space startups in India.

Chandrayaan-2 as an Inspiration

Chandrayaan-2 has brought the importance of Moon missions in the limelight. These missions are not only capable of fetching economic benefits but also further scientific advancements. For instance, various Moon missions, including Chandrayaan-1 mission, have discovered water on the lunar surface. Mineral resources have also been discovered by various Moon missions. Organisations working in space technology are also exploring the aspects of lunar settlements.

In addition to this, ambitious venture like Chandrayaan-2 by India has definitely inspired the world. After the successful launch of the rocket carrying the Chandrayaan-2 into orbit, the National Aeronautics and Space Administration (NASA) of the USA lauded Chandrayaan-2, saying India's Moon mission has inspired the US space agency, which is keen to jointly explore the Solar system with ISRO. The New York Times newspaper lauded India's 'engineering prowess and decades of space development'. Its report stated, "One of the successes of India's space programme has been its cost-effectiveness. Chandrayaan-2 cost US \$ 141 million, a small fraction of what the United States spent on its historic Apollo Moon mission."

Present Status of Chandrayaan-2

The orbiter is successfully moving round the moon in its designated orbit. It is continuously transmitting data in the form of images to ISRO ground stations through various onboard sensors and cameras. On 30th July, 2020, the terrain mapping camera capture the Sarabhai crater on the North-East quadrant of the Moon.

Conclusion

Further Moon missions have been planned by ISRO, with another attempt at a soft landing by 2021, with Chandrayaan-3. The proposed configuration would include a detachable propulsion module, a lander and a rover, but not an orbiter. We hope that this time ISRO will meet with 100% success in the mission.

80



NANOTECHNOLOGY

A NEW REVOLUTION



Nanotechnology is the engineering of tiny machines. This is done inside personal nanofactories using techniques and tools being developed today to make advanced products. Nanotechnology is the technology of the future and it will aid in a manufacturing revolution. Ananometer is one billionth of a meter, probably the width of three or four atoms. A human hair is about 25000 nanometers wide. So, one can imagine how small these machines will be. The development and progress in artificial intelligence and molecular technology have spawned this new form of technology i.e. Nanotechnology.

Background of Nanotechnology

The ideas and concepts behind nanoscience and nanotechnology started with a talk entitled “There’s Plenty of Room at the Bottom” by physicist Richard Feynman at an American Physical Society meeting at the California Institute of Technology (Caltech) on 29th December, 1959. In his talk, Feynman described a process in which scientists would be able to manipulate and control individual atoms and molecules.

Over a decade later, in his explorations of ultraprecision machining, Professor Norio Taniguchi coined the term ‘nanotechnology’. It wasn’t until 1981, with the development of the scanning tunnelling microscope that could see individual atoms, that modern nanotechnology began.

Impact of Nanotechnology

Nanotechnology is sometimes called a general-purpose technology because in its advanced form, it will have significant impact on almost all industries and all areas of society. It will help in creating better built, longer lasting, cleaner, safer and smarter products for the home, communications, medicine, transportation, agriculture and for industry in general. It is more than just mixing nanoscale materials together. It requires the ability to understand and to precisely manipulate and control those materials in a useful way. Nanotechnology involves a new and broad science where diverse fields such as physics, chemistry, biology, material science and engineering converge at the nanoscale.

It is also important to understand that nanoscale materials are found in nature. For instance, haemoglobin, the oxygen-transporting protein found in red blood cells is 5.5 nanometers in diameter. Naturally occurring nanomaterials exist all around us, such as in smoke from fire, volcanic ash and sea spray. Some nanomaterials are a byproduct of human activity, such as bus and automobile exhaust and welding fumes.

Implications of Nanotechnology

To understand its implications, try to imagine a medical device that roams through the human body to find and destroy tiny clusters of cancerous cells before they can spread. Another example is a box of size of a sugar cube that holds the entire contents of a public library, or materials ten times lighter than steel yet ten times stronger. Nanotechnology will result in greatly improve efficiency in almost every aspect of life as has been mentioned above.

You may recall from the size of the nanoscale page that the nanoscale is about 1 to 100 nanometers. Working at the nanoscale requires an understanding of the various types and dimensions of nanoscale materials. Different types of nanomaterials are named for their individual shapes and dimensions. Think of these simply as particles, tubes, wires, films, flakes, or shells that have one or more nanometer-sized dimension. For example, carbon nanotubes have a diameter in the nanoscale, but can be several hundred nanometers long or even longer. Nanofilms or nanoplates have a thickness in the nanoscale, but their other two dimensions can be much larger.

The key is to be able to both see and manipulate nanomaterials in order to take advantage of their special properties. As mentioned earlier, the invention of special microscopes gave scientists the ability to work at the nanoscale. The first of these new discoveries was the Scanning tunnelling microscope. While it is mainly designed to measure objects, it can also move tiny objects such as carbon nanotubes.

People are doing many different types of work in the field of nanotechnology. Most current work looks at making nanoparticles that have special properties, such as the way they scatter light, absorb X-rays, transport electrical current or heat etc. At the more 'science fiction' end of the field, are attempts to make small copies of bigger machines or really new ideas for structures that make themselves. New materials are possible with nano size structures and it is even possible to work with single atoms.

Nanotechnology Development in India

The nanotechnology initiative in India is a multi-agency effort. The key agencies that have undertaken major initiatives for capacity building are the Department of Science and Technology (DST) and Department of Information Technology (DIT). Other agencies that have shown major involvement in the field of nanotechnology are Department of Biotechnology (DBT), Council of Scientific and Industrial Research (CSIR). In addition to this, Nanotechnology as a distinctive area of research was started with Nano Science and Technology Initiative (NSTI) in 10th Five Year Plan. Some of the major initiatives in nanotechnology are launch of Nano mission & introduction of PG programmes in Nano Science and Technology. Nanotechnology intervention in mission mode was also introduced in the fields of solar and water technology.

Conclusion

Nanotechnology will have both commercial and military uses. It can be used to create powerful weapons and tools of surveillance. So, it comes with benefits and risks. It implies not just better products, but a much improved manufacturing process. With nanotech, building products become as cheap as the copying of files on a computer. This explains why it is sometimes seen as 'the next industrial revolution'. This technology could give the human race eternal life or it could cause complete destruction.

81

GAGANYAAN MISSION

INDIA'S MANNED SPACE MISSION

Man's life is sustained by determinism and possibilism. Man has made life possible on Earth by scientific developments. With further technological advancements, man has been able to capture space along with Earth's surface. The scientific advancements all over the world have inspired Indian scientists to join the league of countries which have launched manned space mission. Keeping up the zeal, India will launch its first manned space mission, Gaganyaan. It will be for the first time that India will launch its manned mission to space, making India the fourth country in line to have sent a human to space. So far, only USA, Russia and China have launched human spaceflight missions.

About Gaganyaan Mission

Gaganyaan programme, an indigenous mission is a part of the Indian Human Spaceflight Programme. It is an Indian crewed orbital spacecraft that would take three astronauts to space for a minimum of seven days by 2022. The spacecraft, which is being developed by the Indian Space Research Organisation (ISRO), consists of a service module and a crew module which are collectively known as the Orbital Module.

A crew module houses the astronauts and a service module maintains the speed and orientation of the spacecraft using rocket motors apart from the power supply generated from solar cells. ISRO's Geosynchronous Satellite Launch Vehicle (GSLV) Mk III, the three-stage heavy lift launch vehicle, will be used to launch Gaganyaan, as it has the necessary payload capability.

Evolution of India's Human Space Flight Programme

The technological development of Gaganyaan started in 2006 under the name 'orbital vehicle' where the plan was to design a simple vehicle with a capacity of two astronauts, an endurance of about a week in space and splashdown landing after re-entry. In later years, ISRO has successfully demonstrated some of the technologies required for the mission. In 2007, the Space Capsule Recovery Experiment was launched with an objective of demonstrating the capability to recover an orbiting space capsule, and the technology of an orbiting platform for performing experiments in microgravity conditions. The Crew Module Atmospheric Re-entry Experiment (CARE) conducted in 2014, tested the re-entry technologies envisaged for crew module.

Further, the first 'developmental' flight of GSLV MK III in 2017 with higher payload capacity and engine thrust provided impetus for the Gaganyaan mission. Pad Abort Test (PAT) of 2018 was designed to quickly get the crew and spacecraft away from the rocket in the event of potential failure. ISRO has also finalised the layout and design of Environmental Control and Life Support System (ECLSS) which maintains a steady cabin pressure and air composition, removes carbon dioxide and other harmful gases and manages parameters like fire detection and suppression, food and water management.

Potential Benefits of Gaganyaan Mission

Apart from boosting the culture of research and technology, the proposed mission will provide many benefits. Putting humans in space will have tremendous impact on our medical technologies and understanding of functioning of human bodies. For instance, microgravity can lead to weakening of muscle and loss of bone density. Scientists have developed technologies and fitness mechanisms that have been breakthroughs in the treatment of Osteoporosis and maintaining muscle mass. Many of the present advances in medicine were developed through space research such as telemedicine, including miniaturised ultrasound units and remote monitoring system. Similarly, development of laser surgery and robotic surgery were outcome of developing better laser technology as a part of space technology. This mission is also expected to give support to industrial sector as much of the work related to ramping up of infrastructure and supply of hardware for this mission would be outsourced to industry in a major way.

This mission is also expected to open up space technologies in various areas as agriculture, water resource management, infrastructure and human resource development. For instance, water purification and sewage recycling can be transformed by adapting such technologies at scale. It will also provide potential for an enormous range of experiments in regard to effects of microgravity and cosmic radiations on bio-organisms ranging from bacteria and plants to large mammals. According to ISRO, this mission will help in providing employment to 15,000 people. It will also inspire youth to develop keen interest in science and technology and provide way for international collaborations and policies.

International Collaborations

India has collaborated with France and Russia to make Gaganyaan mission a success. ISRO and CNES, the French Space Agency, will be combining their expertise in fields of space medicine, astronaut health monitoring, life support, radiation protection, space debris protection and personal hygiene systems. Russia will train Indian astronauts for the country's maiden human spaceflight programme or Gaganyaan mission in addition to providing life support system to the Indian space crew and heating mechanism for the spacecraft.

Challenges in the Manned Space Flight

After successfully completing the mission to the Moon and Mars, India could potentially become the fourth country to send a man in space, after the erstwhile USSR, the US and China. But to achieve that feat India has to overcome few challenges. The technological challenges involve mastering of the highly complicated and dangerous re-entry and recovery ability. The spacecraft needs to withstand very high temperatures in excess of several thousand degrees. To avoid any disaster, the spacecraft needs to re-enter the atmosphere at very precise speed and angle. Also, the crew escape system needs to be prepared for any emergency from the launch phase onwards and ensure that the reliability of such a system is with zero room for error.

Apart from this, the facilities for rigorous and focused training of astronaut, such as centrifuges to experience forces and aircraft to simulate zero gravity conditions are absent in India. Finally, manned missions require huge investment, critics are arguing that money could be used to feed millions of hungry people and children suffering from malnutrition. It is also argued that those thousands of ISRO scientists and engineers can contribute more by coming up with new technology to fix malnutrition, poverty and sanitation. In this regard, sustained financial backup and strong political support is the need of the hour.

Suggestions to Overcome Challenges

In the long run to make Gaganyaan a successful mission and turn over a new leaf of research and development, it is necessary that all the stakeholders work vibrantly and with zeal. To ensure a long term commitment for India's human space flight mission, it is necessary to ensure strong political level engagements. Further, the financial implications of the long term project should be assessed and the cost-benefit analysis should be clearly done. To ensure a safe and successful manned space mission, the technological challenges should be overcome. A robust technological framework requires international collaboration and sustained funding in research and development. Also, the procedures and specifications for selecting the astronauts should be rigorous. Thus, such measures will help to make India a successful nation in the league of human spaceflight mission.

Conclusion

India has biggest youth population in the world, today they need to be inspired and the manned mission will surely capture the imagination of millions and inculcate scientific temper in the society. The mission will not only bring prestige to the nation but also establish country's role as a key player in the space industry.

MOBILE PHONE

A NECESSARY EVIL

In modern society mobile phones have become an extremely common electronic gadget for many. The growth in the use of mobile phone is based on their ability to become technologically advanced since most of them can take and send photos and videos and connect to the internet for web surfing, studying, meeting their friends, relatives, enjoying and learning etc. However, there are various unfavourable effects of the use of mobile phones in our society.

Cell phone radiation has been classified as a possible 'human carcinogen' by WHO. The radiations from mobile could also damage the brain tissue and its effects are more in the children as compared to adults and older people.

Coupled with technology, in the era of advancement, mobile phones have made our lives easier. We have become dependent upon the mobiles for even carrying out most fundamental functions of our daily life such as communicating, shopping, banking etc.

About Mobile Phone

A mobile phone is an electronic wireless, portable scientific device, which is used to receive and send voice and messages. With the advent of smartphones, mobile phones have now got a new meaning. A smartphone can be defined as a phone with high-resolution touchscreen display, Wi-Fi connectivity, web browsing capabilities and the ability to accept sophisticated apps. Now, they are not only means of communication, but are also the sources of information and entertainment.

Telephones have changed dramatically since Alexander Graham Bell spoke the first words into a telephone on 10th March, 1876. In the early 1980s, portable phones were like a small-scale mobile phone. In 1983, Motorola first produced commercially hand held mobile phone (Dyna TAC 8000x). Several other companies started to produce mobile phones. From the First-Generation system (1G), now it has come to the Fifth Generation system (5G). The mobile devices have become the lifeline of communication in today's time.

We find ourselves in the midst of the greatest information and communication revolution in human history. More than 40 per cent of world's population has access to the internet because of decreasing prices of smartphone and internet packs.

Over Dependency on Our Social Life

Mobile phones have become so much necessary that human beings have become over dependent on it. In a way, mobile phones have become a constant source of interruptions in our lives. Whether, it is a family get together, any professional meeting, attending a programme, our mobile phones can ring anywhere. These regular interruptions lead to divided attention and an individual cannot give his best to a single activity he is involved in at that moment.

This annoys the other people and lowers the efficiency of the individuals. Mobile phones have dehumanised the dynamics of human contact. The essence of personal touch is lost in today's tech-savvy world. People have confined themselves to the world of mobile and have forgotten how to interact in real life.

Effects of Mobile Phone

Addiction to smartphone has significantly impacted the families all over in negative way. Children are increasingly feeling emotionally neglected. Family as institution for inculcating values to children is gradually losing its relevance. The most affected section of the society by the usage of mobile phones are children. They are spending hours on the mobile phones playing games. This affects their reading time and sleeping hours also. This also creates havoc with their physical and mental growth. Cell phone emits a type of radiation that is known as Radio Frequency Electro Magnetic Radiation (RF-EMR), also referred to as Microwave radiation. It is highly harmful for children.

A large section of teenagers and young people have fallen victims to the use of the mobile phones. The instant messaging and social media applications are very popular among them. Unhindered access to pornographic material, violent uncensored content and extremist radicalised ideologies have negative impact on their mental and physical health. Research has established that the ill effects of Electromagnetic Radiation (EMR) emitted by mobile phones kills birds, damages bird eggs and embryos. Decreasing number of sparrow and many small species of birds are really alarming. Experts claim that once gone, these birds would never be back.

Constant use of mobile phone leads to many risks in our lives also. As it is a source of constant communication, often people are on call and phones while they are walking in the streets or driving the car. These lead to major road accidents which may lead to injuries and even death in many cases. At cognitive level, this is affecting our memory and retention power, we are now increasingly dependent on mobile phones for saving our important data. Because of this habit people are sometimes exploited through data snooping or breaching.

Relevance of Mobile Phone

However, we cannot deny that mobile phones are great invention and almost a perfect technological breakthrough. It would be unfair if we restrict ourselves to only the negativities of these devices. Mobile phones have provided a great level of convenience and safety to those who use it. Apart from the personal use, mobile phones are also considered to be an effective tool in strengthening democracy through better citizen-government interaction, thus influencing the political decision-making process and making governments accountable for their activities.

Today mobile phones have become an integral part of our lives. We seem completely reliant on our phones no matter where we are or what we are doing. People these days are empowered to be mobile savvy by staying connected. We can now send/receive e-mails anywhere, easily stay connected, take photos, play games, manage calendars and the list goes on and on.

One can also set alarms and reminders, schedule meetings and have video conferences through mobile. Besides, a large number of applications help us to do online shopping, get the food delivered at home or office, take care of our health, read books, listen to music, get informations etc.

Nowadays, smart mobile devices are used to deliver and take online education. Mobile phones give an opportunity to teachers and students engage with each other without being physically present with each other. It has provided an enhanced opportunity and support to those students who need to study and learn at their own pace. It has given flexibility to both students and teachers. Mobile phones have been used for conducting business and professional meetings and executing projects at a rapid pace.

Mobiles have increased the pace of wireless communication among the employees and management. Now the employees are available 24/7 rather than the earlier traditional ways. Meetings can be conducted from anywhere and anytime with the help of mobiles.

The instant messaging services help to connect with each other as and when required. The physical distances are now overcome by connecting through mobiles. It is a big support for the people who are living away from their families. They can have a video call with their families as many times as they want to talk to them in a day. The video calls are either free or very affordable.

Optimal Use of Mobiles

The human dependence on the mobile devices has increased significantly. Technology is good, as long as it is our slave. The day it starts becoming a master it can have serious effects on our life. The increasing cases of nomophobia point towards the latter. We shall not become overdependent on the mobile phones nor should we become a slave to the technologies.

Moderation in the use of mobile phone is the key to make ourselves immune from over dependence and addiction. Certain practical tips like not using phone in bed, getting a real alarm clock, turning off notification while studying and deleting unnecessary apps will be helpful in this direction. Outdoor activities and games need to be promoted. We need to make an optimal use of the mobile devices to reap the maximum benefit out of it.

Conclusion

A mobile phone is the most popular and useful gadget in present times. However, a mobile phone could be both positive and negative, depending on how a user uses it. Thus, the mobile phones should be used optimally, according to the needs and requirements of daily life. As mobiles have become a part of our life, so we should use it in a proper way for a better hassle-free life.

RISE OF ARTIFICIAL INTELLIGENCE

Artificial Intelligence (AI) is the biggest technological revolution of 21st century, having the potential to disrupt almost all aspects of human existence. Artificial Intelligence is a branch of computer science that aims to create intelligent machines. Artificial Intelligence is the simulation of human intelligence processes by machines based on computer systems. These processes include learning, which is the acquisition of information and rules for using the information, reasoning which is using the rules to reach approximate or definite conclusions and self-correction.

Rise of Artificial Intelligence

AI has become an essential part of the technology industry. Thanks to virtually unlimited computing power and the decreasing costs of data storage, the world is on the apex of the exponential age of AI, as it learns to unlock the value trapped in vast amounts of data. AI seeks to build machines that are programmed to think like humans and mimic their actions. It involves some traits to be present in the machines which are knowledge, reasoning, problem solving, perception, learning, planning and the ability to manipulate and move objects.

These human like capabilities are built up with the machine's ability to learn from experience and keep adapting over time. Every application of Artificial Intelligence begins with large amounts of training data. Vastly increased processing power that comes from using Graphics Processing Units (GPUs) in place of Central Processing Units (CPUs), decreasing cost of storage and the exponential growth in data volumes, together with the emergence of open source platforms, forms a potent combination of technologies and capabilities that provides a very powerful foundation to AI.

Impact of Artificial Intelligence

Artificial Intelligence has emerged as a new factor of production, supplementing the traditional factors of production such as labour, capital and innovation. AI has the potential to overcome the limitations of capital and labour and has the power to open up new sources of value and growth. It has a strong ability to impact the economic growth and drive growth and development through enabling intelligent automation (ability to automate complex task), labour and capital augmentation (enabling humans to focus on their role that adds the most value and complementing human capabilities and improving capital efficiency) and innovation diffusion (driving innovation).

AI innovations in one sector has positive consequences in another, as industrial sectors are interdependent. Economic value is expected to be created from the new goods, services and innovations that AI will produce. Beyond the economic impact, AI will also have a transformative impact on the greater goods of the Indian society. It will be improving the quality of life and access of choice to a large section of the country.

Increased access to quality health facilities, inclusive financial growth for large sections of population that have been excluded from formal financial sector, providing real-time advisory to farmers, mitigating the effects of unforeseen factors, building smart and efficient cities and infrastructure to meet the demands of rapidly urbanising population are some of the examples that can be quickly achieved through the use of AI.

AI has a great potential to transform the socio-economic system as its impact on every industrial or service sector is indisputable. It will turn the world over a new leaf through automation, intelligence and creation. Thus, it will make few jobs redundant, while it increases the efficiency of other jobs and will create more jobs.

AI and Job Losses

As AI progresses, some believe that it will steadily take over large sectors of the workforce and will bring mass-scale unemployment and social unrest. In 2013, a study conducted by Oxford says that as much as 47% of current jobs are at risk of being wiped out. AI will replace the jobs involving repetitive, highly standardised job activities that can be carried out using computer software. Therefore, demand for these positions has been in decline.

AI has the potential to automate tasks that are monotonous which gradually makes certain roles obsolete. The examples include activities involved in customer care/call center operation, document classification, discovery and retrieval, content moderation which are based more on technology and less on human work.

The transportation sector will witness reduced demand of professional drivers, as fully autonomous cars which are safer, more efficient and more effective will take on the roads. Further, the electronic commerce will see a new wind of change where the importance of salespersons and physical network stores will shrink and the new centres will be fully automated, with robots navigating the space to collect products and execute customer orders, to be then sent or even delivered to customers also automatically, with autonomous drones and/or cars.

Also, the support services in a legal context such as document handling, classification, discovery, summarisation, comparison, knowledge extraction and management tasks will also be significantly impacted.

AI and Creation of Better Paying Jobs

Use of Artificial Intelligence in workplace is expected to create 133 million new roles, but cause 75 million jobs to be displaced by 2022 according to report from World Economic Forum (WEF) called 'The Future of Jobs Report. This means that the growth of artificial intelligence could create 58 million net new jobs in the next few years. The areas in which AI will have positive impact are

- Demand will be increased for professional service talent, with an emphasis on communications, logic and creation and technical talent dealing with computer technologies.

- In arena of data technology, huge jobs will be created as AI-based solutions in any industry both need and generate massive amount of data. Data interpreters, analytics and miners will be needed on massive scale to annotate this data to provide context in ambiguous situations.
- It will increase employment for professors and researchers who have the potential to train engineers who can become a pool of requisite manpower required in the era of AI.
- AI is now helping companies to generate more profit and scaling up of their businesses and as a result, they will require a global workforce which can generate huge employment opportunities.
- According to estimates healthcare would be one of the biggest winner from AI, where job opportunities could increase by nearly 1 million. In the near future, AI powered healthcare will be available at a scale and on demand for everyone. Hence, the requirement for AI-assisted healthcare technician job will see an upward surge.
- The education industry is slowly shifting towards e-learning concept such as smart content, personalised learning and other data driven operations which depends heavily on AI. Hence, this industry will need to hire plenty of AI and machine learning experts. Apart from these, new jobs will be created in gaming industry, robotics and cyber security.

Suggestion to Reap the Benefits of AI to Create More Jobs

To properly leverage the power of AI, we need to address the issue at the educational level as well as in business. Education system needs to focus on training students in roles directly associated with working with AI, including programmers and data analysts. This requires more emphasis to be put on STEM subjects (Science, Technology, Engineering and Mathematics). Also, subjects centered around building creative, social and emotional skills should be encouraged. Artificial intelligence is more productive than human workers for repetitive tasks, however, humans outperforms machines in jobs that requires relationship building and imagination.

International Labour Organisation (ILO) in its 'Future of Work' report suggested a universal entitlement to lifelong learning that enables people to skill, reskill and upskill. In addition, it calls for greater investment in the care, green and rural economies in the backdrop of fear of job losses due to artificial intelligence. There needs to be an immediate government intervention for the availability of qualified faculty and researchers, so that skills could be developed to harness the potential of AI in promoting job creation. It is time for a vision for a human centered agenda that is based on investing in people's capabilities, institutions of work and in decent and sustainable work.

Conclusion

Artificial intelligence will change our world both inside and outside the workplace. Instead of focusing on fear surrounding automation, businesses and governments all over need to embrace these new technologies to ensure that they implement the most effective AI systems to enhance and compliment human intelligence. In this way, AI in medium and long run will produce better paying jobs and augment and develop the human resource of the country and the world.

DRONE TECHNOLOGY

BENEFITS AND CHALLENGES OF UAVS

Drones are rapidly growing in popularity and have broken through rigid traditional barriers in industries. Over the past few years, drones have become central to the functioning of various businesses and governmental organisations. From scanning an unreachable location or military base to surveillance of an area or multiple areas, drones are proving to be extremely beneficial.

Drones are the Unmanned Aerial Vehicles (UAVs) or Remotely Piloted Aerial System (RPAS) controlled either by a pilot on the ground or with the help of technology. It may be as small as a radio-centred toy helicopter or as big as a global hawk.

Drones are playing a significant role in fight against the coronavirus by supporting the activities undertaken by police, healthcare and municipal authorities in surveillance and lockdown enforcement, surveying and mapping, spraying disinfectants etc.

Evolution of Drone Technology

The concept of drones may well date back to 1849, when Austria attacked Venice using unmanned balloons stuffed with explosives. Later in 1916, Great Britain developed the first pilotless winged aircraft, the Ruston Proctor Aerial Target. In 1935, the British developed 'Queen Bee', a radio-controlled target drone. Although originally built for military purposes, drones have seen rapid growth and advancements. Today this technology has evolved into different forms and used widely in defence, commercial aerial surveillance, journalism, crowd management, e-commerce and search and rescue operations.

Functioning of UAVs

An unmanned aerial vehicle system has two parts, the drone itself and the control system. The nose of the unmanned aerial vehicle is where all the sensors and navigation systems are present. The rest of the body is light weight. Drones can be controlled by the remote control system or a ground cockpit. They are equipped with state of the art technology such as infrared cameras, GPS, on-board sensors, software controlled flight plans and laser. The build type of UAVs are-fixed wing, tilt wing, unmanned helicopter and multicopter. Non-military UAVs use the electric engine and internal combustion engine.

For better functioning and control, some drones are provided with Radar positioning and Return home features. Radar positioning displays current location and when drone crosses the control range of remote control, the return home feature makes drones flyback to its takeoff point. The latest technology has an in built GPS enabled chip which is instrumental in finding drone's location. An Altimeter lets the drone know what altitude it is at.

Types of Drones

Drones can be classified on different basis. Based on usage, it can be Drones for Aerial Mapping, Drones for Photography, Drones for Surveillance etc. However, the best classification of drones can be made on the basis of aerial platforms. Based on the type of aerial platform used, there are 4 major types of drones. They are-Multi rotor drones, Fixed wing drones, Single rotor helicopter drones and Fixed Wing Hybrid VTOL drones.

Multi rotor drones are the most common types of drones which are used for common applications like aerial photography, aerial video surveillance etc. Fixed wing drones use 'wings' like normal airplanes and are ideal for long distance operations like mapping or surveillance. Single rotor drones look very similar to helicopters and has just one big sized rotor plug and a small sized rotor on the tail to control its heading. Hybrid VTOL (Vertical Take-Off-and Landing) are hybrid versions of drones combining the benefits of Fixed wing models with that of Rotor bases models (hover).

Applications of Drone Technology

At present, the application areas of drones are limitless. The technology that was once designed to destroy is now being used for the betterment of mankind. From wildlife conservation to disease control, emergency responses, geographic mapping, UAVs are used in multiple sectors.

Drones are normally used in the situations where manned flight is considered too risky or difficult. A typical unmanned aircraft is made up of light composite materials to reduce weight and increase its manouverability. This composite material's strength allows military drones to cruise at extremely high altitudes thus proving very beneficial in a country's defence mechanism. Many defence forces use drones as aerial targets to combat training of human pilots and to check the security of the sensitive areas.

Air surveillance of large areas is possible with low cost drones. The surveillance applications include livestock monitoring, wildfire mapping, pipeline security, home security, road patrolling and anti-piracy. Some journalists have even used drones for gathering news and covering disasters such as typhoons, damages done by hurricanes, etc.

Many police departments across the world have procured drones to maintain law and order. There are unarmed surveillance drones which are helpful to monitor the movements of armed groups in the region, and protect the civilian population more effectively. UAVs are very helpful in the search and rescue operations undertaken after the hurricanes and other natural calamities. UAVs have been tested as airborne lifeguards, locating distressed swimmers using thermal cameras and dropping life preservers to swimmers.

Drones have been successful in the documentation of animals such as counting the number of animals present in a reserve forest and combat poaching of endangered animals such as rhinoceros. Archaeologists have used drones to speed up survey work and protect sites from squatters, builders and miners. Small drones help researchers produce three-dimensional models of sites instead of the usual flat maps and in less time.

In agriculture, drones are helping in sprouting and monitoring crops, they can help assess, prevent and correct crop damage throughout the season by routine monitoring and early detection. To solve the problem of food insecurity, drones are instrumental as it helps in cutting down of crop losses through early detection of plant diseases.

Challenges of Drone Technology

However, these advantages generate three major risks, which are violating sovereignty, over-using the military option and making it more difficult to identify violations of constraints against targetting non-combatants. Undoubtedly, drone technology is another example of the rapid technological development taking place in the world but looking at the safety and ethical concerns related to it, the regulatory authorities need to be stringent and lay down strict rules and regulations for the use of the unmanned vehicles and drone technology for different purposes.

Another challenge is that small drones can easily be built even by novice using parts that are easily available. This causes serious risk to security and privacy of people. Drones can also be used to record or look inside restricted places also such as prisons, military bases. It can be used to look inside homes through windows. There is a serious threat to safety and privacy of people because of drones.

Drone Technology in India

Given the complex security challenges that India faces, the role of UAVs in providing critical intelligence will be a key enabler not only in fighting wars effectively but also in deterring cross-border terrorist attacks in India. UAV of Indian Armed forces are Nishant, Rustom, UAV Panchi and AURA. 'Nishant' is a multi-mission unmanned aerial vehicle with day/night capability used for battlefield surveillance and reconnaissance, target tracking and localisation and artillery fire correction. 'Rustom' is a medium altitude long endurance unmanned combat air vehicle being developed by DRDO. 'UAV Panchi' is the wheeled version of unmanned aerial vehicle Nishant, capable of taking-off and landing by using small airstrips. 'AURA' is stealth UCAV, capable of releasing missiles, bombs and precision-guided munitions. Although, a number of countries are working individually or jointly to develop an advanced drone industry, currently the US, Israel and China are the market leaders.

Regulation of Drone Technology in India

The Ministry of Civil Aviation has been working for several years to establish a world leading drone ecosystem in India. Therefore, it was necessary to develop global standard drone regulations that would permit, with appropriate safeguards, the commercial application of various drone technologies.

According to the new regulations, there is need to obtain a Unique Identification Number (UIN), which is an equivalent of a number plate for all drones except drones in the Nano category. There is also need of an Unmanned Aerial Operator Permit (UAOP) or Remote Pilot license costing about ₹ 25,000 if you are operating above 200 feet. The drone will require an insurance cover, which should be of an adequate amount to cover risks, damages or other factors that are posed by operation. All drones will need to be NPNT compliant (No Permission No Take off), a software program to enable operators to obtain permissions prior to flying under these guidelines. Air space has also been partitioned into Red Zone or 'No-fly Zone', Yellow zone and Green Zone.

Suggestions

Drones are proving to be extremely beneficial in places where men cannot reach or is unable to perform in timely and efficient manner. But they are still in infancy stage and hence require improvement. Drones fly at low speed in comparison to manned aircraft.

Hence, there is need to enhance its speed. Drones are vulnerable to hackers and hence there is need to make it full proof. Though its usage is confined to few areas or sectors but in near future, it is expected to advance in almost every sector. In this backdrop authorities need to focus on two important aspects, first, incentivising the industries to adopt and develop the drone technology which will enhance their productivity and second regulating in such manner to address some of the challenges such as invasion of privacy and unauthorised surveillance. At global level, there is need of an international control regime on the proliferation and use of armed drones.

Conclusion

Drone technology is constantly evolving, so future drone tech is currently undergoing ground breaking progressive improvements. The advantages offered by use of drones are numerous. Throughout the world, innovators and scientific researchers are coming together to find innovative ways to use drones to fight COVID-19.

In such critical times, policy makers world over are leveraging the advantages of drones and facilitating their wider deployment by removing barriers and streamlining their use. Over the period of time, drone technologies continue to evolve and grow as well as drones will become safer and more dependable.

ENVIRONMENTAL POLLUTION

MAKING THE PLANET UNHEALTHY FOR LIVING

Environmental pollution is the addition of contaminants into the natural environment that causes detrimental effects to nature, natural resources and mankind. Any unnatural and negative changes in all the dimensions like chemical, physical and biological characteristics of any component of the ecosystem i.e. air, water or soil which can cause harmful effects on various forms of life and property is called environmental pollution.

Environmental pollution has existed for centuries. But evidence suggests that, since, the industrial revolution, contaminants in atmosphere have been growing day by day and resulting in severe damage to Earth. Hazardous waste, toxic chemicals, suspended particles are affecting both humans and animals. Many of the toxic chemicals and plastic have found their way in ecological food chain. Environmental pollution is a primary reason for the rise of global warming and many incurable diseases.

Pollutants & Its Types

Before studying about different types of pollution, we have to understand the meaning of pollutants. Pollutants are the contaminants that get introduced into the natural environment, beyond permitted limits and caused undesired effects or adversely affects the usefulness of a resource. They can be classified into primary and secondary pollutants. The primary pollutant such as Carbon Monoxide (CO) and plastic remain in form in which they were added to the environment. Secondary pollutants are formed due to interaction of primary pollutants amongst themselves, ozone is example of secondary pollutants which is formed when Hydrocarbons (HC) and Nitrogen Oxides (NO_x) combine in presence of sunlight.

On the basis of origin, pollutants can be anthropogenic (human-made) or natural. Burning of fossil fuels, sewage etc. can cause anthropogenic pollution, whereas volcanic dust, photochemically formed ozone is example of natural sources of pollutants. On the basis of degradability, pollutants can be biodegradable or non-biodegradable. Biodegradable pollutant such as paper products, vegetables etc. are broken down naturally by micro-organisms and are not harmful to environment. Non-biodegradable pollutants such as polythene, plastics, etc., cannot be broken down into smaller, harmless or simpler substances.

Types of Environmental Pollution

Pollution happens in different forms such as air, water, soil, radioactive, light, noise and heat. There are different kinds of pollution and each of them have their sources and causes associated with them. Depending on the nature of pollutants and also subsequent pollution of environmental components, the pollution can be categorized as Air Pollution, Water Pollution, Soil Pollution, Noise Pollution and Radioactive Pollution.

Air Pollution

Air pollution takes place when damaging stuff including particulate matter and biological molecules are dumped into Earth's atmosphere. It can result from both human and natural actions. Natural events that pollute the air includes forest fires, volcanic eruptions, wind erosion, evaporation of organic compounds and natural radioactivity. Man-made sources are mostly related to burning different kinds of fuel which are chiefly oxides of carbon, sulfur and nitrogen. Exhausting fumes from vehicles, natural gas, the burning of fossil fuels, nuclear accidents, destructive off gassing from things such as paint, plastic production and so on can cause pollution.

Out of various kinds of pollution, air pollution is the major contributor to global warming. Sulfur dioxide and nitrogen oxide particles in the air can create acid rain when they mix with water and oxygen in the atmosphere. Carbon dioxide, methane, nitrous oxide and fluorinated gases such as hydrofluorocarbons are major greenhouse gases emitted by natural and artificial sources. In humans, the short term effects, which are temporary include illnesses such as pneumonia or bronchitis. They also include discomfort such as irritation to nose, throat, eyes and skin. Long-term health effects from air pollution include heart disease, lung cancer and respiratory diseases such as emphysema.

In India, National Clean Air Programme (NCAP) has been launched to tackle air pollution at the national level aiming for a 20–30 per cent reduction in PM 10 and PM 2.5 concentration by 2024.

Introduction of cleaner fuels, promotion of mass urban transport networks and stricter regulatory standards such as BS VI are other significant steps. Under Green India Mission, massive afforestation is carried out to tackle air pollution.

Water Pollution

Water pollution is any contamination of water with chemicals or other hazardous substances that are detrimental to human, animal or plant health. For example, releasing inadequately treated waste water into natural water bodies can lead to degradation of aquatic ecosystems. Many of these pollutants sink to the ocean's depths or float far distances from original source, where they are consumed by small marine organisms and introduced into the global food chain.

Sources of water pollution are either point sources or non-point sources. Point sources have one identifiable cause of the pollution, such as storm drain, waste water treatment plant or stream. Non-point sources are more diffuse, such as agricultural run-off. Oil discharge into the surface of sea by way of accident or leakage pollute sea water to great extent in addition to plastic waste.

Water pollution can result in human health problems, poisoned wildlife and long term ecosystem damage. When agricultural and industrial runoff floods waterways with excess nutrients such as nitrogen and phosphorus, these nutrients often fuel algae blooms that, then create dead zones where fish and other aquatic life can no longer thrive. High levels of nitrates in water from nutrient pollution can also particularly harmful to infants, interfering with their ability to deliver oxygen to tissues and potentially causing 'blue baby syndrome'. Globally at least 2 billion people drink water that is contaminated, according to WHO and that may transmit dangerous diseases such as cholera and typhoid.

Two important legislation, Water Pollution Act (1974) and Environment Protection Act regulates and controls the effluent discharged into the water. Pollution Control Boards at the central and state levels are empowered to prevent, control and abate water pollution. The Central Pollution Control Board (CPCB) has established a network of monitoring stations on aquatic resources across the country. Under Namami Gange programme, sewage treatment plants are installed to control the point sources of pollution. At global level, the London Protocol went into effect in 2006. Under the London Protocol, dumping of all wastes and other materials is prohibited except for shortlist of items, like left over materials from dredging.

Soil Pollution

Soil pollution is defined as the build-up in soils of persistent toxic compounds, chemicals, salts, radioactive materials or disease causing agent which have adverse effects on plant growth and animal health. The major contributory factors of soil pollution include use of chemical fertilizers in agricultural practices, acid rain, discharge of untreated sewage, leaching of waste from landfills and burning of crops after harvesting.

Deforestation and soil erosion also plays important role in soil pollution. Excess heavy metals such as arsenic, cadmium, lead and mercury in soil can impair plant metabolism and decrease crop productivity, ultimately putting pressure on arable land. When they enter the food chain, these pollutants also pose risks to food security, water resources, rural livelihoods and human health.

To contain soil pollution, the government has launched schemes such as Integrated Wasteland Development Programme (IWDP) and Integrated Watershed Management Programme (IWMP). Under Bonn challenge, India had committed toward restoring 13 million hectares of degraded and deforested land by year 2020 and a additional 8 million hectares by 2030. Under Soil Health Card Scheme, Soil Cards are issued to farmer which carry crop-wise recommendations of nutrients and fertilizers. Further, bio-fertilizers and manures are promoted by authorities.

Noise Pollution

Noise pollution also known as sound pollution is propagation of noise with harmful impact on the activity of human or animal life. The sources of outdoor noise worldwide is mainly caused by machines, transport and propagation system. It has now become very common due to dense urbanisation and industrialisation.

Noise pollution can bring about adverse effects such as hearing loss, sleeping disorders, hypertension and communication problem. Central Pollution Control Board (CPCB) in associations with its counterparts monitors and regulates noise pollution under National Ambient Noise Monitoring Programme (NANMP).

Radioactive Pollution

Radioactive pollution occurs when there is presence of radioactive materials in the environment, especially where their presence is accidental and when it presents an environment threat due to radioactive decay. Fukushima and Chernobyl incidents are among prominent example of devastation caused by radioactive pollution.

Causes of radioactive pollution includes nuclear accidents from nuclear energy generation plants, use of nuclear weapons, use of radio isotopes for medical purposes, mining, cosmic rays and radio active decay of waste products. Cancer is the most dominant radiation related disease apart from leukemia, anemia and hemorrhage. It is also responsible for genetic mutation in animals and plants.

We can prevent the radioactive pollution in the following manner :

- By totally stopping leakages of radioactive materials from nuclear reactors, industries and laboratories.
- By taking preventive measures so that natural radiation level does not rise above the permissible limit.
- By changing the radioactive waste disposal into harmless form or storing it in safe places.

Mitigation and Measure to Tackle Environmental Pollution

We can tackle the environmental pollution by taking following measures :

- Preserve the physical, chemical and biological integrities of the ecosystem with maximum protection of public health and the environment.
- Follow the three 'R's (Reduce, Reuse and Recycle) to conserve natural resources and landfill space.
- Volunteer for cleanups in your community. One can get involved in protecting one's watershed too.
- One can help others understand the importance and value of our natural resources.
- Usage of energy efficient light bulbs can reduce greenhouse gas emissions.
- Support environmentally sound policies that reduce energy growth rates, emphasise energy conservation and encourage the use of renewable resources.
- Support measures to reduce pollution in order to protect surface water, groundwater and drinking water.
- Promote policies to reduce the generation and promote the reuse and recycling of solid and hazardous waste.
- Do not discharge chemicals into the waterways and choose non-toxic chemicals in the home and public places.
- Buy less plastic and bring a reusable shopping bag.

Conclusion

Human beings often forget that we are largely dependent on mother nature and become ignorant towards taking care of it. One has to see that one's actions can very well impact the Earth's sustainability. Decisions and actions taken by individuals to a very large extent determine the quality of life for everyone. This necessitates that individuals should not only be aware of various environmental issues and the consequences of their actions on the environment, but should also make a firm resolve to develop environmentally ethical lifestyles.

DEFORESTATION

THE RESULT OF HUMAN GREED

Forests are the important part of all living creatures on the Earth. A forest is defined as a large area of land covered with trees or other types of vegetation cover. These are huge source of oxygen and have direct and indirect impact on our ecosystem. Forests cover almost 31% of the world's total land area. But nowadays, humans are destroying this precious forest cover at a large scale. This widespread destruction of forests is termed as deforestation.

The UN Food and Agricultural Organisation (FAO) has defined deforestation as “the conversion of forest to another land use or the long-term reduction of tree canopy cover below the 10% threshold.” In other words, deforestation is the permanent destruction of forests in order to make land available for other uses.

Causes of Deforestation

There are a number of causes of deforestation for which human activities are greatly responsible. Some of the major causes are given below

Agriculture According to a report by UNFCCC (United Nations Framework Convention on Climate Change), agriculture is one of the primary cause of deforestation. This can be linked to increasing population and shrinking space available for humans. Among different types of agriculture, subsistence agriculture (farming for own consumption) is responsible for 48% of forest destruction; commercial agriculture is responsible for 32% of deforestation and logging is responsible for 14% of degradation.

According to a report by Food and Agricultural Organisation, almost 50% of forests in tropical regions have been cleared. This is majorly done by Tribal communities which are involved in subsistence farming. This type of agriculture is technically called slash and burn agriculture or shifting cultivation. The tribals fell the trees and burn them to clear the area for agriculture. They move from one area to other in search of more fertile piece of land thus giving rise to shifting cultivation.

Urbanisation and Industrialisation Deforestation is also caused by the rapid rate of urbanisation and industrialisation. This can also be attributed to the rising population globally. Large areas of dense forests are cut down to clear spaces for urban development and setting up industries. This results in loss of forest cover. In 2015, Government of India passed the Compensatory Afforestation Bill to manage funds which were allocated for diverting forest land for non-forest purposes.

Commercial Use Another major cause of deforestation is the economic significance attached with forest products. Trees like Sal, Teak, Sheesham etc provide valuable timber. Forest woods are used mainly for construction purpose, furniture industry, news print and stationery etc. sports equipments etc. Cutting down forest for commercial use in different industries is a lucrative business.

Mining It is a very destructive human activity which destroys a large area of forest cover. It also causes many environmental impacts like erosion, formation of sinkholes, loss of biodiversity and contamination of soil, groundwater and surface water by chemicals from mining processes. Large number of forests are cleared every year for the purpose of mining mineral resources.

Increase in Population With the rise in population, there is greater need for land. To meet the demands of food and housing, forests are cleared indiscriminately. Land cleared for agriculture and settlements is the biggest cause of depleting forest cover all over the world.

Effects of Deforestation

There are many effects of deforestation which directly and indirectly affects us. Some of the effects of deforestation are given below

Impact on Global Climate The most adverse effect of deforestation is global warming and climate change. Plants absorb Carbon Dioxide (CO_2) from the atmosphere and use it to produce food. In return it gives off oxygen. Destroying the forest means CO_2 will remain in the atmosphere and in addition, destroyed vegetation will give off more CO_2 stored in them as they decompose. This will alter the climate of that region.

Impact on Water Cycle/Hydrology Another effect of deforestation on the biosphere is on water cycle. Reduced vegetation cover leads to loss of water from the ground and reduced evapotranspiration. Without tree cover, water does not get absorbed by the soil. This leads to depletion of ground water and less moisture in the atmosphere. The precipitation in turn gets affected leading to a skewed water cycle.

Also, oceans work as carbon sink as carbon dioxide readily dissolves in water and gets concentrated in oceans. Due to less forest cover, the acidification of oceans may take place leading to disturbance in the ocean ecology.

Impact on Soil quality Soil is also affected as a result of deforestation. The surface runoff of water leads to removal of the top fertile layer of soil. This happens when soil is without the protective layer of vegetation on it.

The rate of erosion increases in a deforested area and results into soil degradation. In mountainous areas where the soil is loosely packed it gets affected which can lead to risk of landslide. Desertification increases as sands spread to nearby areas that are without any tree cover.

Impact on Biodiversity Deforestation also affects the biodiversity as a whole. The loss of vegetation leads to extinction of species which are reliant on forest cover. As deforestation leads to destruction of animals' habitats, wild animals start trespassing human habitats, thus, get brutally killed by humans. Zoonotic diseases are also caused due to deforestation. Gadgil Report on Western Ghats has restricted human activities in certain areas. Western Ghats is one of the biological hotspots of the world. Its conservation has been supported by UNESCO for preserving rich biodiversity.

Importance of Forests

Forests are important in many ways. We depend on forests for our survival and our dependence on forest is due to their various usage. Some of the advantages of forest are as follows

- Forest provide oxygen to all living beings and also consume carbon dioxide, thus maintaining the delicate balance in nature. They also help in preventing global warming.
- They control the climate and purify the atmosphere.
- They provide shelter to both tribal people and wild animals.
- They provide forests produce for human consumption and also for industrial uses thereby sustaining the economy in a big way. They also contribute to GDP and also a large number of people depend on them for their employment. Thus, forests are important to conserve.
- Forests prevent soil erosion. They reduce floods and rapid runoff of water by binding the soils intact with their roots. They help to maintain the ecological balance and provide water, food and various other products.

Mitigation Measures to Control Deforestation by the Indian Government

To increase the tree and the forest cover in our country and to deal with the rising menace of deforestation, the government has introduced several initiatives. Some of the initiatives taken by the government are as follows

- The Indian Government introduced the Indian Forest Act, 1927. It defines the procedures for declaring an area of a reserved forest, a protected forest or a village forest by the State Governments. Reserved forests are those where hunting, grazing and felling of trees are banned. In protected forests, these activities are regulated and permitted with some restrictions.
- Establishment of the National Forest Policy in 1952 was also one of the major initiatives by the Indian Government to ensure compensatory afforestation, sustainable utilisation, maintenance, restoration and enhancement of forest areas.
- Forest Conservation Act was passed in 1980 (with an amendment in 1988) by the Central Government. The main aim of this act was to conserve the forests and to look into the matters connected therewith.
- The Ministry of Environment and Forests constituted the National Afforestation and Ecodevelopment Board (NAEB) in 1992. It evolved specific schemes for promoting afforestation and management strategies through participatory planning.
- In 2009, Compensatory Afforestation Fund Management and Planning Authority (CAMPA) was constituted by the Central Government to channelise money towards compensatory afforestation. Other initiatives include Joint Forest Management (JFM), Social Forestry, National Bamboo Mission and so on.
- Besides these, the Indian Government has also established the Forest Survey of India, an organisation under the Ministry of Environment, Forest and Climate Change. The survey publishes the biennial 'State of Forest Report'. According to the latest report of 2019, India has a policy of keeping one-third of country's area under forest.

- At present, Indian forest cover is 21.67%. Madhya Pradesh has the largest forest cover in India followed by Arunachal Pradesh, Chhattisgarh, Odisha and Maharashtra. The mangrove cover has also increased in Indian coasts. Still the forest cover of India is much below the set criterion given by the Forest Policy of India.
- The forest dwellers like tribals are dependent on minor forest produce. Therefore, in 2006, the Schedule Tribe and other Traditional Forest Dwellers Act was passed to secure their right over forest resources.
- Recently, Central Government has published the draft Environment Impact Assessment (EIA) Notification 2020 which provides for scientific estimate of the likely impacts of a project such as mines, irrigation, dams, industrial units or waste treatment plant.

People's Participation in Conservation of Forests

Besides the Government initiatives, the participation of people and local communities is essential to conserve forests resources. There are number of socio-ecological movements that practised the Gandhian methodology of Satyagraha and non-violent resistance, through the act of hugging trees to protect them from falling.

In 1970s, Chipko Movement started in Uttarakhand, in India. Due to state policy, forest cover in these area was reducing and the benefit was getting accrued to industrialists. Under the leadership of Chandi Prasad Bhatt and Sunderlal Bahuguna, the Chipko Movement took off. Due to their efforts large swathes of forest cover was secured from deforestation.

On the similar lines, Apiko Movement was launched in 1983, by the villagers of the district of Karnataka province by hugging the trees in Kalase forest to save their forest areas. Another such movement was 'Silent Valley Movement' which was started in 1973 by an NGO led by school teachers and the Kerala Sastra Sahitya Parishad (KSSP). It aimed to save the silent valley from being flooded by a hydroelectric project in the Palakkad district of Kerala.

Conclusion

Despite many governmental efforts, social initiatives, the analysis need to be done in order to put an end to the menace of deforestation. Participatory efforts on the part of community need to be initiated. Forests are an important part of our ecology. For sustainability and preserving the biodiversity of the Earth, deforestation should be checked. Human greed leads to disbalance in nature and in extreme cases may raise a question on their own sustenance. It is therefore imperative that we make sustained efforts to secure forest cover.

INDIA'S DEEPENED WATER CRISIS

Water is the most valuable natural resource as it is essential for human survival and life on our planet. At present, the availability of fresh water for human consumption is under stress for a variety of reasons. The crisis of water scarcity is most visible in India as well as in other developing countries.

Water scarcity is the lack of fresh water resources to satisfy the demand for it. It can be observed as partial or no satisfaction of expressed demand, economic competition for water quality or quantity, excessive depletion of groundwater, disputes between users, or other such manifestations. Water scarcity affects India as well as a number of developing countries at particular times every year. Some regions of these countries have perpetual water scarcity.

Meaning of Water Scarcity

Despite the frequent use of the term 'water scarcity', there is no consensus on how water scarcity should be defined or how it should be measured. One of the most commonly used measures of water scarcity is the 'Falkenmark Indicator' or 'Water Stress Index'. This indicator defines water scarcity in terms of the total amount of renewable fresh water that is available for each person each year. If the amount of renewable water in a country or region is below 1700 m³ per person per year, that country or region is said to be experiencing water stress. If the available water is below 1000 m³ per person per year, it is said to be experiencing water scarcity. If it is below 500 m³ per person per year, that country or region is said to be experiencing absolute water scarcity.

NITI Aayog Report on Extent of Crisis

According to study report by NITI Aayog, India is undergoing the worst water crisis in its history. Already, more than 600 million people are facing acute water shortages. Critical groundwater resources which account for 40% of our water supply are being depleted at unsustainable rates. Further, 70% of our water is contaminated, India is among bottom most countries in water quality index which results in nearly 200,000 deaths each year.

Around 40% of the Indian population will have no access to drinking water by 2030. By 2020-21 cities including New Delhi, Bengaluru, Chennai and Hyderabad will run out of ground water which will affect 100 million people. Economically, it may cost upto 6% of our GDP by 2050. With growing population the per capita availability of water has declined to 1,508 m³ in 2014 from 1,816 m³ in 2001.

As more than half of agriculture in India is rainfed, droughts which have become more frequent are creating problem for India's rain dependent farmers. The water crisis in India is deepening for a variety of reasons.

Impact of Water Crisis

The impact of the deepening water crisis will be manifold. According to NITI Aayog report, water demand will be double of the present supply by 2030 and hence India could lose upto 6% of its GDP by 2050 because of water crisis. The water scarcity in India affects hundreds of millions of people across the country. Since tap water is unavailable in many cities residents have to rely on alternative water sources. A lot of people are spending money to buy drinking water.

Water scarcity also threatening the lives of wild animals across India as they are forced to infiltrate villages and cities to find water. Water stress in scarcity hit areas has caused failure of agricultural crops, due to which number of farmers have committed suicide, as they were unable to pay the loan.

The water crisis creates conflicts between states over river water sharing. For instance, the Kaveri river water dispute between Tamil Nadu and Karnataka has been festering for many years. Water shortage will also reduce generation of electricity, as many of thermal power plants, which require much water for their operation, are located in areas of water scarcity.

Reasons for Water Crisis in India

In recent times, the water crisis in India has become very critical, affecting a lot of people across India. Water crisis in India is not only caused by natural disasters, but rather because of severe mismanagement of water resources, poor governance and apathy. Water problem in India has many facets.

The effects of climate change on the monsoon seasons is one of the main reason for decrease in rainfall and water shortage in India. Earlier, average monsoon rainfall spanned 45 days but now it has decreased to 22 days.

India is the world's biggest groundwater user. According to Central Ground Water Board (CGWB), the continued exploitation of groundwater from 2007 to 2017 caused the groundwater level in India to decrease by 61%. The unmonitored and unregulated extraction of groundwater has diminished and contaminated the water resources. Groundwater meets more than half of the country's need of water supply.

India is among the top growers of agricultural produce in the world. Thus, the consumption of water for irrigation is amongst the highest. Indian farmers give more emphasis on growing cash crops instead of food crops, which consume excessive amounts of water. Traditional techniques used for irrigation causes maximum water loss due to evaporation, drainage, percolation, water conveyance and excessive use of groundwater.

Water pollution is another problem. Sewage, effluents and wastewater from industries is drained into traditional water bodies such as river and ponds. Ganga is one of the most sacred but severely polluted river of India. Alongwith other religious wastes, the bones and ashes remaining after hindu cremation are also thrown in Ganges. According to the Central Water Commission, India requires at most 3,000 billion m³ of water annually and it receives around 4,000 billion m³ of rain. But due to inefficiency, misuse and siltation of rivers, significant amount of water is wasted.

Construction of dams, other hydroelectric projects and water diversion for irrigation has led to systematically destroying large river ecosystems. Rapid urbanisation as well as extreme groundwater usage by soft drink companies such as coca-cola also led to the water crisis in India.

Suggestions to Mitigate the Water Crisis

Looking at the current situation of water crisis in India, there is need for a paradigm shift. Some of the solutions which could be effective in dealing with the water crisis are:

- **Rain Water Harvesting** Rain water harvesting is the the innovative way of collecting rainwater in order to recharge the underground water. India receives enough rainwater annually during monsoon. So, it should be encouraged in large scale, particularly in cities where surface runoff of rainwater is very high. Moreover, traditional practices of rainwater harvesting like Jhalara, Bandhi, Bawari, Taanka, Ahar Pynes, Johads, Kuhls etc. should be promoted.
- **Crop Diversification** Crop diversification is a solution to reduce water usage in agriculture. Farmers should be encouraged to grow less water intensive crops like pulses and millets.
- **Micro Irrigation** Micro Irrigation such as drip irrigation, sprinkler irrigation should be promoted. The technology has the advantage of being applicable to all kinds of terrains in the country. Furthermore, the techniques help farmers use water more efficiently by modifying the water supply based on moisture level of soil.
- **Desalination** It is a potential advanced technique to solve the problem of water shortage, especially in coastal regions. Desalination involves treating sea water to remove its salt content, making it fit for drinking.
- **Organic and Nature-based Farming** Organic farming consumes less water in irrigation and also helps in improving the water-storage capacity of soil.
- **Use of Wastewater** More than 50 per cent of wastewater can be reused. By developing partnership with countries which are world leaders in sewage treatment and recycling such as Israel and establishing such facilities, India can meet the rising demands of industries and agriculture.
- **Aquifer Recharging** One of the main reason for deepening water crisis is reduction in traditional water recharging areas. Rapid construction is ruining traditional water bodies such as aquifers that have also acted as groundwater recharging mechanism. We need to urgently revive traditional aquifers, while implementing new ones. Aquifer recharging through community ponds and recharge needs should be promoted with the involvement of Gram Sabhas.
- **Raising Social Awareness** Campaigns should be organised to raise awareness about the importance of saving water to cope with its scarcity and ensure sustainability. Some NGOs are actively involved in teaching the locals how to preserve the water resources and how to increase the water usage efficiency.

- **Establishing Water Resources Projects** NGOs in India should be involved in establishing water harvesting structures in rural areas. For instance, The Jal Bhagirathi Foundation is one of the most prominent NGOs in India dealing with the issues of water scarcity in the desert terrains of Rajasthan. Some of the organisations such as 'FORCE' and 'Safe Water Network' are actively involved in dealing with the water crisis in India.

Government Schemes and Efforts

In partnership with Central and State Governments, the country has launched various schemes/programmes across the regions for conservation and management of water resources in a transparent, equitable and sustainable manner. Prominent among them are:

- **Command Area Development and Water Management (CADWM) Programme** It was launched in 1974-75 and its main aim was to improve the utilisation of created irrigation potential and optimising foodgrains production. It was done to meet the increasing need of food for growing population with the improved water use efficiency.
- **Watershed Development Programmes** Watershed Development Projects were taken up under different programmes launched by Government of India. Some of the important projects under Watershed Development Programmes were Drought Prone Area Development Programme (DPAP); Desert Development Programme (DDP); Integrated Waterland Development Project Scheme (IWDP); National Watershed Development Programme in Rainfed Areas (NWDPA). In case of hilly areas, Watershed Development Project for Shifting Cultivation Area (WDPSCA) was initiated as watershed development programme.
- **National Water Policy** It was first adopted in 1987 which was reviewed and updated in 2002 and later in 2012. The main objective of National Water Policy is to conserve the water.

Some of the recent initiatives taken by the government are as follows :

- The government in 2019 has launched 'Atal Bhujal Yojana' in overexploited and water stressed areas. This scheme envisages active participation of communities in various activities such as formation of water user associations, monitoring and disseminating groundwater data, water budgeting related to sustainable groundwater management.
- Under new unified Ministry of Jal Shakti, the government has launched Jal Shakti Abhiyaan (JSA) which is intensive water conservation campaign built on citizen participation to accelerate water conservation across the country.
- In short run, Jal Shakti Abhiyaan campaign will focus on integrated demand and supply side management of water at the local level, including creation of local infrastructure for source sustainability using rain water harvesting, ground water recharge and management of household wastewater for reuse.
- For the long run, the government has launched the Jal Jeevan Mission (JJM) with an aim to ensure piped water supply to all rural household by 2024.
- Niti Aayog has launched Composite Water Management Index (CWMI) to bring about much required improvements in water resource management and conservation in India in a coherent and collaborative manner. This index is a public platform that provides an annual snapshot of water sector status and water management performance of different states and UTs in India.

Conclusion

To conclude, the rapidly urbanising and developing India needs to drought-proof its cities and rationalise its farming. Water harvesting must be a priority, alongside mechanisms for groundwater replenishment. Coordinated action by all three tiers of government can bring long term solutions such as the inter-linking of rivers and good water management practices. Further, civil societies and NGOs can play a significant role in making water conservation a mass movement.

88

DROUGHT

CHALLENGES AND MITIGATION IN INDIA

Drought is a prolonged period of abnormally low rainfall, leading to a shortage of water. It is a type of natural hazard which is caused by the lack of adequate precipitation, either rain or snow, which can result into reduced soil moisture or groundwater table, diminished stream flow, crop damage and a general water shortage. According to vulnerability profile of India released by National Disaster Management Authority (NDMA), 68% of the cultivable area is vulnerable to droughts in the country.

The onset and end and severity of the droughts are often difficult to determine. Further, it differs from other natural hazards as it has a slow onset, evolves over months or even years, affects a large spatial extent and cause little structural damage.

Classification of Drought

Droughts are classified into meteorological droughts, hydrological droughts and agricultural droughts.

- **Meteorological Drought** It occurs when there is rainfall deficiency w.r.t long term average. In this, rainfall deficiency of 25% or less than is normal, 26-50% of rainfall deficiency is called moderate and a rainfall deficiency of more than 50% is called severe. Meteorological drought is the prime reason for the occurrence of drought and also leads to other kinds of droughts.
- **Agricultural Drought** It is identified by four weeks of consecutive drought or when weekly rainfall goes below 50mm during Kharif season.
- **Hydrological Drought** It is witnessed when there is deficiency of water in water bodies, when the requirement of water for normal and specific needs is not being met.

Causes of Drought

- **Weak Monsoon** The main cause for drought occurrence in India is the weak South-West monsoon system, which results into rainfall deficiency and hence drought. The weak monsoon system and condition of drought are witnessed more in the El-Nino years. El-Nino is an abnormal weather pattern caused by the warming of the Pacific ocean towards Equator.
- **Climate Change** The phenomenon of climate change is also likely to trigger droughts which will have huge impact mainly on agriculture.
- **Human Activities** The human activities like over-irrigation, deforestation, over-exploitation of water resources, improper utilisation of water resources etc. can also create conditions conducive to occurrence of drought. The farming of sugarcane in Maharashtra region has led to drought condition in that region. Sugarcane requires more water than crops like pulses, which leads to over-exploitation of the available water resources.

Effects of Drought

Unlike other natural hazards, the effects of droughts are all pervasive impacting each and every dimension of human life as well as economy of the region and nation. In this section we will discuss the effects of droughts on human lives through real life examples from drought prone areas of the country.

- **Agriculture** About 60% of our agriculture is still rainfed, hence the agricultural productivity of area significantly suffers on the occurrence of the droughts. Food and fodder crises become a grave concern for the people living in these areas. For instance, in the Bundelkhand area which encompasses district of Uttar Pradesh and Madhya Pradesh, there is huge exodus of people to urban areas due to recurrent loss of agricultural productivity.
- **Economy** The aggregate output of the economy also suffers due to droughts. The Agri-allied activities such as milk production, horticulture, fishing etc. are badly impacted due to the occurrence of droughts. Economically, it results into inter and intra states inequitable distribution of wealth. For instance, the drought prone Saurashtra and Vidarbha regions of Gujarat and Maharashtra lag behind in overall economic development when compared to the other parts of state.
- **Environment** Wind and water erosion of soil and poor soil quality are some of the consequences of the droughts on environment. Besides drying of wetlands, reduced food and water supply may lead to the migration of animal species or even their extinction. For instance, the Great Indian Bustard in Rajasthan has become critically endangered due to loss of their habitat.
- **Employment and Poverty** With the onset of droughts, famine, starvation, distress sale of livestock and property are common phenomena in drought prone areas of the country. This increases poverty besides creating large scale unemployments and distress migration in the cities.
- **Society** Due to shortage of basic necessities such as water and food, the sectarian conflicts, tensions and criminal activities rise in drought prone areas. Many of the farmer suicide reported in India were from drought prone areas of Uttar Pradesh and Maharashtra. Similarly, Bundelkhand area is notoriously famous for dacoits.

Regions Affected by Droughts in India

A drought prone area is defined as one in which the probability of a drought year is greater than 20%. A chronic drought prone area is one in which the probability of a drought year is greater than 40%. Most of the drought prone areas are found in arid, semi-arid and sub-humid regions of the country. Broadly, the drought affected areas of the country can be divided into two tracts. The first tract comprising the desert and semi-arid region cover an areas of 0.6 million sq. km. It is rectangle shaped area whose one side extends from Ahmedabad to Kanpur and other from Kanpur to Jalandhar. Most part of these region receives rainfall less than 750 mm. The second tract comprises the dry region lying in the rain shadow region of Western Ghats up to a distance of about 300 km from the coast. It also receives rainfall less than 750 mm. Outside these two main regions, there are isolated pockets which experience frequent droughts. They are Coimbatore and Tirunelveli districts of Tamil Nadu, Saurashtra and Kutch region in Gujrat, Kalahandi region of Odisha, Bundelkhand region of UP and MP and Purulia region of West Bengal.

Mitigation Measures of Droughts

Various measures are adopted in the management of droughts India with equal participation of both central and state agencies. From structural measures such as rainwater harvesting, watershed developments to diversion of cropping system have been carried out in the country. In this section we will learn about different mitigation measures for droughts.

- A proper mapping and assessment of drought prone region is must for taking timely actions. In this regard government in partnership with remote sensing technology of ISRO has taken in depth analysis of soil quality, water availability etc. of different areas of India, accordingly they are graded from low to high.
- Government has constructed many canals, dams, rainwater harvesting structures for drought proofing of those areas in order to provide irrigation facilities. Under Rastriya Krishi Vikas Yojana, there is emphasis on construction of irrigation facilities in those areas. Meanwhile, it has also taken river linking project such as Ken-Betwa river link project for Bundelkhand region in UP and MP and Kosi-Mechi link project for Seemanchal region in Bihar.
- Indian Agricultural Research Institute (IARI) along with Village resource center of ISRO has started educational and awareness programme for farmers in crop rotation and sustainable agriculture in drought prone areas. Further, the Pradhan Mantri Fasal Bima Yojana provides insurance in case of crop failure.
- National Institute of Disaster Management has taken capacity building programme for various officials and personnel involved in mitigation measures for drought prone areas. Apart from it, effective convergence between NGOs, Civil society, Self Help Groups and Panchayats has also been carried out for taking swift actions in case of droughts.
- To provide effective relief measures in wake of droughts, many important government schemes such as MGNREGA have seen increased allocation in those areas. Further, to create better employment opportunities in those areas, NITI aayog has launched Aspirational District Programme.
- Various state governments have also launched cloud seeding programme in the past to bring artificial rain in drought affected region. Indian Institute of Meteorological Departments also provides with short, medium and long-term forecast of Indian monsoon which helps in better preparedness.

Conclusion

Drought is a serious condition which can impact all the sections of the society, can bring huge economic loss for the country and can cause many disruptions in the society. Therefore, serious efforts by the government are needed to overcome and to avoid the situation of droughts. Alongwith the efforts of the government, the awareness among the people about judicious use of water needs to be increased.

89



FLOODS IN INDIA

CAUSES AND CONTROL



Floods are natural disasters affecting the crops, livestock, infrastructure and human beings. Floods occur when water bodies like rivers carry more amount of water than their capacities and when this additional water cannot be drained in a proper manner. Floods are not a recent phenomenon, it have been occurring since ages. However, today the destruction caused by floods is immense because of increased population density and spread of people in every part of the country.

Types of Floods in India

Floods in India are not restricted to any one place. There are several different kinds of flood, and each one bears a different impact in terms of how it occurs, the damage it causes, and how it is forecasted. In this section we will discuss about the different types of flood.

- **Coastal** (Surge Flood) It occurs in areas that lie on the coast of a sea, ocean, or other large body of open water. It is typically the result of extreme tidal conditions caused by severe weather. Eastern coast of India is vulnerable to this type of floods due to frequent cyclonic activities. Further, rising sea level due to climate change can put many coastal cities of the world at risk of being over run by sea water.
- **Fluvial** (River Flood) It occurs when excessive rainfall over an extended period of time causes a river to exceed its capacity. It can also be caused by heavy snow melt and glacial level outburst. The damage from a river flood can be widespread as the overflow affects smaller rivers downstream, often causing dams and dikes to break. This type of flood usually occurs in Himalayan rivers and cause massive destruction including landslides.
- **Pluvial** (Surface Flood) It is caused when heavy rainfall creates a flood event independent of an overflowing water body. It can happen in any urban area even higher elevation areas that lies above coastal and river floodplains.

Apart from these, floods may also be caused due to upsurge in groundwater and outburst of drain and sewer.

Major Flood Prone Areas of India

The major flood prone regions in India according to National Commission on Floods comprises of Ganga river basin which includes state of Uttar Pradesh, North Bihar and West Bengal. The heavy rainfall and huge siltation makes flood a yearly affair in Brahmaputra river system also. The inadequate surface drainage which causes inundation and water-logging over vast areas is the main cause of floods in North-Western part of India.

Cloudburst and torrential rainfall have caused flood in Uttarakhand and Kashmir. The small rivers of Kerala, originating in Western ghats and flowing to the Arabian sea, cause considerable damage when in spate. The deltaic region of the Mahanadi, the Godavari, the Krishna and the Kaveri suffer from occasional floods owing to the large scale silting and consequent change in the river course.

Causes of Flood

Floods are caused by natural, ecological or anthropogenic factors either individually or as a combined result. Earthquake, landslide and cloudburst are among other natural causes of flood. Man made causes include collapse of dams, embankments and inefficient sewerage system in cities. The various causes of floods in India are as follows

- Rainfall of about 15cm or more in single day, sometimes are beyond the carrying capacity of the river causes the spilling of river over natural banks. West coast of Western Ghats, Assam and Sub-Himalayan West Bengal and Indo-gangetic plains faces flood due to heavy precipitation almost every year.
- The Himalayan rivers carry a lot of silt with them due to erosive action of the rivers. Because of the amount of silt carried by the rivers, the level of river bed rises and the water carrying capacity of the rivers gets reduced. This causes floods in the nearby areas of hill slopes. The water level in river rises because of greater run off. Floods in Western ghats, Shiwaliks and Chotanagpur plateau region occurs due to this reason.
- Excessive sand mining comes at a huge cost to the river and those living around it. Excessive sand mining can alter the river bed, force the river to change its course, erode banks and lead to flooding. It also destroys the habitat of aquatic animals and micro-organisms besides affecting groundwater recharge.
- In the flat terrain especially in plain areas, rivers have tendency to meander or change the course within a specific boundary. Because of this, frequent flood occurs in lower reaches of Ganga and Brahmaputra rivers.
- Tropical cyclone accompanied by strong winds, huge torrential rain and high tidal bores causes inundation of Eastern coastal regions of India. Floods due to cyclone are common in the East coasts of Tamil Nadu, Andhra Pradesh, Odisha and West Bengal.
- In coastal areas sea tides deposit silt in the river mouths and discharge channels leading to steady deterioration of their discharge capacity, it causes floods in deltaic areas of India.
- Due to inadequate drainage, floods have occurred in Punjab, Haryana and Western UP. After introduction of irrigation in these areas, the sub-soil water table rises fast leading to widespread flooding.

Control Measures

Being a natural phenomenon, the total elimination or control of floods is neither practically possible nor economically viable. Hence, flood control measures aim at providing a reasonable degree of protection against flood damage at economic costs. In the section we will discuss various control measures of flood adopted by government and citizens.

- For controlling the flood, the government has constructed many dams and authorities which includes Damodar Valley Corporation for Damodar river, Narmada Control Authority for Narmada river, Hirakund dam on Mahanadi, Ukai dam on the Tapi and the Bhakra dam across Sutlej. The Central Water Commission and National Flood Control Board in partnership with the National Disaster Management Authority (NDMA) has taken many steps for flood control.
- Among other structural measures, flood embankments, flood banks and levees have been constructed all along the major rivers, so that excess water in their channel does not cause havoc in nearby areas.
- Surface water drainage congestion due to inadequacy of natural or manmade drainage channels results in flooding in many areas. In this regard government has started many drainage improvements programs.
- Diverting all or a part of the discharge into a natural or artificially constructed channel, lying within or in some cases outside the flood plains is a useful means of lowering water levels in the river to control the flood. The flood spill channel skirting Srinagar city and the Supplementary Drain in Delhi are examples of diverting excess water to prevent flooding of the urbanised areas.
- Among the non-structural measures which strive to keep people away from flood waters, the flood-plain zoning and flood proofing have been adopted by the government. These are non-structural changes, adjustments or additions to reduce and prevent flood. Similarly, India Meteorological Department (IMD) issues flood forecasting and warning which are of immense help in relocation of the vulnerable section of population.
- Watershed management measures such as developing the vegetative cover i.e. afforestation and conservation of soil cover in conjunction with structural works like check dams, detention basins etc. serve as an effective measures in reducing flood peaks and controlling the suddenness of the runoff. Government under National green mission aims at massive afforestation all along the channels of major rivers. Further many watershed developments projects have been taken up under MGNREGA, which will eventually help in controlling the flood.

Conclusion

However, more efforts by the government and proper implementation of the various policies it has made is required to control the situation of flood. Apart from that, the human induced reasons needs to be controlled. Proper planning and control mechanism should be put in place for the meteorological and geographical factors.

The occurrence of floods every year results in the loss of GDP to the country and precious lives are lost due to floods. Therefore, flood control and management is essential today, for which both government and private sectors efforts are needed. Along with organisational efforts, individual awareness and participation to strengthen the infrastructure will prove beneficial in this direction.

ENERGY CONSERVATION PROGRAMMES IN INDIA

Energy conservation is the decision and practice of using less energy. It is the prevention of wasteful use of energy wherever possible. Turning off the light when we leave the room, unplugging appliances when they are not in use and walking instead of driving are all examples of energy conservation. It is a conscious decision taken by keeping in mind the depleting energy resources of the world.

Need for Energy Conservation

Over the years, the conventional sources of energy are depleting, causing the price of fuels to rise, thereby increasing cost of production of energy. Non-conventional sources of energy are not fully developed. Therefore, energy conservation is of paramount importance in our country because

- Energy resources in our country are limited. India has approximately 1% of world energy resources but it has 17% of world population.
- We use energy faster than it can be produced. Coal, oil and natural gas—the most utilised sources take thousands of year for formation.
- Non-renewable energy sources constitute about 80% of our fuel use, they cannot be reused and renewed.
- By saving energy we can reduce pollution as energy production and use account to large proportion of air pollution and significant percentage of Green House Gases (GHG) emissions.
- Electrical power is one of the scarce resources in our country. Generation of electricity is very capital intensive. The cost of setting up a power plant of 1mw (coal/gas) is approximately ₹ 4 crore. This increases the cost of electricity generation.

Methods of Energy Conservation

Energy conservation is a multi-dimensional concept which encompasses behavioural aspect to the high end engineering intervention. Some of the methods of energy conservation are given below

- Among behavioural changes, turning off the light and other appliances when not in use is most common method which can be utilised by each and every household.
- Purchasing energy efficient appliances with star level mark by the Bureau of Energy Efficiency.
- Use of Public transport facilities for mobility instead of private vehicles.

- Consumption of locally manufactured goods as transportation and shipping of goods requires lot of energy.
- Constructing energy efficient houses with proper ventilation and lighting to reduce lighting and cooling needs.
- Proper awareness among young generation and school going children about importance of energy conservation.

These are few methods of energy conservation which we can inculcate in our personal lives.

Government Measures for Energy Conservation

The government of India has taken various measures to conserve energy and ensure sustainable future for all. Government measures for energy conservation encompasses two main features; first, it is promoting energy conservation through awareness of the concerned stakeholder such as industrial bodies, farmers and households. Second, it has taken energy efficiency measures to use less energy to perform the same task. In addition to it, it has also launched many schemes and programmes for generation of energy from renewable sources. Some of them are discussed below :

Petroleum Conservation Research Association (PCRA), 1978

The main objective of PCRA is to improve the productivity of various sources of energy. It has launched initiatives for improving fuel efficiency of vehicles, energy audits of industries and training drivers of heavy vehicles to ensure energy efficient practices. Besides giving publicity to energy efficient programmes, it also educates women on better cooking habits, use of fuel-efficient stoves and lighting appliances.

Energy Conservation Act, 2001

This act provides the mechanism at the central and state level to start energy efficient drive in the country. Five major provisions of the act relate to Designated Consumers, Standard and Labelling of appliances, Energy Conservation Building Codes (ECBC), Creation of an institutional set up called the Bureau of Energy Efficiency (BEE) and establishment of Energy Conservation Fund. The voluntary and mandatory provision of this act guides the energy efficiency programmes in India.

Bureau of Energy Efficiency (BEE), 2002

The Bureau of Energy Efficiency (BEE) is an agency of the Government of India set up under the Ministry of Power in 2002. The agency function is to develop programs which will increase the conservation and efficient use of energy in India.

In 2006, BEE launched the standard and labelling programme with an objective to provide consumers with informed about the energy saving potential of relevant market product. Under this scheme, BEE provides for voluntary and mandatory labelling of various electrical appliances.

BEE was also instrumental in success of UJALA scheme which was launched in 2015 with an aim of facilitating higher uptake of LED lights by residential users. Under this programme, about 36 crore LED bulbs have been distributed at subsidised prices to consumers which helped in reducing the green house emission by 38 million tons annually besides conservation of significant energy.

National Mission for Enhanced Energy Efficiency (NMEEE), 2008

Under this mission, the Perform Achieve and Trade (PAT) scheme has been launched for industries, in which mandatory targets are assigned to energy intensive industries for reducing the energy consumption. This is followed by Conversion of excess energy saving certificates into tradable instrument called Energy Saving Certificates (ES Certs). As of now (2020) there are over 800 units participating in this energy conservation drive.

Energy Conservation Building Code (ECBC), 2007

The main objective of this code is to achieve energy neutrality in the buildings. It sets minimum energy standards for new building, the updated ECBC in 2017 has included parameters for builders, designers and architects to integrate renewable energy sources in design of buildings. The BEE has also launched ECO-NIWAS Samhita for residential buildings in 2018 besides giving mandatory targets for Hotel industry.

Challenges Associated with Energy Conservation in India

Despite many achievements in energy conservation over the years, few challenges remain which needs to be overcome through effective planning and coordination. Some of the challenges are

- India's transmission and distribution (T&D) losses are almost 20% of generation, more than twice the world average.
- There is issue of cross subsidisation of electricity, where highly subsidised electricity is provided to farmers, which results in reckless behaviour in energy use.
- Around half of the electrical energy comes from coal-based thermal power plants, many of which are quite old resulting in low productivity.
- There is lack of awareness among the consumers of energy and there is need of a uniform policy regarding training and capacity building in the domain of energy conservation.

Conclusion

The impacts of these energy conservation programmes are being felt in the economy. The battery driven rickshaw has become a common sight on roads in urban areas. Non-energy benefits have also accrued, such as reduced emissions from fossil fuel driven vehicles. The greater awareness of the consumer has had a significant impact on the market for electrical appliances by ensuring that manufacturers produce more energy efficient products. Thus, energy conservation programmes need to be continued with full force to enable India to change from an energy deficient nation into an energy surplus one.



E-WASTE

THE DARKER SIDE OF DIGITAL REVOLUTION



Electronic Waste, also called e-waste, refers to various forms of electric and electronic equipments which have been discarded. These are the unwanted, non-working or obsolete (outdated) electronic products which have reached the end of their shelf life. These include the discarded electronic products such as parts of computers, mobiles, televisions, washing machines, refrigerators and so on. The world produces 50 million tonnes of e-waste per year, according to 2019 UN report. According to the report, only 20% of this e-waste is formally recycled and rest ends up in landfill or is recycled informally in developing countries.

Sources of e-waste

There are a number of different sources of e-waste such as

- Waste generated from the products used for data processing such as computers, computer devices like monitors, speakers, keyboards, printers, etc.
- Electronic devices used for entertainment like TV, DVDs and CD players. Equipments or devices used for communication like phones, landlines etc.
- Household equipments like vacuum cleaners, washing machines, air conditioners that have become old and people want to get rid of from them.
- Outdated electronic items like VCR, stereo, big monitors etc.

Effects of e-waste

e-wastes have many harmful effects on humans, animals and our environment. Some of the effects of e-waste are given below

- Electronic devices use potentially harmful metals such as lead, mercury, arsenic, cadmium, beryllium, etc. When dumped into the landfills, these metals are known to release harmful toxins that may reach from the soil into the environment and cause health issues to animals and humans alike.
- There are chances that the chemicals released from e-wastes may percolate into the ground resulting in land and water pollution.
- Polychlorinated biphenyls and polybrominated diphenyl ethers are the important components of e-waste and have dangerous side effects. These toxins and chemicals cause birth-defects, kidney, liver, heart and skeletal system damage. Besides, they are known to have a deteriorating effect on the nervous and reproductive systems of the human body.
- The hydrochlorofluorocarbons (HCFCs) and chlorofluorocarbons (CFCs) are present in air conditioners, refrigerators and washing machines. They are the causative agents of ozone depletion. These toxins also bio-accumulate through the food chains and cause a serious threat to all species on the planet.

e-waste Control

Recycling is the best method to control e-waste. Recycling of e-waste takes place in 3 major steps. These steps are

- (i) **Detoxication** To ensure safe disposal or recycling of e-waste, detoxication process takes place for the electronic materials. Detoxication is the process of removing critical components from the e-waste in order to avoid contamination with toxic substances during the downstream processes. Critical components include lead glass from CRT (Cathode Ray Tube) screens, CFC (Chlorofluorocarbon) gases from refrigerators, light bulbs and batteries.
- (ii) **Shredding** In this method, electronic materials are broken into pieces to obtain concentrates of recyclable materials in a dedicated fraction and also to further separate hazardous material. The mechanical processing plants where shredding takes place include shredders, crushing units, magnetic and eddy current and air separators. The emitted gases are filtered and residues are treated to minimise environmental impact.
- (iii) **Refining** Next step of e-waste recycling is refining of the shredded materials to obtain reusable components. Refining of resources in e-waste is possible and the technical solutions exist to get back raw material with minimum environmental impacts.

Other Ways of e-waste Management

The rampantly growing environmental footprint of the e-waste is indeed a cause of worry. It is the responsibility of both the consumers and producers to manage the growing e-waste. Some of the suggested ways of e-waste management are as follows :

- Most of the electronic material has a certain amount of reusable component associated with it. This reusable component includes metals such as copper, aluminium, lead, gold, silver and iron etc. Special environment-friendly techniques need to be devised in order to extract this material safely from the waste material.
- Instead of throwing away, they can be donated to needy people. Used gadget can also be sold at cheaper rates. These electronic products should be repaired and reused if possible.
- Instead of throwing away the e-wastes, it should be sold as scrap material. For this, the initiatives of producers are needed. The producers can enter the recycling chain by providing a collection service and a repurchase offer better than that of the unorganised sector.
- The consumers can be provided with financial incentives in order to make them enter the formal recycle chain. They need to be encouraged to get the defunct gadgets and electronic items out of their house. Many companies like Dell, Apple and HP have started various recycling schemes. The concept of three R's i.e. Reduce, Reuse and Recycle can play a significant role in e-waste management.
- The formal and informal sector can be clubbed together in order to provide better e-waste management. Besides, the producers must try to incorporate environment friendly raw material in the manufacturing of the final products.

Creating Awareness About the Side Effects of e-waste

People need to be made aware of the side effects of e-waste. It can be done by following ways :

- One should not resort to mindless or reckless dumping of the electronic gadgets but donate or resell these items.
- Scientific techniques should be devised instead of incineration or such harmful techniques for the disposal of these wastes.
- Proper training should be given to the workers engaged in e-waste recycling so that e-waste management is done on scientific lines.
- The Government, NGOs and educational institutions should come forward to create awareness among the people about the harmful effect of e-waste and about ways to reduce it.
- As per recent study conducted by ASSOCHAM-KPMG (2018), India has emerged as the world's fifth largest e-waste producer. Therefore, the government needs to come forward and make rules and punish the defaulters.

Government's Initiatives

The Government of India has also took some important initiatives in order to reduce e-waste in the country. Some of these are as follows

- Ministry of Environment, Forest and Climate Change under the Government of India has notified E-waste Management Rules, 2016 in order to keep a check and enable proper management of the e-waste. As per this rule, the manufacturer is also now responsible to collect e-waste generated during manufacture of any electrical equipment and channelise it for recycling or disposal and seek authorisation from State Pollution Control Board (SPCB).
- Besides this, E-Parisaraa is an excellent initiative for the management of e-waste in the country. E-Parisaraa, an eco-friendly recycling unit on the outskirts of the city, is India's first e-waste recycling unit. It aims to reduce pollution and landfill waste along with recovering valuable metals, plastics and glass in an eco-friendly way.
- The Ministry of Electronics and Information Technology (MeitY) has initiated an e-waste awareness programme under Digital India, alongwith industry associations from 2015. The objective of this programme is to create awareness among the public about the hazards of e-waste recycling by the unorganised sector and to educate them about the alternative methods of disposing their e-waste.

Conclusion

As we have seen that e-waste is emerging as a serious public health and environmental issue in India, and India has become the fifth largest electronic waste producer in the world, thus, it is the need of the hour to check and formulate such strategies and measures which can control the e-waste generation and dispose them safely.

We should use effective e-waste recycling methods instead of switching the dangerous incineration method. More than any laws and rules, it requires a collective effort from the consumer, the producer and the government to handle, manage and dispose the e-waste efficiently.

WILDLIFE IN INDIA

PROTECTED OR AT RISK?

Wildlife refers to undomesticated animal species. It also includes those organisms that grow or live wild in an area without being introduced by humans. Like forests, wildlife is also a national resource, which not only helps in maintaining the ecological balance but is also beneficial from economic, recreational and aesthetic point of view. There was a time when human needs were minimum and there was hardly any interference in the wildlife. However, due to unprecedented proportions of threat caused by urbanisation, pollution and other anthropogenic interventions, biodiversity is shrinking.

India is home to a large variety of animals. India has an amazingly wide variety of wild animals and birds that live in the diverse terrain of the country. From ferocious Royal Bengal tigers to Asiatic elephants, India houses this huge variety of animals in its 101 national parks, 18 biosphere reserves and 553 wildlife sanctuaries. Out of the world's 36 biodiversity hotspots, India is home to three such biodiversity hotspots namely-The Western Ghats, the Eastern Himalayas and the Indo-Burma region.

However, due to irresponsible interference of humans with the ecosystem has resulted in the loss and extinction of many species. Due to man's interference with nature and the threats that have risen out of this, conservation of these biodiversity rich spots and their wildlife in India have become important.

Classification of Species

IUCN (International Union for Conservation of Nature) has compiled a list called 'Red Data Book' for wildlife species. 'Red' is symbolic of the danger that these species presently experience. IUCN classifies the species under various categories. These include

- (i) **Extinct Species** These are the species whose last member has died, therefore leaving no surviving individual to reproduce.
- (ii) **Critically Endangered** It is the highest risk category assigned for wild species. It means that the number of species have decreased or will decrease by 80% within three generations.
- (iii) **Endangered Species** It is the population of organisms which are at a risk of becoming extinct because either they are very few in number or are threatened by changing environmental or predation parameters.
- (iv) **Vulnerable Species** These are the species which are likely to become endangered unless the circumstances threatening its survival and reproduction improve.

- (v) **Extinct in the Wild** These are the species known only by living member kept in captivity or as a naturalised population outside its historic range due to massive habitat loss.
- (vi) **Near Threatened Species** These are species that may be considered threatened with extinction in the near future.
- (vii) **Least Concerned Species** These are the ones which are evaluated but not qualify for any other category to bring attention to them.
- (viii) **Data Deficient Species** These are species which indicate that there is inadequate information to make a direct or indirect assessment of extinct species based on its distribution and/or population status.
- (ix) **Not Evaluated (NE)** Not yet having been assessed by IUCN.

List of Threatened Species of India

India has many threatened species. Some of these are as follows

- **Critically Endangered** Great Indian Bustard, White-rumped vulture, Indian vulture, Gharial, Kashmir stag, Sumatran Rhino, Pygmy Hog etc.
- **Endangered Species** Lion-tailed Macaque, Nilgiri Tahr, Great Indian one-horned Rhinoceros, Green Turtle, Red Panda, Bengal Tiger, Asiatic Lion, Ganges river dolphin, Indian elephant etc.
- **Vulnerable Species** Black Buck, Gaur, Yak, Snow Leopard, Indian Rhinoceros, Sarus crane etc.

Causes of Extinction of Wildlife

India has about 6.49% of all fauna species in the world. Following are the factors which leads to the extinction of wildlife in India.

- **Degradation of Ecosystem** There are different types of living beings in the terrestrial and aquatic ecosystems. Cattle, insects, plants, trees grow in the terrestrial ecosystem whereas fish, small plants etc. grow in aquatic ecosystem. The terrestrial ecosystem is degraded due to forest fire, destruction of forests, use of insecticides, pesticides etc., whereas aquatic ecosystem is degraded due to water pollution, construction works etc.
- **Loss of Habitat** Natural habitat is ruined because of human activities like construction work, the extension of agricultural work, destruction of forest etc., which results in bad effect on animal's habitat, food cycle, climate and reproduction process.
- **Loss of Mobility** The deterioration of the natural environment causes the loss of mobility of birds and mammals. Hence, the animals and birds have limited space for roaming. This, disrupts their living and reproductive cycle.
- **International Trade** The trade of some items of wild origin such as animals' fur, bones, tusks, musk resulted in the decline of wild animals. Maximum use of items such as decorative souvenirs, perfumes, cosmetics etc. has increased the loss of wild animals in India.

Besides these, hunting, poaching, shifting cultivation, increase in number of predators etc. are also responsible for extinction of wildlife.

Government Initiatives to Protect the Wildlife

The government has taken many steps in order to protect Indian wildlife. Some of them are given below

- The Indian Wildlife Act was passed by the government in 1972 for the protection of plants and animal species. The Act banned poaching and hunting of animals and provided legal protection to their habitats.
- In the Wildlife Protection Act, 1972, Government of India created protected areas like National Parks, Sanctuaries, Conservation Reserves and Community Reserves.
- In 1973, 'Project Tiger' was launched to save the tigers. At present, there are 50 tiger reserves in our country which are governed by the National Tiger Conservation Authority (NTCA).
- Besides 'Project Tiger', Government of India runs various projects like Project Elephant; Project Hangul; Indian Crocodile Conservation Project; Protected Areas Networks, Action Plan for Vulture Conservation in India and many others.
- Wetland (Conservation and Management) Rules 2010 have been drafted to protect wetlands in India. The Central Government has also initiated the scheme, National Plan for conservation of Aquatic Eco-system. To protect the Dolphins which are found in Ganga, Brahmaputra and Meghna region, the National Government has declared it as 'National aquatic animal'.
- In order to curb the illegal trade of wildlife and that of endangered species, Wildlife Crime Control Bureau has been established.
- Special Organisation like Wildlife Institute of India, Bombay Natural History Society and Salim Ali Centre for Ornithology and Natural History are formed to conduct research on conservation of wildlife.
- To check the dwindling population of Gyps Vultures in India, Government of India has banned the veterinary use of diclofenac drug.
- E-surveillance has been started in Kaziranga National Park in Assam and borders of Ratapani Wildlife Sanctuary in Madhya Pradesh.
- There are some more legislations like Coastal Regulation Zone; Animal Welfare Board of India; Central Zoo Authority; Wildlife Crime Control Bureau; National Ganga River Basin Authority to protect wildlife in India.

Importance of Wildlife

Wildlife plays an important role in balancing the environment. It provides stability to different processes of nature. The following are importances of wildlife for India.

- **Ecological Importance** Wildlife helps in maintaining natural balance. Killing of carnivores leads to an increase in number of herbivores which in turn affects forest vegetation. If this equilibrium and stability is disturbed it disbalances nature and ecology. Thus, it is essential for balancing earth's ecological systems.
- **Economic Importance** Wildlife has great economic importance in terms of plant products such as food, medicine, fibre, timber and wild animals provide medicines, hide (animal skin), ivory, silk etc. Wildlife species are obtained from forests and altered to be domesticated which provides commercial and subsistence resources for farmers and industrialists. Wildlife species are also helpful in improving agriculture.

- **Research** wild organisms are used for the purpose of research and development such as testing the effects of medicine and vaccines. Monkeys, chimpanzees, rats are used to administer vaccine doses and support scientific experimentation.
- **Conserving Biodiversity** By conserving wildlife, biodiversity can be conserved. An ecosystem with more diversity is more stable as compared to a less diverse ecosystem. Conservation of a few important species helps in preserving the entire ecosystem.

Conclusion

It is high time to protect wildlife for their future existence. Therefore, several efforts should be made both at the national and the international level to protect wildlife with community and government participation. Alongwith the government efforts, awareness and cooperation of people are needed for the conservation of wildlife in India. Wildlife is an integral part of our natural heritage. Thus, we should protect wildlife for our future generation.

93

BIOPLASTICS

AN ALTERNATIVE TO PLASTIC POLLUTION

Bioplastics are plastic materials produced from renewable biomass sources, such as vegetable fats and oils. They can also be made from agricultural by-products and also from used plastic bottles and other containers using microorganisms. They are seen as an alternative to the plastic which stands out as one of the most important roadblocks in containing Environment pollution.

Need of Bioplastics

To understand the need of bioplastic as an alternative to plastic, we have to first understand the adverse effect of plastic pollution on the environment and human health. Some of these effects are :

- With the rise of per capita plastic consumption globally at 28 per kg, the modern cities all over the world is surrounded by debris of plastic waste emitting poisonous Greenhouse gases (GHGs) and choking the drainage basin.
- Studies estimate there are now 15-51 trillion pieces of plastic in the world's oceans. Thousands of seabirds and sea turtles, seals and other marine mammals are killed each year after ingesting plastic or getting entangled in it.
- Plastic is a non-biodegradable product which takes thousands of years to degrade naturally. In the meantime, they are broken into microplastics which are consumed by us through sea food, foods packaged by plastics and plastic water bottles.

- Plastics are detrimental to environment and human health because of the chemicals, which are used in its production process. For instance, additive such as BPA, Plasticizers and Flame Retardant used in its manufacturing process are hazardous to human as well as environment health.

So, to tackle the effects caused by plastic pollution, there is need for its alternative which offers some of its beneficial features such as durability, strength and easiness of production and use without jeopardizing the environment. In this context, bioplastic has come out as its viable alternative.

Bioplastics and their Types

Bioplastic is a fast evolving scientific field because of which it is always expanding as new materials are discovered. The most common bio-based plastics include :

- **Starch-Based Bioplastics** Simple bioplastic derived from corn starch. They are often mixed with biodegradable polyesters.
- **Cellulose-Based Bioplastics** It is produced using cellulose esters and cellulose derivatives.
- **Protein-Based Bioplastics** It is produced using protein sources such as wheat gluten, casein and milk.
- **Aliphatic Polyesters** A collection of biobased polyesters including PHB (poly-3-hydroxybutyrate), PHA (polyhydroxy alkenoates), PHV (polyhydroxy valerate) among others. They are all more or less sensitive to hydrolytic degradation and can be mixed with other compounds.
- **Organic Polyethylene** Polyethylene that has been produced from the fermentation of raw agricultural materials like sugarcane and corn, rather than fossil fuels.

Utility of Bioplastics Across Different Sectors

Bioplastics are helping to reduce the impact of plastic waste on the environment and are being used in applications such as thermoformed coffee cup lids, injection moulded disposable cutlery and plates along with food containers of all shapes and sizes.

Bioplastic is most useful in packaging of different types of products. It provide an alternative approach to packaging and are a real solution to the need for a reduction in conventional plastic use and waste. Bioplastics packaging options include bags for compost, agricultural foils, horticultural products, nursery products, toys and textiles. The development of sophisticated bioplastic packaging for food products has greatly improved the shelf life of the food.

Bioplastics provide the electronic industry with an excellent opportunity to improve their environmental credentials as they can be injection moulded with similar characteristics to traditional plastics without modifying any machinery. The electronics industry has made big strides in tackling its environmental impact, largely through producing more energy efficient devices by bioplastics. Electrical product casings, circuit boards and data storage are all traditionally made from oil-derived plastics.

Bioplastic has many uses in the medical sector also. Non-toxic biodegradable bioplastics sutures, commonly referred to as stitches, are now being used by medical professionals in hospitals and surgeries. They are easy to sterilise, robust and remain in place until the tissue has healed at which time they are dissolved by the body leaving no marks behind.

Biodegradable plastics are also being used for medical devices. For example, pins, tacks and screws which are used to help bones heal and during reconstructive surgery are being produced with bioplastics.

The cosmetics industry is another big producer of packaging for its products. Many of these products have a short life span and once disposed of, they end up in landfills. It is no wonder that brands are starting to look towards alternatives and bioplastic enables different brands to satisfy this requirement without impacting on product quality.

Advantages of Bioplastics

Bioplastics are rightly mentioned as an alternative to traditional plastics due to several eco-friendly benefits attached to it. Some of the advantages are as follows :

- Bioplastics are made from plants' raw materials unlike conventional plastics which uses petroleum oil which is limited and finite resource. Therefore, bioplastics are an infinite source.
- The carbon footprint of manufacturing bioplastics is reportedly 75 per cent lower than that of their alternatives. According to a study conducted by the National Center for Biotechnology Information in America, plastics leach estrogen like chemicals into food, this makes bioplastics a safer and healthier alternative.
- Bioplastics can be recycled, they can be cleanly incinerated and industrially composted. This makes bioplastics a great material for food packaging as used packaging does not require cleaning since food and packaging can be composted or incinerated together. An additional benefit of composting is that nutrients from food waste are returned to soil to nurture new plants, improving soil fertility and food security.
- The best understood advantage of biodegradable bioplastics lies in the reduction of permanent litter. Single use plastic shopping bags are most obvious example of how plastics can pollute the environment with huge garbage.
- Other advantages of bioplastics include lesser energy consumption while in manufacturing process, improved income for farmers who produce plant based raw materials for bioplastic and environmentally sustainable way to do business.

Disadvantages of Bioplastics

However, bioplastics are not panacea at all, they also come with their own sets of limitations and repercussions. Some of the disadvantages of bioplastics are given below :

- Most bioplastics produced globally are made from the byproducts of food crops, which are expensive. The reliance on food crops presents a key challenge for bioplastics, because these crops are simply not a cost-competitive alternative to fossil fuels as of now.
- Various researches revealed that bioplastics production resulted in greater amounts of pollutants, due to the fertilizers and pesticides used in growing the crops and the chemical processing needed to turn organic material into plastic.
- Bioplastic production requires extensive land use which is another drawback posed by it.

- Bioplastics are also relatively expensive, PLA (Polylactic Acid) can be 20 to 50% more costly than comparable materials because of the complex process used to convert corn or sugarcane into the building blocks for PLA. However, prices are coming down as researchers and companies develop more efficient and eco-friendly strategies for producing bioplastics.
- Most of the bioplastic recycling processes require industrial composting facilities to be disposed of but most cities lack an adequate number of such facilities.

Bioplastics in India

Environmental awareness and increased demand for bio-based renewable material, along with availability of raw material, advanced functionality and technical properties, and various recycling options have resulted in a gradual growth in the bioplastic market of India. After the government pledge to eliminate single use plastics by 2022, the research and investment in bioplastics has increased significantly. Jammu and Kashmir became the first state/UT in India to build a dedicated Bioplastic manufacturing facility with an installed capacity of about 960 metric tonnes per year.

Scientists from IIT-Guwahati for the first time in India have developed biodegradable plastic with the help of homegrown technology. Similarly, the IIT-Bombay has developed plastic-like films for the packaging industry that can degrade into harmless components. It has also been approved from Food Safety and Standard Authority of India (FSSAI). Though in nascent stage, the future of bioplastics in India looks brighter with active support from policy makers and environmentally conscious choices from consumers.

Conclusion

In recent years, bioplastics have been promoted as potential alternatives to traditional plastic products. Bioplastics can greatly reduce our dependence on fossil resources which are significantly more harmful to the environment than bioplastics. So, it's no surprise that one can expect to see a surge in the production and use of bioplastics in the coming years.

SUSTAINABLE DEVELOPMENT

RELEVANCE IN TODAY'S WORLD

Sustainable development can be defined as a dynamic process designed to meet today's need without compromising the needs of future generations to fulfil their own needs. However, the concept of sustainable development moves beyond environment. It is also about social and economic development. It is about maintaining a balance between economic growth, social equality and preservation of the environment.

Emergence of the Concept

The term 'sustainable development' was coined by Eva Balfour and Wes Jackson. The concept was developed by World Commission on Environment and Sustainable Development, commonly known as the Brundtland Commission in 1987, under the Chairmanship of Gro Harlem Brundtland of Norway. The commission document was titled 'Our Common Future'. The concept received most attention in 1992 at the UN conference on Environment and Development held in Rio De Janeiro, Brazil.

Goals and Objectives of Sustainable Development

The commission highlighted its goals and objectives which are still relevant today. It strived to achieve long-term environmental strategies for achieving sustainable development; greater co-operation among developing countries and between countries at different stages of economic and social development. This is done for the achievement of common and mutually supportive objectives that considers interrelationships between people, resources, environment and development.

It also aims to discover ways and means by which the international community can deal more effectively with environment concerns, share perceptions of long-term environmental issues and the appropriate efforts needed to deal successfully with the problems of protecting and enhancing the environment. It is a long-term agenda for action during the coming decades and aspirational goals for the world community.

Sustainable Development Goals, 2016

The Sustainable Development Goals (SDGs) were adopted by the UN in the year 2016, when the Millennium Development Goals expired and was named as the 2030 Agenda for Sustainable Development. The 2030 Agenda for Sustainable Development calls on countries to begin efforts to achieve the 17 SDGs over the next 15 years.

Following are the 17 SDGs adopted by UN :

- Goal 1 : End poverty in all its form everywhere by 2030.
- Goal 2 : End hunger, achieve food security and improved nutrition and promote sustainable agriculture by 2030.
- Goal 3 : Ensure healthy lives and promote well-being for all at all ages by 2030.
- Goal 4 : Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all by 2030.
- Goal 5 : Achieve gender equality and empower all women and girls by 2030.
- Goal 6 : Ensure availability and sustainable management of water and sanitation for all by 2030.
- Goal 7 : Ensure access to affordable, reliable, sustainable and modern energy for all by 2030.
- Goal 8 : Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all by 2030.
- Goal 9 : Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation by 2030.
- Goal 10 : Reduce inequality within and among countries by 2030.
- Goal 11 : Make cities and human settlements inclusive, safe, resilient and sustainable by 2030.
- Goal 12 : Ensure sustainable consumption and production patterns by 2030.
- Goal 13 : Take urgent action to combat climate change and its impacts by 2030.
- Goal 14 : Conserve and sustainably use the oceans, seas and marine resources for sustainable development by 2030.
- Goal 15 : Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification by 2030.
- Goal 16 : Promote peaceful and inclusive societies for sustainable development, provide justice for all and build effective, accountable and inclusive institutions at all levels by 2030.
- Goal 17 : Strengthen the means of implementation and revitalize the global partnership for sustainable development by 2030.

Though, the goals are not internationally binding, all countries are free to take ownership of planning and establish national framework for achievement of these goals. As the implementation and success of these goals rely on the national process and plans, each country has a vital role to play. All stakeholders i.e. the government, civil society, private sector and others are expected to contribute to the realisation of these goals.

Criticism Against Sustainable Development

The concept of sustainable development has however met through constant criticism due to various challenges in achieving them as well as their lack of focus on social issues. Some of the criticism received against sustainable development are as follows:

- The sustainable development has also been criticised due to narrowness of the term and to confine global problems to the environmental content only.
- The goals are wishful and unattainable. For instance- the eradication of poverty by 2030 will be almost impossible in the wake of low economic growth and various other issues in the conflict-ridden world.
- To achieve the goal of sustainability, not only in developing countries but also the developed world will be requiring a lot of funding. The absence of planning regarding the financing of sustainable development is the biggest drawback of these goals.
- There is also a lack of support for developing and poorer countries on the part of developed countries for the financing and technology transfer to achieve the goal of sustainable development.
- There is also a lack of political will to deal with the issue of environmental degradation and climate change in various countries of the world. Natural occurrences and disasters such as earthquakes, tsunami etc also can pose a threat to sustainability.
- There is no proper monitoring and ownership mechanism to measure the implementation of sustainable development in various countries of the world.

India's Stance on Sustainable Development

India is ranked 117 out of 193 nations on a global index (Sustainable Development Goals Index, 2020) that assesses the performance of countries towards achieving the ambitious Sustainable Development Goals (SDGs). India, which scored 61.92, is behind countries like Nepal, China, Bhutan, Sri Lanka and Iran.

In the context of India with a huge population and social challenges like massive poverty, hunger, malnutrition, acute gender discrimination, and low per capita income, these goals are nearly impossible to achieve. However, India can play an important role in achieving sustainable development goals. In fact, these goals can be treated as 'ideal goals' which can act as a guideline for the national and international governments to measure their success in achieving inclusive and sustainable development.

Conclusion

Sustainable development, calls for a more balanced view thereby ensuring development of all the sectors and not just be biased for environmental sustainability. In brief, sustainable development needs democratic thinking, but it can also help strengthen democratic institutions through consensus-based public participation. It, therefore can be concluded that, sustainable development be considered a 'means' and not an 'end' in itself. Therefore, it is a 'process' and not a 'product'.

GLOBAL CLIMATE CHANGE

CAN WE SAVE THE MOTHER EARTH?

Global climate change is the long-term shift in weather patterns globally. It is a holistic concept which refers to the changes in a region's overall weather patterns including precipitation, temperature, cloud cover and other such conditions which prevail for a longer period of time.

The concept emphasises on the change in Earth's average temperature. Weather includes the short-term changes witnessed in a region's temperature, humidity, clouds and precipitation etc. The weather may vary from one day to another and morning to evening. However, the climate is the weather condition prevailing over an area for a longer period of time.

Evidences of Climate Change

There are several indicators to show that climate is changing. Some of them are mentioned below :

- According to the scientists the accumulation of heat in the oceans is the strongest evidence of how fast Earth is warming. In recent years, oceans have absorbed 90% of the extra heat trapped by increasing greenhouse gases.
- Lower troposphere temperature as measured by satellites showed that 2010s was the warmest decade. The specific humidity has risen with change in temperature which indicates that the climate is changing.
- Sea level has risen at an accelerating rate. There have been net loss of ice from glaciers worldwide. Northern Hemisphere snow cover has also decreased in recent decades.
- Changes in rainfall and weather patterns also indicate towards the climate change.
- The climate change phenomena made favourable conditions for desert locusts to breed consists of moist sand and green vegetation in the desert region of Africa and Arabian Peninsula.
- Other factors like earlier unfolding of new leaves in spring, changes in bird migration patterns etc also show that climate is changing.

Factors Responsible for Climate Change

The Earth's climate is dynamic and always changing through a natural cycle but the climate changes that are occurring today have been speeded up because of man's activities. The causes of climate change can be divided into two categories-Natural and Man-made.

Natural Causes

There are a number of natural factors responsible for climate change. Some of them are as follows

- **Continental Drift** The continents that we are familiar today are parts of large landmass that began gradually drifting apart, millions of years back. This drift of continents continue even today and has an impact on climate because it changed the physical features of the landmass, their position and the position of water bodies. For instance, the Himalayan range is rising by about 1 mm every year because the Indian landmass is moving towards the Asian landmass, slowly but steadily.
- **Volcanoes** When a volcano erupts, it throws out large volume of SO₂, water vapour, dust and ash into the atmosphere. These gases and ash can influence climate patterns for years.
- **Ocean Currents and La Nina and El Nino Effects** Ocean currents have been known to change direction or slow down and hence have an impact on the climate. The fluctuations in El Nino and La Nina lead to the interaction between the oceans and the atmosphere resulting in the variation of global temperature. Such variations last for several days and hence impact the climate.
- **Geothermal Energy** The geothermal energy produced due to the heat and decay of radioactive compounds below the surface of the earth is one of the contributing factors to the rising temperatures.

Human Causes

There are several human factors which lead to climate change. Some of them are as follows

- **Industrial Revolution** The Industrial revolution in the 19th century saw the large-scale use of fossil fuels for industrial activities. The burning of fossil fuel is the largest source of greenhouse gases. It was responsible for rise in global temperature.
- **Deforestation** More and more land that was covered with vegetation has been cleared to make way for houses. Natural resources are being used extensively for construction, industries, transport and consumption. These are the factors responsible for global warming.
- **Greenhouse Gases Effect** Anything that has an impact on the amount of energy being absorbed and radiated from the sun is a contributor to the global climate change. One such process is the greenhouse gas effect which leads to the global warming. The human activities have led to the rise in greenhouse gases which have resulted in global warming. The GHGs have the potential to trap the heat from the atmosphere and keep the earth warm. Besides deforestation, emissions from the vehicles and industrial effluents are some of the causes of the rising of GHGs in the atmosphere.

Effects of Climate Change

Global climate change has already had observable effects on the environment. Glaciers have shrunk, ice on rivers and lakes is breaking up earlier, plant and animal ranges have shifted and trees are flowering sooner.

Climate change has resulted in more heat waves, droughts, floods or intense rain. The rising ocean temperature and acidity seriously impacts the existence of flora and fauna in marine ecosystem. Due to melting of glaciers and subsequent rise in sea level the future of port cities looks grim which can impact millions worldwide.

Climate change is likely to contribute substantially to food insecurity in the future by increasing food prices and reducing food production. Due to increase in extreme weather events such as hurricanes, tornadoes, drought, heavy rainfall and heat waves, the extent and frequency of vector borne diseases may increase.

Climate change also result in enhanced land degradation and expansion of sub-tropical deserts. Ocean acidification due to climate change also poses a serious threat to underwater life, particularly creatures with calcified shells or skeletons like oysters, clams and corals.

Climate change create an imbalance in the natural ecosystem by disruption in timing of seasonal life cycle events, range shifts and food web of many species. There will be an affect on the basis necessities such as water supplies, air quality and supply of electricity.

Suggestions and Initiatives

All these hint towards a dire need of the urgent steps to be taken in order to reduce the greenhouse effect. People can make a difference by changing their everyday habits and lifestyle. The problem of global warming can be controlled by minimising the emission of greenhouse gases into the environment.

To secure water supplies, societies have traditionally used 'grey infrastructure' such as pipelines, dams and man-made reservoirs. However, 'green infrastructure' uses natural or semi-natural systems to provide similar benefits with positive long-term environmental consequences.

First the Amazon, then California, then Australia-wildfires were catastrophic in 2019. Our preventive efforts to reduce the spread of wildfires often involve the removal of forests to create a firebreak (a strip of land devoid of flora). It can be reduced if we promote and work for reforestation.

Cities are significantly warmer than the surrounding countryside. This 'urban heat island effect' has many causes. Urban tree cover is a win-win solution for our cities. Trees cool the surrounding air by releasing water through their leaves.

By 2050 sea levels could be so high that 300 million people in coastal communities will face severe floods every year. There are some coastal ecosystems that can act as cost-effective seawalls. Mangrooves and coral reefs, for instance, cause waves to break before they hit the shore. With this, there would be minimal destruction of lives and properties.

Steps Taken by Government of India

In the recent past the Government has taken number of initiatives to combat the challenge of climate change. Some of the key initiatives of Government of India include the National Action Plan on Climate Change (NAPCC), National Adaptation Fund on Climate Change (NAFCC), Climate Change Action Programme (CCAP) and State Action Plan on Climate Change (SAPCC).

Further, the ambitious goal of generating 175 GW of renewable energy by 2022, smart cities, electric vehicles, energy efficiency initiatives, leapfrogged from Bharat Stage-IV to Bharat Stage-VI emission norms by April 2020 etc., have been undertaken proactively to minimise the impact of climate change.

UN Initiative in Fight Against Climate Change

At global stage, IPCC (Intergovernmental Panel on Climate Change) was founded in 1988 by the World Meteorological Organisation (WMO) and UNEP jointly as a place to study global warming problems at a governmental level. In 1994, UNFCCC (United Nations Framework Convention on Climate Change) came into force and is considered as the Parent Treaty of the 1997 Kyoto Protocol.

Their objective is to stabilise greenhouse gas concentrations in the atmosphere at a level that will prevent dangerous human interference with the climate system.

Later initiatives include REDD (Reducing Emissions from Deforestation and Forest Degradation), REDD+, establishment of Green Climate Fund, etc.

The Paris Climate Change Agreement came up in 2015 within the aegis of the United Nations Framework Convention on Climate Change is a giant leap in this direction. Under the agreement, the countries are expected to set their own targets for reducing emissions of carbon dioxide and other greenhouse gases. Here the target is not to give legal binding commitment, but the countries need to update them every five years. The agreement is scheduled to go into effect from 2020. More than 60 countries at UN Action Summit 2019 on 21st September, 2019 agreed to revise contributions to fight against greenhouse gas emissions.

Conclusion

Restoring and protecting nature is one of the greatest strategies for tackling climate change. It not only sucks carbon dioxide out the air but forests, wetlands and other ecosystems act as buffers against extreme weather, protecting crops, water resources and vital infrastructures. Thus, there is a need to put check on and contain the rising menace of climate change with the joint efforts of the people, countries and the global environment regulators so that the problem of global climate change can be reversed.

DISASTER MANAGEMENT IN INDIA

Nature knows no limits, when it strikes with all its fury it doesn't differentiate between rich or poor, rural or urban, women or children, it just wrecks havoc on all under its clutch. A disaster is a serious disruption that strikes the areas inhabited by man. It involves widespread destruction of human, material, environmental loss etc.

Classification of Disaster

Disaster can be classified as natural and man-made disaster. Few of natural disasters are landslides, hurricanes, wildfire, tornadoes, floods, earthquakes, drought, hail and tsunamis. Natural disaster may take different forms and range or duration, but it is sure to strike loss of life and infrastructure.

Man-made disasters are the disasters that are caused or induced by human activities. These include hazardous material emergencies like chemical spills on groundwater and land, power service blackout, radiological emergencies, reservoir induced earthquake, nuclear leakage, terrorism, civil unrest and many more. Man-made disasters are equally vulnerable as they pose great threat to both, people and property.

Concept of Disaster Management

Disaster management is a very important process which can be defined as proactive measures to mitigate loss of life and property, measures to rescue, relief, rehabilitation and recovery. It involves the creation of plans through which communities reduce vulnerability to hazards and cope with disasters. It does not eliminate the disaster but strikes to minimise its effect. It is very important for the societies and nations to value this concept as the failure to realise or plan may lead to human mortality, loss of revenue and damage to assets.

Disaster Management in India : Act and Policy

Disaster management comes into light as India has suffered great loss of life and property in the past. Indian Government has put a strong foot forward in order to create a standard plan for disaster management by passing and implementing various laws and acts. The Disaster Management Act, 2005 provides the institutional, legal, financial and coordination mechanism at centre, state, district and panchayat or municipality level.

This act also establishes National Disaster Management Authority (NDMA) under the chairmanship of the Prime Minister with tenure of five years. It assists in laying down plans and policies for effective management and implementation of Disaster Management Act. It also has provision for establishing National Disaster Management Force and National Institute of Disaster Management. National Disaster Management Force has played key roles in the recent Chennai floods 2015, Nepal earthquake 2015, Kerala floods 2018 and Gas leakage in Visakhapatnam 2020.

Disaster Risk Reduction (DRR) is a policy which highlights the broader modalities for disaster mitigation. Major areas underlined in DRR are mainstreaming DRR into developmental strategy; increasing awareness and preparedness; strengthening early warning system with the assistance of science and technology; strengthening rescue and relief mechanisms; better rehabilitation and reconstruction.

Projects and Schemes

The NDMA has set up a project named National Cyclone Risk Mitigation Project in 2003 for developing strategies in coastal and island regions for disaster management. It covers 13 Coastal States and Union Territories. NDMA has also made provisions to set up State Disaster Management Force from 2009-10. It plans to upgrade National Fire Service College in Nagpur to prepare professionals for fire prevention, fire protection, fire fighting, rescue and specialised emergency response. To meet the immediate requirements during an emergency, NDMA has created National Disaster Response Reserve (NDRR). NDRR maintains an inventory of tents, medicines, blankets, lighting equipments and food. Under Aapda Mitra Scheme, NDMA trains community volunteers to undertake basic relief and rescue measures during floods, flash floods, and urban flooding. NDMA has identified two district each in the States of Uttarakhand, Assam, Bihar, Himachal Pradesh and Jammu and Kashmir (Now a UT). These districts are multi-hazard vulnerable districts. NDMA prepares local people to fight natural and man-made disasters in these districts.

Under agriculture category, various new schemes like Pradhan Mantri Fasal Beema Yojana (Crop insurance scheme), Pradhan Mantri Krishi Sinchai Yojana (Irrigation programmes) are running. These serve the purpose of saving the marginalised farmers from disasters like extreme temperatures (heat waves and dipping mercury), torrential rains or cyclone.

International Tie-ups

Apart from these national measures, large number of international organisations are also linking up with Indian Government in the field of disaster risk reduction and response. Recently, the social networking giant Facebook Inc has rolled out disaster maps for India in a bid to help communities recover and rebuild faster in aftermath of natural disasters. India is also party to Sendai Framework for Disaster Risk Reduction (SFDRR) that was approved by UN member states in 2015 at Third World Conference on Disaster Risk Reduction held in Sendai, Japan. Four specific priorities of this framework are

- (i) Understanding disaster, (ii) Strengthening disaster risk governance
- (iii) Investing in disaster risk reduction, (iv) Enhancing disaster preparedness.

Challenges of Disaster Management in India

Despite having Disaster Management Act, India faces several challenges. In this section we will examine the disaster management challenges in India and assess the implications of those challenges for that country's economic, political and security environments.

- In recent years, Indian's public policy on disaster management has shifted from a focus on rehabilitation efforts to holistic management of disasters. This new policy approach incorporates pre-disaster issues of prevention, mitigation and preparedness as well as past disaster issues of response, recovery and reconstruction.
- Unsafe building practices in rapidly growing urban settlements constitute India's greatest challenges for disaster management. A major earthquake in any of India's densely and heavily populated cities in seismic zones would be catastrophic in terms of fatalities.
- Climate change has far-reaching implications for managing disaster risk in India, as the frequency and intensity of flash floods, landslides, droughts, cyclones and storm surges are expected to increase in upcoming decade.
- While significant achievements have been made in past disaster response and reconstruction, there are still formidable challenges to reduce the risk of future disasters.
- Disaster management policies must incorporate programmes to protect the most vulnerable segments of society-the poor, the marginalised, women, children etc.
- Mechanism must be designed and adopted for transferring lessons learned for pre and post-disaster management between communities.
- Given that natural disasters do not always follow the national boundaries, cross-border issues of disaster management should be addressed through enhanced regional cooperation.
- Funding for disaster management is another area of bottleneck despite that we have two institutional funds namely, National Disaster Management Fund and State Disaster Management Fund.
- According to World Bank Report India loses 2% of its GDP due to disaster every year. Moreover, in India the disaster assessment is done only on face value.
- Disaster is a state subject and therefore it is taken as the responsibility of the state to provide assistance and support in every form.

Conclusion

In recent years, there has been shift in emphasis, from response and recovery to strategic risk management and reduction, and from a government-centered approach to decentralised community participation. But we still need well equipped and latest technology, sufficient funding, community participation and coordinated effort at all levels to avoid or reconstruct the loss and damage incurred. Afterall, disaster both natural and man-made is not good for the economy as well as the society.

RAINWATER HARVESTING

Water is the primary source of living. We cannot imagine life without water, and it is the reality also that we are facing continuous threats of the shortage of water just because of misuse of water. In India, we have 17.7% of the world population but only 4% of the world fresh water resources. By 2025, it is predicted that large parts of India will join countries or regions having absolute water scarcity. Therefore, conservation of water is important for all of us. There are different ways of saving or conserving water, and rainwater harvesting is one of them.

Concept of Rainwater Harvesting

Rainwater is a free source of nearly pure water and rainwater harvesting refers to collection and storage of rainwater. Rainwater can be collected from rooftops and redirected to a deep pit or a reservoir. This water can be used for watering plants, washing and flushing. Thus, rainwater harvesting is a good example of water conservation. Rainwater harvesting is required due to several reasons which include

- To overcome the inadequacy of surface water to meet our demands.
- To increase groundwater levels at specific place and time and utilise rainwater for sustainable development.
- To increase infiltration of rainwater in the subsoil; this has decreased drastically in urban areas due to paving of open area.
- To improve groundwater quality by dilution.
- To reduce flood hazards and soil erosion.
- To improve ecology of the area by increase in vegetation cover etc.

Ancient Techniques of Water Conservation

Around the third century BCE, the farming communities in Baluchistan and Kutch (India) used rainwater harvesting for agriculture and many other uses. As per archaeological and historical records, Indians were adept in constructing dams, lakes and irrigation systems during the reign of Chandragupta Maurya.

In the 11th century AD, the largest artificial lake in India was constructed by King Bhoja of Bhopal. It covered an area of over 65,000 hectares. Therefore, rainwater harvesting in India had been in practice from ancient times.

Rainwater Harvesting in India

Rainwater harvesting is common in areas having high rainfall intensity well distributed in the year. In India such areas include Himalayan region, North-Eastern states, Andaman and Nicobar islands, Lakshadweep islands, Rajasthan and the Southern parts of Kerala and Tamil Nadu.

Tamil Nadu was the first state to make rainwater harvesting compulsory for every building to avoid groundwater depletion. The scheme was launched in 2001 and has been implemented in all rural areas of Tamil Nadu. In ancient Tamil Nadu, rainwater harvesting was done by Chola kings. In Meghalaya, rooftop rainwater harvesting is the most common practice in Shillong. Nearly, every household in the city has a rooftop rainwater harvesting structure. Almost 15-25% of the total water requirement of the household comes from rooftop rainwater harvesting.

Bangalore had developed an intricate system of rainwater harvesting during 1860s itself. In Bangalore, adoption of rainwater harvesting is mandatory for every building having an area measuring 60 feet and above and for newly constructed building measuring 30 feet and above. Bangalore Water Supply and Sewerage Board has initiated and constructed 'Rainwater Harvesting Theme Park' in the name of Sir MVisvesvaraya in 1.2 acres of land situated at Jayanagar, Bangalore.

In Rajasthan, rooftop rainwater harvesting has traditionally been practised by the people of the Thar Desert. Rainwater is captured from roof catchments and stored in reservoirs for future use. Rainwater from rooftops may be filtered and used for various purposes. Many ancient water harvesting systems in Rajasthan have now been revived. Water harvesting systems are widely used in all the areas of Rajasthan. Some of these are *Tankas* and *Kundis* for collection and use at the micro level and *Talabs*, *Nadis*, *Tanks* at the macro level; *jobads* for recharge at the macro level. In the semi-arid and arid regions of Rajasthan, particularly in Bikaner, Phalodi and Barmer, almost all the houses traditionally had underground tanks or tankas for storing drinking water.

In Pune, rainwater harvesting is compulsory for any new housing society to be registered. In Mumbai, Maharashtra, rainwater harvesting is being considered a good solution to solve the water crisis. This practice of rainwater harvesting is not unique to India. It has been practised worldwide in different forms.

Rainwater Harvesting in Other Countries

Rainwater harvesting is the normal practice for most rural housings in New Zealand. It is encouraged by most councils. Rainwater harvesting has been a popular method of obtaining water for agriculture and for drinking purposes in rural homes. The legislation to promote rainwater harvesting was enacted through the Urban Development Authority (Amendment) Act, in 2007. Water butts are often found in domestic gardens and on allotments to collect rainwater, which is then used to water the gardens.

In UK, the British Government's code for sustainable homes encouraged fitting large underground tanks to newly built homes to collect rainwater for flushing toilets and washing. In Japan, a simple and unique rainwater utilisation facility, Rojison, has been set up by local residents in the Mukojima district of Tokyo. They utilise rainwater collected from the roofs of private houses for garden watering, fire-fighting and drinking water in emergencies.

New Approach to Rainwater Harvesting

A new approach to rainwater harvesting is developing a Rain Saucer. Instead of using the roof for catchment, the Rain Saucer collects rain straight from the sky. Rain Saucer looks like an upside-down umbrella. This decreases the potential for pollution in rainwater and makes potable water for developing countries a potential application.

Other innovative approaches for rainwater collection are sustainable gardening and small-plot farming. 'Groasis Waterboxx' is a Dutch invention which is very useful for growing trees in dry areas. The waterboxx is specially designed to collect dew and rainwater and slowly release it to keep the soil moist for plant growth.

Recently, the National Green Tribunal (NGT) has directed all schools and colleges in Delhi to install rainwater harvesting system on their premises in two months. If the schools and colleges fail to do so, they will be liable to pay ₹ 5 lakh as a penalty.

Conclusion

Rainwater harvesting is the most sustainable and effective way to make water available in the areas lacking water. Rainwater harvesting is very low cost method and has lots of benefits. It helps in various purposes like household works, field irrigation, livestock, agriculture and animal husbandry.

Thus, harvesting through rainwater is not only saving the earth from becoming barren but also helping farmers to continue the cultivation process even under lesser rain and drought conditions.

DECLINING BIODIVERSITY IMPACT ON HUMAN LIVES

Biodiversity is often used as a measure of the health of ecosystems which represents all the human population and species existing on Earth's surface. Biodiversity is defined as the totality of genes, species and all ecosystems of a region. The biodiversity we see today is fruit of a billion of years of evolution on Earth as a result of natural processes and human activities. The loss of this unique biodiversity is considered irreversible by conservationists. Decline or loss of biodiversity on Earth is considered as reduction in the number of species, loss of habitat, loss of ecosystems, and variety of species present on Earth's surface.

It is estimated that almost 15,889 species on Earth are at the risk of extinction. In almost 20 years only, between 1980 to 2000, one fourth of mangrove area of the world has been lost, one fifth of coral species have vanished and 15 million hectares of tropical rainforests have been lost. Several birds, mammals, amphibians, fishes etc are on the risk of collapse due to environmental degradation. To understand the risks arising out of biodiversity loss, it is essential to understand the types of biodiversities.

Types of Biodiversity

Following are the types of biodiversity

- **Species Diversity** Species diversity refers to the variety of species on Earth. The aspects of species diversity can be measured in a number of ways. The most important among these are species richness, species abundance and taxonomic diversity. At the global level, an estimated 1.7 million species have been described till date. Total number of species are estimated at 5 million to almost 100 million. The most of species richness is concentrated in equatorial regions.
- **Genetic Diversity** Genetic diversity refers to the variation in species. New genetic variations produce newer features in species. There are wide genetic variations in species due to variety of habitats and their complexity. It also depends on the different ways with which organisms obtain their living from the nature. Genetic diversity affects the survivability, adaptability of species.
- **Ecosystem Diversity** It includes differences between types of ecosystems, diversity of habitats and various processes occurring within each ecosystems type. It is not easier to define ecosystem diversity than species or genetic diversity as the limits of ecosystem are more fluid. Managing and classifying ecosystems is a major challenge for the scientific community as biodiversity degradation and decline will affect the ecosystem and species badly. Many species may go extinct and many others may be vulnerable. Various threats to biodiversity exists which can be controlled to reduce biodiversity loss.

Factors Threatening Biodiversity

- Earth's biodiversity is the result of billions of years of evolution which is caused by natural as well as human factors. The factors that threaten biodiversity include the following.
- **Habitat Fragmentation** Habitat fragmentation and loss is the primary cause of biodiversity loss. Habitat fragmentation is the result of felling of forests, diversion of forest land for non-forest use, mining activities, construction of dams and roads in forest areas, overgrazing by domestic cattle population, and pesticide pollution etc. Several forest lands have been diverted for commercial Eucalyptus plantations and food crops. As the population of the world has increased, increased areas of agricultural fields is required for more production of food crops. This has resulted in diversion of natural lands at an extremely faster rates.
- **Pollution and Disturbance** Pollution due to man made activities leads to decline in biodiversity because unwanted materials in the ecosystem severely affects the living organisms. Sensitive species are mainly affected due to large pollutants in the ecosystem. Disturbances in ecosystems results in large scale death of various species such as fires, natural calamities, defoliation by insects etc.
- **Over Exploitation** Over-exploitation of resources such as hunting, over collection of produce, rapid and large scale fishing results in reduction of species of wild animals and plants. Illegal poaching, threatens the survival of species such as elephant, tiger etc. Loss of exotic marine biodiversity is aggravated by the promotion of unsustainable fishing practices and selective harvesting of wild resources. Traditional practices of gathering and hunting also possess threats to biodiversity.
- **Climate Change** The range and tolerance of plant and animal species are changed drastically due to change in climatic conditions. Species which cannot adapt to changed climatic conditions tend to migrate to newer areas where they are not able to survive due to change in weather. Resultant increase in the summer and dry season also increases the risk of forest fires in forests which sweeps away various important species.
- **Political Reasons** Political causes are also responsible for the loss of biodiversity. The developing countries which have rich biodiversity do not possess sufficient resources to conserve biodiversity. The developed countries exploit the diverse resources of developing countries at low costs. This affects biodiversity conservation efforts at the global scale. There is also lack of political coordination, differences in interests among various countries, incomplete information on biodiversity in political decision making and distortion of political incentives.
- **Absence of Local Institutions** It is believed that local institutions are closer to nature and help in their conservation but absence of local communities and local institutions results in over exploitation of natural resources. There is general lack of awareness among people if the local institutions are absent. The people are not aware about the utility of biodiversity and conservation. All these factors leading to decline in biodiversity results in multiple harmful effects on the humans as well as nature.

Impact of Biodiversity Loss on Human Lives

- **Loss of Nutrition** Biodiversity plays a crucial role in nutrition of humans through improvements in world food production through sustainable productivity of soils. Biodiversity provides genetic resources for all crops, livestock foods etc. Intensified and enhanced food production through irrigation, use of fertilisers, plant protection by pesticides, or introduction of food crop varieties and cropping patterns affect biodiversity and it impacts global nutritional status and human health.
- **Loss of Valuable Genes** Loss of biodiversity results in the loss of valuable genes. The present day genes are the result of millions of years of evolution. The loss of genes results in significant economic loss as well as social degradation. Genes provide resistance to the crops against various diseases as well as give nutrient value to the food crops. Neglecting diversity results in risking our own survival on Earth.
- **Loss of Ecosystems** Genetic diversity decline results in loss of ecosystems which provides us various valuable services. Loss in biodiversity results in significant changes in aesthetic, inspirational and educational role of mankind. Loss of various species may also negatively influence the emotional, spiritual well being of human race. Loss of ecosystems may also result in extinction of endemic species. Larger species, which are valuable for ecosystems are highly susceptible to extinction.
- **Rise of Infections** Biodiversity loss results in significant changes as well as disturbances in the environment. Such disturbances reduce the abundance of some organisms and increases the population of others. These wide disturbances alters the interaction between organisms and their physical environment. Infectious diseases are sensitive to these disturbances. As there is disturbance in form of deforestation, land use changes, irrigation, water management, uncontrolled urbanisation etc., it results in accidental or unintentional introduction of harmful pathogens in humans. These harmful infections puts human lives at great risk.
- **Health Impacts** Biodiversity provides us with various medicines that are extensively used by world populations for their healthcare needs. Many communities rely upon natural plants collected from forests for making traditional medicines, which are also used by a large number of people worldwide. There is also a global demand for traditional natural medicine in the world. The deficiency in availability of traditional as well as natural medicine will significantly impact the healthcare system around the world. The scientific community relies on biodiversity to understand and treat diseases affecting humans.
- **Unclean Water** The continuous loss of biodiversity affects the quality of water required for human use in households and agriculture. The availability of clean drinking water has become a major concern in world's large cities. Loss of forests, loss of species that naturally filters water, loss of watershed quality results in supply of unhealthy and unclean water unfit for human consumption.

Conclusion

Biodiversity is the primary and most fundamental requirement for the existence of biological organisms. It provides economic as well as social benefits for humanity. It has a large habitat for microorganisms, flora as well as faunal species. Enormous benefits have arisen from the conservation of components of biological diversity. Diverse nutritional food is a gift of biodiversity that sustains 7 billion people. These services are under threat due to habitat destruction, degradation, fragmentation, poaching, loss of wetland, hunting, global warming, invasive species etc. It calls for national as well as international level cooperation. The local level participation in conservation efforts is also necessary for conserving biodiversity at the national level. It is required to strengthen the capacity of natural systems so that our own welfare can be ensured.

99

GENETICALLY MODIFIED FOOD

EFFECTS ON THE ENVIRONMENT AND HUMANS

World population has been rising at a fast rate since the 12th century. It has been led by rapid industrialisation, improved medical facilities, reduced mortality, higher standards of living, increasing food production and productivity etc. But this growing population is required to be fed by improving production of food further, in addition to adding more nutritive value to the food crops. Thus production, productivity can be improved and more nutrition can be added with the help of technology. One of the methods of improving food production is by the use of genetic modifications in food crops. It can ensure stable and sustainable accessibility of food to the world population at a faster rate. But, several environmental concerns are associated with Genetically Modified Foods as a large number of people in the scientific community still find the GM crops unsafe.

What are GM crops?

Traditionally, plant breeding is done to improve crop varieties and their production value. In breeding, two same variety crops are crossbred by exchanging their genes. This crossbreeding is limited to close or related species and it takes long time to achieve desired results. But the GM technology enables the plant breeders to bring the useful genes in one plant from a variety of superior plants. Thus, a GM crop or Genetically Modified Food crop is defined as a superior plant variety that has been created by combining novel varieties of genes which have been artificially inserted instead of natural pollination. Genetic modification of plants include adding a specific stretch of DNA into the plant's genome for giving it a new or different characteristics. This include modifying the way in which plants grow or making it resistant to a particular disease. GM food crops are also made to make the plant tolerate wide varieties of environments to make the plants grow in difficult weather conditions.

Genetic modifications also results in significant reduction in inputs required to grow food crops. There can be reduction in the amount of herbicides, pesticides and insecticides to grow per unit of crop as compared to the traditional non-modified GM crop. Toxic elements also reduces by genetic modification of crops. It makes the crops safe from toxicity and improves their acceptability in the society. Though there are many advantages of GM crops related with food security yet there are many concerns caused by GM crops due to adverse effects on human health and the environment.

Effects of GM crops on Human Health and Environment

With every technology, potential risks are also associated with them. Any type of agriculture affects the environment in many ways. So, it is natural that GM crops are also going to affect environment and have an impact on human health. Releasing Genetically Modified Food crops into the environment will have direct effects on the environment because of gene transfer.

The use of GM crops have negative impacts upon the non-target organisms as well as on soil and water ecosystems. Use of several GM crops such as corn and soy has destroyed habitats of various butterfly species in North America. GM crops have also been able to contaminate the environment because of gene flow from modified crops to the surrounding environment. This also affects biodiversity and eliminates various important species that may have been useful for providing ecological services to us. GM crops are also producing several new toxins for which pests may evolve resistance. This resistance significantly affects food production and crop productivity.

Transfer of genes from Allergenic plant species to the non-allergenic ones may also make the non-allergenic plant species prone to allergy. It needs to be safely demonstrated that there is non-allergenic production after the gene has been transferred successfully. If antibiotic resistant genes are transferred from one species to another, it may result in antibiotic resistance in humans too, which will have adverse effects on human beings. Thus, it should be ensured that only those crops are primarily modified by gene transfer that do not have antibiotic resistance. The migration of genes from the Modified Food crops to the traditional food crop varieties will also have an indirect effect on food security as well as safety. There needs to be clear strategies where GM crops and conventional food crops are grown separately on different lands to avoid any mixing.

Further, the safety and efficacy standards of all GM food crops have not been fully assessed because it is not possible to assess the safety of all crops by only one method and safety and efficacy of all GM crops is required to be assessed on only a case-by-case basis. To ensure the safety of GM food crops, there is need for continuous assessment of food safety of GM crops on human health. These crops are also responsible for creation of superpests that have developed resistance to toxins of GM crops. These pests can not be killed or eliminated with the use of pesticides and insecticides and pose great threat to food crops affecting their production. In various regions, GM crops have also resulted in increasing use of herbicides due to widespread cultivation of herbicide tolerant crops. Thus, GM crops, though offering wide range of benefits are affected by various concerns related to the environment and human health. Till the safety and efficacy of GM crops is not ensured, they should not be grown on a large scale to feed the population.

Why GM crops are increasing in use?

GM crops have resulted in great benefits to humanity. Several regions have improved production of agricultural crops and even raised farmer's incomes. Hence, it has been used to people's benefits as it has helped in feeding a rapidly increasing population. The main benefits of GM crops for which they are being increasingly used are

- Indian farmers and farmers worldwide in the developing countries are still practicing traditional processing of seeding and cultivation. These practices have lower crop production and genetically modified foods are required to raise production and nutrition value of the foods so that huge population increasing at a fast rate can be easily fed.
- Use of GM crops has reduced the use of toxic pesticides and insecticides. This has made the use of food crops more safe because of reduction in the use of pesticides. Reduction in pesticide use has also provided various environmental benefits along with economic benefits to the farmers due to reduced inputs.
- GM crops have also been used to make more crops having natural medicinal value. It can be used to reduce disease incidence among the population of the world. Foods have been created that have less carcinogens and foods that can be used as medicines have also been created with help of GM crops.
- Mainly crops such as soyabean, cotton, maize, canola etc. have been genetically modified but many crops are still under research that can provide substantial benefits to the farmers and improve their social and economic conditions. Thus, because of evident as well as perceived advantages, GM crops offer a potential solution to many of the economic, social and environmental issues affecting the world. But the safety and efficacy of GM crops on humans and environment shall be assessed first.

Conclusion

The cultivation of GM crops on millions of hectares of land is a huge global genetic experiment involving all human beings and the natural environment. Considering the harmful effects of GM food crops on humans as well as environment, the governments, policy makers, consumers, farmers etc. have to reach a consensus to have a clearer vision of the uses and potentials of GM food crops along with potential ill effects on natural ecology as well environmental resources. Many scientists have indicated that harms have been done to animals that have been fed on GM food crops. In order to give the public the option of making informed choice about the decision to consume Genetically Modified Food, large scale safety and efficacy tests have to be done on the intended GM crop. The current regulatory mechanisms to regulate the production and distribution of GM crops should be strengthened so that anyharmful effects are not passed on to the end consumer of food crops.

The environmental effects of GM crops should be carefully assessed to prevent any harm to nature as well as any unintended effects that could result in critically endangering environmental resources, exotic species or any kind of loss of biodiversity. GM crops offer huge potential for humans but can cause harm if they are not used before wider consultations involving the elements of nature.

INCURABLE RIVERS

In India, rivers are treated as Goddesses and mothers. These worshipped rivers have shaped cultures, traditions, faiths, histories and civilisations. These rivers provide hope, life and salvation to Indian people. The rivers, from early vedic periods were considered divine who brought wealth and abundance to people. Unfortunately, the same rivers have become increasingly polluted over the decades due to human aspirations, greed and desires. About 61000 million litres of sewerage is generated in India in the urban areas but only some amount flows after treatment into the rivers. Other sewage is disposed untreated into the rivers or water bodies. Several industries working along the river banks discharge their effluents into rivers and pollute them.

Huge amount of waste water goes into the water bodies and major rivers and percolates into the ground. Crores of rupees have been pumped into cleaning the rivers in India under various programs but still the pollution levels in India's rivers have not shown any significant improvements. The top five states having most polluted river stretches are Maharashtra, Assam, Madhya Pradesh, Gujarat and West Bengal.

Extent of Pollution in Indian Rivers

More than half of India's rivers are polluted. The number of polluted stretches have increased from 102 to 351 over past few years. The number of critically polluted river stretches have also increased. Pollution has affected larger as well as smaller rivers equally. This has mainly been due to rapid industrialisation and urbanisation along the river banks. Low priority has been given to river conservation efforts in India. The environmental degradation due to river pollution in India has costed India about \$ 80 billion per year. This problem will reach at catastrophic levels if it is not contained immediately.

Causes of River Pollution in India

- **Domestic Waste** Domestic sewage is the largest contributor of pollution in the rivers. There has been a rapid increase in the urbanisation levels in India. Presently, 377 million people reside in urban areas of India which generates huge amounts of sewage that is drained into the rivers untreated. The waste water from domestic use that is not treated effectively to remove contamination of heavy metals and other harmful wastes. Only 22% waste water from larger cities and 14% water from smaller cities is treated and disposed into rivers. The rest of the waste water is left untreated.

- **Industrial Waste** Indian rivers are polluted by industrial wastes and discarded effluents. Almost 1100 industries are located around Ganga river alone. Its water has become unfit for even bathing. The thermal power plants generate largest amounts of waste water. Engineering industries are another major generators of wastewater. Other than these industries, paper mills, steel plants, textile industries, distilleries etc. also contribute significantly to waste water generation that is disposed into the river directly without much treatment. Small scale and cottage industries also cause large scale pollution in India's rivers. About 3 million small scale and cottage industries in India are devoid of any waste water treatment facility. Thus, these industries dispose huge amounts of water into rivers directly.
- **Agricultural Runoff** Fertilisers and pesticides are used on large scale in Indian agriculture. Agricultural inputs require large irrigation mechanisms. Agricultural runoff due to irrigation by water and rain takes away water from agricultural fields and drains them into the rivers. Excess usage of fertilisers, pesticides, insecticides further aggravates the problems and pollutes the river water more. During monsoons, this wastewater flows increases and water drains into the river, making them more polluted.
- **Over Withdrawal of Water** Indian rivers have plenty of water around their upper courses but as they reach downstream, irrigation channels and large amount of water requirements in urban areas takes away this supply of water. As result of this very less amount of water reaches the downstream plain areas. This results in reduced flow in the river downstream. As the flow downstream reduces, the pollution from urban and industrial areas being drained into the river does not get diluted. Several stretches of river get so polluted that they turn into stinking sewers. Therefore, it becomes essential that a minimum quantity of flow is maintained in the rivers so that pollution does not get accumulated and pollutants are washed away at a faster rate than they are being generated.
- **Religious and Social Practises** Faith and belief in religious practises such as idol immersion also pollute river water. Dead bodies are cremated on rivers banks, partial burnt bodies are also immersed into rivers. Mass bathing in rivers during religious festivals also leads to river pollution. Thus, these practises have contributed to pollution of rivers.
- **Oil and Natural Gas Exploration** Several river basins in India are used to derive oil and natural gas stored in them for commercial purposes. While necessary steps are taken by oil exploration companies for preventing pollution in rivers yet rivers in India are contaminated with residual wastes of oil and gas exploration as the implementation of laws are not stricter.

Effects of River Pollution

- **Impact on Flora and Fauna** Chemical effluents, harmful elements etc. pollute Indian rivers and significantly impact aquatic flora and fauna. River pollution threatens biospheres, habitats and natural ecology of rivers. Natural conservation areas are also severely affected due to river pollution. Migratory birds also face extinction due to polluted and contaminated rivers.
- **Loss of Livelihoods** Pollutants in rivers affect livelihoods as the fishermen who survive on traditional fishing methods are affected because of reduced fish productivity. Also fishes from polluted rivers have lower demands in the markets as compared to fishes produced in safe and fresh water. Fish from polluted rivers are high in mercury, lead and cadmium content and hence become unfit for human consumption.

- **Loss of Exports** Indian fishes and fish products have higher demand in the foreign markets. But river pollution has caused these varieties to be contaminated with disease causing microbes and harmful chemicals. As a consequence several fish varieties from India have been banned thus reducing exports and significantly affecting the foreign revenue that was generated from export activities.
- **Spread of Diseases** Pollution in rivers is significantly impacting spread of disease in India as the harmful chemical effluents and contaminants have caused several skin diseases, allergies and other uncommon ailments. Increasing disease burden also causes significant economic loss and burdens on the healthcare infrastructure of India.
- **Polluted Drinking Water** Contaminated drinking water itself is the cause of several diseases and causes deaths in India. The health hazards associated with consuming contaminated water includes cancer as well as gastrointestinal disorders that occur due to harmful bacterias in the rivers.
- **Agricultural Productivity** Polluted river water is used for irrigating large fields having food crops as well as commercial crops. Contaminated water is used for irrigating agricultural fields. This affects the crop growth because polluted water does not allow the crop seeds to germinate, which results in stunted growth. Hence, agricultural production gets affected.
- **Reducing Water Availability** Already several large and small cities of India are facing severe water crisis. Polluted water further reduces water availability and creates shortage of water. Water treatment costs are further higher that results in lower availability of clean water for domestic purposes.

Conclusion

Rising pollution of any type affects 1.3 billion people of India. Water is a valuable resource that ensures the survival of life on earth. Unless and until stringent steps are not taken to control pollution of rivers and strict environmental safety rules are not enforced, the current dismal state of India's rivers will remain like this. The conservation, preservation and sustainable availability of water is needed to be ensured so that human, animal as well as floral life forms are not affected due to severe water pollution. While various waste water facilities have been developed but they have been insufficient to stop river water pollution. Hence, policies and strategies are needed so that the problem of water pollution can be resolved.



NUCLEAR HAZARDS AND THEIR EFFECTS ON ECOLOGY



Nuclear energy is a major source of clean power everywhere in the world. They produce lesser Carbon dioxide per unit of fuel and operate for longer periods of time. A strong nuclear energy program of a country is essential for energy security and national prosperity. Nuclear power plants are fitted with complex set of safety and security features but an uncontrolled reaction can result in widespread air and water contamination. If the nuclear waste is not disposed properly, it could also result in hazardous land pollution.

As Nuclear power plants create a lot of hazardous waste in the form of radioactive wastes such as uranium tailings, spent reactor fuel and other such radioactive materials, these wastes can remain radioactive for thousands of years and pose dangers to human health. There are always concerns associated with transportation, storage and disposal of nuclear wastes and even nuclear fuels. Nuclear disasters are capable of producing large damages to human health and the environment. The radiation release associated with nuclear disaster causes significant acute and chronic problems in the immediate environment as well as over a wide geographic area over longer periods of time.

What are Nuclear Hazards?

Nuclear hazards refer to the incidents involving the release of significant levels of radioactive materials and exposure of general public or the natural environment to nuclear radiation. The nuclear hazards primarily affect public health due to direct exposure to radioactive materials, inhalation of radioactive waste, ingestion of contaminated food, water etc. and long term exposure to radioactive materials in the environment that leads to acute or chronic health and environmental damage.

Due to radioactivity, even a small amount of radiation exposure can have serious biological consequences due to nuclear hazards. The radioactive elements emit high energy particles that cause damage to environmental resources. Radiations emitted due to hazards in nuclear facilities can result in mutations in DNA, burns and radiation sickness, weakness, nausea, hair loss etc. Contamination of natural resources further aggravates the potential of nuclear hazards. Nuclear hazards can be created by man through the mining of radioactive materials, careless handling and processing of nuclear fuels, storage of radioactive wastes, carelessness in safety protocols while operating reactors, as well as improper use of devices that are used to give radiation therapies in hospitals, clinics etc.

Causes of Nuclear Hazards

Nuclear hazards occur due to the following reasons

- **Nuclear Accidents** Nuclear energy has been considered as environmentally safe and potential source of energy. If nuclear facilities producing nuclear energy are not put under strict safety measures, there are chances that nuclear accidents may occur. Nuclear plants have huge amount of radioactive material for generation of nuclear energy. The radioactive elements if escape into the environment, proves most harmful for the immediate land, air and water resources as well as human health. If nuclear power plants are operated with flawed design, then too, nuclear power plant accidents occur. For eg Chernobyl Nuclear accident, 1986, Ukraine.
- **Nuclear Waste Handling** Radioactive nuclear wastes are categorised as low level and high level wastes. The handling and disposal of these wastes if not performed according to standards prescribed for handling wastes, then nuclear hazards can take place because of leakage of this radioactive material. Radiation waste can not be degraded or treated biologically or chemically. The only options are either to contain the waste by storing them in closed containers, having radioactive protection or disposing them at remote locations.
- **Mining of Nuclear Fuels** Mining and extracting nuclear fuels such as thorium, uranium can turn into a nuclear hazard if safety precautions are not taken. Mining increases exposure to humans by moving radio materials from below the Earth's surface to the top. These substances are usually mined with safety gears and protective equipments. Exposing the natural environment such as trees, plants, water, animals to radioactive elements during mining also increases hazard risks.
- **Spilling of Radioactive Elements** Spilling occurs due to marine accidents which are due to accidents of ships carrying nuclear materials and radioactive elements. Spilling in water bodies causes harmful effects on marine life, contaminate water resources and ends up killing thousands of marine floral as well as faunal species. Contaminated water supply in households can have drastic effects on human health.
- **Radiation Based Tests** Radiation has been used in several medical therapies such as Chemotherapies for cancers. Exposure to medical based radiotherapies leads to deaths and other complications. Radioactive elements leaking out of medical facilities can cause fatal nuclear hazards.

Human and Ecological Effects of Nuclear Hazards

Nuclear hazards cause large amounts of nuclear wastes to be released in the environment thus contaminating air, water and land resources. It is essential to contain nuclear material and facilities having nuclear materials safely. The harmful effects of nuclear hazards include

- Radioactive materials released from nuclear hazards cause mutations in the DNA, thereby affecting genes and chromosomes. The genetic makeup of future generations is affected due to these mutations. It leads to several incurable birth defects.
- Radiations can kill essential flora and fauna, important environmental species and can make land soil, plants etc. toxic and critical species are also affected. It results in huge damage to biodiversity.

- Damages caused by different kinds of radiations also include direct physical harms such as burns, miscarriages, cancer, bone defects, eye diseases etc. Even a small exposure to radiation can cause adverse effects. Damages that occur over longer periods are spread over for generations.
- Natural resources such as land, soil, forests, water bodies like rivers, ponds, oceans get affected by nuclear wastes and nuclear elements. Contamination of natural resources affects large number of people living in urban as well as rural areas.
- If nuclear accident sites are not treated and managed properly, it could result in human infectious diseases due to contaminated water and soil in a region.
- Children are at particular risk from nuclear radiations. High doses of radiation increase cancer risk early in the life of children. Lifetime cancer risk significantly increases among children due to exposure to radiation.
- Nuclear hazards increase the pressure on land as soil and water resources are contaminated and therefore lesser land is available for agricultural purposes. The microorganisms present in land and soil also get killed due to insufficient oxygen which reduces soil fertility.
- Nuclear hazards also reduce human immunity to fight against diseases and infections. This makes people vulnerable to infections. It further increases the chances of disease risk in the population.

Ways to Mitigate Harmful Effects of Nuclear Hazards

Nuclear hazards can pose serious risks to environment, humans and animal and plant life. Nuclear hazards can be mitigated by taking following measures

- There must be robust design and construction of nuclear reactors so that any fault does not occur during operation of the reactor.
- Medical devices involving nuclear fuel and its use should be used with caution to prevent any undesirable exposure to nuclear material.
- Leakage of nuclear materials, radioactive elements, careless handling of radioactive elements must be fully ensured before carrying out any operations in nuclear facilities.
- There should be regular monitoring of areas that are prone to nuclear hazards.
- Nuclear wastes should be disposed properly as to prevent any long term presence of radioactive material. Long term presence of radioactivity results in hidden and unwanted effects on human lives for longer periods of time.
- If there are any possibilities of release of radioactive materials, it must be ensured that adequate safety measures are in place to limit the spread of radioactive waste materials and their harmful effects on human lives.

Conclusion

The handling of nuclear hazards require good cooperation between government, disaster management authorities, civil society, scientific community and environmental authorities. It requires elaborate arrangements to carefully implement protective policies and counter measures in the affected areas so that environment and humans can be saved from the ill effects of nuclear hazards.

Preventive measures to prevent the occurrence of nuclear hazards should be taken so that any harm to human life and the environment can be prevented. Nuclear reactors should be filled with good safety measures. The high level waste should be managed carefully by adopting strict safety protocols.

Areas which are vulnerable to nuclear hazards should be equipped with preventive and curative tools to reduce chances of accident. Medical devices using nuclear technology must be placed in highly secure rooms to prevent any chances of leakage and accidents. Patients should be made aware of the steps to be taken in case of a mishap. Nuclear technology is a promising and sustainable form of technology that has the potential of creating prosperity for human civilisation. If nuclear hazards can be prevented, the capacity of nuclear energy can be utilised properly.

102

WAR AGAINST SINGLE-USE PLASTIC

Single use plastics are also known as disposable plastics. They are used only once before they are thrown away or recycled. The most common single use plastics are carry bags, drinking bottles, straws, bottle caps, food wrappers, grocery bags, wrappers for consumer goods, multi-layer packaging used for food and takeaway containers.

The convenience and cost-effectiveness of plastic has made it popular in daily use. When food or other products are packaged in plastic, they are protected from spoilage or other environmental damage. In the case of fresh goods, they remain fresh for longer, keeping food from spoiling reduces food waste, which helps reduce the strain on our resources and keeps costs down. In healthcare, single use plastics such as blood bags and syringes help modern healthcare remain affordable for all and helps to provide a safe and hygienic environment in hospitals.

Even though, single use plastic has a comparatively low production cost, its disposal cost is high. Collecting all the pieces of discarded single use plastic each year, separating, cleaning and then treating them incurs a very high cost. Most of the discarded plastic that is collected gets either burnt or disposed of in some landfill of garbage. The world produces about 300 million tonnes of plastic every year, however, only half of it is disposable. The remaining plastic finally ends up in the oceans. Since, plastic takes quite considerable span of time to get decomposed, there is another serious concern of microscopic particles or microplastics, which causes problems for sustainable environment.

When the plastic breaks down, it releases many toxic chemicals which were used in its manufacturing. As a result, the soil in the landfills, as well as the groundwater and ocean water gets polluted. These harmful chemicals enter the human food chain. Various studies have linked the presence of such toxic chemicals to occurrence of cancer, disruption of hormonal activities, affecting endocrine and immune system, etc. So, we should wage a war against usage of single use plastic.

The size and intensity of the problem justifies this war against plastic use. From 1950 onwards, about 9 billion tonnes of plastic has been produced globally, about 79% of which is still in the environment. Out of this, 44% was produced after the year 2000. About 8 million tonnes of plastic waste flows into the oceans worldwide every year from coastal regions. Half of the world's plastics are made in Asia.

Global Production of Single Use Plastic

China alone produces 29% of the world's plastic. Less than 20% of all plastic is recycled globally. Plastic recycling rates are highest in Europe at 30% and China at 25%. However, the USA recycles only 9% of its plastic trash. Nearly, a million plastic beverage bottles are sold every minute around the world. In 2015, Americans purchased 111 billion plastic beverage bottles, which is almost one bottle per person per day. In India, according to a report by the Central Pollution Control Board (CPCB), we generated about 26,000 tonnes of plastic waste everyday in 2011-12. It is also likely that plastic waste generation will further increase in subsequent years. According to experts, 94% of plastics are recyclable.

However, India recycles only about 60% and the rest is dumped in landfills, in the sea and other water bodies. Experts also believe that plastic products have an end life and cannot be recycled more than three or four times. The CPCB has warned that recycled products are at times more harmful to the environment because of added chemicals and colours.

Measures Taken Against Plastic Pollution

After environmentalists raised the issues about plastic pollution, various nations have taken measures to limit the usage of single use plastics. Bangladesh was the first country to ban plastic bags, which it did in 2002. In 2008, Rwanda imposed a blanket ban on the sale, use and production of plastic bags. Even though, it led to illegal smuggling of plastic from neighbouring nations and Rwanda was compelled to increase penalties, eventually people switched to greener alternatives. Various other countries have imposed bans on various forms of plastic. The European Union plans to ban single use plastic items such as straws, forks, knives and cotton buds by 2021.

Measures Taken by India

To minimise use of single use plastic, some of the state governments in India have taken stringent measures. The state of Sikkim banned use of plastic bags as far back as in 1998. People living in Sikkim say that major education campaigns and enforcement measures made citizens accept the plastic bag ban. Maharashtra has banned all kinds of single use plastic products such as spoons, cups, straws, plates, glasses, etc in June, 2018.

The Odisha government announced a phase-wise ban on single use plastic items on 2nd October, 2018, in the six cities of Bhubaneswar, Cuttack, Berhampur, Sambalpur, Puri and Rourkela. In July 2018, the Uttar Pradesh government imposed a ban on polythene bags of less than 50 microns, followed by a ban on single use plastic items on 15th August and a total ban on non-biodegradable polythene on 2nd October. Bihar also banned all kinds of polythene and plastic bags from 24th December 2018 in urban and rural areas of the state. Tamil Nadu became the fourth state in India to ban single use plastic in 2019.

Assessment of the Current Situation

Many of the bans on use of single use plastic in Indian states are not universally effective. Lack of alternatives to plastic is a major problem that needs to be overcome if plastic ban is to be implemented successfully. The eco-friendly options may not be very expensive, but if it is compared with the price range of plastic, the eco-friendly options are 50% costlier. The availability of alternative options also stands in the way, as the demand is less, thus, forming a vicious cycle.

Another problem regarding recycling of plastic waste is that most of the states and their local urban bodies (i.e. municipal corporations) have not established an organised system to segregate the plastic waste from other waste. This is resulting in widespread littering in landfills of towns and cities. Only a few states such as Goa, Chhattisgarh, Gujarat, Odisha and Tamil Nadu are transporting their plastic waste to cement plants for being used as fuel. Nagaland, Tamil Nadu and West Bengal are also using some plastic waste for polymer bitumen road construction.

Conclusion

It is worth mentioning here that all these efforts are only a single drop in the ocean. Changing the mindset of people is required, which takes a long period of sustained campaigning so as to make people aware of the health hazards of plastic. So, far the plastic bans in India have been marred by poor enforcement and failure to provide viable, eco-friendly alternatives.

Plastic pollution, particularly micro-plastic is a key issue to be addressed by India as the uncontrolled waste continues to damage the environment for several years.

First and foremost, the government needs to come up with a broad and extensive National Action Plan or guideline for the implementation of single use plastic ban in a phase-wise manner. Only then we can hope for a plastic free environment.

LIFESTYLE DISEASES IN INDIA

If the potentials of a younger population of India is to be realised, the people should be free from any kind of diseases. The nature of disease incidence has changed in India over decades. A few decades ago, infectious diseases affected and killed millions of people in India. But increasing medical improvements and health facilities have led to improvements in the people's living standards as it has considerably reduced infections and death. With improvements in the standards of living due to rapid economic growth, industrialisation and urbanisation, and the consequent change in lifestyle and dietary choices, there is now greater risk of non-communicable diseases or lifestyle diseases. These diseases significantly affect people of all age groups. Lifestyle diseases include conditions such as obesity, diabetes, hypertension, arthritis and even cancer. 21st century rapid and unhealthy lifestyle is responsible for the occurrence of lifestyle diseases. This includes tobacco use, alcohol, fast food diet, insufficient physical activity, extended office working hours, lack of proper sleep etc.

Extent of Lifestyle Diseases in India

India has undergone a major epidemiological transition in consonance with socio-economic development. The share of non-communicable lifestyle diseases has increased in India from 37.6 to 61.8%. The major lifestyle diseases in India are heart disease, pulmonary disease and stroke. It is estimated that more than 1.78 million cases of cancer are likely to be added each year by the year 2022. Every 12th person in India is suffering from diabetes. India ranks second in the list of countries having diabetes patients. Children are suffering from asthma, strokes, heart diseases etc.

The following are the major lifestyle diseases of India

- **Obesity** The number of overweight and obese people in India have doubled between 2005 and 2015. Among the individuals aged between 15-50 years, 21% of women and 18.6% of men have been found overweight. The presence of obesity is mainly due to obesogenic chemicals such as MSG, Bisphenol etc. Marketing of processed foods need to be regulated. Presently, lower taxes on unhealthy foods, inadequate health labelling and lower physical activity among the people has led to higher incidence of obesity.

- **Mental Health** More than 12% of country's adult population suffers from some kind of mental illness. At least 150 million people in the country are in active need of medical intervention due to mental illnesses. The main reasons for higher incidence of mental illness are changing diets, lack of social support, stress, fatigue and sometimes intake of large amount of sugar has also been linked to mental diseases.
- **Cancer** More than 1.73 million cases of cancer are likely to be recorded each year in India. Commonly used household items including chemicals and cosmetics containing cancer causing compounds are responsible for cancers. Many cases of cancer have been linked to environmental exposure of toxins. The main triggers responsible for cancer are tobacco, alcohol, air pollution and diets rich in meat and low in vegetables. These are relatively unaddressed as compared to other diseases.
- **Heart Diseases** Cardiovascular diseases are responsible for a large number of deaths in India each year. In urban areas, young and middle aged people are at risk of cardiovascular diseases. The main cause of heart diseases is lack of physical activity. Green spaces are absent in many areas. Pedestrian and cycling tracks are not adequate. Depression has been found to be a risk factor causing cardiovascular diseases. Heart rhythm is also affected due to changes in central nervous system and other hormonal changes.
- **Food Allergies** Food allergies are caused by various packed and unpacked food in India. Almost 25-40 million people suffer from food allergies in India. Food products are not adequately labelled and there are no adequate information about allergy causing substances on food items. Also, genetically modified foods (GMF) are not labelled adequately in India. There needs to be mechanisms to ensure that allergy causing foods are labelled so that allergic reactions can be prevented.
- **Hormonal Disorders** One-twelfth of India's population is diabetic. Hyperthyroidism cases are also on the rise in India. Data is not available yet for several hormonal disorders. Hormonal disorders can occur due to exposure to toxins, air pollution and foods rich in fats, sugar and salt. There is poor understanding of hormonal disorders in India. There are currently no policies that reduce consumption of processed foods, increase physical activity among people of all ages and reduce exposure to certain chemicals changing the hormonal balance.
- **Respiratory Diseases** Asthma and COPD are the main respiratory diseases affecting people in India. Global warming, air pollution from vehicles smoking tobacco and pollution from industry as well as global warming increases the risk of contracting respiratory illnesses. Global warming has extended the duration of pollens in the air and altered the timing, production and distribution of aeroallergens in the environment. There has been increased airway inflammation that increases frequency of respiratory allergy.

Causes of Lifestyle Diseases

The causes of lifestyle diseases can be categorised into three broad categories

- **Modifiable Risk Factors** Behavioural risk factors such as excessive use of alcohol, bad food habits, eating and smoking tobacco, physical inactivity, prolonged wrong body posture and disturbed biological clock has increased the likelihood of contracting non-communicable lifestyle diseases. Stress related to work, modern occupational desk jobs is seen as a potential risk factors associated with lifestyle diseases.

Excessive use of sodium and sugars in the diet has resulted in increased rate of death due to lifestyle diseases. Use of tobacco and alcohol are also causing rising incidences of deaths among the vulnerable population.

- **Non-modifiable Risk Factors** It leads to major changes in the ability of the body to keep away diseases. Age, race, gender and genetic makeup are major factors that affect the immunity of a person. Different races have different genetic makeup. Males and females are affected separately due to differences in physical and mental setups. As the age increases, people tend to be less immune to various diseases. Increasing physical activity reduces chances of contracting lifestyle diseases.
- **Metabolic Risk Factors** Metabolic risk factors include increasing blood pressure, obesity, increasing blood glucose levels and increasing levels of fat. These factors aggravate the harmful effects of lifestyle diseases as people become more vulnerable to lifestyle diseases. Slow metabolism because of these risk factors weakens the ability of the body to fight against regular disease incidence or seasonal diseases that occur due to change in the environment and conditions.

How to keep India healthy and free from lifestyle diseases?

Access to low quality and poor in nutrition fast food, affordable sugary foods, lack of physical activity has increased the growth of lifestyle diseases. Hence, there needs to be healthy lifestyle approach and policies should be created which keeps lifestyle diseases under control. There needs to be focus on the following aspects to keep India free from lifestyle diseases

- **Improving Food Habits** There should be strict regulation of low quality fast food. A national policy can be formulated that promotes lower intake of sugars and salty foods. People should be motivated to consume less fat rich food instead of foods that have more fats.
- **Exercise Habits** Regular exercising and physical activity should be promoted among the people so that the incidence of lifestyle diseases can be reduced. Regular exercise keeps the metabolism fast and prevents occurrence of diseases as it improves immunity.
- **Mental Support** There should be regular mental and social support to mental patients so that no individual feel dejected and depressed. Lack of mental and socio-economic support aggravate lifestyle disease incidence among the vulnerable population. Regular mental health services should be provided to mental health patients.
- **Avoiding Tobacco and Alcohol Use** Avoiding smoking and alcohol use is an important step in preventing non-communicable lifestyle disease. Alcohol, smoking and eating tobacco also increases the likelihood of contracting of lifestyle diseases.
- **Educational Interventions** People should be made more aware about healthy lifestyle and good food habits. Intervention should be made at the schools and college levels to make students aware about the changing lifestyle and increasing physical activities.

Lifestyle diseases can be prevented easily with minimal interventions. Regular exercise, eating green leafy vegetables, good food habits etc. can be simple preventive techniques to fight against the lifestyle diseases.

ONLINE SCHOOLING

THE FUTURE OF EDUCATION?

With the development of Information and communications technology, India has witnessed increased acceptance of online education over a period of time. Many students, working professionals etc. have joined different e-learning platforms to enhance their skills and employability. Several institutions across the world and in India offer online degrees.

Until now, schools were mostly out of the online education environment, but due to the sudden outbreak of COVID-19 they had to adapt to the online mode of teaching in a short period of time. As the pandemic situation became clear, it became evident that the online mode of schooling is going to be the future of education. As education sector is the most affected sector, globally over 1.2 billion children have been out of their classrooms, adapting to the new online mode of schooling. New tools, softwares, with the help of modern technology have been designed to facilitate online mode of learning. Governments too have run several streaming platforms to provide the students with lectures and digital content so that they can learn at their convenience.

Online schooling classes can be delivered through online video streaming where the teacher is able to deliver classes and lecture in live mode. There can also be pre-recorded lecture modules where students are able to get a pre-recorded video which can be viewed anytime.

Scope of Online Schooling in India

India has nearly 1.5 million schools that teaches around 260 million students. It has the world's second largest school system after China. Online schooling in India is expected to grow magnificently within the next three years. It involves primary, secondary as well as higher education. Internet penetration is going to increase to nearly 735 million users by the year 2021. This will create conducive conditions for online schooling in India. Other factors that are going to provide a boost to online schooling are.

- 1. Rising Digital India** With increasing internet penetration and internet becoming cheaper for a large number of people, online mode of education is certainly going to get a boost. Internet speeds are also going to be upgraded with coming of the optical fibre internet services in urban areas and the government's target of connecting the entire rural areas till the Panchayat level through its BharatNet Program. This will increase accessibility to internet services which will allow the people to easily access online schooling classes.

2. **Government Policies and Schemes** The government policies aim to increase the role of online education in India's schooling. With the announcement of New Education Policy 2020, the government aims to create a separate unit in the Ministry of Human Resources and Development that will enhance capacity building to look after e-education of both school and higher education. Besides this, the government already runs several portals such as SWAYAM, SWAYAM Prabha, National Digital Library, E-yantra etc. that are engaged in providing good quality digital content to the students. The government has also announced PM e-Vidya service that aims to promote online education across the country. Under DIKSHA platform, it will provide a One Nation One Digital Platform for schools across the country. It will offer e-content and QR code enabled test books for all grades.
3. **Learning Beyond School** In the new age of education, children are not only dependent on their schools for learning. Along with schooling, taking private tuitions is a common characteristics of the Indian education system. Thus, online schooling can be of great advantage to children as it enhances their learning capabilities with the use of new tools and techniques so that the child is able to grasp quickly, saving his/her time and effort.
4. **Increasing Cost of Offline Education** The costs of schooling, tuitions etc. have increased sharply over the past few years. Online education can be a great alternative to traditional mode of schooling as it is cost effective. Only one studio is to be setup to teach thousands of students. It also proves to be an advantage for those people who were earlier not able to send their children to schools because of higher costs or other disadvantages. Acceptability of online classes is also higher for students in the young age. Thus, it can become a game changer as it has the potential to reach a large number of people at much cheaper costs.
5. **Easily Accessible** Online schooling breaks all the class, caste barriers and is accessible to all the students. It only requires a good internet connection and mobile or computer device. It does not require investments in huge infrastructure to build classrooms, schools, as well as other facilities. The classes can also be recorded and repeated as per one's convenience. With the use of graphics, charts, digital boards etc. students can learn the topics of their choice in a much better way. It is accessible to even those students who were earlier not able to go to schools due to various socio-economic barriers.
6. **Personalised and Flexible** Online schooling is flexible. It gives the students adequate time to plan their studies. There is enough scope to digest, engage, practise and learn at their own pace. Students are not under peer pressure and study in a comfortable environment. The teachers can give particular instructions, address specific issues of a particular student in a much convenient manner. This increases the confidence of the student as they do not need to be under the pressure of the class or group to which they belong.

Limitations of Online Schooling

Even though online schooling has huge potential but it is not devoid of limitations. It requires good time management skills and may create a sense of isolation for students due to the absence of social interaction and puts the onus of learning on the students themselves. The following limitations prevents the successful implementation of online schooling

1. **Lack of Internet Connectivity** Still crores of children in India are not connected to any internet services. The costs of internet services is higher for the disadvantaged sections of the society. Mobile devices and computer devices are still out of reach of students in India. Slow internet or absence of any internet services becomes a hinderance in accessibility.

2. **Lack of Digital Devices** Online schooling requires a mobile, computer or tablet device. Number of computers, tablets or smart devices is still very low in India. Moreover, students do not have their personal devices and the devices are mostly shared among the siblings or the parents and the children. This is a disadvantage for those students who can not afford to buy a separate device for their own use. Further, computer devices are still costlier in India due to lesser demands. Along with the computer or phones, students may also require a supplementary device such as a printer or scanner which adds to the cost.
3. **Less Personal** Online education reduces personal face-to-face as well as social interaction between the students and the teachers. It may hinder the development of interpersonal communication as well as social skills of students. In an informal environment, the students may also become more dependent and demotivated. It also results in many types of disorders that are physical as well as mental in nature. Children are also at health risks as it may cause headaches, watery eyes, back pain etc.
4. **Lack of Skills and Training** Accessing and using online tools is not easier. It requires adequate skills and training. If the teachers are not able to impart online instructions successfully it will lead to unsuccessful learning outcomes that affects the development of students. Imparting skills and necessary training to teachers as well as students require time as well as expenditure. This adds to the costs of initial expenditure that requires setting up of studios, buying digital devices and setting up a robust Information and Communication Technology (ICT) infrastructure.
5. **No Practical Skills** In online schooling, students are not able to attend the labs and carry out practicals as there is no provision to do so. Practical form an essential part of curriculum of schools and they are useful in building the applied knowledge of students. Lack of laboratory practicals may also demotivate students as they are not able to apply the theoretical understanding to any use.

Way Forward

It is clear that the pandemic period has utterly disrupted the education system that was prevailing in the form of traditional methods. However, the current crisis has acted as a bridge to encourage digital education. Institutions need to be better equipped digitally as well as students need to learn digital skills for their betterment and improving quality of their learning.

The emphasis on online education has to be accompanied with changes in curriculum, textbooks, teacher training, examination systems and pedagogy. The scope and reach of online education, can be broadened to far greater horizons than ever imagined. Evaluating both the pros and cons of online learning will facilitate better preparations to face the challenge of working in this new environment as well as embrace the new opportunities that it has to offer.

RIGHT TO EDUCATION

NO CHILD SHOULD BE LEFT BEHIND

Education plays a significant role in the development of an individual and making him a well-informed citizen. It is the education which makes an individual self-sufficient, helps to overpower the social evils and contribute towards the growth of the society and nation as a whole. Over the years, the demand for the education in our country has grown by leaps and bounds. This is because people of all sections of society have understood the need of education which is important for the overall development of a child. In India, education falls under the jurisdiction of both the Union and State Governments.

Post-independence era witnessed the commitment of the government to ensure universal elementary education to all. In 1950, India made a Constitutional commitment to provide free and compulsory education to all children upto the age of 14, by adding this provision in Article 45 of the Directive Principles of State Policy.

Education System in India

In India, Central and most state boards uniformly follow the “10 + 2 + 3” pattern of education. In this pattern, study of 10 years is done in schools and 2 years in schools or junior colleges and then 3 years of graduation for a bachelor’s degree in college. The first 10 years is further subdivided into 4 years to primary education, 6 years of High schools followed by 2 years of junior colleges. Most of the State Governments have their own Board of Education. However, there are two Boards namely CBSE and CISCE, which are prevalent all over India.

The New Education Policy, 2020 has proposed new curricular and pedagogical structure, with 5 + 3 + 3 + 4 design covering the children in the age group 3-18 years.

Article 21A and Right to Education Act

It was the Constitution (Eighty-sixth Amendment) Act, 2002 which inserted Article 21A in the Constitution of India to provide free and compulsory education to all children in the age group of six to fourteen years as a Fundamental Right in such a manner as the state may by law determine.

The Right of Children to Free and Compulsory Education (RTE) Act, was enacted on 4th August, 2009. It represents the consequential legislation envisaged under Article 21A, means that every child has a right to full time elementary education of satisfactory and equitable quality in a formal school which satisfies certain essential norms and standards.

The title of the RTE Act incorporates the words 'free and compulsory'. 'Free education' means that no child (studying in government run schools) shall be liable to pay any kind of fee, charges or expenses which may prevent him or her from pursuing and completing elementary education. 'Compulsory education' casts an obligation on the appropriate government and local authorities to provide and ensure admission, attendance and completion of elementary education by all children. With this, India moved forward to the rights based framework that casts a legal obligation on the Central and State Governments to implement this fundamental child right as enshrined in the Article 21A of the Constitution, in accordance with the provisions of the RTE Act.

Salient features of Right to Education Act

Some of the salient features of Right to Education Act, 2009 are mentioned below :

- Free and compulsory education to all children of India in the age group of 6-14 years. However, the New Education Policy, 2020 has recommended the free and compulsory school education for all children in the age group of 3-18 years.
- The provision of 'No Detention' was incorporated in RTE Act. Under it, no child shall be held back, expelled or required to pass a board examination until the completion of elementary education i.e. class 1 to class 8.
- If a child above 6 years of age has not been admitted in any school or could not complete his or her elementary education, then he or she shall be admitted in a class appropriate to his or her age.
- The age of a child shall be determined on the basis of the birth certificate issued in accordance with Registration Act, 1856 or on the basis of such other document as may be prescribed. No child shall be denied admission in a school for lack of age proof.
- A child who completes elementary education, shall be awarded certificate.
- 25% reservation for economically disadvantaged group in admission to class I in all private schools.
- Financial burden will be shared between the State and Central Governments.

Limitations of Right to Education Act

Though RTE aims at 'Free and Compulsory Education' between age group of 6-14, but it has certain limitations. Some of them are discussed below :

- The RTE Act, provides for reservation of 25% seats for disadvantaged groups in every private schools. However, there is possibility that the children from the weaker sections may develop inferiority complex while studying in these schools. Besides, the elite parents may have an objection that their children are studying with the children from backward area. It is thus difficult step to get economically weaker sections at parity with the regular students in terms of education and exposure provided to them.
- The RTE Act lays down the guidelines in terms of infrastructure and minimum personnel requirements which the school needs to adhere in order to function. There are many aided and private schools which have delivered excellent results in the past but due to lack of funds in order to meet the stipulated guidelines

will have to shutdown. The RTE Act sanctions the government schools as the most secure ones in the terms of education and infrastructure. The RTE also prohibits all unrecognised schools from taking donations, capitation fees and no interview of parent and child. The public opinion about these schools tends to differ. Most of these schools are overcrowded, impart poor standards of education and lacks in basic facilities like drinking water and sanitation. It is the unrecognised schools which fill in the gap created by their government school counterparts.

- The RTE Act focuses more on infrastructural development in comparison to teaching standards. In fact, the education in the villages is vested in the hands of 'Para teachers' or 'Contract teachers'. Shockingly, the qualification of 'Para teachers' is barely higher secondary or senior secondary. Also, the government fails to take into consideration the pre-primary, secondary and higher secondary education, without which the whole purpose of RTE is defied.
- The child labour is widely prevalent in India. It is tough to get the children free from the clutches of child labour and send them to school.
- The responsibility of bringing children to school and providing them quality education is the work of Ministry of Human Resources Development. Monitoring and implementation of RTE Act is the responsibility of the Child Rights Commission in each state, which is under Women and Child Department. Thus, there is the problem of coordination between these two departments.

Important Measures to Make RTE a Success

In order to entitle each child with a quality education and make RTE a success, the government needs to take certain stringent measures. Some of these are as follows:

- The government needs to assure that each state prepares a set of rules for the implementation of the right to education with the active participation of all the stakeholders.
- The states need to ponder upon expanding the age limits and include more age groups under the aegis of RTE.
- The government needs to address the problem of shortage of well-qualified teachers.
- The Education Department should be given judicial power for the effective implementation of RTE.
- The government can encourage private investment to manage the problems of funds. But at the same time, it needs to assure that there are strict rules governing the participation of private sector in order to prevent the commercialisation of education.
- The government needs to widen the scope of RTE Act to ensure its success.

Conclusion

The passing of the Right of Children to Free and Compulsory Education (RTE) Act, 2009 marks a historic moment for the children of India. This Act serves as a building block to ensure that every child has his or her right to get a quality elementary education, and that the state, with the help of families and communities fulfils this obligation and also ensures free and child-centred education.

SPORTS IN OUR COUNTRY

ISSUES AND REFORMS

Sports and physical education are necessary components of human development. Playing any sport has a positive effect on the overall development of personality of a person. It enhances a person's sense of achievement, national pride and patriotism. Sports in India include indoor as well as outdoor games. Sports development in India started since the ancient period where remains have been found in Indus valley sites which indicate that people played board games using dices and marbles. Hunting, swimming, boating, boxing etc. were some of the major sports played and nurtured in India during ancient times. Yoga was a traditional practise in Indian culture. Every community practiced yoga in India to achieve spiritual and mental peace.

Games like Archery, chariot racing, wrestling, horse riding, military tactics etc. were played in ancient times, on a large scale. The *guru-shishya* parampara was prevalent in those times where the teacher taught the student and the student in return gave *dakshina* to the guru for his teachings. Games such as chess, playing cards, polo, martial arts etc. had originated in India and spread to other parts of the world where they were further developed. Games such as chess were being played in India since the times of Mahabharata where they were known as Chaturanga. Kerala's ancient martial arts Kalaripayattu is similar to modern Karate.

Major Sports Played in India

Cricket

The most popular sport played in India at national level is cricket. India has hosted multiple cricket world cups and won two 50 over world cups and 20 over T-20 tournament. Cricket in India is governed mainly by the BCCI (Board of Control for Cricket in India) which is a full member of ICC. Cricket was introduced in India by British sailors in the 18th century and the first cricket club was established in 1792. The major first class tournaments played in India include the Ranji Trophy and Duleep Trophy. Indian cricket team has evolved as a number one team across all the formats. Indian Premier League (IPL) is one of the largest domestic T-20 tournament played in the world.

The Indian diaspora is present in nations such as Australia, England and South Africa where as large turnout of fans is there whenever India plays in these nations. Many Indians considers cricket very close to their heart and keep a close watch on player performances.

Hockey

Hockey is considered as the National game of India. Indian hockey team has proved itself from time to time to be one of the best teams in the world. India's men hockey team was the first Non-European team to be a part of the International Hockey Federation. In 1928, the team won its first Olympic gold medal and until 1960, Indian team remained unbeaten in the Olympics, winning 6 medals in a row even during colonial suppression. The men's team has won medals several times in World Cup, Asian Games and Asia Cup. Major Dhyan Chand, known for his extraordinary goal scoring skills is considered as the greatest player in the history of sports.

Tennis

Tennis has significant following in India and is counted among the popular sports of India. India has produced a number of tennis players who have achieved international recognition. All India Tennis Association is the governing body for tennis in India. Tennis was brought to India by the British army and civil officials. In 1960s, the sports had witnessed a golden era. India has won several grand slam titles in singles and doubles both in men's and women's categories.

Chess

Chess has risen popularly in India in the last few decades mainly due to chess grandmaster and former 5-times world champion Viswanathan Anand. The All India Chess Federation is the governing body of chess in India. The game originated in India in the ancient times. There are 65 Indian grandmasters from India. In last several years, India has tasted success at world youth championships. The chess federation of India has played an important role in identifying new talents and ensuring quality competition at the domestic level. The All India Chess Federation has also hosted a number of major world events in India such as the world Junior championship, commonwealth championship and Asian Team championship. Though Indian chess players have made a name for the country but the Golden period of chess is yet to come in India.

Wrestling

Wrestling developed in Indian sub-continent during the Mughal period by combining Persian wrestling style and native Indian style. Wrestling is also known as Dangal in India. India won its first Olympic medal in 1952 which was won by KD Jadhav in 1952 summer olympics. Other wrestling medals were won by Sushil Kumar, Yogeshwar Dutt, Sakshi Malik etc. Wrestling in India is governed by Wrestling Federation of India. Over the years, female wrestling has greatly been enhanced. Geeta Phogat and Babita Phogat are the two famous names who won gold medals for India in 2014 Commonwealth games.

Badminton

Badminton is another popular sport in India developed by British in mid 1800s. Indian players such as Saina Nehwal, Srikanth Kidambi and PV Sindhu are famous badminton players. It is considered as the second most popular sport played in India after cricket. Badminton is managed in India by the Badminton Association of India. India has won Olympic medals in Badminton in the 2012 London Olympic games and 2016 Olympic games in Rio de Janeiro.

Other Sports

Other sports played in India include archery, shooting, long jump, athletics etc. Adventure sports such as skating, paragliding, skiing etc are also played on a large scale in India by many people. Government has also made several efforts by instituting schemes and programs to promote sports in India.

Events such as Khelo India games have also gone a long way to promote development of sports in India. Inculcating a nature of playing sports at home, schools, colleges and work places is essential to inculcate the spirit of sports in people.

Issues with Sports in India

The sports ecosystem is affected by various issues in India. These issues are

- **Mismanaged Sports Authorities** There is a lot of corruption in sports authorities in India. Authorities of sports such as cricket, hockey, weightlifting are under attack due to corruption charges. It is commonly seen that sports authorities are manipulated by politicians. Controversies surrounding Commonwealth Games of 2010 and IPL fixing scandal have tainted sports administrators in India.
- **Social and Economic Inequalities** Denial of access to sports facilities such as stadiums, training grounds etc. due to poverty, concentration of sports facilities in urban areas etc. has resulted in inadequate development of sports persons in the country. There is lack of encouragement to girls, lack of opportunities for poor people which also affects the growth of sports.
- **Lack of Focus on Sports** From early on, Indian families are more focussed upon studies and academics than sports. Focus is on getting marks and achieving academic excellence rather than development of sports skills and career in sports. Sports career is not a priority for Indian parents and kids. It is a common belief that one needs to study hard to achieve success and sports ruin one's life.
- **Poor Infrastructure** Lack of facilities at the grassroots level is a major issue. Schools and colleges lack in infrastructure that can encourage other sports during school and college life. The concept of school sports is absent in India. Coaches are absent at the local level that can nurture or groom talent. Any natural talent is suppressed at the local level.
- **Lack of Recognition to Other Sports than Cricket** Cricket continues to dominate Indian sports ecosystem. Sports other than cricket are not considered as worthy of career option because they neither appear financially lucrative nor glamorous. Other sports do not have strong presence in India in terms of coaches, infrastructure, stadiums etc.
- **Lack of Cohesive Policy** There is not a good policy for the development of sports sector in India. Sports policy planning is inadequate in India due to lack of resources and no planning body. There is not a specialised body that works in full enthusiasm to promote the development of sports in our country.

Future of Sports in India-Need for Reforms

Several measures have been taken by the government to promote the development of sports in the country. These are

- Sports education should be promoted at the school and college level so that interest of children at early ages should be developed. It must be ensured that parents do not keep their children away from sports.
- More programs such as Khelo India campaign should be promoted to promote school and university level competitions to inculcate a spirit of sports development in the country's youth.
- Corruption in sports bodies should be eliminated to provide good governance because of which sports facilities, education, infrastructure etc. can be developed at a rapid pace and sports can develop fast in developing country like India.
- There must be a uniform regulatory body for the development of sports in India so that any governance issue does not arise. Politicisation of sports authorities should be stopped to end discrimination in these authorities on the basis of political backing. An independent regulatory authority will be in the best interest of sports persons, coaches, teams playing sports in India.
- Sports related uniform guidelines shall be constituted so that fraudulent methods in sports can be eliminated.
- Infrastructure should be developed at all the levels starting from the local level to promote sports development by providing better infrastructure facilities to sports persons and emerging talents.
- Sports leagues which are of professional nature should be started on the lines of Indian Premier League and Pro Kabaddi League so that international players can participate and share their experiences to make local talent more enhancing.

Conclusion

Development of sports in future requires participation of all state holders which includes the government, private bodies, regulatory bodies, players, school level coaches, colleges, national as well as international sports experts so that Indian sporting ecosystems can be strengthened. For a country of over 1.3 billion people, the current sports infrastructure is not sufficient. There should be world class infrastructure to utilise the availability of talent in India. There must be incentives for sports funding and creation of infrastructure at the national, state and local level. A sports commission should be established to nurture the sports ecosystem. Dispute resolution mechanisms and strict protocols should be setup to ensure a fair sports environment. If sports will be promoted, India will be able to create a glorious future for its athletes.

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EDUCATION WITHOUT VALUES MAKES A MAN CLEVER DEVIL

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Education is the major aspect of any modern society. Education gives us knowledge and awareness and also it keeps us away from superstitious beliefs. Education directs the person to move in right path at all the times in life. It also increases the 'ethical values' of the person and hence helps to identify the difference between good and bad. The knowledge which is supposed to guide students to success might be abused or misused without value education.

Value Education

Before defining value education, we should know about the values. Values are principles, fundamental convictions and ideals, standards of life which act as a general guide to behaviour or as a reference point in decision-making. Values are virtues, ideals and qualities on which actions and beliefs are based. It is guiding principle of life which are conducive to all value development.

Value education is the aggregate of all the process by means of which a person develops abilities, attitudes and other forms of behaviour of the positive values in the societies in which he lives. In the words of John Dewey, "Value education means primarily to prize, to esteem to appraise, holding it dear and also the act of passing judgement upon the nature and amount of its value as compared with something else".

The very purpose and main function of education is the development of an all round and well-balanced personality of students so that children can make our nation more democratic, cohesive, socially responsible, culturally rich and intellectually competitive. But, now a days, more emphasis is unduly laid on knowledge-based and information-oriented education. As a result, the other aspect of their personality like physical, emotional, social and spiritual are not properly developed in providing for the growth of attitudes, habits, values, skills and interest among the pupils. It is here the value education comes in handy.

Importance of Value Education

- It gives the students a progressive way for their future and also helps them to know the real purpose of their life.
- Value education helps students to become responsive and practical.
- This helps them to better recognise the perception of life and lead a positive life as a responsible resident.
- It also helps in developing a strong relationship with family and friends.
- It changes the personality and character of the students.
- Value education is the only means which can give the young generation a right direction. Hence value education is needed.
- In modern times, people are extremely focused in the pursuit of their own success and self interest. In this process human being has been changed into robots i.e. without feelings and values. Their activities become heartless and lack values. Therefore, there is need of value education.
- Swami Vivekanand pin pointed value education as the total upliftment of society. Martin Luther King Jr said that the function of education is to teach one to think intensively and critically.
- Value education forms a positive opinion about life in the student's mind.
- Value education is teaching and learning about the ideals that society considers important.

Objectives of Value Education

The following objectives of value education are identified :

- Full development of child's personality in its physical, mental, emotional and spiritual aspects.
- Inculcation of good manners and responsibility and cooperative citizenship.
- Developing respect for individual and society.
- Developing a democratic way of thinking and living.
- Developing tolerance towards and understanding of different religious faith.
- Developing a sense of human brotherhood at social, national and international levels.
- Enabling children to make moral decision on the basis of sound moral principles.

Types of Value

Following are some of the types of values which are required in education

- **Personal Values** Personal values are those we learn for ourselves and which constitute a critical part of our values and are apparent in attitudes, beliefs, and actions. Personal values include honesty, responsibility, loyalty etc.
- **Social Values** Social values are those which puts the rights of wider groups of people first. This may include equality, justice, liberty, freedom and national pride. These are often instilled into people when people are young.

- **Political Values** Political values are ideological beliefs about the best way to govern a country or organisation, e. g. through welfare democracy and civic responsibility.
- **Economic Values** Economic values are those that are centred around money and may include beliefs around ownership of property, contributing to the common good.
- **Religious Values** Religious values are spiritual in nature and include beliefs in how we should live.

Factors Influencing the Learning of Values

Hogan believes that moral values are determined by five factors :

- **Socialisation** It is becoming aware of society as a child and parent's rules of conduct for being good.
- **Moral Judgement** It is learning to think reasonably about our own ethics and deliberately deciding on our own moral standards.
- **Moral Feelings** It is the internalisation of our moral beliefs to the degree that we feel shame and guilt when we do something wrong.
- **Empathy** The awareness of other people's situation, feelings and needs so that one is compelled to help those in need.
- **Confidence and Knowledge** It is knowing the steps involved in helping others and believing that one is responsible for and capable of helping.

Value Education in India

Value education in India from the ancient times has held a prime place of importance. From the Gurukul stage, the child not only learnt skills of reading and archery but more the philosophy of life in relation with its impermanence. Hence, education in India was born of this vision to achieve one's experience in the absolute as a spark of the divine and in this process practice of one's duty accompanies the acquisition of knowledge.

In the modern school system, value education was termed as moral education or moral science. Britishers were absolutely neutral in their policy towards religion and value education. Committee on emotional integration pointed out that the science students should have at least some background of humanities. It also opined that there should be a compulsory paper on India's cultural heritage.

Value based education has become an integral part of the New Education Policy, 2020. NCERT has brought a book 'Education for Values in Schools'. Universal educational values mentioned in NEP are truth, peace, non-violence, love, righteous conduct.

Value-less Education and its Effects

Intelligence with good character is the goal of true education. All scams and episodes of corruption, crime and violence in recent times in our country and the world are evidence to failure of human being, not because of lack of education, but because of value-less education. Value education never allows one to perform under pressure or greed.

Education without values tends to make man a clever devil. For example, Osama bin Laden, a dreaded terrorist was a civil engineer, whose higher education could not help him to follow the virtuous path. It is important to have an intelligent mind, but it is far more important to have a good heart. Nelson Mandela rightly said that a good head and a good heart are always a formidable combination. Gandhiji took the path of non-violence and taught us to follow value-based right path in our lives.

On analysing the activities of a soldier and a terrorist, we find that a soldier gives life for his people and his country, whereas a terrorist takes the lives of innocent people either in the name of religion or in the name of politics. Now-a-days many educated youths take the path of terrorism. This highlights that how value-less education can be used to propagate the ideas which are not only irrational but against peace, harmony and progress of human society. Values help us to differentiate between good and bad acts, while education only teaches us about the various acts.

Conclusion

The real education should come with moral values and character. Only the education with values can lead a man to path of virtue. Thus, our education system should adopt value based education at all levels. The value-oriented education programme should not be led only during the school level, but should be carried on further up to the level of higher education too, as it is from there that the nation's bureaucrats, army personnel and future leaders emerge. Only the value-laden education can bring developments in form of eradication of poverty, generation of employment, removal of social ills, empowerment of women, problem-solving skills, decision-making power and an inclusive society.

SIGNIFICANCE OF PRIVATE UNIVERSITIES IN INDIA

Priate universities are those universities which are self-financed and managed by private groups. University Grants Commission (UGC) defines private university as “a university established under any Central or State Act by a sponsoring body viz. a society, trust or a company registered under Society Registration Act, 1860 or Companies Act, 1956 respectively”. Private universities in India, however, cannot run without the approval of UGC. A UGC is a government regulatory and funding body for various academics institutions in India. Private universities in India are regulated under UGC Regulation 2003. UGC recognised private university has to run according to its rules and regulations.

Private university education in India has been booming since last two decades. The education market in India is worth billions and is increasing exponentially. On the basis of size, India has the third largest higher educational system in the world, next to China and to United States. New Economic Policy of 1991 have benefitted education sector most. Private players have established themselves for providing higher education in almost every Indian state. With the regular increase in the number of students, the seats are getting reduced in colleges and universities. As of 2020, there are 361 private universities in India catering to aspirations of lakhs of student population.

Background of Private Universities

In 1857, first three universities were established at Bombay (now Mumbai), Calcutta (now Kolkata) and Madras (now Chennai). At the time of Independence in 1947, there were 20 universities and several hundred affiliated colleges. With the liberalisation of economy policy, there has been surge in the provision of private higher education in India. Till 1980, higher education sector was controlled by the government and there after, there has been trend towards privatisation of higher education. Setting up of private universities under the State Private University Act by individual and private trusts is a new trend in privatisation of higher education in the country during 21st century.

Need of Private Industries

In this section, we will discuss some of the factors which led to the growth of private universities.

- **Limited Seats in Government Colleges and Universities :** With already less number of seats for graduation and post-graduation in government colleges and universities and cut throat competition to avail it, private universities have come as blessing in disguise for aspirations of millions of students. The private sector has been playing an influential and Vital role in the field of education in India. In fact, 50% of educational institutions in India are privately owned.
- **Increase in Gross Enrolment Ratio (GER) :** Gross Enrolment Ratio can only be increased by the involvement of private institutions in higher education. In New Education Policy 2020, there is emphasis on 50 per cent Gross Enrolment Ratio (GER) in higher education by 2035. It can only be achieved by involvement of private universities.
- **Opening of 'Deemed to be University Route' :** With the opening of 'deemed to be university route', the degree can be awarded by private as well as by government institutions. In the early years, this privilege was extended only to government/government aided institutions. Manipal University, a pioneer in private higher education became the first totally self-financed institutions to be declared as a deemed to be university in 1976.
- **Quality of Education :** Private university competes in par with best government institutions in providing high quality education. Increasing collaboration with foreign institutions generally attracts students for opting private university instead of public university.
- **Job-Oriented Course :** A major attraction of the private universities is the job-oriented courses they offer. Training and placement is an important activity in most of the private universities. Some of the universities have collaborations with industries for students internship and placement.

Issues Concerning Private Universities

Private universities have done more harm than providing benefits. Private university runs on profit motives by charging hefty fees from students for courses. Private universities invite students for higher education, but no guarantee of job is given after completion of the degree or diploma.

Private higher education institutions are often accused of charging capitation fees (any amount in excess of fees charged for the course of study) from students, in turn making them unaffordable. Fee structures of private institutions may be one reason for inaccessibility of higher education. Exorbitant capitation fees in private institutions ranged from ₹ 1-10 lakh for engineering courses, ₹ 20-40 lakh for advanced courses in medicine, ₹ 5-12 lakh for dental courses and ₹ 30,000-50,000 for courses in arts and science.

Education has become business and private university has become company for doing business. In name of education a nexus of politician, goons and educational professional are establishing colleges/universities and laundering the illicit money in establishing institutions to escape the wrath of tax officials. With increasing large force of educated unemployed is a serious issue of concern. With falling standards in education, it is pity that India don't have a single private university in top 100 best universities in world despite 50% of higher education need is met by private university.

Reforms in Private Universities

Over the years, the Supreme Court of India has interpreted the nature of educational institutions to be charitable and not for profit. Therefore, supernormal or illegal profits cannot be made by providing education. If a revenue surplus is generated, it is to be used by the educational institution for the purpose of its expansion and education development.

Private universities should ensure that they do not become mere machines for producing graduates and post-graduates like their government counterparts. The efforts and time of the students and the money of their parents should not go in vain. The emphasis should be on the high quality education and on the need to adapt the changes quickly and effectively. The rules and regulations should be such that the foreign students are also attracted to study in India.

They should, therefore, have to be given the flexibility to raise resources. The legal and administrative frameworks allowing private sector operations should be simplified. There should be deterrents for those who provide poor quality education and use the system to make profit. Both National Knowledge Commission (NKC) and Yashpal Committee recommended that, it is essential to stimulate private investment in higher education to extend educational opportunities. The Yashpal Committee also pointed out that while private investment is high in the emerging areas of engineering, medicine and management recommended that the private sector should not confine itself to the commercially viable sectors.

Government on its part should take the role of establishing more university and colleges in higher education along with private sector in bringing best talent out of India. In 2002, the Supreme Court ruled that the fees charged by private unaided educational institutes, could be regulated. Also, while banning capitation fee, it allowed institutes to charge a reasonable surplus. In 2003, the Court ruled that the fee structure in professional courses shall be approved by a committee in order to curb profiteering and charging of capitation fees.

Way Forward

Indian private education industry has been booming but the quality of education, its efficiency, effectiveness is very low. This is because private education players mainly focus to maximise their profits. With the increasing demand of higher education and government constraint to invest in it (as we see from reducing public expenditure for higher education), there is an urgent need for allowing foreign well-known universities to set up their branches in India and increase quality of education. The sudden and almost unending disruption due to COVID-19 pandemic has major impact on many higher educational institutions in the country. However, many private universities in India quickly adapted to online teaching and learning via video conferencing platforms and learning management systems customised by universities.

According to New Education Policy 2020, over the next 15 years, colleges will be given graded autonomy to give degrees. Affiliation with universities will end, and these institutions will be given the status of 'deemed to be universities'. The New Education Policy suggests a cap on fee charged by private institutions of higher education. New breed of private institutions can supplement the highest public institutions and can establish international standards of excellence in the field of higher education in India.



YOGA

A JOURNEY TOWARDS SELF-RELIANCE



Yoga is one of six schools of orthodox Hindu philosophy. It is a spiritual discipline as well as a science. It is the heritage of India. The word Yoga comes from the Sanskrit word 'Yug' which means 'to add', 'to join', 'to unite' or 'to attach'. Thus, Yoga is union of mind, body and soul. It involves physical, mental and spiritual practices. Yoga is considered beneficial not only for cardiovascular and blood circulation but the practice of it could provide incredible immunity booster for body to fight against COVID-19.

History of Yoga

The practice of Yoga was started during Indus Valley Civilisation in Northern India over 5000 years ago. The Indus Valley Civilisation is the suggested origin of Yoga as many seals, including the Pashupati seal, depicted several Yoga positions. It was first mentioned in 'Rigveda'. Yoga was slowly developed by Brahmanas who eventually documented their practices and beliefs in the Upanishads.

Initially, Yoga lessons and teachings were transferred from the teachers to disciples orally. They were compiled by Patanjali in 1st century CE in the name of 'Yoga Sutra'. 'Yoga Sutra' is the most credited source of Yoga, therefore Patanjali is known as the 'Father of Yoga'.

In the 3rd century BCE, the word 'Yoga' became popular in other religions like Hindu, Jain, and Buddhist writings. In Mahayana Buddhism, the practice of Yoga for both spiritual and meditative use was known as Yogacharya which consisted of eight significant steps of meditation called 'Insight'. In the 5th century, Yoga was meant for meditation and religious use, but not as a form of workout. Yoga later became widely valued because of the Indian Nationalist Movement as a way of building up pride and cultural identity. Today, Yoga is practiced worldwide by millions of people in many forms.

Various Forms of Yoga

There are various forms of Yoga including Hatha Yoga, Asthanga Yoga, Classical Yoga, Bikraw Yoga, Iyengar Yoga, Power Yoga, Kundalini Yoga, etc. Yoga has been evolving, therefore, many more types of Yoga are available today as compared to the past.

Yoga today forms an essential part of millions of peoples' lives. It is practised to keep oneself fit, for meditation and for good living. Yoga has been part of the lives of Indians since ages. Today, Yoga is one of the most practised forms of exercise (both physical and mental) even in the West.

Pranayam : Part of Yoga

Yoga through Pranayam and meditation provides many psychological benefits. It helps in stress management, better concentration and focus, besides increasing self-awareness, thus helping in bringing inner peace. Yoga is not a form of physical exercise only as commonly understood today. Yoga is a way of life. It is not a course to be completed within a specific period, it is a journey of self-development.

Vivekanand's Contribution to the Spread of Yoga in West

During famous Chicago speech (in 1893), Swami Vivekanand introduced the whole world about the spiritual superiority of Indian religious traditions. Overtime he realised that Yoga was the best way to introduce spirituality to the West. He travelled throughout the United States and England giving the Western World a taste of Yoga and Vedanta. His first book on yoga meditation was assembled and published as 'Raja Yoga'. It was followed by his collection of books on 'Jnana Yoga', 'Karma Yoga' and 'Bhakti Yoga'.

As a large number of people in America craved for a personal experience of Indian spiritualism, he went on to establish the Vedanta society in New York in 1895 which continues to thrive till day. Further, Vivekanand drew that Yoga was not an Indian tradition or a Hindu one but it was the concept of humanitarianism that made Yoga popular around the world.

Today, the popularity of Yoga in the West is such that about 75% of the fitness centres of America offer Yoga in their courses. Every year International Yoga Day is also celebrated which has given an international push to Yoga.

International Yoga Day

The idea of an International Day of Yoga was first proposed by the current Prime Minister of India, Narendra Modi, during his speech at the UNGA (United Nations General Assembly), on 25th September, 2014. Following this initial proposal, the UNGA held informal consultations on the draft resolution, titled 'International Yoga Day' on 14th October, 2014. The proposal of India for International Day of Yoga got huge support of 177 members out of 193. 21st June was chosen as the day as it is the longest day in the Northern Hemisphere and holds special significance for many countries.

Contribution of Baba Ramdev Towards Yoga

The credit for increasing the popularity of Yoga in India and making the teachings of Yoga available to every person goes to Baba Ramdev. Yoga Guru Baba Ramdev used the medium of television and newspapers to reach out to the general public and made his lessons available to them.

Baba Ramdev has made significant step in rejuvenating traditional education in India by establishing University of Patanjali located at Haridwar, Uttarakhand in 2006. The university aims at innovating teaching-learning and research to produce professionally competent, personally elevated and socially empathetic alumni.

Lifestyle Diseases Prevented

Today many of us are under the threat of lifestyle diseases. Such diseases can be cured by following a good lifestyle. Yoga helps in emotion management by people, provides a proper routine for life and enhances awareness about the body. Yoga heightens mindfulness in people which is essential for controlling lifestyle diseases. Yoga includes Pranayam and Kapal Bhati which are one of the best and effective breathing exercises. Yoga is a therapy which helps getting rid of illnesses slowly if practised on regular basis. It makes some positive changes to the internal body and regularise the body organs functioning. It is clinically proven fact that regular breathing exercise of Yoga can successfully strengthen our lungs and prevent Coronavirus disease.

Improves Quality of Life

Yoga brings holistic development. It helps people to engage in life purposefully, reduce sufferings and bring joy for living. It helps us in maintaining a harmonious life. It gives us a good lifestyle. It can reduce our health expenses with least investment.

Today Yoga can act as both preventer and controller of disease and hence improves the quality of life. Citing the importance of Yoga, UNESCO in 2016 also listed Yoga as an Intangible Cultural Heritage. United Nations in response to COVID-19, has suggested that mindfulness meditation is a great option to incorporate and to reduce anxiety and stress caused by isolation and lockdowns.

Yoga is considered a 'Sadhana' i.e. disciplined and dedicated practice. It is a science with many benefits for humanity. It is not related to particular religion. Yoga can be very useful to the people who practice it. Yoga is seen as a complete workout. It purifies both mind and body.

Conclusion

Yoga is a great gift to mankind given by India to the world. It is an exercise that connects the elements of mind and body. It helps to meditate and relax. It is an essential tool in the 21st century to develop self awareness and discipline. Any one can practise Yoga no matter what age or whichever religion one follows. In a stressed world of today, Yoga can be a calming exercise and it can prove to be effectively controlling the lifestyle diseases that the world is struggling to fight. With rising number of pandemics and new viruses that weakens the immune response of human body, Yoga has the potential to make the mankind healthier naturally.

FIT INDIA MOVEMENT

A STEP TOWARDS HEALTHY FUTURE

On the occasion of National Sports Day, Prime Minister Narendra Modi launched 'Fit India Movement' on 29th August, 2019 at Indira Gandhi Stadium in New Delhi. The Prime Minister also urged the people of the country to make fitness a part of their lifestyle. Prime Minister requested people to make 'Fit India Movement' a national goal. In an effort to inspire the nation, the Prime Minister stated that, Fit India Movement may have been started by the government but it is the people who have to lead it and make it a success.

Fit India initiative is the need of the hour and will guide the country towards a healthier future. Fit India Movement complements other initiatives like Swachh Bharat and the campaign for a plastic-free India, which are socially oriented and also offer health and economic benefits and well-being for individuals and the community. Initiatives that focus on health, personal cleanliness and civic and community hygiene are welcomed. They help to maximise the benefits of development and spread them wider in society.

About Fit India Movement

Fit India Movement is the latest among several other initiatives by the Prime Minister Narendra Modi to promote fitness and health. A committee comprising government officials, members of Indian Olympic Association (IOA), national sports federations, private bodies and fitness promoters has been formed to advise the government on the 'Fit India Movement'. Kiren Rijju is the Chairman of this 28 member committee to advise the government on the Fit India Movement. The Fit India Movement will be a 'multi-ministry effort', including the Ministry of Sports, HRD Ministry, Panchayati Raj and Rural Development Ministries. It will aim at bringing about behavioural change and introducing basic fitness practices in the daily lives of Indians, a majority of who lack access to sports or fitness infrastructure in their neighbourhoods.

A special focus of the campaign will be on rural India that lacks basic facilities to improve physical well-being and awareness of fitness. Awareness programmes through involvement of celebrities, sports activities to be undertaken in tier 1 and tier 2 cities and other such events are being planned under the campaign. This will also be used to promote Yoga in a big way.

The University Grants Commission (UGC) has asked affiliated higher educational institutes to prepare and implement an institutional fitness plan incorporating sports/exercises/physical activities for fitness, into the daily routine. The commission has also asked institutes to encourage every person to walk 10,000 steps. Private industries have also been made a part of the 'Fit India Movement'.

Challenges to Fitness

Fitness has always been an integral part of our culture, but technology has thrown up new challenges and there is indifference to fitness issues now. Technological advances have made life easier, but they have reduced the scope for walking and manual work. Physical fitness culture has suffered and health standards have fallen. As a result of this, lifestyle diseases like diabetes and hypertension are rising. The burden of Non-Communicable Diseases (NCDs), which are caused by physical inactivity and sedentary lifestyles, is growing. In the past, older people were more prone to chronic diseases, but now even the younger sections are susceptible to them.

The threat is not just from lifestyle changes but from habits like tobacco consumption and environmental degradation. Physical activity is a means for the prevention of chronic diseases, for treatment and rehabilitation of patients and for building immunity against other kinds of diseases. The WHO has estimated that 30% of cancer incidents can be avoided with lifestyle changes.

Benefits of Physical Activities

People in any profession can make themselves efficient in their profession if they are mentally and physically fit. Fitness is not just a word but an essential pillar to a healthy and prosperous life.

Regular physical activity increases life expectancy and reduces the risk of premature death. It also boosts physical and mental health. Regular exercise further increases muscle strength, bone density and flexibility. Consequently, it reduces the risk of Osteoporosis and accidental injuries.

Relevance of Fit India Movement

In the modern time, technology has reduced our physical ability, our daily fitness routines have been hampered and today we are unaware of our traditional practices and lifestyle which could keep us fit. With time, fitness has been accorded a lower priority in our society. Earlier a person used to walk or cycle for kilometers, today mobile apps have to tell us how many steps we walked! India has a growing burden of Non-Communicable Diseases (NCDs). More people now suffer and die from lifestyle diseases than ever before in the history of this country.

As per ICMR, contribution of non-communicable diseases in total death in country rose to 61.8%. The major risk factors were unhealthy diet, lack of physical activity, high blood pressure, cholesterol, obesity etc.

The disease scenario in India is as follows

- The health scenario in India is very dismal. People are suffering from diseases like obesity, cardiovascular diseases, hypertension and diabetes due to lack of physical activities.
- Today lifestyle diseases are on a rise in India affecting even the young population of country. Cases of diabetes and hypertension are common among children in India.
- 'Fit India Movement' is an effort to bring these small lifestyle changes.
- The launch of 'Fit India Movement' doesn't just highlight the indispensable need for physical fitness, it marks a conscious effort to make a shift in the common attitude among Indians to consider engagement in sports as an activity beyond recreation.

Challenges before Fit India Movement

Although, the launch of 'Fit India Movement' is a welcome step, there are certain apprehensions as well. It may not reach the people of below poverty line. To maintain a healthy lifestyle, both physical activity and nutritious food are necessary. But in India, still many people are malnourished and some people do not have access to safe drinking water. So, without solving the issue of poverty and lack of access to affordable nutritious food, a section of people in India will not be able to take advantage of this movement. Lack of playgrounds may push children to turn towards an inactive lifestyle. There are apprehensions that pollution, infrastructure, lack of safe public spaces such as parks, walking routes and cycling tracks will act as a hindrance for India in achieving 'Fit India' tag.

Conclusion

Fit India is an idea which needs to be properly and scientifically executed, particularly directed towards vulnerable groups in children, women and people belonging to middle and low socio-economic strata. An appropriately built environment, which was integral to our planning earlier, needs to be brought back. The importance given to sports and fitness is most essential. Although, the advantages of physical fitness are known and evident, India is in a contradictory situation of the simultaneous presence of increasing lifestyle ailments and the challenges that can be attributed to poverty, backwardness, illiteracy and lack of access to healthcare. So, the Fitness Movement should best be seen in association with anti-poverty programmes and other social welfare schemes.

All citizens should try to live a fit and healthy life but there is also a major responsibility of governments and public authorities to create a congenial environment for it by taking steps to reduce environmental pollution, providing open spaces and other facilities for recreation and encouraging policies that promote physical fitness culture.

NATUROPATHY

SELF HELP FOR GOOD HEALTH

Human health is one of the important factors that influence the development of a nation. The health of individuals is a resource for everyone. It emphasises upon social resources as well as personal capacities of an individual. For a healthy life, a person needs to have a balanced diet and regular exercise. Our body has the ability to naturally heal itself from the ailments and stresses that have been induced in it because of environment. Naturopathy provides the people with a new approach that allows persons to naturally heal themselves without any artificial medications and therapy. The health of all organisms depends on their surroundings. The social environment is also an important factor in keeping an individual healthy.

Environmental cleanliness is an important factor that ensures good human health. Healthy food is necessary to ensure a healthy lifestyle. Naturopathy takes a holistic view towards health and wellness. It supports a person to live a healthy life. The foundations of naturopathy are based upon the importance of a healthy diet, clean fresh water, sunlight, exercise and stress management.

What is Naturopathy?

Naturopathy is an alternative system of health and wellness in which man lives in a harmonious relation with nature. Naturopathy has disease preventive, curative, as well as restorative potentials. Naturopathy recognises the existence of a vital curative force within the body. It seeks to normalise all the bodily functions so that it is able to heal itself properly without any external help. Naturopathy employs an array of pseudoscientific practises that are non-invasive and promotes self-healing.

The term 'naturopathy' originated from 'natura' and 'pathos' to suggest natural healing. Naturopathy considers Hippocrates as the father of Naturopathy. Naturopathy had its roots in the 19th century Natural Cure movement of Europe. Naturopathy focuses upon holistic approach, completely avoiding the use of medicines and surgeries. It aims to reduce stress by changing diets and lifestyles. Natural cures include a range of therapies based upon sunshine, fresh air, heat or cold as well as nutrition advice such as following a vegetarian and whole food diet, fasting or abstinence from sugar and alcohol. There is focus upon dietary and lifestyle changes, stress reduction, homeopathy, manipulative therapies, exercise therapies, psychotherapy and counselling.

Benefits of Naturopathic Medicines

Incorporating naturopathic medicine into lifestyle of people have immense benefits for human health and wellness. These benefits include

- **Health Promotion** The focus of Naturopathic medicine is promotion of health and wellbeing, giving importance to the principle that the body has the ability to heal itself. By identifying various obstacles to natural cure, the body is able to cure itself on its own. The goal of Naturopathic medicine is to treat underlying disorders and to restore normal functions of the body by enhancing its healing abilities. Promotions of health aims to make individuals enjoy their daily lives with a good standard of living.
- **Prevention of Disease** Prevention is better than cure. Preventing disease is a primary aim of Naturopathy. It prevents the progression of existing diseases. Naturopathy engages with the persons to identify the root cause of diseases and address all factors that are affecting the health of patients. All this is done by natural factors and does not involve any surgery or chemical medicines.
- **Treating Existing Conditions** Naturopathy involves treatment of minor as well as major conditions from pediatric to geriatric and physical to psychological. Naturopathy works with all three types of people. Patients that are looking for disease prevention and health improvements. Patients with a wide range of health concerns and no clear diagnosis and patients suffering with chronic illness.
- **Personalised Treatment** Naturopathic treatments are highly personalised. Each patient has to be cured according to their specific genetics, dietary habits, lifestyle and associated health concerns. A naturopathy practitioner will work to determine the underlying causes and create individualised treatment plans to stimulate a person's innate healing ability. Patients are also able to make effective, self educated decisions that can help in prevention of occurrence of any future healthcare problems.
- **Safe and Effective Treatment** The goal of Naturopathy is to restore the normal functions of the body to its original state so that body can heal itself in a natural way. The doctors in naturopathy focuses upon each patient's distinct abilities. Naturopathy provides safer treatment as it does not have any side effects.
- **Cost Effective** Naturopathy is a cost effective treatment because it does not involve any surgeries, operations, medicines etc. The preventive value of Naturopathy also reduces the burden of diseases on a country's healthcare system.
- **Self Awareness** With healing, Naturopathy also involves improving awareness about the self. When a person knows more about his/her body, they are able to understand better the symptoms that the body is trying to communicate to the person.

Principles of Naturopathic Practice

Naturopathy is based on the following principles

- **Medicatric Nature** Naturopathic medicine requires an inherent self healing process in people that is based on individualised traits. Naturopathy acts to identify and remove the obstacles to self healing and recovery. It facilitates the self healing ability.

- **Tolle Causum** It means identify and treat the cause. It involves treating the cause of the problem rather than symptoms. Thus, the cause of the disease is eliminated to reduce the effects of diseases.
- **Primum Non-Ocure** It means do no harm. Naturopathy avoids any harm to the patient. It utilises methods and medicinal substances that do not cause any harm to the patient. It does not involve any operations that have some side effects. It uses that least force to treat a patient. It acknowledges and respects a person's self-healing abilities.
- **Docere** It means that doctor is the teacher. Naturopathic physicians do not make the patients dependent upon themselves. Rather, they make the patient self aware so that they take self responsibility for their health.
- **Prevention** Prevention emphasises upon the patient's ability to resist the disease by assessing risk factors to his health and wellness, his susceptibility to diseases etc. It aims at preventing the disease so that person can remain healthier for longer periods of their life.
- **Treat the Whole Person** Naturopathy treats each patient by taking into account individual mental, physical, emotional, genetic, social and other factors. It also focuses upon spiritual development of patients. Thus, by taking into account all the individual factors, it completely treats an individual rather than treating only a particular condition.

Conclusion

All the diseases have environmental causes. Naturopathy aims to correct all these the environmental factors so that diseases do not occur in the body. It says that the treatment of all diseases is the elimination of morbid matter from the body. Various bacterias and viruses are only able to survive in the body only because of the morbid matter. Diseases occur when the body's ability to self heal and resist diseases is weakened. The resistance and ability of the body to self-heal can be enhanced by the nature which is a self healer. Nature does not only cure the disease but the entire body of the patient.

Naturopathy has huge potential to cure a person suffering from chronic ailments. It also treats all aspects such as physical, mental, spiritual and social at the same time. It cures the body with only the natural elements such as sun, wind, water, yoga exercise, vegetarian and wholesome food etc. To realise the demographic potential of the country, it needs to make the population healthy by adopting a lifestyle that is disease free. Naturopathy has the ability to cure and make India healthy.

PHYSICAL EDUCATION

COMPULSORY FOR ALL IN SCHOOLS

Physical fitness can be defined as the ability to carry out daily tasks without fatigue. The students of 21st century should be physically and mentally fit which highlights the importance of physical activity in one's life. But to carry out any physical exercise, there is a need to know one's body, its mechanisms, dynamics and how to keep it healthy. This highlights the need to teach physical education in schools that will enable the students to maintain an active and healthy lifestyle. One of the major reasons that physical education should be made compulsory in schools is that it promotes a healthy lifestyle and reduces obesity in students which is a common problem in 21st century lifestyle. Regular physical activity improves the ability of the body to respond to environmental changes and sharpens the mind and brain activity. This allows the student to focus upon their studies and perform academically well.

Components of Physical Education

The components of physical education which are used to teach the importance of physical activity to students are

- **Muscular Strength** Muscular strength is the ability of muscle to continuously contract and expand against a given resistance. It is the power that allows a person to lift and carry objects. Without muscle strength the body will be weak and will not be able to keep up with the demands placed upon it.
- **Muscular Endurance** It is the ability of muscle to perform contractions and expansions for extended periods of time. Rather than just lifting or carrying some weight for few seconds, the muscles are used for a few minutes. Muscle endurance is a prerequisite for everyday health so that muscle is able to carry out general functions with ease.
- **Cardiovascular Endurance** It is the body's ability to keep up with the exercises that involve increased pumping of blood. These exercises involve running, jogging, swimming, cycling and any other exercises that force the lungs, heart and blood vessels to work for longer periods of time. Cardiovascular endurance enables the body to maintain efficient delivery of oxygen and enhances cellular metabolism.
- **Flexibility** Flexibility involves improving range of motion. Without flexibility, the muscles often grow stiff and movement gets limited. Flexibility training ensures that the body can move through its entire range of motion without any pain or stiffness. Flexibility ensures balance, coordination and agility in a student. Flexibility in students can be enhanced with the help of active stretching.

- **Body Composition** Body fat composition refers to the amount of fat in one's body. Higher levels of fats in students are associated with poor health outcomes such as it increases heart diseases and diabetes. Lower amount of body fat tends to promote healthier outcomes whereas higher proportion of body fats leads to several disease risks among students.

Approaches to Teaching Physical Education in Schools

Various approaches are employed by teachers for teaching physical education to schools children. These approaches are

- **Lecture Approach** Lecture is a verbal presentation to students that seeks to provide information to them about a particular subject matter. Lecture approach is useful when presenting a subject matter to a large number of students. Lecture strategy is limited to memory learning and treats the students as passive learners.
- **Individualised Instruction** Individualised instruction strategy allows the learner to learn at their own pace and develop the ability to learn independently with minimum help from the teacher. With individualised instruction, students can learn at a fast pace with minimum supervision.
- **Simulation Based Instruction** In simulation strategy, the physical education teacher simulates physical activities so that children can learn about physical education in a more effective manner. Simulation promotes learning of game skills, knowledge, attitudes, strategies and social skills. Through simulation, children can learn by practise and observation in real world environment.
- **Interactive Approach** In interactive approach, teaching is in the form of two way communication between teachers and pupils. The interactive teaching allows the students to dig deeper into meaning and concepts. Therefore, interactive teaching focuses on interpersonal relationships among learners and teachers. In this way, the students are able to grasp the concepts of physical education in a much better way and for longer duration of time.
- **Active Approach** Active approach of physical education teaching enables the students to engage inside and outside the school environment. It is intended to make the students active recipients of information. It involves active participation on the part of the student. Individual students can learn by doing activities on their own.

Why Physical Education Should be Promoted in Schools?

There are many benefits that school students receive from physical education. It is essential that physical education should be promoted among school children because of following reasons

- **Promotes Physical Fitness** By studying the subject matter of physical education, school students are motivated to lead a healthy lifestyle. Inclusion of regular physical activity enables the students maintain their physical strength, muscular endurance and improve cardiovascular health. Regularising physical activity results in increased absorption of nutrients by the body, improves digestive processes and increase physiological processes. It also improves the student's motor skills and hand eye coordination.

- **Reduces Chances of Ailments** Increasing physical activity also reduces the chances of diseases and ailments as it improves body's ability to fight against the diseases. It improves diet intake as the health of students is at risk to many diseases like chronic heart disease, hyper-tension etc. because of irregular and undernourished diet patterns.
- **Improvements in Academic Performance** Physical education can help in improvements of academic performances of a student. Many regular physical activities improve concentration and ability to focus. Sports activities also help to reinforce knowledge and skills acquired in other subjects. Physical education tends to improve nutrient circulation inside the body. This circulation produces longer attention spans during classes.
- **Builds Self-Esteem** Students who regularly and actively play sports are more confident among themselves as compared to students who are not. It is because of self-discipline and dedication as well as commitment to excel in sports that brings out the best in students. It provides a positive influence to mental health and builds character, self-esteem in a student.
- **Relieves Stress** Physical activities also enable the students to neutralise their negative energies through their physical movements. School students are under stress particularly due to curriculum, homework, families, peer pressure. Involvement in physical activities offers a potential channel for stress relief. Reducing stress also provides emotional resilience and stability to the students.
- **Develops Motor Skills** Physical education at the school level is essential for the development of motor skills and enhancing reflexes in students. A healthy body posture can be developed in the students with physical education strategies.
- **Improve Social Skills** With sports increasingly becoming team based which requires cooperation and coordination with fellow team members, physical education can enable the students to learn these social skills with great ease. It allows them to be respectful to other team members and instill a good positive character in them.

Conclusion

It is clear that physical education can play an important role in the lives of students from early periods at the school and college level. Various factors are required to be considered which promote physical education at the schools. It involves generating student's interest in the subject rather than forcing them to perform a particular activity. It is required that physical activity and good health should be promoted at early stages of a student's life so that they can become better humans in every aspect of life. The best way to make them better is by introducing them to physical education as early as possible.

RENOWNED PERSONALITIES

113

VIRAT KOHLI

THE RUN MACHINE

Virat Kohli was born on 5th November, 1988. He is an Indian International Cricketer who is currently the captain of the India National Team. Cricketer Virat Kohli is an inspiration and a role model for the youth today. Performing consistently in all three formats of the game, he has been recognised as the future star of Indian Cricket by many of the former cricketers like Sunil Gavaskar, Ravi Shastri and Wasim Akram. He has proved his worth in a very short span of time.

Journey Towards Success

A right hand batsman, often regarded as one of the best batsman in the world, Kohli is ranked as one of the world's most famous athletes by ESPN and one of the most valuable athlete brands by Forbes. He plays for the Royal Challengers Bangalore in the Indian Premier League (IPL), and has been the team's captain since 2013.

Born and raised in Delhi, Kohli represented the city's cricket team at various age-group levels before making his first class debut in 2006. He captained India under-19 team at the 2008, under-19 World Cup in Malaysia which emerged to be victorious. A few months later, he made his ODI debut for India against Sri Lanka at the age of 19. He made his test debut in 2011 and removed the tag of 'ODI Specialist' in the year 2013 with test centuries in Australia and South Africa.

His Achievements

As a batsman he holds the records like highest run scorer in the years 2017, 2018 and 2019 in Tests and ODIs. He is the fastest batsman in the world to reach the ten thousand and eleven thousand run mark which he reached in 205 and 222 innings, respectively. He also became the first player in the world to receive the top three honours of cricket i.e. Garfield Sobers Trophy, ICC Test Player of the year and ICC ODI Player of the year in 2018.

In April 2019, he was named the captain of India's squad for the 2019 Cricket World Cup. On 16th June, 2019 in India's match against Pakistan, Kohli became the fastest batsman, in terms of innings to score 11,000 runs in ODI cricket. In October 2019, Kohli captained India for the 50th time in Test cricket, in the second Test against South Africa. In this match, after scoring a double century, he became the first batsman for India to score seven double centuries in Test cricket.

He has become the most successful captain of Indian cricket team in test format in 2019. He also holds the record for most consecutive Test Series wins (9) as a captain, equalling that of Ricky Pointing. He is also the first captain in the world to score ten hundreds in a calendar year.

Alongside his cricket career, Kohli co-owns FC Goa in the ISL (Indian Super League), the IPTL (International Premier Tennis League) franchise UAE Royals and the PWL (Pro-Wrestling League) team Bengaluru Yodhas. He also has other business ventures and over 20 brand endorsements.

Awards and Honours

Currently, Kohli rank 2nd in test rankings with 886 points and holds top ranking in ODI with 871 points. Kohli has been the recipient of many awards such as the Wisden Leading Cricketer in the World in 2016, 2017 and 2018, ICC World Cricketer of the Year in 2017, ICC ODI Player of the Year in 2012 and 2017 and the BCCI's International Cricketer of the year for the 2011-12, 2014-15 and 2015-16 seasons.

In 2013, he was given the Arjuna Award in recognition of his achievements in International cricket. The Padma Shri was conferred upon him in 2017 under the sport category. He was awarded with Rajiv Gandhi Khel Ratna Award in the year 2018.

Working for the Social Cause

Apart from leaving his impact on cricket, Virat Kohli has also taken several initiatives to work for the social cause. In March 2013, Kohli started a charity foundation called 'Virat Kohli Foundation' (VKF).

The organisation aims at helping underprivileged kids and conducts events to raise funds for the charity. In May 2014, 'ebay' and Save The Children India' conducted a charity auction with VKF, with its proceeds benefitting the education and healthcare of underprivileged children.

Virat Kohli is a famed tech-savvy. He has a huge fan base on social media like Facebook, Twitter and Instagram. In February 2020, Virat Kohli became the first person to have 50 million followers on Instagram. Virat Kohli is also the most valuable celebrity. According to a study, Kohli has also topped the brand valuation list in 2019.

After having achieved a permanent spot in all the formats, among many tough competitors, there is no doubt in saying that Kohli is one of the best gems of Indian cricket. He seems to be a self-driven individual and his countrymen want to see more of him, more winning performances and series, that would justify his capabilities, talent and efforts before he retires.

PANKAJ ADVANI

MOST SUCCESSFUL BILLIARDS PLAYER OF ALL TIME

Pankaj Advani was born in Pune on 24th July, 1985. He spent the first five years of his life in Kuwait with his father Arjan (who passed away when Pankaj was just six years old), mother Kajal and elder brother Shree Advani.

The family migrated to Bengaluru at the onset of the Gulf War in 1990 and has been living there since. Pankaj and Shree studied at the Frank Anthony Public School. Pankaj's special talent in billiards became evident quite early, and he showed abundant promise of turning into a master of his craft in the future.

The Bengaluru-based billiards and snooker player Pankaj Advani increased his tally of world titles to 22 by winning a 4th straight final in the 150-up format at IBSF World Billiards Championship 2019 held in Mandalay, Myanmar. It was the premier international non-professional tournament for the game of English billiards. Pankaj is one of India's most consistent sportspersons and won a world trophy every year ever since returning from a professional session in the UK in 2014.

Journey Towards Success

Pankaj began his career in the world of cue sports at the age of ten when he started accompanying his brother Shree to the snooker parlour close to their home everyday after school. In his very first attempt, he pocketed the red ball and from then, he was 'addicted' to the game. The following year, he won his first State title by beating his brother in the finals. The world-renowned Snooker wizard Arvind Savur spotted his talent at a young age and took him under his wing. Mr Savur, the 'father' of modern snooker, promised the family that he would make Pankaj a world champion.

His Achievements

In the year 2000, Pankaj won his first Indian Junior Billiards Championship title and then went on to win it again in 2001 and 2003. In 2003, he also won the India Junior Snooker Championship which made him the youngest National Snooker champion. Pankaj went on to win the Men's World Snooker Championship in China, the first of his 21 World titles. After winning the IBSF (International Billiards and Snooker Federation) World Billiards Championship in Malta in 2005, he became only the second cueist to have won both the billiards and snooker world titles.

He became the first Indian ever to have claimed five billiards titles in the same year i.e. Junior National, Senior National, Asian Championship, World Championship (Point Format) and World Championship (Time Format).

He held some of the major records in this sport. He is the youngest Indian and Asian to win the world professional billiards title. He is the only person in the world to win the world professional billiards title, IBSF World Billiards (time format) title, IBSF World Billiards (point format) title, and IBSF World Snooker title. He is also the only person to be the reigning champion in all possible major Billiards championships. He is the only one to win twice the twin titles (point and time formats) at the IBSF World Billiards championships.

He is the youngest world champion in IBSF billiards, the youngest Asian to win the World Snooker title at the age of 18 years and the World Billiards title at the age of 19 years. He has won the maximum number (six) of IBSF world titles and three Asian Billiards titles.

He is probably the only sportsman in the world to have won seven senior world titles by the age of 24. However, after 2014, Pankaj has focused his career on English billiards.

Awards and Honours

For his commendable performance as a billiards and snooker player and his invaluable contribution to the nation through the glory that he brought home through his consistent and skillful efforts, Pankaj has won a host of awards from various government and non-government bodies.

These include the prestigious Civilian award, the Padma Bhushan in 2018, the Sahara India Sports Award, Teacher's Achievement Award in Sports and the DNA Most Stylish Sportsman Award in 2010, the Padma Shri in 2009, India's highest sporting honour, the Rajiv Gandhi Khel Ratna Award in 2006 and the Arjuna Award in 2004. Other awards that he won include the NDTV Spirit of Sports Award for India's Outstanding Achiever, TAG Heuer's Excellence in Sports Award in 2012 and recognition as a Global Shaper from the World Economic Forum in 2011.

Pankaj Advani's life is an inspiration to young generation. He holds many records of his domain and made India proud at the International level.

His success has led to the popularity of billiards among masses. His contribution to the sport and to India's success in billiards is well recognised.

DUTEE CHAND

INSPIRING A MILLION DREAMS

Dutee Chand is an Indian professional sprinter and 2019 National Champion in the women's 100 metres event. In 2018, she clinched two silver medals in women's 100 m and 200 m race at the Asian Games held at Jakarta and Palembang, Indonesia. It was India's first medal in 100 m since 1998 and in 200 m since 2002. In 2019, she became the first Indian sprinter to win a Gold medal at the World University Games, clocking 11.32 seconds in the 100 m race. Her success has inspired a million dreams for all aspiring women athletes in India.

Early Life, Education and Employment

Dutee was born on 3rd February, 1996 as the third of seven siblings in a poverty-stricken family of weavers in Odisha's Chaka Gopalpur village of Jajpur district. She was initially not interested in athletics. But the tempt of a government job was hard to avoid. Her sister, Saraswati, a kabaddi player-turned-runner, helped her to learn to run professionally. After finishing her schooling in various government schools, she enrolled in a private university to study law in 2013. She is presently employed as an Executive Officer in the Odisha Mining Corporation Ltd, a State Public Sector Unit.

Athletic Career

Her first major win came in 2012 when she became the National Champion in the Under-18 category of the 100 metres event. In 2013, she won the Bronze medal in the Asian Athletics Championship at Pune. She was the first Indian sprinter to reach the final of a global athletics event, the World Youth Championships, in 2013. She also became the National Champion in the 100 and 200 metres categories at the National Senior Athletics Championship at Ranchi in that year.

She set the Indian National Record at 11.28 seconds in the qualification round of the Asian Indoor Athletics Championship in 2016 and went on to win the Bronze medal in the final event of the same.

In the year 2016, she became the third Indian woman ever to participate in the women's 100 metres sprint. In the 2018 Asian Games, Dutee won silver medals in the women's 100 and 200 metres sprints. She was awarded ₹ 3 crore by the Government of Odisha for her achievements at the Asian Games.

Dutee's Controversy

She had earlier suffered a setback in the prime years of her athletics career when she was suspended from competition due to a hormone controversy in June 2014. She was dropped from the 2014 Indian Commonwealth Games contingent after the Athletic Federation of India stated that hyper-androgenism found in her body while conducting routine tests on her as part of competition, made her ineligible to compete as a female athlete. She was also dropped from the Indian contingent for the 2014 Asian Games. The decision was made in compliance with International Olympic Committee (IOC) regulations on 'female hyper-androgenism', designed to address a perceived advantage for female athletes with high androgen levels.

The Athletic Federation of India and IAAF's actions were widely criticised as an offence to her privacy and human rights.

Dutee Chand appealed to the Court of Arbitration for Sport (CAS) by employing the services of a Canadian law firm. The IAAF policy on hyper-androgenism, or high natural levels of testosterone in women, was suspended following her case, which was decided in July 2015. The ruling found that there was a lack of evidence that testosterone increased female athletic performance and notified the IAAF that it had two years to provide the evidence. This effectively removed the suspension of Dutee Chand from competition, clearing her to race again.

Her Records and Achievements

Dutee clocked 11.33 seconds in the women's 100m dash to win the gold in the 2016 Federation Cup National Athletics Championships in New Delhi. In June 2016, she broke the national record twice in one day after clocking 11.24 at the 26th International Meet at Almaty, Kazakhstan, thereby qualifying for the Rio Olympic Games. However, in the Olympics, she could not get achievement due to a very tough competition.

In 2017, at the Asian Athletics Championships in Bhubaneswar she clinched two bronze medals, one in the Women's 100 metres and another in the Women's 4×100 m relay. At the 2018 Asian Games, in the Women's 100 metres finals, she won the silver medal, her first Asian games medal, clocking 11.32 seconds. Three days later, she bagged her second silver at the Asian games in the Women's 200 metres final.

At the 2019 Summer University Games in Napoli, Italy, she won the Gold medal in the 100m race, becoming the first Indian woman sprinter to win gold at these games. She finished the sprint in 11.32 seconds. For this victory, she was praised by the President of India and the Prime Minister, as well as the Chief Minister of Odisha. Presently, she is training at Hyderabad for participating in the 2020 Olympic Games at Tokyo and bring home a medal for India in the 100m sprint.

Dutee Chand is a flag-bearer of the new India. She has not only dealt with allegations of doping but has also challenged the societal norms while keeping her athletic career on track. Dutee's story is the story of hope. It's the story that generations will love to hear and inspire them forever.

BAJRANG PUNIA

BAHUBALI OF INDIAN WRESTLING

Bajrang Punia is an Indian freestyle wrestler who competes in the 65 kg weight category. He was born on 26th February, 1994 in the Jhajjar district of Haryana. He has won three medals at the World Wrestling Championships and two medals each in the Commonwealth and Asian Games.

Early Life, Education and Career

Bajrang was born in a village in Jhajjar district of Haryana on 26th February, 1994. He began wrestling at the age of seven and was encouraged to pursue the sport by his father. After completing his schooling in Jhajjar, his family moved to Sonipat in 2015 so that he could train at a regional centre of Sports Authority of India. He has graduated in Sociology from a private university located in Sonipat. Currently, he works with the Indian Railways at the post of Gazetted officer OSD sports.

His international career started with participation at the age of 19 years in the men's freestyle 60 kg category in the 2013 Asian Wrestling Championship held at New Delhi in April. He beat Iran's Morad Hassan 3-1 in the quarter-finals, but was defeated by Hwang Ryong-hak of North Korea in the semi-finals to claim a bronze medal. In August of the same year, he competed in the 2013 World Wrestling Championship at Budapest, Hungary. He won the Bronze medal in the men's freestyle 60 kg category by qualifying for the Bronze medal round through the repechage round. There, he faced Enkhsaikhany Nyam-Ochir of Mongolia and beat him 9-2.

After this flying start, he didn't look back and continued with success in both the 2014 Commonwealth and Asian Games. In the Commonwealth Games held at Glasgow, Scotland, he won the silver medal in the men's freestyle 61 kg category, after losing by 1-4 to David Tremblay of Canada in the final. In the semi-final, he had overcome the Nigerian wrestler, Amas Daniel by 3-1.

Later, in the Asian Games held at Incheon, South Korea, he won the Silver medal in the Men's freestyle 61 kg category, after losing 1-3 to Masoud E of Iran in the final. Here, he had overcome Noriyuki Takatsuka of Japan by 4-1 in the semi-finals. In the Asian Wrestling Championship held later that year at Astana, Kazakhstan, he bagged the Silver medal in the men's freestyle 61 kg category. Here he lost by 0-4 once again to Masoud E of Iran in the final. However, in 2015 World Wrestling Championship, he could not win a medal, as he was defeated in the round of 32.

His Wrestling Achievements

The years 2017 and 2018 were golden years for Bajrang, as he won a Gold medal at the Asian Wrestling Championship held at Delhi. In the 2018 Commonwealth Games held at Gold Coast, Australia, he won the Gold medal in the men's freestyle 65 kg category by overcoming Kane Charig of Wales by technical superiority in the final round. Next, in the 2018 Asian Games held at Jakarta-Palembang, Indonesia in August, he won the Men's freestyle 65 kg Gold medal by defeating Japanese Wrestler Takatani Daichi by 11-8 in the final.

However, he could not repeat this success in the 2018 World Wrestling Championship in October. Here, he won the Silver medal by losing the final round. In the 2019 World Wrestling Championship, he won a Bronze medal. He defeated Tulga Ochir, a Mongolian wrestler, in the Bronze medal match. Bajrang fought back from a 0-6 deficit to win by 8-7 in the 65 kg category. He won a Bronze medal at this event and demonstrated a positive outlook with his views.

His Awards and Honours

For his commendable performances in wrestling, and his invaluable contribution to the nation through the glory he brought home through his consistent and skilful efforts, Bajrang has won a number of awards from the government. These include the prestigious Civilian Award, the Padma Shri in 2019, India's highest sporting honour, the Rajiv Gandhi Khel Ratna Award, in 2019, and the Arjuna Award in 2015.

Bajrang is currently working rigorously to eliminate his weaknesses so that he can bring home a medal from the Olympic Games at Tokyo to be held in 2021. He is truly the *Babubali* of Indian wrestling. Bajrang Punia has shown great determination to become the country's greatest wrestler. He is an inspiration to the new generation of young men who want to take wrestling as a career.

AZIM PREMJI

CZAR OF INDIA'S IT INDUSTRY

Azim Hashim Premji is an Indian business tycoon, investor, engineer and philanthropist, who is the Chairman of Wipro Limited. He is informally known as the Czar of India's IT Industry. He guided the IT company Wipro over 40 years of diversification and growth to emerge as one of the global leaders in the software industry. In 2010, he was voted among the 20 most powerful men in the world by Asia Week. He has been listed twice among the 100 most influential people by the Time Magazine, in 2004 and 2011. In 2013, he agreed to give away at least half of his wealth by signing 'The Giving Pledge'.

Early Life and Education

Azim was born on 24th July, 1945 in Bombay in a Nizari Ismaili Shia Muslim family with origins in Kutch area of Gujarat. At that time, his father was setting up the company named Western Indian Vegetable Products Ltd, based at Amalner, a small town in the Jalgaon district of Maharashtra. The company was manufacturing hydrogenated cooking oil under the brand name Sunflower Vanaspati and a laundry soap named 787. After completing school education in Maharashtra, Azim graduated with a bachelor degree in Electrical Engineering from Stanford University, USA.

His Career

Azim's father died of a heart attack in 1966. At that time he was in the USA. This forced him to return to India and carry on his father's business at the age of 21. He completed his degree later on through distance mode. He diversified the product range of his company and renamed it as Wipro. On recognising the importance of the emerging IT field during the late 1970s, the company started manufacturing minicomputers in 1980. In 1984, Wipro's Infotech division diversified into software. The Indian Government's Policy of Liberalisation in 1991 further helped Wipro to expand its exports by 50% every subsequent year. Wipro currently makes 65% of its sales to the USA.

Under his able leadership, a ₹ 7 crore company manufacturing cooking fats has currently grown into a US \$ 900 million diversified, integrated corporation in services, technology products and consumer products. He is a role model for young entrepreneurs across the world. He has integrated the country's entrepreneurial methodology with professional management, based on concrete values and superlative integrity. His greatest strength lies in bringing together and building motivated teams of high potential, high performing people. With his vision and pragmatism, Wipro Corporation has become the second most competitive and successful company in India.

He was the prime mover behind Wipro's decision to achieve 'Six Sigma' status. In his address to the top management of Wipro Corporation, he said, "The end objective of our 'customer-in' concept is that we want to build the voice of the customer into our products and services. In this journey of achieving near defect-free products and services, I am very clear that as a world-class organisation, what Wipro needs to be concerned about is the process, not merely the results".

His Achievements

Azim Premji has been recognised by the Business Week magazine as one of the greatest entrepreneurs for being responsible for Wipro emerging as one of the world's fastest growing companies. In the year 2000, he was conferred an honorary doctorate by the Manipal Academy of Higher Education. In 2005, the Government of India honoured him with the title of the Padma Bhushan for his outstanding work in trade and commerce. In 2006, he was awarded the Lakshya Business Visionary by National Institute of Industrial Engineering, Mumbai.

His Awards and Honours

In 2009, he was awarded an honorary doctorate from Wesleyan University in USA for his outstanding philanthropic work. In 2011, he has been awarded the Padma Vibhushan, the second highest civilian award by the Government of India. In 2015, Mysore University conferred an honorary doctorate on him. In April 2017, the India Today magazine ranked him 9th in India's 50 most powerful people. In 2018, he was conferred with Chevalier de la Legion d'Honneur (Knight of the Legion of Honour) by the French Government. In 2019, he was cited by Forbes Magazine as one of the 'Heroes of Philanthropy list of 30 altruists' in the Asia-Pacific region.

Philanthropic Works

As he decided to concentrate on philanthropy in 2001, he established the non-profit organisation named 'Azim Premji Foundation', through which he aimed to improve the quality of elementary education in rural regions throughout India. By the end of 2010, the foundation had extended computer-aided education to more than 16000 schools, with child-friendly content increasingly available in local languages. In December 2010, he pledged to donate US\$ 2 billion of his personal fortune for improving school education in India. This donation is the largest of its kind in India. In March 2019, Premji committed to donate Wipro stock held by him to the foundation which was worth about US\$ 7.5 billion. He has also founded the Azim Premji University near Bengaluru to improve university education.

In May 2020, the Azim Premji Foundation collaborated with the National Centre for Biological Sciences and the Institute for Stem Cell Science and Regenerative Medicine for augmenting testing infrastructure to deal with the corona pandemic.

Azim Premji-An Exceptional Personality

Premji's is a successful entrepreneur with the key traits of intelligence and insight. He is also a self-confident leader with a democratic style of leadership. In a world that is increasingly relying on complex strategies, long-drawn discussions, and many self-help books and essays on the secrets of success, very few people have managed to keep their lives simple. Premji is one of them. He emphasises on seemingly simple and old-school rules. Azim Premji's commitment to building a profitable business that brings inherent social value is one of his most important legacies. Eventually, it is all about striking the right balance between work and life, between revenue and social good, between past lessons and future ambitions and between differing opinions. We can learn a lot from his success.

AJIT DOVAL

THE MAN BEHIND INDIA'S INTERNAL SECURITY

Ajit Doval is the 5th and current National Security Advisor of India. It is no secret that Ajit Doval, over the past five years has played a critical role in shaping India's security architecture and response to critical challenges, both internal and external. Doval is not only credited with formulating a strong response against Pakistan sponsored cross-border terrorism but also for building security and strategic partnerships with West Asian nations, expanding strategic partnership with Russia, deepening the counter-terrorism partnership with the USA and widening security partnerships in South and South-East Asia. He is also regarded as an instrumental figure in India's revocation of Jammu and Kashmir's special status recently.

Early Life and Education

Ajit Doval was born on 20th January, 1945 in a village in district Pauri Garhwal, presently in Uttarakhand. He belongs to a military family, as his father was an officer in the Indian Army. He received his early education at the Ajmer Military school in Ajmer, Rajasthan. He graduated with a Master's degree in economics from the Agra University in 1967. He subsequently cleared the Civil Services exam and became an IPS officer of the Kerala cadre in 1968.

His Career and Achievements

In 1972, he moved to the Intelligence Bureau (IB), where he spent the remainder of his career as an IPS officer, including a period in the restive regions of North-East India, Jammu and Kashmir and the UK. He also served as an undercover agent in Pakistan for seven years and worked in India's High Commission at Islamabad for six years.

He resolved various insurgency problems and terrorist related matters during his career in the IB. He was actively involved in anti-insurgency operations in Mizoram and Punjab. During the Mizo National Front (MNF) insurgency in 1972, Doval won over six of Laldenga's seven commanders and broke the back of the MNF, forcing its leader Laldenga to request for peace.

He spent long periods of time incognito with the Mizo National Army in the Arakan in Burma and inside Chinese territory. From Mizoram, Doval went to Sikkim where he played an important role after the merger of the state with India. In Punjab, he was behind the rescue of Romanian diplomat Liviu Radu in 1988. He went inside the Golden Temple in Amritsar in 1988 before Operation Black Thunder (disguised as a rickshaw puller) to collect critical information.

He has led a number of negotiations for release of hostages from airline hijackings. He was one of the three negotiators who negotiated the release of passengers from IC-814 in Kandahar in 1999. In fact, he has the experience of being involved in the termination of all 15 hijackings of Indian Airlines aircrafts from 1971 to 1999.

In Kashmir, he lured away prominent militants such as Kukkey Parey and turned him and his colleagues into counter-insurgents, a policy criticised in some quarters but also praised by others as an effective tool that helped combat militancy in Kashmir at its peak.

In the IB headquarters, he headed IB's operations wing for over a decade and was the founder Chairman of the Multi-Agency Centre (MAC), as well as of the Joint Task Force on Intelligence (JTFI). He was also the Director of the Intelligence Bureau for about six months during 2004-2005, before retiring from service at the end of January, 2005.

After retiring from the Intelligence Bureau, Doval founded the Vivekananda International Foundation in 2009, a public policy think tank set up by the Vivekananda Kendra. He remains an expressing and renowned speaker on all topics related to security.

His Awards

He has received a number of awards and honorary degrees due to his exploits and expertise. Doval was the youngest police officer to receive the Police Medal for meritorious service. He was given the award in 1974 after six years in the Police. He was later awarded the President's Police Medal in 1988, the highest possible award for a police officer. In 1989, Doval was granted one of the highest gallantry awards, the Kirti Chakra, becoming the first police officer to receive a medal previously given only as a military honour. He received it for his daring exploits in the Golden Temple Operation.

His Record as NSA

He was brought back into operations when he was appointed India's fifth National Security Advisor (NSA) by Prime Minister Modi in May, 2014. He played a crucial role in ensuring the secure return of 46 Indian nurses who were trapped in a hospital in Tikrit, Iraq by ISIS militants.

After family members lost all contact with these nurses following the capture of Mosul by ISIS, Doval flew to Iraq in June 2014 on a top secret mission to understand the position on the ground and make high-level contacts with the Iraqi government. On 5th July, 2014, ISIS militants handed the nurses to Kurdish authorities at Erbil city. An Air India plane, specially arranged by the Indian Government, brought them back home to Kochi.

He is widely credited for the policy change in Indian National Security Policy in relation to Pakistan, by which India switched from being simply 'defensive' to become 'defensive-offensive'. In September 2016, surgical strike on a terrorist training camp in Pakistan was also probably his idea, as it was executed perfectly without any loss of life on the Indian side. Doval, along with former Foreign Secretary S Jaishankar (now Foreign Minister) and Indian Ambassador to China Vijay Keshav Gokhale, is credited with resolving the Doklam Standoff in 2017 through diplomatic channels and negotiations.

Other Activities

In October 2018, he was appointed as the Chairman of the Strategic Policy Group (SPG), which is the first tier of a three-tier structure at the National Security Council and forms the nucleus of its decision-making apparatus.

In February 2019, tension arose between India and Pakistan after the Indian Air Force airstrike in Pakistan, a Pakistan Air Force retaliatory airstrike in India and subsequent capture of Indian pilot Abhinandan Varthaman by the Pakistani military. The captured pilot was released next day by Pakistan, probably due to negotiations led by Ajit Doval. On 3rd June, 2019, he was reappointed as NSA for 5 years and was given Union Cabinet Minister rank. As long as he is in charge, India's security is in safe hands.

119

SAINT MARIAM THRESIA

SAINT FROM GOD'S OWN COUNTRY

Chiramel Mankidiyan Thresia was born in Puthenchira, a remote village of Kerala. She was a remarkable person and a social reformer. She worked at a time when women were not encouraged to go outside home. She was the founder of the Congregation of the Holy Family, which now has 1500 sisters worldwide who take care of the poor and the needy. She has been declared a Saint by the Vatican in October, 2019.

Early Life

Thresia was born on 26th April, 1876 to devout parents who followed the ancient Syrian Catholic sect of Christianity. She had two brothers and two sisters and was the third child of her parents. As per the local custom, she was baptised in the Catholic faith in May, 1876, in the Parish Church of Puthenchira. The name Thresia was given to her after the name of the great contemplative mystic named Saint Teresa of Avila. She did not have a normal schooling, as there wasn't any school nearby and because her family was poor. She learnt to read and write from a village teacher.

Journey towards Spirituality

She was initiated into the study of religion when she was five years old. She was a very intelligent girl as she could learn and memorise prayers quickly. Her mother appreciated her spiritual practices and way of living. Once, when her mother noticed that the special food that she gave Thresia to improve her health was instead given away to the poor, she did not scold her. When Thresia was 12 years old, her beloved mother, who had played a great role in laying a strong foundation for her spiritual life, passed away.

Thresia was left in deep sorrow and in an insecure situation. So, she accepted Mother Mary as her own mother and dedicated her soul and body to the blessed mother. However, her education was stopped after her mother's death.

As Thresia entered into adolescence, her intense desire to be united with the Lord also bloomed. This was visible in her choices, decisions, practices of virtues etc. In contrast to the normal desires of teenagers, she loved solitude and a simple life. Brushing aside all opposition and the prevailing customs and conventions, she went around visiting the poor and needy in their homes. This was quite unusual for women in that period.

With three of her friends, she did parish work such as cleaning the church, arranging flowers, decorating the altar etc. As she grew deeper in the practice of virtues, she had to undergo severe diabolic assaults, i.e. harrowing spiritual experiences. She felt the need of an able spiritual director who could understand and guide her. Father Joseph Vithayathil, a highly spiritual and reliable person, appointed her as parish priest. She chose him as her spiritual director.

He played a unique and decisive role in her life, as her spiritual guide from 1902 onwards till her death in 1926. The time from 1905, till the foundation of the Congregation of the Holy Family in 1914 was a crucial period in her life, as she had a number of strange spiritual experiences. Her extraordinary experiences can be divided into two main categories. One was the fierce battles that she had to fight with the devils. The second was the special graces given to her to experience the sufferings of the crucified Jesus.

Founding of 'Holy Family'

The noisy family environment was not conducive for solitude and prayer. So, with the help of the parishioners and many other generous people, Father Vithayathil got constructed a small two storeyed house for her. In October 1913, Thresia moved to the new house of solitude and prayer, which was called '*Ekantha Bhavan*'. She began to reside there permanently and attracted towards her way of life. Three of her earlier companions, who had helped her visit families and do other charitable work, started staying with her from January 1914.

She rose in the religious hierarchy through complete sacrifice and dedication with the guidance of her spiritual director. The Bishop of her parish became convinced of the genuineness of Thresia's virtuous life. After consultations with Father Vithayathil, in May 1914, the Bishop raised this four member community to the status of a religious congregation having a definite canonical form.

The Bishop gave the name 'Holy Family' for the new congregation. Thresia was given the name Mariam Thresia. She was made the superior of the community. Thus, through Thresia, the Congregation of Holy Family was founded and she became its founder. She was also given the religious habit, i.e. the dress.

She continued her dedicated service to the people in a more zealous way up to her death. She was regarded as a person specially favoured by God and powerful in her prayer. So, she used to be called to the bedside of the sick. Many were cured through her prayers and penance. Many young girls from Puthenchira and neighbouring parishes were attracted to the sanctity of the founder and the new way of life. A good number of girls from respected families were impressed by the example of Mother Mariam Thresia and joined her congregation.

In May 1926, on the occasion of the blessing of the third convent and chapel at Thumbur, a portion of the railing of the sanctuary collapsed and fell on Mariam Thresia's leg. As she was diabetic, her wound festered and grew into an ulcer in a few days' time. Though, she was taken to hospital and was treated very carefully, her condition deteriorated and she died. Before her death, she called her sisters to her side and exhorted them to continue the charitable work and make the congregation grow. Her exhortation was followed with the result that, now it has over 1500 members worldwide.

There were many miraculous healings that took place through the intercession of Mother Mariam Thresia even after her death. On certain occasions Mother herself appeared, touched the patients and healed them. So, the authorities in the Vatican accepted her cause for beatification. After many years of discussions and studies, she was declared venerable in June, 1999 and was beatified or 'blessed' in April 2000, by Pope St John Paul II in Rome.

Her Canonisation

Based on the miracles she performed, Mother Thresia was canonised and declared a Saint by Pope Francis in October, 2019. Thus, Thresia, at present is known to the world as Saint Mariam Thresia. As Kerala is also known as 'God's, Own Country', she is also known as the 'Saint from God's Own Country'. She is only the fourth Indian to be declared a Saint by the Vatican.

120



ELON MUSK

AN ENTREPRENEUR BUILDING OUR FUTURE



Elon Musk is a revolutionary engineer, inventor and visionary leader. He founded X.com in 1999, which later became PayPal, SpaceX in 2002, and Tesla Motors in 2003. Musk became a multi-millionaire in his late 20s when he sold his startup company, Zip2 to a division of Compaq Computers.

Elon Musk's owned SpaceX created history on 30th May, 2020 by becoming the first private rocket company to launch two American astronauts towards orbit in a SpaceX Falcon 9 rocket aboard SpaceX's Crew Dragon capsule.

While the accomplishments of Elon Musk are monumental, this man is a true inventor and engineer at heart. He is a self-made billionaire and an ingenious innovator of modern times, shaping the future in many areas. Thus, he has been termed as 'our future shaper'.

Early Life, Education & Innovation

Elon was born on 28th June, 1971 in Pretoria, South Africa. His father was a British Engineer and his mother was a Canadian dietician. Elon has a younger brother and sister also. As a child, Elon was so much lost in his daydreams about inventions that his parents and doctors ordered a test to check his hearing. When he was ten years old, he developed an interest in computers and taught himself how to program. When he was 12 years old, he sold his first software, a game he created which he called 'Blastar'.

After completing his schooling, he shifted to Canada in 1989 for higher studies. In 1992, he left Canada to study business and physics at the University of Pennsylvania, USA. He graduated in economics and stayed on for a second bachelor's degree in physics. At that time, the Internet boom was starting. So, he decided the three major topics of concern for devoting his life's mission to the internet, renewable energy and space travel.

His Achievements

He joined the Internet revolution by starting his first company named Zip2 in partnership with his brother in 1995. The company provided content for the new websites of both the New York Times and the Chicago Tribune as an online city guide. In 1999, the brothers sold the company for over US \$300 million. With this money, they started an online financial services/payments company by name X.com in 1999 which was later renamed as PayPal. Their payment product became an instant success. In October 2002, he became a billionaire when PayPal was acquired by eBay for \$1.5 billion in stock.

He became the major shareholder of Tesla Motors, a company formed in 2003, by investing \$70 million of his personal funds into it. This company is dedicated to producing affordable, mass-market electric cars as well as battery products and solar roofs. He now oversees all product development, engineering and design of the company's products. He turned around the loss-making company, which is now producing all kinds of electric vehicles including the latest Cybertruck.

He founded his third company, Space Exploration Technologies Corporation, or SpaceX, in 2002 with the intention of building spacecraft for commercial space travel. By 2008, SpaceX was well established and NASA awarded the company the contract to handle cargo transport for the International Space Station, with plans for astronaut transport in the future, so as to replace NASA's own space shuttle missions.

In May, 2012, SpaceX made history when the company launched its Falcon 9 rocket with an unmanned capsule going to the International Space Station with supplies for the astronauts stationed there. This marked the first time that a private company had sent a spacecraft to the International Space Station.

In March 2017, SpaceX saw the successful test flight and landing of a Falcon 9 rocket made from reusable parts, a development that opened the door for more affordable space travel. The company enjoyed another milestone moment in February, 2018 with the successful test launch of the powerful Falcon Heavy rocket.

Elon had helped his cousins to start a company in 2006, called Solar City, for providing solar-powered systems for individuals, businesses and the government. In 2016, Tesla Motors purchased this company.

Philanthropic Works

Elon has founded the Musk Foundation, which is dedicated to space exploration and the discovery of renewable and clean energy sources. In October 2019, he pledged to donate US \$1 million to the Team Trees campaign, which aims to plant 20 million trees around the world by the end of 2022. He even changed his Twitter name to Treelon for the occasion.

Elon Musk is a visionary genius who appreciates the true definition of struggle, hardwork and the hunger for success. He says, “Constantly think about how you could be doing things better and keep questioning yourself”. He has followed this saying all his life to become the future shaper.

121



GRETA THUNBERG

YOUNG VOICE AGAINST CLIMATE CHANGE



Greta Thunberg is a teenage Swedish environmental activist whose campaigning gained her international recognition. She is known for her blunt, and straightforward speaking manner, both in public and to political leaders and assemblies, in which she urges immediate action to address what she describes as ‘the climate crisis’. A member of Royal Scottish Geographical Society, she has been named as one of the most influential people of 2019 by Time Magazine.

Early Life

Greta Thunberg was born on 3rd January, 2003 in Stockholm, Sweden. Her mother, Malenda Ernman is an opera singer who represented Sweden in the 2009 Eurovision Song Contest, and her father, Svante Thunberg is an actor. Greta first learnt about global warming and climate change in 2011, when her class was shown documentaries about climate change at school. She sat quietly at the back of the classroom being more affected than the other students by this knowledge, she could not understand the reason for inaction to counteract this phenomenon by various National governments.

She attributes to having the problems of a disorder known as Asperger syndrome. It is a developmental disorder that affects ability to effectively socialise and communicate, and selective mutism. Both these illnesses cause anxiety and thinking excessively. It affected her so much that, three years later, at the age of 11, Greta experienced a period of depression which stopped her from attending school. Climate change wasn’t the sole reason for this depression, but it definitely played a part.

When her parents spoke to her about it, Greta explained to them about her climate crisis worries. She saw that her parents also started to understand her concerns. Greta had been eating a vegan diet for a while. So, she convinced her parents to adopt several lifestyle choices to reduce their own carbon footprint, including giving up air travel and avoiding meat as much as possible.

Her Public Career and Activism

Greta soon realised that by talking about her worries, she could influence others and make a difference. This marked the beginning of the movement that she created.

In May 2018, Greta entered a climate writing competition held by the Swedish newspaper *Svenska Dagbladet*. She was announced as one of the winners of the competition for her essay entitled 'We know-and we can do something now'. Her essay was published in the newspaper, and this brought Greta her first publicity.

She first became known for her activism in August, 2018 when she began spending her school days outside the Swedish Parliament to call for a stronger action on global warming by holding up a sign saying in Swedish, "School strike for the climate".

She demanded from the Swedish government for reducing carbon emissions as per the Paris Agreement.

As her protest gained momentum, she was invited to give speeches at a variety of forums that enabled her to expand on her concerns. So far, she has spoken on four interwoven themes

- Humanity facing an existential crisis due to climate change.
- The current generation of adults responsible for climate change.
- Climate change will have a disproportionate effect on young people.
- Too little is being done about the situation.

She has also stated that politicians and decision-makers need to listen to what the scientists are saying and should take action accordingly. By this time, people started to know her name. Her mother had shared her story on social media, where she had several thousand followers. Her story had also been picked up by various news outlets, and was being shared widely on social media.

Greta was asked to deliver a speech at a People's Climate March rally, which would be in front of thousands of people. Although, her selective mutism problem has created a problem for her but she delivered the speech brilliantly in fluent English. Many of the crowd filmed her and the videos spread out on social media. She staged demonstrations throughout Europe subsequently. Now, she speaks in public frequently.

Her school strikes went global with children across the world joining in to make their stand against the climate change. In March 2019, a global school strike was called. More than 1.6 million people took part in the strike globally, from 2233 cities in 128 countries. It was the biggest day of climate action that has been seen so far.

Greta's Impact

In August 2019, Greta sailed across the Atlantic Ocean from Plymouth, UK, to New York, USA, in a racing yacht equipped with solar panels and underwater turbines. The trip was announced as a carbon-neutral trans-Atlantic crossing, serving as a demonstration of Thunberg's declared beliefs of the importance of reducing emissions. She also attended and spoke at the UN Climate Action Summit in New York City. Greta's impact all over the world has been phenomenal. She has been supported by the UN Secretary General and a number of academicians and environmentalists.

However, she also received criticism and mockery by the leaders of nations who are the maximum contributors to the problem of climate change. But, she has inspired a number of her school-aged peers which has been described as 'The Greta Effect', the need to focus on climate change issues.

Her Achievements

Greta has won numerous honours and awards in her short public life. In December 2018, Time Magazine named her as one of the world's 25 most influential teenagers of 2018. She was also awarded the Fryshuset Scholarship of the Young Role Model of the Year.

In March 2019, she was named Swedish Woman of the Year by Swedish Women's Educational Association. Then, she was nominated as a candidate for the Nobel Peace Prize by deputies of the Swedish and Norwegian Parliaments. She has continued receiving awards, but has declined those which involve her to fly to the award ceremony, as she does not travel by air as a symbolic gesture to care for the environment.

The action which started with a single girl sitting outside the Swedish Parliament with a hand-made wooden sign, became an international movement. The young voice of Greta against climate change has inspired action to be taken against it. Greta Thunberg has become a very influential name throughout the world.

PV SINDHU

FIRST WOMAN OLYMPIC SILVER MEDALIST FROM INDIA

Pusarla Venkata Sindhu was born on 5th July, 1995 in Hyderabad. She is an Indian badminton player who became a household name after she bagged a silver medal at the 2016 Summer Olympics held at Rio, Brazil. Her parents PV Ramana and P Nijaya are professional volleyball players. PV Sindhu's father received the Arjuna Award in the year 2000 for his remarkable records in the sports. PV Sindhu brought glory to India by becoming the first Indian woman and also the youngest Indian to win a medal in an individual event at the Olympics. She chose badminton over volleyball as she was inspired by the success of Pullela Gopichand, who was the winner of 2001 All England Open Badminton Championship.

Love for Badminton

She started playing badminton at the age of eight and her father later started taking her to the badminton courts of Indian Railway Institute of Signal Engineering and Telecommunications in Secunderabad. There she learned the basics of the game from renowned badminton coach Mehboob Ali. She eventually joined Pullela Gopichand's Badminton Academy. After joining Gopichand Badminton Academy, Sindhu won several titles at National and International level.

Recognition at National and International Levels

In the under-10 years category, she won the 5th Servo All India ranking championship in the doubles category and the singles title at the Ambuja Cement All India ranking. In the under-13 years category, Sindhu won the singles title at the Sub-juniors in Pondicherry, doubles title at the Krishna Khaitan All India Tournament, IOC All India Ranking, the Sub-Junior Nationals and the All India Ranking in Pune. She also won the under-14 team gold medal at the 51st National School Games in India.

Sindhu was a bronze medalist at the 2009 Sub-Junior Asian Badminton Championships held in Colombo. At the 2010 Iran Fajr International Badminton Challenge, she won the silver medal in the singles category. On 7th July, 2012, she won Asia Youth Under-19 Championship beating Japanese player Nozomi Okuhara in final. She won Malaysian Open title 2013, beating Gu Juan from Singapore. This was Sindhu's first Grand Prix Gold title. She beat Wang Shixian to become India's first medalist in women's singles at the World Championships.

PV Sindhu reached the semifinal stage of 2014 Commonwealth Games in the women's singles competition, which she lost to Michelle Li of Canada. She later won the bronze medal in 3rd place match against Tee Jing Yi of Malaysia. PV Sindhu later created history by becoming the first Indian to win two back-to-back medals in the BWF World Badminton Championships after her bronze medal finish in 2014 BWF World Championships held in Denmark. In November 2015, defending champion PV Sindhu won her third successive women's singles title at the Macau Open Grand Prix Gold after defeating Japan's Minatsu Mitani in the final. In January 2016, Sindhu won the Malaysia Masters Grand Prix Gold women's singles title after beating Scotland's Kirsty Gilmour in the final. She had also won this tournament in 2013.

Rio Olympics 2016

At the women's singles event of Rio Olympics 2016, during the group stage matches, she beat Laura Sarosi and Michelle Li. She further defeated Chinese Taipei's Tai Tzu-ying in the round 16 to meet the second competitor Wang Yihan in the quarterfinals, whom she defeated in straight sets. Sindhu later faced the Japanese Nozomi Okuhara in the semi-finals and she won in straight sets which ensured her a podium finish.

This set the stage for her final showdown with top competitor from Spain, Carolina Marin. Marin managed to beat Sindhu in three sets in the 83-minute match and thus, Sindhu bagged the silver medal and charted history of achieving the feat of being the youngest and first woman individual to bag an Olympic Silver medal representing India. This was the second instance of podium finish at the Olympics by any Indian badminton player, the first being Saina Nehwal.

Her Achievements

In 2017, India Open Superseries, Sindhu won the title by defeating Carolina Marin in straight games. In the BWF World Championships held at Emirates Arena in Glasgow, Scotland, Sindhu had to settle for silver after losing to Japan's Nozomi Okuhara in the finals. Sindhu avenged her World Championships loss to Okuhara by beating her in the final of the Victor Korea Open Super Series. Apart from this, she has also won the Rajiv Gandhi Khel Ratna (2016), the Padma Shri (2015), the Arjuna Award (2013), FICCI Breakthrough Sports person and NDTV Indian of the Year 2014.

She went on to win the Gold medal by defeating Nazomi Okuhara at the 2018 BWF World Tour Finals in China. She clinched the silver medal in the Thailand Open and Indian Open in 2018. In the 2018 Gold Coast Commonwealth Games, she lost to compatriot Saina Nehwal in the finals. She bagged the silver medal at 2018 Asian Games.

In the year 2019, she reached the semi-finals of the Indonesia Open, but lost it to Akane Yamaguchi. Later in the year, she won the BWF World Championship held at Basel, Switzerland, thus becoming the first Indian to become the Badminton World Champion. She has also figured in the Forbes list of highest-paid female athletes in 2018 and 2019.

Following a positive mindset, PV Sindhu has achieved a lot in such a short span of her career due to sheer hard work, dedication and passion. She ranks no. 2 in the BWF World Ranking and is one among the top five shuttlers in Women's single category.

Despite her achievements she has remained humble and modest which is apparent from her on field and off the field attitude. She took the charge as Deputy collector (Krishna district) in the Chief Commissioner of Land Administration (CCLA) office under the Revenue Department of the Government of Andhra Pradesh.

PV Sindhu has earned various awards by governments of various states of India. Her love for the state has brought a lot of pride for the women throughout India. PV Sindhu has much more to do for the nation as a sports woman. She stands as an icon for many other youngsters of our nation.

123

DR APJ ABDUL KALAM

MISSILE MAN OF INDIA

Dr APJ Abdul Kalam, popularly known as the ‘Missile Man’ rose to the height of becoming the first citizen of India i.e. the President of India. He was the architect of India’s Integrated Missile Development Programme and a recipient of the highest civilian award the Bharat Ratna. He is a real life example of honesty, simplicity and social contributor in today’s world, where most of the people are filled with mediocrity, hypocrisy and corruption.

Early Life

Avul Pakir Jainulabdeen Abdul Kalam was born on 15th October, 1931 at Rameswaram in Tamil Nadu. His father, Jainulabdeen was a boat owner and Imam of a local mosque and his mother, Ashiamma was a homemaker. Kalam was youngest of all in his siblings. In his early years of school, Kalam was an average student but determined and hardworking.

After completing his schooling from Schwartz Higher Secondary School (Ramanathapuram), he earned a graduation degree in physics from Saint Josephs’ College (Tiruchirappalli) in 1954. He moved to Madras (Chennai) in 1955 to study aerospace engineering.

Professional Career and Works

In 1960, Kalam joined Aeronautical Development Establishment of the Defence Research and Development Organisation (DRDO) but he was unsatisfied with his choice of job at DRDO. After nine years, in 1969, he was transferred to Indian Space Research Organisation (ISRO) where he directed the creation of India’s First Satellite Launch Vehicle (SLV-111) that successfully deployed the ‘Rohini’ satellite in July 1980.

With great success in his various endeavours, like directing projects to develop ballistic missiles, creation of Polar Satellite Launch Vehicle (PSLV) or advance missile programmes’, Kalam was best known nuclear scientist. He is rightly termed as ‘The Missile Man of India’.

His Awards and Honours

Kalam's contribution in development of scientific research and modernisation of defence technology in India brought him prestige, laureate honours and awards. He was bestowed with honours like Padma Bhushan, Padma Vibhushan, Bharat Ratna, Veer Savarkar Award and many more. Despite being awarded with honorary doctorates from over 40 universities, national and international awards, Kalam led a very simple life. He was noted for integrity and influential attitude towards life.

People's President

In 2002, Kalam was elected as the 11th President of India with support of both the ruling parties, Bhartiya Janta Party and Indian National Congress. Dr APJ Abdul Kalam, widely referred to as 'The Peoples President', is known for his zest for life and pursuits that might make other scientists astonished. He believed, "If you want to shine like a Sun. First burn like a Sun". Because "Without your involvement, you can't succeed. Without your involvement you can't fail." He was a voracious reader, a lover of classical music, poet of Tamil literature, a great scientist, a religiously atheist personality and he can be termed as an ideal personality of our times.

A leading columnist wrote about Dr Kalam saying that "India needs a Kalam in every Institution". In his literary pursuit, Dr Kalam has authored and co-authored many books, such as 'Wings of Fire', '2020-A Vision for the New Millennium', 'My Journey', 'Ignited Minds', 'The Luminous Sparks', 'The Life Tree', 'Children Ask Kalam', 'Indomitable Spirit', 'Inspiring Thoughts', 'Envisioning an Empowered Nation' and 'Mission India'. Many of these are read in every households in India and among the Indian nationals abroad. These books have been translated in many Indian languages.

Dr Kalam (aged 83) passed away on 27th July, 2015 while delivering a lecture at Indian Institute of Management (IIM) Shillong, due to an apparent cardiac arrest. He was cremated with full states honours in his hometown, Rameswaram where a memorial is being constructed in his honour.

Remembered for His Ideals

Dr Kalam is known for his motivational speeches, inspirational quotes and interaction with the student community in India. Some of the inspiring quotes by him are "We will be remembered only if we give to our younger generation a prosperous and safe India, resulting out of economic prosperity coupled with civilisational heritage." And "Climbing to the top demands strength, whether it is to the top of Mount Everest or to the top of your career." India indeed is indebted to Dr APJ Abdul Kalam in uncountable ways and proud of such a brilliant personality. His birth anniversary is observed as World's Students' Day.

DR AMARTYA SENFIRST NOBEL LAUREATE INDIAN ECONOMIST

One of India's greatest pioneers in socio-economic theories, Amartya Sen is the Nobel laureate who revolutionised the image of Indian society with his socio-economic policies. Better known for his contributions in classifying the reasons for famine that affected the country in post-independence era, Amartya Sen forwarded feasible solutions to curb effectively the crisis that once plagued the nation. A Ph.D in economics, Sen extensively researched on various problems affecting the socially backward communities.

Over the years, he introduced innovative solutions to help the underdeveloped countries to cope with social problems like poverty, famine, gender inequality, human rights, and biased liberalism. This earned him the title of “the Conscience and the Mother Teresa of Economics”. Sen has written many books to convey his theories on social welfare, most of which give us an insightful and practical elucidation on how to curtail such crisis.

Childhood and Early Educational Life

Professor Sen was born on 3rd November, 1933 at Shantinekanta (Bengal). His father Ashutosh Sen was a Professor, who later served as the chairman of West Bengal Public Service Commission, and mother was Amita Sen. In 1941, he was enrolled at the St Gregory's School, Dhaka and after the partition of India, his family moved to India, where he attended the Visva-Bharati University.

He completed his graduation from the Presidency College, Kolkata. After that Professor Sen went to the Trinity College, Cambridge for higher studies, where he received his doctorate. He was appointed as the Head of Department of Economics in the Jadavpur University, Calcutta in the year 1956.

Professional Career and Works

In the following years, Dr Sen dedicated his entire time in studying philosophy, which helped him in his future research work. He would often shuttle between London and Kolkata, to teach and continue his research on his social theories. When he finished his PhD in 1959, he was recruited as a visiting faculty in a number of universities including Berkeley, Stanford, Cornell, and Massachusetts Institute of Technology. In the year 1972, he moved back to India and started teaching at the University of Calcutta and the Delhi School of Economics. During this period, he completed his extensive research on 'Collective Choice and Social Welfare.' After that Amartya Sen went on to teach Economics in various elite institutions like the London School of Economics, University of Oxford, Nuffield College, All Souls College and other distinguished universities.

Contribution in Social Reforms

Having witnessed a famine in his childhood, Sen was interested in bringing out social reforms to improve the condition in underdeveloped countries with his adaptable socio-economic policies to abolish shortage of food.

In 1981, Sen published 'Poverty and Famines : An Essay on Entitlement and Deprivation' in which he argued that famine occurs not only from a lack of food, but also from inequalities built into mechanisms for distributing food. His work explain country's many social problems such as poverty, famine, human underdevelopment, gender inequality and political liberalism and brought about successful reforms to rectify the same.

His Awards and Honours

Amartya Sen was elected as the Foreign Honorary Member of the American Academy of Arts and Sciences in the year 1981. The Nobel Memorial Prize in Economic Sciences was awarded to him for his work in Welfare Economics in 1998. In 1999, he was honoured with the Bharat Ratna by the President of India.

The year 2000 proved to be a good year for Amartya Sen as this was the year when he was bestowed with a number of distinguished awards such as the Companion of Honour in UK, the Leontief Prize from the Global Development and Environment Institute, and the Eisenhower Medal for Leadership and Service. In the same year, he was also chosen as the Commencement Speaker of Harvard University.

In 2002, he won the International Humanist Award from the International Humanist and Ethical Union. The Indian Chamber of Commerce and the United Nations Economic and Social Commission for Asia Pacific, a Bangkok based organisation, honoured him with a Lifetime Achievement Award in 2003 and 2007, respectively.

In 2010, he was listed among 'World's 50 most influential people whose matter' by New Statesman. The Time Magazine listed him under '60 years of Asian Heroes' and in 2010 included him in their '100 most influential persons in the world'.

In 2013, he was listed by NDTV India as 25 greatest living legends. In 2015, Dr Sen won the Charleston-EFG John Maynard Keynes Prize. He has also been awarded over 100 honorary doctorates.

Publications

Over the years, he also took to writing to put forward his views and ideologies to bring about a social change. His popular publications are 'Collective Choice and Social Welfare', 'Hunger and Public Action', 'More Than 100 Million Women Are Missing', 'Reason Before Identity', 'Development as Freedom', 'The Argumentative Indian', 'The Three R's of Reform,' etc. His books have been translated in over 30 languages.

Empirical Studies Conducted by Amartya Sen

Professor Sen made empirical studies on the cause of famine and its impact in terms of welfare economics and mechanism. In empirical studies, Sen's applications of his theoretical approach have enhanced our understanding of the actual effect of economic policies to tackle the problems like poverty, famine and hunger. He stated that famines have less to do with food supply than with simple economics.

Professor Sen is a man who rose to such great heights by sheer force of his zeal, dedication, determination and sincerity. He achieved everything with his untiring courage, devotional approach and dedicated efforts with a positive and iron like will. His contribution to applied economics is significant in today's contemporary world.

125

DR BR AMBEDKAR

THE APOSTLE OF DALITS

Dr BR Ambedkar was an economist, politician and social reformer who campaigned against social discrimination against the untouchables. He is also known as the Father of Indian Constitution as he was the Chairman of Drafting Committee of Constituent Assembly and the chief architect of Indian Constitution.

Early Life and Education

Bhimrao Ramji Ambedkar was born on 14th April, 1891 in Mhow in Madhya Pradesh. He was born in a family of Mahars, the largest untouchable caste at that time. His father's name was Ramji Maloji Sakpal, who was a social worker and a Subedar in the British Indian Army. His mother was Bhimabai Sakpal. Ambedkar had a tough childhood as he belonged to a family of poor dalit caste. They were considered to be untouchables and were subjected to socio-economic discrimination. Even in school, Ambedkar and other untouchable children were victims of segregation and inferior treatment.

Ambedkar received his early education in a nearby village school. He graduated from Elfinstone College, Bombay in 1912, then he joined Columbia University, USA where he was awarded Ph.D. Later, he joined the London School of Economics and obtained a degree of DSc (Economics) and was called to the Bar in 1922. He completed his Bar at Law degree from Gray's Inn, a premier institution of law.

Initiated Anti-Caste and Anti-Priest Movement

Being an Indian jurist, economist, politician and social reformer, he influenced dalits in various ways. With the slogan of 'Educate-Agitate-Organise', the social movement led by Dr Ambedkar aimed at annihilation of caste system and the reconstruction of Indian society on the basis of equality amongst human beings.

In 1927, he led a march at Mahad, Maharashtra to establish the rights of the untouchables to drink water from the Chawdar Lake that was traditionally banned for them. This marked the beginning of anti-caste and anti-priest movements.

The temple entry movement launched by Dr Ambedkar in 1930 at the Kalaram Temple, Nashik, Maharashtra is another landmark in the struggle for human rights, political and social justice.

Role Played in Indian Politics Before Independence

Dr Ambedkar held the view that "Only political power cannot be a panacea for the ills of the depressed classes. Their salvation lies in their social elevation." In 1932, the British announced the formation of a separate electorate for 'Depressed classes' in the Communal Award.

Gandhiji opposed a separate electorate for the untouchables, as he feared that such an arrangement would divide the Hindu community. Gandhiji started fasting, thereafter an agreement known as 'Poona Pact' was signed on 24th September, 1932 by Madan Mohan Malaviya on behalf of Hindus and Gandhiji and Ambedkar on behalf of the depressed classes. The agreement allowed reserved seats for depressed classes in the provincial legislatures within general electorate. As a member of the Viceroy's Executive Council from July 1942, he was instrumental in bringing about several legislative measures to protect the rights of labourers and workers.

Contribution in the Framing of the Constitution of India

One of the greatest contributions of Dr Ambedkar was in respect of Fundamental Rights and Directive Principles of State Policy enshrined in the Constitution of India. He was the Chairman of the Drafting Committee for the Indian Constitution. He prepared a Draft Constitution for discussion.

Under his leadership the members of the Drafting Committee completed the work in 114 days spread over three years. The Fundamental Rights provide for freedom, equality and abolition of untouchability and remedies to ensure the enforcement of rights. The Directive Principles enshrine the broad guiding principles for securing fair distribution of wealth and better living conditions.

His Awards and Honours

His birth date is celebrated as a public holiday known as 'Ambedkar Jayanti'. Many public institutions are named in his honour, such as the Dr Babasaheb Ambedkar Open University in Hyderabad, BR Ambedkar Bihar University, Muzaffarpur etc. He was honoured with the greatest civilian award 'the Bharat Ratna' posthumously in April 1990.

Adopted Buddhism

On 24th May, 1956 on the occasion of Buddha Jayanti, he declared in Bombay that he would adopt Buddhism as it was the only way for the untouchables to gain equality. On 14th October, 1956 he embraced Buddhism along with 3,65,000 of his followers at Deekshabhoomi, Nagpur.

Ambedkar had been suffering from diabetes since 1948. From June to October in 1954, he was bedridden owing to clinical depression and failing eyesight. He died in his sleep on 6th December, 1956 at his home in Delhi.

Dr Ambedkar made an immense contribution in derating the standard of the Indian society. He fought all his life to remove discrimination, degradation and deprivation from the society.

126



MOTHER TERESA

SYMBOL OF PEACE AND HUMANITY



Mother Teresa was an Albanian Indian Roman catholic nun and missionary. She was the founder of the order of the missionaries of charity, a Roman catholic congregation of women dedicated to helping the poor.

She was a unique person in her own right. She possessed great attributes that set her apart from many others. Her efforts in advocating for the plight of the less privileged in the society made her stand out from the rest of the people. This made her win worldwide acclaim and recognition.

Early Life and Education

'Agnes Gonxha Bojaxhiu' widely known as 'Mother Teresa' was born on 26th August, 1910 in a middle class Albanian family in Skopje, North Macedonia. As a child she was called Gonxha. Her father, a businessman and a member of the community council, died when she was only nine years old. Her mother, Drana, raised Gonxha and her siblings, Aga and Lazar, alone. Drana Bojaxhiu earned a living by sewing, and was very conscientious about the religious education of her children. She belonged to a devoted Roman Catholic family.

Gonxha attended a convent-run primary school and then a state-run secondary school. At the age of 12 she first felt a calling to a religious life. On holidays, the family made pilgrimages to Letnice, where the Holy Virgin was venerated. Gonxha attended the lyceum, where she sang in the choir and played the mandolin.

Worked for the Poor and Helpless in India

After completion of school education, Gonxha became a nun at the age of 18. She was taught to treat the poor and the needy who came to knock at their door with respect and to practice charitable ways. Her name was changed to Teresa. She joined the community of Irish nuns, the sisters of Loretto, who were active in India. This community had a centre in Calcutta (now Kolkata).

Teresa received training in Dublin, Ireland. There she learned to speak English and began her formal religious training. Later, she came to Darjeeling. She took first religious vows in 1928 and finally in 1937. Mother Teresa came to India as a teacher at St Mary's High School at Entally, Calcutta where she taught the next 17 years. She realised that her fight would have to be against poverty, disease and ignorance. She herself began to work for the poor and helpless.

Founded the Missionaries of Charity in Kolkata

Teresa went to the slums regularly with food and medicine and started to teach the slum children. In 1948, she acquired the Indian citizenship. In the same year, she founded the Missionaries of Charity in Calcutta and established the Mother House on Acharya Jagadish Bose Road, Calcutta. It is the headquarters of the Missionaries of Charity even today. In 1950, the Missionaries of Charity got the official status as a religious community.

Mother also founded, 'the Kalighat Home for the Dying' (*Nirmal Hriday*). Mother Teresa soon extended her work to helping India's lepers. She opened a Leprosy Ashram at Titagarh. She opened a home for the orphan and abandoned children, '*Shishu Bhavan*'.

Expanded Her Work Across the World

In the ensuing decades, wherever, people needed comfort she was there, whether it was serving the hungry in Ethiopia, the radiation victims of Chernobyl, or the poor in the squalid townships of South Africa. In 1982, during the siege of Beirut, she persuaded the Israeli army and Palestinian Guerrillas to stop shooting long enough for her to rescue 37 children trapped in a front-line hospital.

She created a global network of homes for the poor from Kolkata to New York including one of the first homes that helps and shelters the AIDS victims. She expanded her work by establishing 750 centres in 250 countries. In 1970, she opened branches in Jordan (Amman), England (London) and the United States (Harlem, New York city). In 1971, she opened a home for rape victims in Bangladesh. In 1988, she sent her Missionaries of Charity to Russia. The Missionaries of Charity opened home for AIDS patients in San Francisco and other places.

Recipient of Many National and International Awards

Mother Teresa used her powerful voice to defend conservative values, arguing passionately against abortion, contraception and divorce. Her fame gave her a platform and she preached values of life. She won many National and International awards for her humane works. In 1962, Indian Government awarded her the Padmashree ('Magnificent Lotus') Award. The same year she got the Ramon Magsaysay Award instituted by the Malaysian Government. In 1971, she was awarded the Pope John XXIII Peace Prize and the Bharat Ratna, the highest civilian award in India, in 1980.

Worldwide recognition for her work came in 1979, when she was honoured with the Nobel Peace Prize. Accepting the Nobel Prize in 1979, in the name of the 'unwanted, unloved and uncared for,' she wore the same \$1 white sari with a blue border that she had adopted to identify herself with the poor when she founded her order.

"I choose the poverty of our poor people. But, I am grateful to receive it (the Nobel) in the name of the hungry, the naked, the homeless, the crippled, the blind, the lepers and all those people who feel unwanted, unloved, uncared for throughout society, people that have become a burden to the society and are shunned by everyone," said Teresa while accepting the Nobel Peace Prize in 1979.

Demise

Mother Teresa suffered her first heart attack while meeting Pope John Paul II in Rome in 1983, and a second nearly fatal in 1989, after which a pacemaker was installed in her body. Her health took a marked turn for the worse in the beginning of September 1996. On 5th September, 1997, at the age of 87, Mother Teresa left for her heavenly abode having lived a life that inspired people all over the world, believers and non-believers, rich and poor, the unknown and the famed similarly.

Mother Teresa Canonised into Saint by Pope Francis

On 9th October, 2003, Mother Teresa, the humble nun known as the 'Saint of the Gutters', was declared beatified by Pope John Paul II thereby bestowing on her the title 'Blessed'. The Vatican scheduled 4th September, 2016 as the canonisation date for Mother Teresa as a Saint. Mother Teresa was canonised into Saint Teresa at the Vatican City by Pope Francis on 4th September, 2016.

It is declared that "For the honour of the Blessed Trinity, we declare and define Blessed Teresa of Calcutta (Kolkata) to be a saint and we enroll her among the saints, decreeing that she is to be venerated as such by the whole Church. Physically she is no more with us, but her spirit of love, service, charity and compassion is always there to guide and help us. Really, she became a role model of charity, compassion, holiness and selfless service."

MARY KOM

HURDLES CAN BE OVERCOME BY DEDICATION

Mary Kom is an Indian Boxer who has the distinction of being a five-time World Amateur Boxing Champion.” She had made India proud with her glorious achievements.

Early Life and Education

Mary Kom, was born on 1st March, 1983 in the village of Kangathei in Churachandpur district of Manipur state. Her father, M Tonpa Kom and mother, Mangte Akham Kom, worked as farmers in jhum fields. Being the eldest child in the family, Mary helped her parents by working in the fields, cutting wood, making charcoal and fishing. She studied upto class VI in Loktak Christian Model High School, Moirang, and attended St Xavier Catholic School, Moirang, up to class VIII. She completed her school education through NIOS, Imphal and graduated from the Churachandpur College in Manipur.

Interest in Boxing

Mary Kom since her childhood had interest in sports but her major interest was in boxing. She was greatly influenced by Indian boxer Dingko Singh, the winner of gold medal in Asian Games. The demonstration of women boxers at the 5th National Games held in Manipur also inspired her. Then she began training with M Narjit Singh, the Manipur State Boxing Coach, at Khuman Lampak, Imphal.

Remarkable Achievements as Boxer

Marry won a silver medal at the first AIBA Women’s World Boxing Championship held in 2001 at Scranton in USA. Since then, she has not given up. She is the only boxer to have won medals in each one of six World Championships, the gold medal in her category (46kg) five times from 2002 to 2010. In 2009, she won the gold medal at the Asian Indoor Games in Vietnam and another gold in the Asian Boxing Championships in Kazakhstan. She won her 5th World Championships crown in 2010 in Barbados. On 3rd October, 2010 Mary had the honour of bearing the Queen’s Baton in the Opening Ceremony run for the 2010 Commonwealth Games at Delhi.

In the Olympic Games held in London in 2012, she won the Bronze Medal for competing in the flyweight (51 kg category). She became the first Indian women boxer to get a gold medal in the Asian Games in 2014 in Incheon, South Korea. At the South Asian Games 2016, Mary Kom won the gold in the 51kg category. In March 2017, the Ministry of Youth Affairs and Sports appointed Mary Kom as national observer for boxing.

Her Awards and Honours

Mary is a recipient of the Arjuna Award, Rajiv Gandhi Khel Ratna, Padma Bhushan and Padma Shri. She is also a recipient of a special award by the Association Internationale de Box Amateur or International Boxing Association (AIBA). AIBA also declared her 'Magnificent Mary' for her unprecedented achievement.

She has also been nominated as member of the Rajya Sabha, the second sports person to be nominated after Sachin Tendulkar. Mary Kom has also won gold medal after beating Kristin O' Hara of Ireland in the finals of women's 48 kg boxing final at the 2018 Commonwealth Games in Gold Coast.

Mary is also employed as the Deputy Superintendent of Police (DSP) in the Manipur Police. She has also been given a house at National Games Village as a prize for her outstanding achievements.

Inspiring Star

Mary Kom is supporter of animal rights and has associated with animal rights organisation, PETA India. In her book 'Unbreakable: An Autobiography', Mary very vividly describes her career and her family life including her parents, her husband and children.

Mary Kom's majestic wins and her determination towards boxing while fighting against all odds made her a star, and in 2014 Sanjay Leela Bhansali made a biography on her life named Mary Kom.

Many village girls idolise her dream of becoming boxing champions. They come from remote places to join the MC Mary Kom Boxing Academy set-up by her in the picturesque Langol foothills of Imphal West district.

MUKESH AMBANI

THE RISE OF A BILLIONAIRE

Mukesh Ambani is an Indian business magnate who is the Chairman, Managing Director and largest shareholder, (holding 44.7% shares), of Reliance Industries Limited. This is a Fortune Global 500 company and India's most valuable company by its market value. In 2020, he has been ranked 5th in the latest world billionaires list by Forbes with a net worth of \$44.3 billion. He has been India's richest person on the Forbes list ever since 2016. His telecom venture Jio Infocom became India's biggest telecommunication company in terms of net worth and users.

Early Life and Education

Mukesh Ambani was born on 19th April, 1957 to Dhirubhai Ambani and Kokilaben Ambani in Aden, Yemen, where his father was working. He has a younger brother, Anil Ambani and two sisters. He lived only briefly in Yemen because his father decided to move back to India in 1958 to start a trading business that focused on spices and textiles. Later on these textiles were branded as 'Only Vimal'. Mukesh attended school in Mumbai and then completed his BE degree in Chemical Engineering from the Institute of Chemical Technology.

Career

Mukesh had enrolled for an MBA at Stanford University, USA, but withdrew in 1980 to help his father build Reliance Industries Ltd, which at that time was still a small but fast-growing enterprise. Thus, he started his career by helping his father establish a synthetic yarn manufacturing company. In the wake of joining the business, Mukesh assumed a vital role in developing the business legacy and entered into new areas.

Under his initiative, Reliance commercial enterprises made an incredible accomplishment into various divisions such as petroleum refining, petrochemicals and gas investigation. He additionally set up Reliance Infocomm Ltd, which included products and services in the retail and telecommunication industries.

He led Reliance's backward integration, in which companies own their suppliers to generate more revenue and improve efficiency in 1981 from textiles into polyester fibres and further into petrochemicals from which the yarns were made.

Dhirubhai Ambani, his father, treated him as a business partner, allowing him the freedom to contribute even with little experience. Thus, at the age of 24, Mukesh was given charge of the construction of the Patalganga petrochemical plant where the company was heavily investing in oil refining and petrochemicals.

When Dhirubhai suffered a stroke in 1986, all the responsibility shifted to Mukesh and his brother Anil. After his father died in 2002, he was given controlling interest in Reliance Industries Limited (RIL) and Indian Petrochemicals Corporation Limited (IPCL), while his brother Anil got controlling interest in the telecom business of Reliance. He subsequently created the world's largest grassroots petroleum refinery at Jamnagar, which had the capacity to refine 660,000 barrels of crude oil per day (33 million tonnes per year) in 2010, integrated with petrochemicals, power generation, a port and related infrastructure.

He was termed the 'World's Richest Sports Team Owner' after he purchased the IPL cricket team named Mumbai Indians for US \$111.9 million in 2008.

He started RIL's venture in the Infocomm sector in 2016 by starting Reliance Jio Infocomm Limited, which later absorbed Reliance's original telecom venture, which had earlier been controlled by his brother. It was an immediate success due to the innovative schemes it offered to customers.

Personal Life

He married Nita Ambani in 1985, who takes an active part in the social and charitable aspects of his company's business. They have two sons, Anant and Akash, and a daughter, Isha. Both the sons are being groomed to gradually take over the control of the business from their father. They live in a 27-storey mansion Antilia in the heart of Mumbai valued at over US \$1 billion. It was the most expensive residence in the world at the time it was built in 2010.

His Awards and Honours

Due to his entrepreneurship, he has received a large number of awards and honours. The first one was in the year 2000, when he was given the Ernst and Young Entrepreneur of the Year award. In 2010, he won a large number of awards and honours which included

- Global Vision Award by the Asia Society.
- Business Leader of the Year by NDTV India.
- Businessman of the Year by the Financial Chronicle.
- Global Leadership Award by the Business Council for International Understanding.
- Honorary Doctorate (Doctor of Science) by MS University, Baroda.

In 2013, he was conferred with the title of 'Millennium Business Leader of the Decade' at the India Leadership Conclave. In 2016, he was awarded the Othmer Gold Medal by the Chemical Heritage Foundation in the USA.

NELSON MANDELA

FIRST BLACK PRESIDENT OF SOUTH AFRICA

Nelson Mandela, the first black President of South Africa is one of the greatest leaders and politicians who has graced the civilisation with many noble contributions.

Early Life and Education

Nelson Mandela was born as Rolihlahla Mandela on 18th July, 1918, in a small village of Mvezo in Transkei, South Africa. His father, Gadla Henry Mphakanyiswa, served as a local chief and counsellor to the Monarch.

Mandela grew up in the village of Qunu, where he spent his early years herding the cattle and playing with other boys of the village. Though both his parents were illiterate, they realised the importance of education and sent him to the Methodist school, when he was seven. He was the first in his family to attend school.

Mandela completed his BA at the University of South Africa *via* correspondence after which he studied law at the University of Witwatersrand. At college, he came into contact with modern principles such as freedom, liberty, democracy, equality, political rights etc. He was deeply distressed to see the sufferings of fellow Africans, who were no better than slaves under the British rule. Mandela participated in movements against racial discrimination.

Nelson Mandela's Political Journey

Nelson Mandela's political journey began with the African National Congress (ANC) in 1944. Mandela developed ANC's Defiance campaign. In 1961, he led ANC'S armed wing. ANC challenged the racist political system of apartheid in which black Africans were legally discriminated against, in all walks of life. ANC under Nelson Mandela's leadership organised labour strikes and nationwide protests and demonstrations against apartheid during the 1940s, 1950s and 1960s. Their efforts were met with cruel resistance, torture and blood shedding of African people.

Nelson Mandela and other key leaders of ANC were arrested and charged with treason. In 1964, Nelson Mandela was sentenced to life imprisonment and he was imprisoned for 27 years and stayed in various prisons like the Robben Island, Pollsmoor prison and Victor Verster prison. He spent the first 18 of his years in jail at the brutal Robben Island prison. Life in the prison was like living in the worst place in South-Africa. The prisoners were treated inhumanly. The prisoners belonging to African National Congress (ANC) were classified as 'D' category meaning most dangerous and had the least rights.

Being the leader of ANC, Nelson received more harsh treatment than the others. He was not allowed to meet anyone and his wife was allowed to meet him once in six months. While in prison Mandela rejected several offers of 'conditional' release which would have imposed limitations on his political activities.

South Africa by that time was being increasingly isolated as a racist state. Civil unrest had spread and international boycotts and diplomatic pressures were mounting on South Africa. There was a worldwide campaign to release Mandela. In 1990, he was released unconditionally.

First Black President of South Africa in 1994

In the first election that followed in 1994, ANC under Nelson Mandela won the election and he was chosen to lead the country as its first black President.

Nelson Mandela's greatest achievement was not so much in becoming South Africa's first black President but in putting an end to the evil of apartheid which divided the blacks and the whites of South Africa.

As a President, Mandela worked very hard to smoothen the transition of a minority black rule to a major black rule. He ended apartheid and established the new Constitution. He also introduced new reforms in Economic Policy of South Africa. Mandela's international contribution as a mediator for Libya and United Kingdom, for overseeing the military interventions and human right activist are also appreciated.

Retired from Active Politics

In 1999, Mandela retired from active politics but he continued to remain active on social front by raising money and building schools and healthcare centres in the country. Mandela was diagnosed with prostate cancer and was being treated for the same in 2001. Weakened by cancer and other health issues, he died on 5th December, 2013 due to a recurring lung infection.

His Awards and Honours

Mandela was a proud recipient of the Nobel Prize for Peace in 1993 which he dedicated to Mahatma Gandhi by whom he was greatly influenced. Apart from this, he received more than 250 awards including honorary degrees from more than 50 universities worldwide, to pay tribute and homage to this South African leader for his contributions to democracy, freedom, equality, peace and human rights around the world. The United Nations declared 18th July to be observed as 'Nelson Mandela Day' every year.

Mandela : A Charismatic Personality

Mandela, has inspired the masses not only through his work but also by his words. His autobiography, 'Long Walk to Freedom' provides knowledge and experiences capable of shaping thoughts. He has written his concern about equality for blacks in his book.

Mandela aspired to spread peace, equality and learning and never gave up his devotion in doing so. Despite terrible provocation, Mandela never gave up hope and stayed firm on his principles. His writing and speeches are collected in 'I am Prepared to Die', 'No Easy Walk to Freedom', 'The Struggle in My Life' and 'In His Own Words'.

He ushered in the history of South Africa, an era of social harmony, national unity, democratic governance and building the national fabric from the scars of the former regime. His simple principles of political agitation almost on the lines of Mahatma Gandhi, healing the wounds of hate, bringing about national unification, becoming the symbol of oppressed people all over the world are some of his noble legacies to the world.

He advocated and employed methods to kill racism, allow full citizenship to people, redistribute land, bestow trade union rights and provide free and compulsory education for children.

Nelson Mandela's contribution for liberation of Africa, continuous struggle for social justice and struggle to change socio-economic system is honoured by one and all. In remembrance of this noble contributor, the entire civilisation honours the principles for which he stood for i.e. equality, justice and peace for all. In South Africa, Nelson Mandela is widely considered both as 'the father of the nation' and founding father of democracy.

130

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NARENDRA MODI

THE LEADER OF NEW INDIA

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Narendra Modi is an Indian politician and India's current Prime Minister who became the most popular world leader on facebook, in April 2020 followed by US President Donald Trump. Ensuring safety and security measures for the Indian people and also lending all the necessary support to other nations he has been number one amongst all world leaders in the fight against the COVID-19 pandemic.

It was the Prime Minister, Modi who decided to set up a separate AYUSH Ministry, which is now exporting drugs to several countries in the wake of pandemic.

Under his strong leadership, Article 370, which gave special status to erstwhile Jammu and Kashmir state, abolished. World leaders, international agencies, philanthropists, nobel laureates and many other have praised Modi's leadership.

Early Life

Narendra Damodardas Modi was born on 17th September, 1950 in Vadnagar, a small town in Northern Gujarat's Mehsana district. He was born three years after India attained freedom and within months of India becoming a Republic. Narendra Modi was the third of the six children of Damodardas Modi and Hirabai Modi. Narendra Modi's life journey to the Office of Prime Minister is an inspiration for everyone.

His formative years taught him tough lessons as he balanced his studies and non-academic life. His saga of struggle began when as a teenager, he along with his brother, used to run a tea stall near a railway station in Ahmedabad.

Right from his childhood, he felt a strong urge to make a difference to the society. He was highly influenced by the works of Swami Vivekananda who laid the foundation of his journey towards spiritualism. As a young boy, Narendra Modi offered his services voluntarily to the soldiers at the railway stations during the Indo-Pak war in 1965. He also helped the affected people during the 1967 Gujarat floods.

His contribution to the Anti-emergency Movement impressed senior political leaders. As a result of this, he was eventually appointed the regional organiser of the newly-formed Bharatiya Janata Party in Gujarat.

As Chief Minister of Gujarat

In 1987, he started to work as the General Secretary of the BJP in Gujarat. For his first task, Modi won a victory for the BJP in Ahmedabad Municipal Corporation elections in the first time. Later, he worked as the National Secretary of BJP looking after party's activities in Haryana and Himachal Pradesh.

He was the Chief Minister of Gujarat from 2001 to 2014 and is a Member of Parliament from Varanasi. As the Chief Minister of his home state of Gujarat, he ushered a shift towards good governance which is pro-people and pro-active. His path for creating a vibrant Gujarat as a shining example of development and governance was not easy. It was a path littered with adversities and challenges.

If there is one trait of Narendra Modi that has impressed all, it is his strong leadership in the face of grave adversity. With his unconventional thinking and out of the box ideas, he has reframed the conventional definition of governance and democracy.

As Prime Minister of India

Narendra Modi's life has been a journey of courage, compassion, and constant hard work. He took an oath as the Prime Minister of India in 2014 and for the second term in 2019. As the Prime Minister of India, Mr Modi has emerged as a dynamic, decisive and development-oriented leader who has given a hope of accomplishment to the dreams and aspirations of billions of Indians.

His conviction sticks to the motto of 'Sabka Saath, Sabka Vikash, Sabka Vishwas'. His major achievements include the surgical strike against terrorism. Besides laying a roadmap for doubling farmers income and many other steps towards poor people and good governance for the country.

His focus on development of India and efforts to bring a qualitative difference in the lives of the poorest of the poor, have made him a popular and respected leader across the length and breadth of India.

He was neither given the luxury of time nor the benefit of training to learn the basics of administration and governance. He had to learn the process of administration while on the job right from day one. His approach to governance has always been viewed as being above from politics. He has never let any political differences in the way of pursuing solutions for developmental challenges.

Improvement of India's Bilateral International Relations

The bilateral relations between India and US witnessed a significant improvement during his tenure. A number of stalled projects got a kick start after Prime Minister Modi's meeting with the US President.

Modi's interaction with the world leaders has put India on a high pedestal in the world map. India has got the confidence of the foreign investors considering investing in India as remuneratively lucrative under his regime. A large number of multinational companies have made their way into India generating a large number of jobs and bringing the latest technology.

Modi's excursions include state visits and summits on five continents, including the visits to USA to attend the UN General Assembly. Modi embarked on his first ever foreign visit after assuming charge as PM to Bhutan. He is the first Indian Prime Minister to address the British Parliament. Besides, he has visited Canada, Germany, Mauritius, Mongolia, South Korea, China, Turkey, Ireland and Singapore to name a few. Modi has won recognition for his ability to captivate the audience with his public speaking skills. His speech at the joint meeting to the US Congress was appreciated so much that there were many senators who came to him for his autograph.

Modi Government's Ambitious Projects

Modi's love for technology is evident from his presence across the different social media channels, besides, the government's ambitious programmes such as the Digital India and Make In India. Almost all the governmental departments and ministers are actively engaging with the citizens through the use of different technological innovations and social media platform. Despite being the Prime Minister of the country, he comes across as a very humble human being. Through the radio show 'Mann Ki Baat', he regularly addresses the nation. He is quick to respond to all the questions that are put across to him by the people of India.

His Achievements

The idea to celebrate International Yoga Day was proposed by Modi during his speech at United Nations General Assembly and by his efforts, the International Yoga Day is celebrated on 21st June throughout the world. 'Aankh ka Dhanya Che' is a book which comprises the collection of Modi's poems. Modi's wax statue features at the Madame Tussauds Wax Museum in London. Besides he has featured fifth on the Fortune Magazine's list of the World's Greatest Leaders in 2015.

He was named in the 30 most influential people on the Internet and also ranked among the top 10 most powerful people in the world by Forbes list. In October 2018, Modi received UN's highest environmental award, the 'Champions of the Earth'. He is the first Indian to win the Seoul Peace Prize in 2018.

India is rising and shining by leaps and bounds under the dynamic leadership of Narendra Modi. India's Prime Minister Modi brings with him a rich and hands-on experience as one of India's most successful politician and one of its finest administrators.

PT JAWAHARLAL NEHRU

THE ARCHITECT OF MODERN INDIA

India's first Prime Minister Pandit Jawaharlal Nehru, was born on 14th November, 1889 in Allahabad. His father, Motilal Nehru, was a wealthy barrister belonging to the Kashmiri Pandit Community. He was a prominent leader of the Congress party and had served twice as the President of Indian National Congress. His mother Swarup Rani Nehru belonged to a well known Kashmiri Brahmin family. Nehru was the eldest of three children, two of whom were girls. His elder sister Vijaya Laxmi Pandit was renowned politician, and younger sister Krishna Hutheesing was a writer.

Educational and Professional Life

Jawaharlal Nehru was tutored at home by a private governess until the age of sixteen. While being home-schooled, Nehru was interested in science and theosophy which did not prove to be enduring in the following years. He then attended the Trinity College, Cambridge where he graduated with an honours degree in Natural Sciences in 1910. After graduating, he studied law at the Inner Temple in London before returning home in 1912. In India, he practised law for several years.

During the First World War, Nehru spoke out against the Censorship Acts passed by the British Government in India. He became involved with aggressive Nationalist leaders who demanded 'Home Rule' for Indians.

In 1916, he married Kamala Kaul and had his only child 'Indira Priyadarshini' in 1917, who later served as the Prime Minister of India under her married name 'Indira Gandhi'. Nehru's family was a family of achievers. His sister, Vijaya Laxmi Pandit, also became the first woman President of the UN General Assembly.

While practicing law for sometime, Nehru attended an Indian National Congress Party meeting where he met Mohandas Karamchand Gandhi for the first time. Thereafter, their lives were interlinked, though they differed on several points, largely because of Nehru's international outlook clashed with Gandhi's simple Indian outlooks and orthodox views. The turning point in his life came in 1919, when he overheard General Dyer relishing over the Jallianwala Bagh massacre. From this point he vowed to fight against the British.

Nehru's Involvement in Indian National Movement

Regardless of the criticism, Nehru was one of the most influential leaders in freedom struggle. Nehru for the first time got involved in the big National Movement viz the Non-Cooperation Movement in 1920. He led the movement in the United Province (now Uttar Pradesh). He was the pioneering supporter of Asian resurgence and an unusually idealistic advocate of conscience in international politics.

President of the Congress Party

The younger Nehru became a leader of more radical wing of the Congress Party and in 1929, he was elected as the party President. Demand for dominion status was rejected by the British in 1929. Nehru introduced a successful resolution calling for complete independence. He drafted the Indian declaration of independence, where he stated, "India must sever the British connection and attain *Purna Swaraj* or complete independence."

Most Prominent Leader in Indian Politics

At midnight on New Year's eve of 1929, Nehru hoisted the tricolour flag of India upon the banks of the river Ravi in Lahore. After the Lahore session of the Congress in 1929, Nehru emerged as the most prominent leader in Indian politics. The British repeatedly arrested him for Civil Disobedience, strikes and other political actions. He spent half of his next 18 years in jail for supporting Indian National Movement for freedom from the British rule. Since 1929, Nehru created the policies of the Congress and a future Indian nation under his leadership.

He declared that the aims of the Congress were freedom of religion, right to form association, freedom of expression of thought, equality before law, abolition of untouchability, introduction of adult franchise and establishment of a socialist and secular India.

During his second term as the General Secretary of the Congress, he proposed the future Foreign Policy of India. He developed good relations with governments all over the world. He firmly placed India on the side of democracy when a large portion of the world was under the threat of fascism. He advocated the policy of Non-Alignment during cold war and subsequently kept India aloof from being a part of global bifurcation.

Lead Role in Determination : The Dominion of India and Pakistan

Jawaharlal Nehru was arrested in 1942 during Quit India Movement, after being released in 1945, he took a lead role in the negotiations to determine the creation of dominions of India and Pakistan. When the British began to prepare for withdrawal from India, he was invited to form an interim government to organise the transition from dependency to independence.

Nehru initially attempted to prevent the partition of India into separate Hindu and Muslim States. But a separate Muslim State known as Pakistan was founded. In August 1947, following the final withdrawal of the British and the establishment of India as a self-governing dominion within the commonwealth, Nehru became the first elected Prime Minister. He continued in that post when India became a republic in 1950 and returned to office thrice until his death on 27th May, 1964, in New Delhi.

Carried India into Modern Age as India's Prime Minister

Jawaharlal Nehru, India's first Prime Minister, wanted to build the country as a truly democratic and peace loving nation. The speech, he delivered to the Constituent Assembly in New Delhi at midnight on 14th August, 1947, reflected his vision and views. He carried India into the modern age of scientific innovation and technological progress. He also prompted social concerns for the marginalised and the poor. He successfully reformed the Hindu Civil Code.

Nehru's four pillars of domestic policies were democracy, socialism, unity and secularism. He largely succeeded in maintaining a strong foundation of all four during his tenure. Nehru's administration established many Indian institutions of higher learning including the All India Institute of Medical Sciences, Indian Institutes of Technology and National Institute of Technology.

Nehru's Writings

Nehru's writings include letters published under the titles *Glimpses of World History*, *Letters to Chief Ministers*, *The Discovery of India*, *An Autobiography : Toward Freedom*, *Letters from a Father to his Daughter*, etc.

Father of Institutional Democracy and Architect of Indian Policy

He was one of the nationalists who put their life and comfort at stake for the cause of freedom. He is known as the father of institutional democracy and as an architect of Indian policy in all manifestations and as the longest serving Prime Minister of India (1946-64). While serving his country, he took iconic status for the development of the country and was widely admired internationally for his idealism and statesmanship.

As a Prime Minister, he was fully involved in carrying out India's Five Year Plans and pursuing a policy of peaceful coexistence with nations of every political identity.

Jawaharlal Nehru as a Popular Figure

Nehru's birthday 14th November is celebrated in India as *Baal Divas* (Childrens' Day) in recognition of his lifelong passion and work for children and young people. He loved children very much and was called 'Chacha Nehru' by them.

It was Jawaharlal Nehru who held aloft India's banner of independence and led India to glory. Nehru will always be remembered fondly by the Indians.

RABINDRANATH TAGORE

FIRST ASIAN NOBEL LAUREATE WRITER

Rabindranath Tagore was a great writer, poet, playwright, essayist, painter and naturalist. He was a multi-talented personality. He was also an early advocate of independence for India. He won the Nobel Prize for literature on 13th November, 1913 for his book *Gitanjali* (a collection of poems), which he wrote in 1910.

Early Life

Rabindranath was born on 7th May, 1861 at Jorasanko, Calcutta (now Kolkata) in a wealthy and renowned Brahmin family. He was the youngest son of Maharshi Debendranath Tagore and Sarda Devi and grandson of Dwarakanath Tagore. His father was a religious reformer, scholar and leader of the Brahmo Samaj.

Unconventional Way of Studying

Rabindranath was mostly educated at home by the private tutors. At a very early age he started composing verses. When he was 12 years old, his first poem was published in a magazine. Later his poems were regularly published in '*Bharati*' a Bengali literary magazine. At the age of 17, he was sent to England for formal schooling, but he could not finish his studies there. His limitless curiosity to know more about the world could not be satisfied by the formal education given by the school. Tagore had early success as a writer in his native Bengal. With the translations of some of his poems, he became rapidly known in the West. For the world, he became the voice of India's spiritual heritage; and for India, especially for Bengal, he became a great living institution.

Family Life

Tagore married Mrinalini Devi Raichaudhuri in 1883. They had two sons (Rathindranath and Shamindranath) and three daughters (Bela, Renuka and Meera). In addition to his many sided literary activities he managed the family estates in Shilaidah, Bangladesh.

Tagore's Works

Tagore's well-known poetic works are *Sonar Tari*, *Puravi*, *Sandhya Sangeet*, *Balaka*, *Kanika* etc. Some famous novels of Tagore include *Gora*, *Ghare-Baire*, *Noukadubi*, *Chokher Bali*, *Bou Thakuranir Hat*, *Chaturanga*, *Char Adhayay*, *Shesher Kobita*, *Rajarshi* etc. Apart from poetry and novels, he wrote travel accounts, autobiography (*Jiban Smriti*), musical plays, symbolic dramas, essays, short stories and more than 2000 songs.

His most memorable plays are Visarjan, Dak Ghar, Rakta Karabi etc and musical plays include Shyama, Chitrangada, Mayar Khela, Valmiki Pratibha, Shapmochan, Tasher Desh etc. Tagore's most popular stories include Kabuliwala, Chuti, Khudito Pashan, Subha, Nastanirh, Malancha etc. His songs, known as Rabindra Sangeet are considered to be an integral part of Bengali and Indian music and culture.

New Phase of Writing

By 1890, Rabindranath had entered a new phase of writing, which included his strong stand on controversial, political and social issues. His writings inspired common men, scholars and freedom fighters both in India and abroad. Tagore composed the National Anthem 'Jana Gana Mana'. It was first sung at the Calcutta Congress Session in 1911.

During anti-partition Swadeshi Movement his patriotic songs inspired the youth. Tagore's 'Amar Sonar Bangla' became the National Anthem of Bangladesh. Moreover, the lyrics of Sri Lanka's National Anthem were also written by Tagore. In 1901, Rabindranath established a different type of school at Shantiniketan, where he tried his Upanishadic ideals of education. In 1921, his school became the Visva-Bharati University. Tagore's education marked a novel blending of the ideas of the East and West.

Won Nobel Prize and Renounced Knighthood

Tagore's works have been translated into many languages. His book *Gitanjali* (collection of poems) which translated by himself in English, earned him the Nobel Prize in Literature in 1913. In 1915, he was awarded Knighthood by the British Crown which he renounced in 1919 as a mark of protest against the Jallianwala Bagh massacre.

Introduced New Form of Art and Paintings

Tagore took up painting. His paintings are so vivid and exceptional that they won him a place among India's famous contemporary artists. He introduced a completely new form of art.

A Great Humanist

Rabindranath passed away on 7th August, 1941, leaving behind a legacy of world class literature. He is one of the most influential Indian writers. His great literary contribution is universally recognised. Even though he is not amidst us, his presence can be felt through his vast works. He will always be remembered as the source of inspiration of noble thoughts and great ideas for humanity.

SWAMI VIVEKANANDA

A SPIRITUAL REFORMER

Swami Vivekananda was an inspiring personality and famous around the world. He was a spiritual leader and social reformer.

Early Life and Education

Swami Vivekananda was born as Narendranath Dutta in Calcutta on 12th January, 1863 on the occasion of *Makar Sankranti*. He was one of the eight children of Vishwanath Dutta and Bhuvaneshwari Devi. His father Vishwanath Dutta was a learned lawyer at the High Court of Calcutta.

Narendranath obtained his education regularly. He was enrolled at Ishwar Chandra Vidyasagar's Institution and later at the Presidency College, Calcutta. Narendranath learnt the *epics* and the *Puranas* from his mother. He was a natural leader and much sought after by the people because of his various accomplishments. By the time of his graduation, he had acquired a vast knowledge of different subjects like Western philosophy and history.

Quest for God

Born with a yogic temperament, he used to practice meditation even from his boyhood, and was associated with the Brahmo Movement for sometime. He met Keshab Chandra Sen and Devendranath Tagore, the famous members of Brahmo Samaj, but nobody could satisfy his queries about the existence of God. It was at that time he heard about Sri Ramakrishna. In November 1881, Narendra went to meet Sri Ramakrishna, who was staying at Kali temple in Dakshineswar.

Apart from removing doubts from his mind, Sri Ramakrishna won him over through his pure love and devotion. Thus, began a guru-disciple relationship which is quite unique in the history of Indian spirituality. At Dakshineswar, he met several young men who were devoted to Sri Ramakrishna and they all became close friends. After the death of Sri Ramakrishna he vowed to devote his life to propagate his message.

World Parliament of Religions

On 11th September, 1893, Vivekananda attended the World Parliament of Religions as a spokesman for Hinduism in Chicago. The audience was fascinated by his excellent speech. He travelled throughout the United States of America and England and gave lectures on Vedanta interpretation of the Upanishads. He said, "If there is a sin in the world it is weakness; avoid all weakness, weakness is sin, weakness is death." During this time he also travelled to France, Switzerland and Germany.

Believed in Vedanta Philosophy

He started the Vedanta Movement in England and the United States and established a Vedanta Institution in San Francisco, USA. Many European became his disciples. He preached universal brotherhood. He urged the people to imbibe the spirit of liberty, equality and free thinking.

He strongly condemned the caste systems which divided our country. He urged people to reject meaningless superstitions and rituals. By his teachings, Indians began to believe that they were not as backward as they once thought themselves to be. They realised that they were perhaps more advanced than the Western people in the field of religion, philosophy, art and literature.

Establishment of Ramakrishna Mission

In 1897, Vivekananda along with some of his followers founded the Ramakrishna Mission. It was founded at the monastery of Belur Math on the river Ganges, near Calcutta. Ramakrishna Mission tries to alleviate human sufferings and spread education among the illiterate masses. Two cardinal principles guide this mission, one is Ramkrishna's view, 'Religion is not for empty bellies' and other is Swami Vivekananda's view, 'If you want to find God, serve men.'

Social Reformer

Swami Vivekananda was a true patriot. His contribution to Indian society was enormous. He dedicated his life to stop child marriage and eliminate illiteracy among women and backward classes. He tried to uplift the socially marginalised and oppressed classes. He claimed that spiritual self-realisation led to people realising their own potentialities. He fully believed in universality, cosmopolitanism and compassion. He believed that mutual kindness and compassion between man was very important. He emphasised on self-perfection and service to mankind.

Influence of his Philosophy on Youth

Swami Vivekananda died on 4th July, 1902, while meditating. He was only 39 at that time. 12th January, the birth anniversary of Swami Vivekananda is celebrated as the 'National Youth Day' in India. His famous writings on Jnana-yoga, Bhakti-yoga, Karma-yoga and Raja-yoga on Hindu philosophy still inspire us. He declared: "The only God whom I believe, is the sum total of all souls and above all, my God is the weak, my God is the afflicted, my God is the poor of all races." He is regarded as one of the greatest spiritual figures in India. He was able to motivate people with his effective and vibrant speech capacity. In his short life, Vivekananda has left a remarkable influence on our lives.

SUBHASH CHANDRA BOSE

PATRIOT OF PATRIOTS

Subhash Chandra Bose was an Indian nationalist who played a vital role in India's freedom struggle. Mahatma Gandhi described Subhash Chandra Bose as 'Patriot of Patriots'.

Subhash Chandra Bose, popularly known as Netaji, occupied an honourable position in the history of Indian Independence Movement. He was a man of great courage and a dedicated leader completely filled with patriotism. He wanted to free India from the British Raj not by peaceful means or petitioning but by waging an open war.

Early Life and Education

Subhash Chandra was born on 23rd January, 1897 in Cuttack as the ninth child among fourteen, of Janakinath Bose, an advocate, and Prabhavati Devi, a religious and orthodox lady. He was a brilliant student and topped the matriculation examination of Calcutta province and passed his BA in Philosophy from the Presidency College in Kolkata.

He was strongly influenced by Swami Vivekananda's teachings and was known for his patriotic zeal as a student. Due to his parents' wishes, he remained away from the Indian freedom struggle and they sent him to England for the preparation of the Indian Civil Service. He ranked fourth in the ICS examination and was selected, but he did not want to work under any foreign government. He resigned from the Civil Service job on 23rd April, 1921 and returned to India. He came under the influence of Mahatma Gandhi and joined the Indian National Congress. Gandhiji directed him to work with Deshbandhu Chittaranjan Das, the Bengali leader whom Bose acknowledged as his political Guru.

Leader of Youth and a Revolutionary

Subhash Chandra played a major role in enlightening the students, youths and labourers of Calcutta. He was eagerly waiting to see India as an independent, federal and republic nation.

He was the leader of the youth wing of the Congress Party, in the forefront of the trade union movement in India and organised Service League, another wing of Congress. He was admired for his great skills in organisational development.

Bose advocated complete freedom for India at the earliest, whereas the Congress Committee wanted it in phases, through a dominion status. Other younger leaders including Jawaharlal Nehru supported Bose and finally at the historic Lahore Congress Convention, the Congress had to adopt *Poorna Swaraj* (complete freedom) as its motto.

Bhagat Singh's martyrdom and the inability of the Congress leaders to save his life infuriated Bose and he started a movement opposing the Gandhi-Irwin Peace Pact. He was imprisoned and expelled from India. But defying the ban, he came back to India and was imprisoned again. Bose warned the Indian people and the British against dragging India into the war as the situation of a Second World War emerged in late 1930s.

President of the Indian National Congress and Thereafter

Bose was elected President of the Indian National Congress twice in 1937 and in 1939, the second time defeating Gandhiji's preferred candidate Pattabhi Sitaramayya. But Gandhiji took it as his own defeat and Subhash Chandra was forced to resign from the President post due to the tension that emerged in the Congress working committee.

He formed a progressive group known as the Forward Bloc 1939. The Second World War broke out in September 1939, and just as predicted by Bose, India was declared as a warring state by the British Government without the consent of Indian leaders. The Congress Party was in power in seven major states and all State Governments resigned in protest. Subhash Chandra Bose then started a mass movement against utilising Indian resources and Indian army personnel in this war. To him, it made no sense to shed the blood of Indians for the sake of colonial and imperial nations. There was a tremendous response to his call and the British promptly imprisoned him. He took to a hunger-strike, and when his health deteriorated on the 11th day of fasting, he was freed and placed under house arrest. The British were afraid of violent burst of reactions in India if something would happen to Bose in prison.

Sought Support from Germany and Japan

In November, 1941 Bose's broadcast from German radio sent shock waves among the British and shocked the Indian masses who realised that their leader was working on a master plan to free their motherland.

The Axis powers (mainly Germany) assured Bose, military and other help to fight the British. Japan by this time had grown into another strong world power, occupying key colonies of the Dutch, the French, and the British in Asia. Bose had struck alliance with Germany and Japan. He rightly felt that his presence in the East would help his countrymen in freedom struggle. In July, 1943, he arrived in Singapore from Germany.

Organised Indian National Army

In Singapore, Bose took over the responsibility of the Indian Independence Movement in East Asia from Rash Behari Bose and organised the *Azad Hind Fauj* (Indian National Army) comprising mainly Indian prisoners of wars with Japanese support. INA freed the Andaman and Nicobar Islands from the British and they were renamed as *Swaraj* and *Shabed* islands.

INA entered on the Indian mainland and captured Kohima and Imphal. However, withdrawal of Japanese support post the attack on Hiroshima and Nagasaki, weakened the aggressive movement of Azad Hind Fauj. The defeat of Japan and Germany in the Second World War forced INA to retreat and it could not achieve its objectives. Bose gave slogan to his army of 'Delhi Chalo' and 'Jai Hind'. He had inspired his Army men through his great words "Give me blood and I will give you freedom" to make his motherland free from the rule of the Britishers. It is believed that Netaji Subhash Chandra Bose died in a plane crash in 1945. The bad news of his death had ended all the hopes of Indian National Army to fight with British rule. Even after his death, he is still alive with his vibrant nationalism in the hearts of Indian people as an everlasting inspiration. The great works and contributions towards motherland and great leadership earned him the title of 'Netaji'. He is an unforgettable hero of the Indian freedom struggle and will always be remembered for his bravery. He was a fierce nationalist whose brave patriotism made him one of the greatest freedom fighters in the Indian history.

135

SAROJINI NAIDU

THE NIGHTINGALE OF INDIA

Sarojini Naidu also known as Sarojini Chhattopadhyaya was a renowned political activist, feminist, poet and the first Indian woman to become the President of the Indian National Congress. She was the first woman Governor of a state (Uttar Pradesh) in India. She was also called the 'Nightingale of India' or 'Bharatiya Kokila' because her poems are rich in imagery and have a lyrical quality.

Early Life and Education

Sarojini Naidu was born on 13th February, 1879 in a Bengali Brahmin family in Hyderabad. Her father Aghornath Chattopadhyaya, was a scientist and philosopher and her mother, Barada Sundari Devi was a poetess who used to write poetry in 'Bengali.' At the age of twelve, she topped the Presidency in the matriculation examination from the University of Madras. She was a brilliant student who was very proficient in Urdu, Bengali, English, Telugu and Persian. Although Sarojini's father wanted her to be a Mathematician, she was interested in poetry. She took a break from studies for four years but kept writing poems and plays owing to her interest. Impressed by her poems and play 'Maber Muneer, which was written in Persian, the Nizam of Hyderabad gave her the chance to study abroad. In 1895, she was admitted in King's College London and then in Girton College, Cambridge.

At the age of nineteen, Sarojini Naidu married Dr Muthyala Govindarajulu Naidu. Both Sarojini and Govindarajulu faced opposition for their marriage, as at that time inter-caste marriages were not allowed but Sarojini's father supported them in this revolutionary step.

Literary Skills and Works

During her stay in England, she met famous Nobel laureates, Arthur Simon (a poet and critic) and Edward Gausse. Edward convinced Sarojini to stick to Indian themes and life to express her poetry and Simon persuaded her to publish her poems. Her collection of poems were published under the title, *The Golden Threshold* (1905), *The Bird of Time* (1912) and *the Broken Wings* (1912). These publications attracted a lot of Indian and English scholars.

Sarojini wrote the poems in English but her work reflected Indian culture, values, beliefs and traditions. Many prominent politicians and influential personalities like Aurobindo Ghosh, Rabindranath Tagore and Jawaharlal Nehru were among the admirers of her work.

Lead Role in Freedom Movement

Sarojini Naidu was not only a distinguished poet but also a renowned freedom fighter. Naidu joined Indian National Movement in the wake of partition of Bengal in 1905, where she met Gopal Krishna Gokhale, Rabindranath Tagore, Muhammad Ali Jinnah, Annie Besant, CP Ramaswami Iyer, Mahatma Gandhi and Jawaharlal Nehru.

From 1915 to 1918, she travelled to different places to awaken the women of India to advocate for their rights. She re-established self-esteem in them by delivering lectures on social welfare, women empowerment and nationalism. Sarojini actively campaigned for the Montagu-Chelmsford Reforms, the *Khilafat* issue, the Rowlatt Act, the Sabarmati Pact, the Satyagraha Pledge and the Civil Disobedience Movement.

In 1919, she went to England as a member of the All-India Home Rule Deputation. After 1920, she toured widely as the President of the Bombay Provincial Congress Committee, opposed council entry in Kolkata and protested against the anti-Moplah measures in Calicut. From 1922-26, she supported the cause of Indians in South Africa. In 1925, Sarojini Naidu presided over the annual session of the Indian National Congress.

She took part in the Salt Satyagraha. She was one of the women protesters at the Dharasana Salt Works, Gujarat. In 1931, she participated in the Round Table Conference in London with Gandhi and Madan Mohan Malaviya and campaigned for participation of women and youth in the public life. She played a leading role during the Civil Disobedience Movement and was jailed along with Gandhi and other leaders.

She organised a National Week in 1940 and rallied against the Cripps Mission to India. Again she was jailed in 1942 for 21 months for active participation in the Quit India Resolution of the AICC in Bombay.

Prominent Personality of India

After Independence she became the first woman Governor of Uttar Pradesh. Her presidentship of the Asian Relations Conference in 1947, was also remarkable. It is not wrong to say that she was one of the influential personalities of India and lived a glorious life.

On 2nd March, 1949 (aged seventy), she took her last breath and died from a heart attack in her office at Lucknow. India, not only lost her nightingale but also a fighter by heart. Her notable contribution is written in golden words in the history of Indian Independence.

She is also commemorated through the naming of several institutions including the Sarojini Naidu College of Women, Sarojini Naidu Medical College, Sarojini Devi Eye Hospital and Sarojini Naidu School of Arts and Commerce, University of Hyderabad.

136



SACHIN TENDULKAR

A LIVING LEGEND



Sachin Tendulkar, is a former Indian cricketer widely regarded as one of the greatest batsmen in the history of cricket. He is often referred to as 'The Little Master' or 'The Master Blaster'. Sachin's father, Ramesh Tendulkar, was a well known Marathi novelist and his mother Rajni worked in an insurance company.

Early Life

Sachin Ramesh Tendulkar was born on 24th April, 1973 in Mumbai, Maharashtra. Tendulkar was introduced to cricket in 1984. He started taking coaching from the famous cricket coach, Ramakant Achrekar, at Shivaji Park, Dadar. Sachin's talent in the sport was apparent and almost immediately exposed. At the age of 14, he scored 326 runs out of a world record stand of 664 runs partnership with Vinod Kambli in a school match. As his accomplishments grew, he became a sort of prominent figure among the schools of Mumbai.

Besides school cricket, he also played club cricket, initially representing John Bright Cricket Club in Bombay's Premier Club Cricket Tournament, the Kanga League, and later went on to play for Cricket Club of India. After schooling, Tendulkar enrolled in Kirti College for further studies. On 14th November, 1987, Sachin, a 15 year old boy, was selected to represent Mumbai in India's premier domestic first class tournament, Ranji Trophy. Sachin married Anjali, a pediatrician by profession, in 1995 and has two children, Sara and Arjun.

International Career

Sachin's rapid paced progress got him to debut internationally for India against Pakistan. Sachin made his first international century at the young age of seventeen. Regarded as one of the best batsmen of the game, he has amassed 30,000 + international runs, a feat no other player has yet achieved.

Some of his major records include

- Most runs in international cricket
- Most centuries in international cricket
- First double hundred in ODI cricket

Contribution to Indian Cricket

Sachin is the first Indian to score a century on his debut in first class cricket. He followed scoring a century each in his first Deodhar and Duleep Trophies, which are also Indian domestic tournaments. Sachin was Mumbai's highest run-scorer in 1988-89. He was also picked up for a young Indian team to tour England twice, under the Star Cricket Club banner in 1988 and 1989. He also made an unbeatable century in the Irani Trophy match against Delhi.

In August 1990, in a match against England, Sachin become the second youngest player to record a century in Test Match. Sachin became the first international and Indian player to ever sign with England's famous Yorkshire Club. He became the first player to score 1000 runs in One Day International Competition. He has also played a total of six World Cup matches, the highest played by any Indian player.

National and International Awards and Honours

Sachin's efforts and contribution in cricket is unmatched. He has been bestowed with numerous awards. He is the first cricketer to receive the Rajiv Gandhi Khel Ratna, India's highest sporting honour. He is the only cricketer and one of the first sportsperson, along with Vishwanathan Anand, to receive the Padma Vibhushan (2008), the second highest civilian honour of India. He is also the youngest recipient of the Bharat Ratna, India's highest civilian honour, in 2014. He was also voted as the 'Cricketer of the Generation' in 2014.

He also holds many other honours and recognitions in his name like the Arjuna Award, the Maharashtra Bhushan Award, etc. Sachin Tendulkar has become the sixth Indian cricketer to be included in the ICC 'Hall of Fame' on 18th July, 2019 at the ceremony held in London. He has also been awarded Laureus Sporting Moment Award 2020 on 17th February, 2020 in Berlin (Germany).

Retirement from Cricket

Sachin is a trailblazer to many of the youngsters in the world. He retired from One Day International competitions in December 2012 after swearing in as a Member of Parliament (Rajya Sabha) in New Delhi in June 2012. In the following year, i.e. 2013, he announced retiring from cricket in all forms. He played his last match in November 2013, finishing it with a jaw dropping accumulation of statistics that included more than 34000 runs and 100 centuries in international play. He also wrote an autobiography, 'Playing it My Way,' which came out in October 2014.

SUNDAR PICHAI

AN INSPIRING STORY OF AN INDIAN TECHIE

Sundar Pichai is an Indian-American business executive and the Chief Executive Officer (CEO) of Google Inc.

Early Life and Education

Sundar Pichai was born on 10th June, 1972 in Madurai, Tamil Nadu in a Tamil Brahmin family. His father, Regunatha Pichai worked as a senior electric engineer in General Electrics and managed a factory that made electrical components. His mother was a stenographer before his birth. He belonged to a middle class family. He completed his schooling from Chennai and earned his bachelor's degree from the Indian Institute of Technology, Kharagpur in Metallurgical Engineering. After graduation, he pursued MS from Stanford University in Material Sciences and Engineering and MBA from the Wharton School of the University of Pennsylvania. He was named as Siebel Scholar and Palmer Scholar in Stanford University and Wharton School, respectively. After completing his MBA in 2002, he planned to pursue Ph.D from Stanford University but dropped out and joined Applied Materials as an engineer and product manager for a brief period. He then moved to work with McKinsey and Company as a management consultant.

Career in Google

In April 2004, he was interviewed and selected by Google. Initially, he worked on Google's search toolbar which could give an easy access to searches and direct the users of Internet Explorer and Firefox to the Google search engine.

Pichai's hardwork on Google's search toolbar came into limelight when Microsoft changed their default search engine from 'Google' to 'Bing' in 2006. Though, it was not easy, but Pichai was successful in convincing the computer manufacturers to pre-install the Google toolbar to mitigate the effect of the change implied by Microsoft. The success of the Google toolbar brought him the idea of developing his own browser. After facing objection by the then CEO, Eric Schmidt, he persevered and convinced the co-founders of Google, Larry Page and Sergey Brin to launch his own browser.

Vital Role in Launching 'Google Chrome'

Pichai played a vital role in the launch of Google's Browser 'Google Chrome' in 2008. Pichai became a widely known household name after the great success of Chrome. This development and achievement paved the way towards success for him. Pichai was promoted to serve as the Vice-President of Product Development Division in 2008 and by 2012, he had become the Senior Vice-President of Chrome and Apps.

Developed All Google Products

As a leader, Pichai has always been well-liked for his easy and focussed outlook. With more responsibility piled up on his shoulders he took over the Android Division in 2013 when the former head of the department, Andy Rubin left the team. Sundar gave in his best to make Android most compatible with Google products.

Pichai's excellent performance with Chrome, Apps and Android led him to be the incharge of almost all the Google products such as Google Chrome, Chrome OS, Google Gear and Packs, Gmail, Google Drive etc and areas like Search, Maps, Google+, Commerce and ads and the entire Google infrastructure.

He had, by then, achieved a very important role in Google. Despite getting high ranked offers from Twitter, Pichai stayed loyal to Google.

Appointed as CEO of Google

Late in October 2014, he was made the product chief because of his involvement and influence. With the reorganisation of the company 'Google', a new holding company Alphabet Inc was formed. Google put its co-founders Larry Page and Sergey incharge of it. Thus, Pichai was appointed as the CEO of Google, on 12th October, 2015.

His Net Worth

Pichai is already one of the highest paid executives in Silicon Valley having held the job of Google since 2015. In 2019, Sundar Pichai added nearly \$240 million in his net worth as the CEO of Google's parent company Alphabet Inc on 3rd December, 2019. Google pays nearly ₹ 650 crore to Sundar Pichai every year as his salary.

In February 2016, Pichai was awarded with 2.7 million shares of Google's holding company, Alphabet Inc worth \$199 million. This awarded possession took up his stakeholdings to a net of \$650 million.

Pichai is a chess enthusiast and admires people like Nelson Mandela, Anthony Shadid, Dennis Ritchie, Wangari Maathai, John McCarthy and Aaron Shwatz. This 'tech-genie' is riding on the road to success with his passion, determination and motive for the development of the world through technology.

138

UNCERTAINTY SHOULD
IGNITE CREATIVITY
NOT DEPRAVITY

Change and uncertainty are inseparable parts of life. We can try our best to control our fate but in the end, life always reminds us how little control we really have. Everything that is happening around us nowadays makes us realise our vulnerable and fragile life. And yet, these periods of human history are also responsible for sparking incredible acts of creative expression.

Certainly, these are difficult times. There is fear and confusion. Yes, there is stress and anxiety as well. But along with all these odds, we also have time for ourselves. It is also a wonderful opportunity to put our minds to create innovative ideas.

Daily routine life and busy schedule absolutely destroys creativity. As now you have more time at your leisure you can be more creative! We can look at this quarantine as conditions that promote development for our dreams, desires and ideas. We can get back to square one (to go back to the beginning) and restart a few things. Eventually, things will get better with time and that is the way of life. Now it is up to us to transform this difficult moment into an opportunity.

We may all agree that change is constant, and that change is constantly picking up speed. One way of looking at the relationship between change and the creative force is by looking at nature, where change is continuous and unstoppable. The same is true for human beings. The push from within is the natural tendency towards growth and expansion.

Creativity is the part of every human being that allows us to see situations from a new perspective, to solve a problem when the old ways are non-functional. Researchers in their studies found that *belief of being creative makes one more creative*. It is true in the sense that people's belief in their capabilities to succeed in a particular situation plays a central role in turning thoughts into deeds.

It was during the Great Plague of 1665-66 that Isaac Newton made his famous theories. That one year when he lived in complete seclusion is termed as *Annus Mirabilis* (year of wonder). Therefore, being lonely is not altogether bad and it can be utilised systematically.

We know that the most developed nations across the world are suffering due to the pandemic. However, in the meantime, the brightest minds around the world are working day and night to develop the vaccine. It teaches us that it is more important to stay focused to successfully reach the other side.

Therefore, uncertainty should not be confused with hesitation as it can become a massive barrier to happiness. It all depends on the way we look at things and how we approach them.

139

AS YOU SOW, SO
SHALL YOU REAP

The proverb ‘As you sow, so shall you reap’ assumes significance in the light of Karma. In order to understand the meaning of this proverb in a better way, let’s consider an example of a farmer who sows the seeds, ploughs the field and waters it regularly in order to get a good harvest. Just in case, he fails to take care of the seeds at any stage, he may not get the desired results. This is what holds true in the case of human life also. Our actions do reciprocate. In short, it means that we have to bear the consequences of our actions. It is our present that shapes our future.

The theory of Karma is spoken about in many of the sacred and religious texts and so is implicitly explained in this proverb. The good one does to others definitely comes back to him. It may take some time to get the results but life has a full circle. When one sees negative people progressing and succeeding in life, many tend to question the validity of this theory. But this is the trickiest part about the Karma that one fails to understand when it comes into the picture. It is unescapable. In fact, many of the sacred texts strongly advocate the fact that Karma is not restricted to a single lifetime. The cycle goes over multiple lifetimes.

One needs to balance the karmic debt with good actions and gestures. Somebody else’s action should not be the deciding factor of our reaction. This will add on to our negative deeds. If we leave aside the concept of Karma, then also one should behave in a manner in which he expects the others to behave with him. Nobody likes to be ill-treated.

The proverb holds significance in our daily life as well. A hard-working and sincere child performs well in the academics. While a well behaved and polite individual is revered by his fellows, a rude and impolite person isn't considered worthy of any sort of respect.

Youth is the golden period in one's life. In case, one sows the seeds of idleness and bad habits, life is bound to be miserable and full of hardships. But the seeds of hard work, patience and perseverance definitely bear sweet fruit. We are the architects of our destiny and can either make or mar our destiny. As human beings, our duty is to work hard towards the accomplishment of our goals. Sometimes it may take time for the results to be conspicuous but one is definitely rewarded for all the hard work that one puts in.

Goodness never goes waste. Evil deeds at one point of time or the other get noticed and punished. If someone is on the track of virtues, he will be rewarded sooner or later. Goodness and hardwork makes the journey of life simpler and easier. Law of Karma stipulates that if a person is spreading happiness through charity and kindness, it means he is sowing the seeds of happiness that will produce the fruits of happiness.

140



WISDOM FINDS TRUTH



Siddhartha Gautama lived during the 5th century BC. He was born into a wealthy family as a prince in present day Nepal. Although he had an easy life, Gautama was moved by the suffering in the world. He decided to give up his lavish lifestyle in search of the truth. After six years of searching Gautama found enlightenment while mediating under a Bodhi tree. He later founded the 'Buddhism' and came to be known as 'the Buddha'.

The enlightenment achieved by Buddha was the ultimate truth. Truth is the beliefs, thoughts or the propositions that are said to agree with the facts. Truth is the aim of belief. People need the truth in order to thrive. A dedicated pursuit of truth emanates from wisdom. Wisdom is the quality of having experience, knowledge and good judgement i.e. the quality of being wise. If truth is the state of being true to someone or something, then wisdom is an element of personal character that enables one to distinguish the wise from the unwise. Wisdom enables us to transcend from the path of uncertainty and shallowness to the path of truthfulness. Wisdom is one of the highest forms of human characteristics.

A collection of experiences and virtues shape our wisdom. A number of social reformers acquired wisdom through their knowledge, experience, understanding and common sense. It was wisdom which not only enlightened some of the greatest minds in Indian history but also let them propagate the truth to shape a modern

society free from social evils. Raja Ram Mohan Roy recognised the inhumane practices such as sati pratha, caste system and religious superstitions and worked hard so as to get rid of these social evils. Vivekananda not only initiated the social reforms but he continuously fought for the eradication of social and religious evils. Jyotiba Phule devoted his whole life for the emancipation of weaker and depressed sections of society. In addition to this, there were several luminaries like Vinoba Bhave, Baba Amte, Dr BR Ambedkar among many others who not only sought the truth for themselves but also propagated it to others for the upliftment of the society. Through their wisdom they not only found the truth but also propagated it so that it became a reality.

The present day society is also going through various changes: the protest in Hong Kong against the authoritarian regime, environment issues being raised by Greta Thunberg and others, demand for LGBTQ rights, Yellow vest protest in Paris and Global Climate Strike. These all are rooted in realisation of truth. The humanity depends on the wise and their quest for the truth. They motivate others to realise the truth and to act.

Wisdom is not only associated with the changing reality of society or nation, rather it can also be attributed with the potential to augment one's own ability. When we realise the truth about ourselves, it is bound to change the course of our life. All the greatest human beings have also undergone some kind of realisation of truth through their wisdom. Mahatma Gandhi, Nelson Mandela, Abraham Lincoln, Martin Luther King Jr are some of the names whose quest for truth changed the history of the world.

There is an old Chinese proverb, "there are three kinds of truth-my truth, your truth and the truth." Being wise is not the same as being intelligent. Intelligence is more about having the skills and mastery of the subject. This is why an intelligent person can mould the facts and manufacture a new truth. It is due to the manufactured truth, some of the heinous crimes of the past, like the Jallianwalla Bagh massacre, the American Civil War and the Holocaust took place. It is therefore due to the manufactured truth that humanity in present day also continues to suffer. The persecution of the Rohingyas in Myanmar, the Uyghur Muslims in China, the rising level of crimes against *dalits* and minorities in India can be attributed to the manufactured truth which is being represented as a new reality. However, it is wisdom which allows us to filter the real truth from the manufactured truth. The expression of regret over Jallianwala Bagh massacre by the United Kingdom PM can be regarded as the rediscovery of truth in this light.

True wisdom can only be attained through experiencing life. True wisdom teaches us to embrace life through acceptance, self-observation and with full consciousness. With practice, wisdom takes us above the basic instincts. It does not let us to be reduced to mere puppets in hands of our instant gratification. Wisdom gives our mind the power to differentiate between the justified and the unjustified, thus, enabling us to filter the misinformation and ultimately see the truth.

JUSTICE DELAYED IS
JUSTICE DENIED

Justice delayed is justice denied means that when the justice is not timely delivered, it is useless. Martin Luther King Jr in his “Letter from Birmingham Jail” used the phrase in another form “Justice too long delayed is justice denied”. It will be apt to use this proverb in the context of Indian legal system as it takes years for the judicial system to impart justice to the petitioners. Ironically, the life cycle of justice in India is unpredictable and highly delayed. Often the justice is delivered to an individual after a long time when it has become redundant or useless for him. In some sense, it violates the basic essence of freedom in a democracy.

Many times people are declared innocent after spending many years in imprisonment. The delayed justice has led to a rise in the number of cases to be disposed of by the court. During the time an accused petitioner is seeking justice and it is delivered to him, it turns out to be a nightmare for the petitioner and his family. Irrespective of the fact that the petitioner is under the jurisdiction of the court in regards to the crime, he is labelled as a criminal by the society. People get judgemental and develop perceptions towards the petitioner. In the cases where the petitioner is actually innocent, such kind of labelling by the society comes with an additional mental trauma.

This horrifying experience is not restricted to the individual but extends to the family as well. The family members are subjected to different kinds of mental atrocities. Friends and society decide to cut off all the ties with that person. The petitioner has to run from pillar to post to speed the process. A person may have to let go from his job as a result of accusations. In such cases, it becomes difficult for him to manage his expenses.

All this while, the pending judgements lead to an additional financial burden in the form of fees of the lawyers which is soaring, and getting out of reach of the common man to get justice. In worst cases, people compromise with the judgements as they cannot afford a lawyer. Thus, delayed justice has been a blessing in disguise for many like the corrupt politicians and businessmen, who continue to enjoy their position despite a number of charges being levelled against upon them. In fact, they use the power of their position to promote unscrupulous and illegal activities. They are the roadblocks to prosperity and development of our society.

Securing social, economic and political justice to all citizens is one of the key mandates of the Indian Constitution. The Article 39A of the Constitution directs the state to secure equal justice and free legal aid for the citizens. But from our experience we find that the state has failed squarely on addressing some very basic issues such as quick and inexpensive justice and protecting the poor and vulnerable. The disposal of the cases takes so much time that sometimes even an entire generation is too short to get any type of redressal.

Take the famous case of 'Uphaar Cinema fire' which killed 59 people due to suffocation and injured 103 in the resulting stampede in June 1997. The final verdict on this case came on 19th August, 2015 i.e. 18 years later when the Supreme Court imposed a fine on Ansal brothers, the owners of the Uphaar Cinema, for 30 crores each and held that their jail terms will be reduced to the term already undergone by them, considering their old age. This decision has been criticised by the victims' families. The CBI and the victims' association has opposed the relief to the Ansans and have filed a review petition.

In the famous Jessica Lal murder case, Manu Sharma, son of an influential Congress leader Vinod Sharma killed Jessica Lal (a model) for refusing to serve liquor after the bar was closed. Following intense media and public pressure, Manu Sharma was punished with sentence of life imprisonment and a fine on 20th December, 2006. But he was granted parole many times to attend family business, marriage of his own, appearing for master's degree, etc. Recently, he has been released from jail on account of good behaviour. Despite being in jail these high profile persons enjoy their life. It is the great irony of the Indian judicial system.

The current example of justice delayed is Nirbhaya case, which was 3 Judge-Bench judgement headed by Justice R. Bahumati and other Judges Justice Bhusan and Justice AS Bopanna, where all 4 men were convicted for the 2012 Nirbhaya gang-rape case and murder case. The victims were finally hanged 7 years after brutal crime.

All these point towards the inefficiency and loopholes of the Indian legal system. The Indian Constitution has bestowed our judicial system with power to uphold the sovereignty and integrity of an individual. The government needs to step in over here. Fast Track Courts must be set-up in order to clear the backlogs. A timeline must be fixed for the disposal of cases. The strengths of judges in the courts need to be looked at seriously. Besides, an upper limit must be fixed in regard to the fees of the lawyers. It is high time that our judicial system works upon these loopholes and restores the lost faith of the citizens in it.

FAILURES ARE THE PILLARS OF SUCCESS

In the journey of life, everyone has to struggle by facing ups and downs. Obstacles and hardships are bound to be there in one's life but what is important is how we tackle them. It is the perception of an individual towards the same that defines the course of his life. It is one's tireless pursuit that will lead one to success. Success and failure are the two facets of a coin. There are people who may give up or there are others who are ready to take the failure as a challenge. A brave person takes the failures as a challenge and takes steps to climb the ladder of success.

Destiny also favours the brave. It is our attitude towards life that helps us to shape our destiny. Failures can be disheartening when one is unable to cope with the situation. At such times, one must remember that it is the cowards who run away from the situation.

It is seldom that a child can walk without tumbling or falling down. But these small failures do not deter his spirit. Slowly and gradually, he learns to stand on his feet and then walk. It is because of the child's will power that he is able to stand upright. This gives us a lesson that we must try and try until we succeed.

Success is a culmination of hard work, dedication and determination. It is not necessary that every effort bears fruit. But every step definitely gives us an experience and this experience is incomparable. Failures not only make us aware of our shortcomings but also provide us a learning lesson.

They hint towards an individual's weaknesses, lack of preparation or lack of efforts. A person who can learn from his failures and work upon them is bound to be successful in life.

With each failure, an individual steps closer to success. The success, after a number of failures is valued and cherished much more. If we look at the life history of successful people, we will find that every successful person has failed at some point of time in his life. It is just that the person was smart enough to extract learning from those failures. Every time they experienced a failure, they bounced back with a rejuvenated spirit. They did not let the rejection of a failure overcome their spirit to achieve their goals. This is what made them successful.

Nothing great has ever been achieved without consistent efforts in the face of innumerable difficulties. Here are some examples. Bill Gates, a Harvard University dropout, founded Microsoft in 1975, which became the world's largest PC software company. His first business Traf-O-Data failed but he did not give up and now he is one of the wealthiest persons in the world.

Another example is Walt Disney, the creator of Mickey Mouse and founder of Walt Disney company, winner of 22 Academy Awards. Disney failed to join the United States Army and became an ambulance driver in Red Cross. In 1920s, he set-up the Disney Brothers Studio and made many famous animated films and got many academy awards. Later, he founded Disneyland and Disney Park.

Similarly, JK Rowling, author of Harry Potter, spent a life full of poverty and depression, before she wrote her first novel. Twelve publishing houses refused to publish her first book, 'Harry Potter and the Philosopher's Stone' but now, it has become one of the most famous books in the world. There were six sequels and the book has become one of the best selling books in history. She has lived a 'rag to riches' life story and became one of the wealthiest women in UK.

Eventually, it is our patience and determination that leads us to the road of success. One has to pay the price of one's aspirations and dreams with one's perseverance and dedication. As Rome wasn't built in a day, one cannot become successful overnight. The road to success is rough and patchy with hurdles and obstacles. But all failures become insignificant, once we accomplish our goals successfully.

143

BEST FOR AN INDIVIDUAL IS NOT NECESSARILY BEST FOR THE SOCIETY

There is a famous story of an African tribe. An anthropologist proposed a game to the kids in an African tribe. He put a basket full of fruits near a tree and told the kids that whoever got there first, will win the sweet fruits. When he told them to run they all took each other's hands and ran together, then sat together enjoying their treats. When he asked them why they had run like that when one of them could have had all the fruits for himself, then they said, "Ubuntu! How can one of us be happy if all the other ones are sad?" The story reflects the spirit of Ubuntu that says, "I am a person through other people. My humanity is tied to yours."

Individualism emanates from moral and social philosophy that is known to determine the moral worth of an individual. On the other hand, society is an institution that is rooted in the philosophy of collectivism. Collectivism is based on the doctrine of common good.

Common good refers to those factors which are shared and beneficial to all. Although, society is collection of individuals, it does not necessarily mean to reflect each and every goal and aspiration of its members. A person might be motivated by the personal rewards and benefits, whereas, society functions on the basis of common goals shared by all even if it means curtailing individual goals.

The essence of society is that together, as social beings, it binds the different stakeholders into one whole. No individual can lead his/her life in isolation, since humans are social beings. Society also ensures to keep individual interest in check that might harm the overall interest of others. When a person thinks he/she is entitled to something, that is when he/she starts to walk all over others to satisfy his/her personal goal. Almost every sinful action ever committed can be traced back to selfish motive of an individual who thought it to be the best for him. Ravana's desire to marry Sita devastated Lanka. Similarly, the lust of Duryodhana for the throne left his kingdom and its people in perils. In modern times, the desire of Hitler to achieve the Lebensraum by annexing other countries ultimately lead to 'Holocaust', the most heinous crime in the history of mankind.

The individual aspirations of a few people to dominate the society led to the creation of the Varna system (caste system). Caste based discrimination involves massive violations of civil, political, economic, social and cultural rights of major sections of society. Caste system still bears a profound impact on our society. Similarly, creation of class can be traced back to the dominance of affluent people. This has resulted into exploitation of proletariat (working class) in hands of bourgeoisies (capitalists).

When individual interest wants to dominate the society then it suppressed the collective consciousness as well. The result is exploitation of the large section of society in hands of few. The quest of European countries to colonise the Asian and African countries, ultimately led to the acculturation of the native society and oppression of its people.

Also, rise of dictators is attributed to the urge to satisfy their individual goals. They not only set the wrong priorities for the people but also waged unnecessary wars as witnessed in the past. For example, Mussolini, Hitler, Saddam Hussein among many others. Human rights are crushed and people are deprived of even the basic rights. Many a times, states to appease their political masters get engaged in state sponsored violence against a race, religion or a section of society. Humanitarian crisis in Syria, Myanmar and Venezuela are some of the examples of this.

The mindless quest to acquire most of the resources by corporate companies has too left the environment vulnerable. This has posed eminent danger to the natives of the areas where resources are present. The excessive exploitation of natural resources has disturbed the equilibrium where man was living in harmony with nature. Natural calamities can be attributed to the constant exploitation of the natural resources. Furthermore, the violation of environmental protection laws to satisfy the needs of few people has rendered majority of the section of the society vulnerable. Creation of urban heat islands, smog like situations and forest fire among many others can be attributed to this.

Individual conscience has suppressed the collective consciousness. On one hand, anti-India rhetoric is being promoted in the name of freedom of expression and liberal stance. On the other hand, Jingoism has become new normal and is being promoted as patriotism. The selective outrage to suit the philosophy of few political masters has posed an imminent danger to the secular and democratic fabric of our society. As a result of this, vulnerable groups, such as *dalits*, minorities, and other weaker sections of societies are being targeted. Communal biasness of law makers for their own lust for political power and vote bank has created an unprecedented fissure among the people.

The selfishness of few people has also created an economic divide. The economic disparity is continuously increasing. Rich people are becoming richer, while the poor are getting poorer. Black money is being boarded by rich people which could have otherwise been used for development purposes. A large number of people are forced to live in slums. A survey by Oxfam suggests that India's 1 per cent population holds 73 per cent of its wealth. This individual quest to own more and more money has not only resulted in rising income inequality, but has also led to the exploitation of poor people.

In this light, it is worth mentioning here that not all individual interests are detrimental for society. Sometimes, what is best for an individual is also best for society. Chanakya's self interest in overthrowing the Nanda dynasty ultimately emancipated the people, while unifying India. The role of social reformers in eradicating social evils, like *sati*, child marriage, etc pushed India into a new era of reason and progress. The stubbornness shown by Mahatma Gandhi to get his demand fulfilled eventually facilitated the achievement of India's Independence. Similarly, Sardar Patel's interest to unify India through strict policies ultimately benefitted the nation.

So, the role of individual interest can also be good for the society unless it is not devoid of empathy, compassion and altruistic character. An individual's self interest is only best for the society when it has a moral underpinning to it. The best for the society can be achieved when the personal aspirations are harmonised with the common good. Individual interest must not undermine social values. To achieve best for society the individual interest must bear the moral attributes of beneficence, respect for autonomy, justice and least harm. Like Jeffery D Sachs has said, "We need to defend the interest of those whom we've never met and never will."



IDEAS RULE THE WORLD



An idea is a thought or opinion related to something which may pop up randomly or after a brainstorming session. It can be spontaneous or situational. Ideas provide us with a platform to express our thoughts. We ought to be thankful for the discovery of fire which was an outcome of the idea of rubbing of two stones by the early man. This marked the beginning of a new era for the mankind. Most of the ideas are a result of some necessity or the need of human beings.

Necessity is the mother of invention. Technological inventions such as electricity, the internet, laptops, computers and smart phones have been a boon for the society. All these have led to the evolution of mankind at a rapid pace.

Thanks to the smart ideas and the technological innovations, the world has actually shrunk. We have transcended the geographical boundaries and are virtually connected with each other all the time. In many cases, a single idea has given way to a string of connected ideas. Internet provided a platform to the social media, which has become an important marketing tool in today's time.

An idea bears the fruit of hope and has the potential to bring about a change. These changes result in innovation, eventually leading to growth and development of the human civilisation. Some of the world's greatest inventions and innovations are the outcomes of an idea. Many a times the world has underestimated the potential of an idea but the great minds have proved the worth of their ideas with their splendid discoveries and inventions.

Only a good idea is not sufficient. One requires the conviction and vision to execute it. An individual's confidence is the lifeline of an idea. One needs to have faith in his idea, as an idea has the potential to change the world. A successful execution of an idea requires will power, perseverance, hard-work and dilligence.

The countries around the world have think tanks i.e. people who generate new ideas and the organisations are investing heavily in the field of research and development. All this is done in order to provide a room for creative thinking so that the new ideas, thus, generated lead to innovation and development.

India witnessed a technological revolution in the last two decades. It was the vision, faith, will-power and determination of some of the present day leaders in their ideas, that India has been able to perform remarkably well in the information technology sector. With science and technology touching the untouched horizons, it becomes important for the educational institutes, as well as the government to promote and nurture the indigenous research and development. Brilliant ideas backed by research and knowledge assure success. We are living in the world which is basking in the glory of some revolutionary ideas. This provides us with an insight into the potential of an idea. Unleashing and harnessing the power of ideas can help the countries and civilisations to take rapid strides towards development.

145

THE CHILD IS FATHER
OF THE MAN

Wordsworth, the famous nature poet wrote a poem 'The Rainbow' and left behind a very famous saying that "Child is the father of the Man". This statement has been interpreted by various critics in various ways. For Wordsworth, it is important because a child is very innocent and spiritually elevated. Wordsworth was of the view that a child is a symbol of purity and honesty which remains untarnished till he gets engaged in worldly affairs.

A child is spontaneous and unselfish in his sharing of love, a quality which a fully grown up man can learn from a child. Living in this world is not easy. A child grows into a teenager and then into an adult. He learns so many things like deceit, flattery, lies, hypocrisy etc. to survive in this world. A man can learn unselfishness and purity of mind from a child which can make him a better person.

Another explanation to this quotation is that we try to teach our children all that we have learned but somewhere down the line our children teach us things that we may have forgotten.

They teach us to smile, to laugh, to love and to forgive. These are the simple spontaneous things that grown-ups yearn for while leading their busy lives. In the rat race of this world we are not able to enjoy even simple things like the beauty of a flower or relaxing for a while.

A child's innocent query or an expression can teach us to sit and relax and enjoy the moment. Wordsworth was an ardent nature lover. He was of the view that man should always find time to appreciate nature and praise the beauty of small things.

The poet feels that a child sees a celestial light and enjoys himself in the dreamy grandeur. By this what he means to say is that a child is like a mystic or an angel who has some ability of seeing the light of heaven in some objects of nature which an adult may not be able to see. So, the child can lead the way and teach man to enjoy the beauties of nature.

Man has forgotten to spend time in the lap of nature and appreciate marvels made by God. But a child, who is away from all worldly worries and musings, finds joy in very small objects of nature like a colourful butterfly or a jumping frog. In this way, the poet rightly considers the child as the father of the man who can find happiness in small things and keep himself contented. Adults can learn so many things from a child such as innocence, spontaneity, love and happiness.

146

THINK POSITIVE AND
WIN POSITIVELY

One of the greatest gifts to man from the nature is his ability to think and this is what makes him different from others. Each individual is unique in his way because of his thinking. An individual's thought process is reflected in his personality which ultimately plays an important role in deciding the course of his life. Optimism or positive thinking is all about being confident about the future or success of something. It is this positive thinking which opens the doors of success for an individual. The person who is confident of achieving his goals will make sure to put in all the hard work in the requisite direction. It becomes difficult for the failures and hurdles to stop an optimistic person from achieving his goal. This is because each failure is a stepping stone to success for him.

Although life isn't a bed of roses, there is a way out of every maze and an answer to every enigma. There is no such problem which can't be sorted out. At times, it may happen that a person finds himself stuck in a situation and is unable to figure out how to proceed. In such a situation, he needs to think and analyse carefully in order to find a way out. The journey of life isn't a smooth one. There are a number of speed breakers in the form of obstacles and hurdles at each stage of our life.

It is not that a few selected individuals have to face problems in life, everyone has to face their share of problems in life. It is just the intensity which may vary. However, the thinking of a person makes all the difference in how a person tackles the situation. An optimistic and confident person will be determined to fight the situation instead of giving up.

A pessimistic person will prefer to run away from the situation. Such people develop a habit of finding faults in almost everything. Failures tend to halt their journey and what these people fail to understand is that life is all about challenges and overcoming them. An optimistic person has faith in his abilities. The word 'impossible' ceases to exist in his dictionary. Had this not been the case, the world would not have witnessed revolutionary inventions. Confidence, perseverance, dedication, will-power and determination are the important elements of optimism.

Here are some examples of how strong determination can win all obstacles in our life. Arunima Sinha was a National level volleyball player who was pushed out from a running train by thieves in 2011 while she was resisting them. Due to this accident, one of her legs had to be amputated below the knee. She trained under Bachendri Pal, the first Indian woman to climb Mount Everest and became the first female amputee to climb Mount Everest in 2013. Famous Indian cricketer, Yuvraj Singh was diagnosed with cancer in 2011 and he underwent chemotherapy treatment in Boston. After getting the treatment he came back to India and made his international comeback in a Twenty-20 match against New Zealand in September 2012.

Karoly Takacs was the first shooter to win two Olympic gold medals with his left hand, after his right hand was seriously injured. During army training his right hand was badly injured due to a grenade explosion. But Takacs was determined to continue his shooting career and switched to shooting with his left hand. He practised in secret, surprising his countrymen and the world by winning the national level championship first, and then Olympic gold medals in 1948 and 1952.

An optimistic individual has the courage to admit his faults and shortcomings instead of blaming others. In fact, it is this attitude of a person that helps him to lead a happy and satisfied life. In order to develop a positive mindset, one needs to keep away from all the negative energy and people. It is best to indulge in some activity or keep oneself busy so as to distract oneself from the negative thoughts. Indulging in physical activities such as games and sports can provide an outlet for venting out all the negative energy such as anger, frustration, etc.

A calm and composed mind can overcome all the difficulties. One should never lose hope and let negativity overpower him. With a positive mindset, half of the battles are won. Always remember that winners never quit and quitters never win.

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KNOWLEDGE WITHOUT CHARACTER IS DANGEROUS!

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Character and knowledge are the heart and soul of an individual. Character is the set of inherited and acquired qualities which defines an individual's identity and makes him different from others. One acquires knowledge over the time through formal and informal education. Formal education is acquired from schools and educational institutions while informal education is acquired through family, friends, peer group and social circle.

Education empowers an individual and enables him to take rational decisions. Each individual is blessed with some or the other talent and is a bundle of untapped potential. This is why education has an important role. It helps an individual to make the best use of his talent and capabilities.

Education cannot be restricted to an individual's personal growth. He may inspire others to learn and act as a role model for many. In fact, a society's progress can be measured in terms of the number of educated individuals. The knowledge and expertise gained by the person during the course of his education must be used for the benefits of others and society.

An educated person with strong moral values is an invaluable asset to the society and nation. The moral values lay down the foundation of a strong character. A person with poor moral values may attain his short term goals easily but it will be difficult for him to accomplish his long term goals.

The technology has taken education to the next level. The students are taught by specialised teachers and trainers in smart classes. E-learning solutions have become an important component of the curriculum. But it is highly disappointing that amidst all these, the moral values and the virtues have taken a back seat.

Today's generation has failed to understand the importance of character building. The failure of education to instil values and lack of character is increasingly apparent from the rising crime and violence in the society. There is an increase in the disrespect for the authorities and violence among the school going children and teenagers. The children are indulging in early sexual activities and self-destructive and addictive behaviour. The rate of heinous crimes such as physical and sexual assault among the children and teenagers is increasing.

The media, peer groups and the internet have an impact on the development and learning of the child. Using knowledge in the negative direction, is a waste of one's talent and capabilities. This is what is happening with today's generation. The moral values and the virtues of a society play an important role in the character building of the individuals. Over the time, there has been a gradual decline in these values. We must remember that the character development and education need to go hand in hand. Character building must be an important aspect of education. It is important to teach the children moral and ethical values. These moral values help them to succeed in the long run.

The purpose of education should be to develop a child's instincts in a manner that he is naturally inclined to do what is morally right. Besides the teachers and parents, the society needs to be an active partner in the character building efforts. Character development and education should go hand in hand. Effective education must include curriculum that teaches the students respect for moral and ethical values and helps them to succeed. The education should strive to develop students' intrinsic motivation and commitment to do what is right. All school staff-teachers, administrators, counsellors, coaches, secretaries, cafeteria workers, playground aides, and bus drivers must be involved in learning about discussing and sharing responsibility for character education. Parents and community members should be full partners in the character building effort. Effective education must include an effort to assess progress in the direction of character building. Knowledge without character is not only worthless but can also prove to be dangerous for the individual, society, country and the humanity as a whole.

148

MONEY IS A GOOD SERVANT BUT A BAD MASTER

The proverb “Money is a good servant but a bad master” is given by Francis Bacon. This proverb emphasises on the fact that money should not be given so much importance that it starts ruling one's life. One must be wise enough not to run after money at the cost of the other important things in life. Money shall come and go but an individual should not lose the most valuable things of his life just because of money. Money is an essential and in fact an indispensable component of today's life. Without money, it is impossible to survive in this world, as it is the money with which one can buy all the necessities and luxuries required to lead life. If one has money, one can buy whatever one needs, wishes or desires.

This is the reason that everyone is running after it and finding ways to increase their wealth. People want to fulfil their unfulfilled desires. This desperation has led to the rise of unethical practices and crime in many cases. Morals and ethics seem to be lost in the money-driven world.

Money has become very powerful. An individual's prestige, respect and social status are directly linked to one's bank balance. Gone are the times when an individual's character used to speak for him, now it is the bank balance which has become synonymous with one's identity. Money and muscle power have become the essential ingredients of success.

People have become the servants of money. In the world dominated by money, the relations have taken a back seat. A person who is running after accumulating wealth at the cost of his relations and health is a slave to money. In true sense, these people are not satisfied with their lives. They fail to experience the true happiness out of the small pleasures of lives. The ironical part is that they are not able to use their money when it is required the most. These people tend to live the life of the king 'Midas' who was blind after money and lost his most lovable daughter one day because of this blind love for money.

An individual who makes use of money to fulfil his necessities, to acquire reasonable comforts and invest it in the welfare of people is in a real sense a 'wealthy and rich' person. He is actually the master of money. It is the healthy body and a relaxed mind which makes one happy. The money should be invested in making one happy. One must remember that happiness and health are one's biggest assets.

What people tend to forget is that howsoever powerful the money is, but it cannot buy them internal satisfaction and mental peace. Nor they can purchase the lost time and happiness of life with the money. Cheating and fraud may bring momentary joys but lead to blind ends. Nothing can substitute hardwork.

All said and done, one should control the urge to earn money instead of being controlled by it. Truly quoted 'Money is a good servant but a bad master'.

QUICK BUT STEADY WINS THE RACE

Quick but steady wins the race is just the opposite of the famous age old saying 'slow and steady wins the race'. Being quick means that one is faster than the others and being steady means there is continuity in one's endeavours.

If we analyse the age old saying of 'slow and steady wins the race', even it emphasises on the continuity of efforts. But it is the modern version that holds true in light of the rising competition in today's world.

We all are living in a world where everyone is running in a rat race. Right from the time a child is born; he enters the race of life. It is just that the finishing point for each race is different each time. For a young child, the finishing point will be getting admission in a school. For the teenagers, it may be getting into their dream college and for a college pass out, it will be getting a good job. This vicious cycle goes on forever.

The finishing point of one race is the starting point of the next race in life. The irony is that everyone is running in this race but nobody can spare the time to look back or help the one who is left behind. So, in order to fulfil one's expectations and achieve the desired goals, one needs to be quick and steady.

Due to the cut-throat competition, one cannot afford to fail. Sometimes the consequences of the failures are unforgiving. A single moment of failure may take one far away from his goals, missions and future. The goals are missed and the dreams are shattered. In fact, the 21st century has become synonymous with fast life. The technological revolution has led to the replacement of traditional techniques and equipment with advanced techniques and gadgets. Quickness and speed have become indispensable in order to leave the competitors behind.

Steadiness ensures consistency in the efforts. Success is achieved with continued efforts. We need to chase our targets continually despite the failures we face. The beauty of life lies in the fact that we fall seven times and get up eight times. Failures shouldn't deter one from achieving one's goals instead they have to be the stepping stones towards success.

However, greater speed can lead to errors and it can affect the quality of work. There may be times when one is not able to introspect and ponder upon his work. At the same time, excessive steadiness towards the projects which aren't delivering results will also lead to failure and waste of time. So, it becomes important to ensure optimum steadiness and speed in our efforts.

As each flower blossoms at a different pace, each one of us is blessed with a natural pace. Each individual has its intrinsic capabilities and potential. One should work according to them. Stretching them beyond their limits may result in failures but steadiness will come handy all throughout.

Patience and perseverance pays. Things take time to unfold. The most successful men are the products of steady accretion of their hardwork and will-power. One must ensure that success doesn't come at the behest of some unethical practices. Rather, speed and consistency should form the pillars of success.

150

WE LIVE IN DEEDS, NOT IN YEARS

The proverb 'We live in deeds, not in years', means that longevity of one's life is not measured in the number of years one lives, rather it is measured by the good deeds done by one throughout his life. Human life is a gift of God and comes with an expiry date. Death is the eternal truth. The only difference is that some men live a long life and some die young. A short life can be made glorious by virtuous deeds. It is much better than a long life which is of no use to others. A noble life backed by good deeds makes an individual immortal.

Life is not about mere existence in this world. Age should not be the criterion of life. Instead one should leave a mark on others' lives with one's good deeds. For instance Bhagat Singh was hanged to death at a young age. However, even today he is remembered as a true patriot who sacrificed his life for the nation. Similarly, Swami Vivekananda and Shankaracharya are some other famous people who have lived a short but worthy life. All these great men are remembered for their noble deeds and great achievements in their respective fields. Their lives have been an inspiration to many.

All the living beings on this Earth are the creations of God. The purpose of our life should be to do good to others and help them. If throughout our life we are unable to do any good to others, then that life is worthless.

A selfish person may live a long life but after his death, nobody remembers him. If someone remembers him, it is for his selfish attitude and vices. Good deeds, moral values, and virtues should be the cornerstone of our lives.

It is true that life and death are not in one's own hands and are guided by the will of the Almighty. But making our life valuable and worth remembering is definitely in one's hands. One must set short and long term noble goals and work in order to achieve them. Noble deeds are not just about giving a lot of money in charity.

One should always remember that good deeds only live after us. Everyone should try to do something useful for the society so that we may be remembered even after we have left this world forever. A long life is a blessing from God. In order to make the best use of this blessing, we need to spend the life productively by helping others. In this way, even after one's death, one becomes immortal.

It has many more dimensions to it. Small deeds such as being kind and polite to others, helping the needy and teaching poor children, etc are some of the noble deeds that can be done easily. We all need to strive in order to make the best use of the precious gift of life. Always remember, one crowded hour of a glorious life is worth than a long life without a good deed.

SIGNIFICANCE OF JAL SHAKTI ABHIYAAN (JSA)

Jal Shakti Abhiyan (JSA) is a time-bound, mission-mode water conservation campaign. It has been launched in 2019 to ensure India's water security with an aim to provide access to safe and adequate drinking water to all Indians.

The Jal Shakti Ministry has been entrusted with the management of country's water resources and water supply in an integrated and holistic manner. It will work with states to ensure Har Ghar Jal (piped water supply) to all rural households by 2024 under the Jal Jeevan Mission (JJM). The JSA aims at making water conservation a Jan Andolan through asset creation and extensive communication.

Water in Ancient Text

Historically, India and Indian culture has always considered water as sacred. Water has a pervasive influence on the various facets of human life, including the supporting ecosystem. It is considered by Hindus to be a purifier, life-giver and destroyer of evil. The civilisation originated and flourished on the banks of the sacred rivers and the influence of the rivers is reflected in all aspects of life.

In the hymns of the Vedas, the Puranas, the Upanishads, the Epics and the great works of Vedic scholars, the importance of water is often highlighted.

Ancient records show the awareness existed in India of water conservation and management. There are seven rivers in India which are considered sacred and hence, worshipped. These rivers are Ganges, Yamuna, Godavari, Saraswati, Narmada, Sindhu and Kaveri.

Need for Jal Shakti Abhiyaan

India has 17 per cent of the world's population and 4 per cent of the world's freshwater resources, ranking it among the top ten water rich countries. However, India is the second most populated nation in the world and it is currently designated as water stressed by Intergovernmental Panel on Climate Change (IPCC) with current utilisable freshwater much lower than international standards.

A 2017 study of Food and Agriculture Organisation (FAO) of the United Nations shows that India's Per Capita storage capacity is significantly low which is only 8% of annual rainfall being stored. A major grain producer, India also uses 3-5 times more water for crops than China, US and Israel, which is considered disproportionate use of water per crop.

Heavy dependence on groundwater, years of deficient rains and disproportionate demand for water due to rapid population increase, urbanisation and industrialisation have put considerable stress on water management. Therefore, Prime Minister, Narendra Modi have given a clear call to citizens to join hands for water conservation and create a Jan-Andolan along the lines of the Swachh Bharat Mission, to save water and secure the future.

As per NITI Aayog, India is facing water crisis with around 50% population experiencing high to extreme water shortage. In order to address water scarcity, it is important to undertake efforts for conservation, restoration, recharge and reuse of water.

JSA and its Component

Jal Shakti Abhiyaan (JSA) intends to improve conditions in around 1500 Blocks that are drought affected, water stressed or over-exploited that falls in 256 districts with water conservation related Central programmes.

Components of JSA are as follows

- JSA was planned to be carried out in two phases. Phase I was carried out between 1st July to 15th September, 2019 for all States and Union Territories and Phase II was carried out between 1st October to 30th November 2019 for all States and UTs receiving the retreating monsoon namely Andhra Pradesh, Tamil Nadu, Karnataka and Puducherry.
- The Jal Shakti Ministry, which is executing the government's mission to provide clean and piped drinking water to every household in the country, has been earmarked with ₹ 28,261.59 crore in the budget 2019-20.
- The Ministry of Drinking Water and Sanitation and Ministry of Water Resources and Ganga Rejuvenation have been merged into the Jal Shakti Ministry.
- The National River Conservation Directorate (NRCDD), which was under the Ministry of Environment, Forest and Climate Change (MoEF and CC), will also be brought under it. It majorly implements pollution abatement works in polluted stretches of various rivers under the National River Conservation Plan (NRCP) and provides assistance to various State Governments in this sector.

Activities and Interventions Under JSA

During the campaign, officers from Central Government will work together with State Government officials and district officials and emphasis will be given on India's most water-stressed districts.

Under this campaign, targeted activities shall be undertaken under five areas of intervention, namely

- Water conservation and rainwater harvesting
- Renovation of traditional and other water bodies/tanks

- Reuse of water and recharging of structures
- Watershed development
- Intensive afforestation

In addition, the following interventions will be carried out

- Development of an integrated block and district water conservation plans which will incorporate the district irrigation plans.
- The conservation efforts will be supplemented by initiatives like developing block and district water conservation plans and 'Krishi Vigyan Kendra Melas' to promote efficient use of water for irrigation and better crop choices.
- Engagement of national level scientists and IITs to be mobilised. Targeted communication shall be designed to promote and achieve accelerated progress of the five identified interventions.

Key Points of JSA

- Special focus will be given to mobilise farmers and communities and encourage them to participate in the campaign.
- The Department of Drinking Water and Sanitation, Ministry of Jal Shakti is the nodal department for the campaign.
- One of the major outputs of Jal Shakti Abhiyaan is to develop 'district water conservation plan'.
- In urban areas, plans with time bound targets will be developed for waste water reuse for industrial and agricultural purposes.
- Plans will be developed for at least one urban water body for ground water recharge in the block or city.
- It is the governmental plans to run a water conservation similar to the Swachh Bharat Abhiyaan as there is a pressing need to make it a mass movement on the lines of cleanliness drive.

This is essentially a strategy to conserve, recharge and improve water use efficiency. The District Water Conservation Plan is developed by compilation of block level conservation plans, which is essentially the compilation of water conservation plans of respective Gram Panchayats (GPs) within the block.

Water scarcity is a reality that India is facing now. There are thousands of villages across the length and breadth of the country facing severe water scarcity. The monsoon has failed from time to time.

In this regard, Jal Shakti Abhiyaan (JSA) can be a turning point in conservation efforts undertaken by public participation. We must not treat the natural resources as our birthright and exploit them blindly.

FAKE NEWS MENACE

Mark Twain, the famous American writer once said, “A lie can travel halfway around the world while the truth is putting on its shoes”. Fake news has become a threat to peace in the 21st century. Fake news laws, regulations, controlling mechanisms etc. have been inadequate to control the spread of fake news. Fake news has created nuisance and endangered lives. Video clips, messages, jokes, photographs etc. are used to polarise the environment and spread violence to create trouble. This has been further aggravated by the spread of new form of media that is social media, which has gained strength over the traditional media. Fake news, disinformation etc. has been existent in the world since the times of the printing press. But in the age of internet, it has found itself at ease in a rapidly changing and busy world.

Popular social media platforms like Whatsapp and Facebook have been accused of spreading fake news and not keeping any watch on the fake news spreaders. Several fake news detecting portals and websites have been launched to curb the spread of disinformation but these have not been successful in successfully keeping a check on the spread of fake news.

How to Define Fake News?

The most important and difficult part in studying and analysing fake news is to first define as to what constitutes a fake news. Fake news can be defined as news, stories, or hoaxes created to deliberately misinform and deceive readers. It is a story that is not true and it has an intention to deceive. Usually, fake news is created to influence people’s views, push a political agenda, or cause confusion in the public. Fake news stories can deceive people by imitating trusted websites or using similar names and web addresses. The three main elements of fake news are: mistrust, misinformation and manipulation.

Fake news spread is leading to the possibility of potential violence, hatred and has impacted the social fabric of India in many ways. Given the social and political effects of fake news, there is an urgent need to have a uniform policy guideline in this regard. Lack of effective regulation by government agencies has given fake news spreaders a free hand in propagating the fake stories and furthering their agendas. No regulation specially offers large scope to private players and individuals in the online environment to spread misinformation freely.

Factors Contributed in the Rise of Fake News

Fake news is not a new phenomenon, it has existed prior to the advent of social media. But social media has turned out to be more influential than traditional media. Various other factors have also contributed to the spread of fake news. These factors are

- **Lack of Regulation** The online social media platforms do not fall under any strict regulation. Multiple online news portals and platforms have been setup due to lack of governmental regulation. The users themselves need to filter out fake information from the fake and real news, which is difficult for them to do on their own. Traditional sources of media are generally restricted by a self-regulated code but social media, which is internet based is lacking this self-regulator code.
- **Increase in Digital Devices** India has witnessed tremendous increase in digital devices over the past decade. Government initiatives such as Digital India program have led to increase in the users of digital media due to rise in number of smartphones. Increase in the number of smartphones has also been due to declining costs of these devices. All this has contributed to increased reach of digital media.
- **Sensationalisation of News** Sensationalisation of news by the mainstream media has resulted in the spread of misinformation. When sensational news is presented as true information, it tends to form misperceptions among the people. Fake news often spread a sensational news which people tend to believe easily. This contributes to the spread of fake news as what people believe, they tend to share it rapidly.
- **Stratified and Organised Campaigns** There are now specialised groups and teams which are hired to spread misinformation. Thus, the spread of fake news has become more organised and stratified. It contributes to the spread of fake news in a more systematic manner, that has the ability to target specific groups and members of the society.
- **Rise in Number of Bots** Bots are malicious tools that are specifically created for some special purpose. Social media platforms have become home to millions of bots that spread fake news and misinformation. These are nothing but computer codes which can be used to spread fake news rapidly. They are made to execute tasks systematically and repetitively without any human being operating it. They simulate the behaviour of human beings. These bots can interact with other users, spread message, replies and information.
- **Polarised Society** The society has become polarised on communal lines. There are divisions among social groups that tends to create more fake news by polarising the communal atmosphere. As people see news related to their rival groups, they tend to believe it easily without any fact checking. There are lack of mechanisms that can ensure that fake news related to communalisation of the environment can be checked and prevented from spreading.

Effects of Fake News on Society

Fake news is false news and it has dangerous effects on the society. These harmful impacts include

- **Bullying and Violence** Fake news can mislead people into bullying the other people of a particular community. False rumours and stories are circulated mainly through social media against particular communities that has the potential to incite violence against people of certain community.
- **Democratic Impacts** Fake news can create or change people's perceptions about a particular political ideology. People tend to view that ideology with great respect and reject other political beliefs. Fake news can promote leaders during elections by assigning particular social phenomenons with them. People tend to believe that a particular leader is good and they vote for them. It has serious democratic implications.
- **Increases Polarisation** Fake news is both a cause and consequence of communal polarisation. Fake news can spread misinformation about particular communities and religions, that can polarise the society and divide them socially as well as politically. It is dangerous for communal harmony as well as peace.
- **Harmful for Health** Fake news and misinformation can be harmful for the health of people. Certain fake news can spread fake information about treatment of diseases that is not medically certified. If this information spreads rapidly, it can lead to decisions which are harmful for one's health and wellness.
- **Challenge to Internal Security** Fake news can create challenges to internal security of a country. Fake information about the government or communities can disturb the internal security environment in a country that can be particularly difficult to manage through law and order machinery.

Conclusion

Fake news has become more systematic and organised in the 21st century. Therefore, an effort of similar intensity is required to fight fake news menace. There should be regulation of online social media platforms by establishing appropriate authorities that can make these platforms more accountable. There should be education on a massive scale so that people who tend to get attracted to fake news can be made aware about the ill effects of fake news. There has been a declining trust in the mainstream media and increasing trust in online media sources. This has given an undue advantage to the social media platforms. Increasing digital devices has increased the outreach of social media through internet.

Tools should be developed to find fake news and stop them from spreading. These tools can be particularly developed with the help of social media giants. The government, IT experts, private players and policy makers should take the lead in tackling the fake news menace. Campaigns to make viewers aware about fake news should be started by the mainstream news channels. Every member of the society has responsibility to combat fake news. There must be support for investigative journalism, reducing financial incentives for fake news and improving digital literacy among the public.

INDO-PACIFIC ZONE

AN EMERGING POWER ZONE

The Indo-Pacific Zone, sometimes known as Indo-West Pacific or Indo-Pacific Asia is a biogeographic region of Earth's seas, comprising the tropical waters of the Indian Ocean, the Western and Central Pacific Ocean and the seas connecting the two. The German geopolitician Karl Haushofer first used it in 1920. However, in the contemporary content the term was first used by Gurpreet Khurana. Since 2011, the term 'Indo-Pacific' is being used increasingly in geopolitical discourse. The spirit of this term was reflected in the speech of Shinzo Abe (Japan's then Prime Minister) to the Indian Parliament (2007) when he talked about the confluence of the 'Indian and Pacific Oceans' as 'the seas of freedom and prosperity'. From about 2011 onwards the term has been used frequently by strategic analysts and high-level government/military leadership in Australia, Japan and US.

With the rising involvement of the US in the new growth areas of Asia, the idea of the Indo-Pacific economic corridor was conceptualised during the US India Strategic Dialogue of 2013. Indo-Pacific has also featured prominently in the top level US strategic documents such as National Security Strategy, the 2018 Nuclear Posture Review. In 2019, the US department published a document formalising the concept of a "Free and Open Indo-Pacific".

Countries of Indo-Pacific Zone

The Indo-Pacific region is a geopolitical area that spans two regions of the Indian Ocean and the Pacific Ocean. Stretching from the West coast of the United States to the West coast of India, the Indo-Pacific is a 24 nation regional framework. Some of the important countries of the Indo-Pacific regions are Australia, Bangladesh, Bhutan, Brunei, Indonesia, Cambodia, India, Japan, Malaysia, Maldives, Myanmar, Nepal, New Zealand, Singapore, United States, etc.

Asian Pivot Theory

US think tanks gave the theory of 'Asian Pivot'. This theory was mainly directed at China, in order to sustain the hegemony of US. Trans-Pacific Partnership (TPP) is being considered as the economic arms of the Asian Pivot theory. However, experts view that by striking TPP under the leadership of US, the consequences will be wide and deep. In the midst of these developments, the recent decision of the US President Donald Trump denouncing the 12-member Trans-Pacific Partnership (TPP) came as a shock to the world community.

The enforcement of the TPP could have yielded annual income gains of \$295 billion, including \$ 78 billion in the US alone. It could also unleash potential gains of as much as \$ 1.9 trillion in the Asia-Pacific region through free trade. But the scenario has changed in the last few months. Global trade is going through turmoil, with growth declining and an increase in protectionism as countries are resorting to more and more non-tariff barriers, regulatory measures, higher standards, etc.

Similarly, Asia Pacific Economic Cooperation (APEC), a group of 21 Pacific Rim countries aims to promote free trade in the region. The main objective of APEC is to capitalise upon the potential of developing countries and to exploit the advancement in various fields of developed countries. The growing interdependence of these countries on each other aims to secure free trade and a robust economic partnership among the member countries.

Different Supranational Organisations

Some other supranational organisations where India has taken the top authority for fostering cooperation in the region are South Asian Association of Regional Cooperation (SAARC), Indian-Ocean Rim Association (IORA), Mekong Ganga Cooperation (MGC) and Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC).

However, the main drawback of all these organisations is the conflicted interests of the member countries, sharing similar interests in other organisations. Also, the lack of able leadership has ruined the objectives of these organisations. SAARC has been less effective due to perception of India by others smaller countries and the obstructive attitude of Pakistan. Similarly, IORA is only partially successful due to its diffused objectives, promoting open regionalism for strengthening economic cooperation and social development.

US Backing the Littoral States Over South China Sea

The conflict in the South China Sea is the manifestation of cartographic expansion of China. The littoral states of the region have staked claim over islands rich in mineral resources in the South China sea. China with its superior naval power have been able to brow-beat the neighbouring countries. However, US has backed the littoral states indirectly and has supported their claims over the islands, similarly, the theory of 'String of Pearls' given by experts has been an irritant for India. Based on the theory of String of Pearls China has been surrounding India by developing infrastructure in its surrounding ports in Gwadar (Pakistan), Hambantota (Sri Lanka), Sittwe (Myanmar). These are the manifestation of String of Pearls theory. Some areas of South-East Asia are infested with drug trafficking and human trafficking countries like, Thailand, Cambodia, Laos, etc are the hub of such crimes. This creates law and order and security issues in these areas.

Indo-Australian Agreement 2020

On 4th June, 2020, Indian Prime Minister Narendra Modi and his Australian Counterpart Scott Morrison conducted a 'Virtual Summit' to boost their bilateral relationship. In this virtual summit, they have signed 9 pacts including one to raise their relationship to a 'comprehension strategic partnership' for wider and deeper cooperation in diverse areas ranging from trade to defence. One of the main component of this summit was the joint declaration on a shared vision.

For maritime cooperation in the Indo-Pacific region. India is also considering Australia's participation in annual naval exercises it holds with US and Japan in the Indo-Pacific Zone in cementing of security ties between the four countries.

The long anticipated pact for sharing of military logistics will strongly step up cooperation and will give Indian warships and aircraft enhanced reach towards the Pacific. The shared vision for maritime cooperation had an indirect but clear message to Beijing about future ready operations in demand. Therefore, proper cooperation and crackdowns on these cartel are necessary for development of this area to make the Indo-Pacific zone, the Europe of 20th century.

The focus of the countries of the Indo-Pacific region is on connectivity, enhancing maritime security, counter terrorism, non-proliferation and cyber issues. All nations of the Indo-Pacific region always affirmed a shared commitment to maintain and strengthen a rule-based order in the Indo-Pacific in which all nations are sovereign, strong and prosperous.

154

INTERNATIONAL SOLAR ALLIANCE

INDIA'S LEAD FOR GLOBAL COOPERATION

The International Solar Alliance (ISA) is an alliance of 121 countries which aims to work for efficient exploitation of solar energy so as to reduce dependence on fossil based fuels. Its purpose is to bring together a group of nations to endorse clean energy, sustainable environment, clean public transport and a clean climate. It was formed as the result of the goals for renewable energy set by the UN World Summit on Sustainable Development in 2002.

These goals clearly state that renewable energy must be given priority in the future agenda of all countries. Solar energy is renewable and freely available in the tropical regions of the world. These regions lie between the Tropic of Cancer and the Tropic of Capricorn. So, the countries fully or partially located in these regions have been identified as prospective beneficiaries of ISA.

Need for ISA

The need for specialised agency under the UN system to promote renewable energy was felt ever since United Nations General Assembly (UNGA) resolution in 1981. This resolution underlined the urgency of cooperation among developing countries and mobilisation of financial resources for new and renewable sources of energy. Solar energy technologies had also made significant progress and were considered as sustainable alternative to energy based on fossil-fuel.

Absence of universal energy access, energy equity and affordability were issues common to most of solar resource rich countries. Hence, in order to obtain a rapid and massive deployment of solar technology in countries that are rich in solar resources (located between Tropic of Cancer and Tropic of Capricorn), the ISA was formed.

Formation of ISA

This initiative was launched by France and India during the climate Conference in Paris in December 2015. The ISA is the first intergovernmental organisation to be based in India. After the United Nations, it is the largest grouping of states worldwide. The ISA headquarters and interim Secretariat is at National Institute of Solar Energy (NISE) in Gurugram. India has contributed 25 million (US dollar) to the fund to build a campus and for meeting expenditure for the first five years.

Countries that do not fall within the tropics can also join the alliance and enjoy all the benefits as other members, with the exception of voting rights. The framework agreement of the International Solar Alliance opened for signatures in Marrakech, Morocco in November, 2016 and 200 countries have joined. This Alliance is also called International Agency for Solar Policy and Application (IASPA).

Objective of ISA

The main objective of ISA is to overcome any obstacles in the way of promoting solar energy. Another objective is to promote the development and use of solar energy to provide energy security to all for the present and in the future. ISA plans to generate 1 trillion watts (1000 gigawatts) of solar power by 2030. Another objective of ISA's is to motivate countries who are not ISA's members to increase the production and consumption of solar energy to achieve the goals of sustainable development for the world.

Benefits of ISA

The benefits of ISA are manifold. Some of them are mentioned below

- It provides a group identity to the member countries that will protect them against monopolistic international groups.
- It facilitates the member countries in developing innovating financial packages to bring down the cost of a capital to a level lower than the local interest rates on loan. ISA will also work with the countries that provide Overseas Development Assistance (ODA) to identify solar programmes in ISA member countries.
- It will give the demand push towards clean energy when the world is reeling under the impact of climate change due to pollution from energy generating plants like coal etc.
- The Alliance has a 24 × 7 Solar Cyber Centres. It will give open access, to all nations for advice and information on many projects and financial innovation.
- It could position India as an energy leader of sun-rich developing countries.
- It showcases India as a strong contender internationally and could generate job opportunities of a global natures.
- It will also facilitate in building up a pool of local trained technicians and entrepreneurs who can assemble Solar home lighting systems, Solar pumps, Solar mini grids etc.

Major Project of ISA

ISA has taken up three major projects, besides other projects, as part of its work. First, it assists member countries in drafting solar policies. These policies should include universal access to solar lighting, best practices to be followed and other crucial information. The second project is to develop standards, specifications and test procedures for solar energy systems. The third project is to design and implement training programmes for students, engineers, policy makers and others in this field. In this regard, the ISA will also organise workshops, focused meetings and conferences.

Focus Areas of ISA

ISA is focusing on two areas. Its first focus area is grid connected solar power systems. These are Solar Photo Voltaic (PV) power systems that are connected to the main electricity supply grid. They have solar panels, inverters, power conditioning units and grid connection equipment. Examples of such systems are solar parks, solar thermal projects, rooftop solar projects, canal top projects, etc. ISA's second focus area is off-grid and decentralised applications, which will mostly be used in villages and remote areas. These include village electrification networks, solar lanterns, solar mobile chargers, solar powered telecom towers, solar street lights, solar pumps and solar heating or cooling systems.

Major Initiatives of ISA

The organisation has taken three major initiatives to make solar power a universally available commodity. The first such programme is scaling solar applications for agricultural use. This brings reliable, affordable and made to order solar applications within the reach of all farmers in the alliance countries. It also helps in better storage of agricultural products, drying of crops and creation of livelihood opportunities in rural areas. The second initiative is called 'affordable finance at scale'. It means mobilising the low cost capital available in some countries for projects in ISA's member countries. This is being done by financing a large portfolio of projects together and also reducing their risks. Both these measures ensure that the rate of interest remains low. Most of the US \$1000 billion investments required in ISA programmes upto 2030 will be covered in this manner. The third programme is called 'scaling solar minigrids'. A solar minigrid is a system having a renewable energy based electricity generator of capacity 10KW and above. It should supply electricity to people for household use and to other users through a public distribution network.

India and ISA

ISA has provided a huge opportunity to India to take global leadership in the fight against climate change and reduction of carbon footprint. India stands 4th in wind power, 5th in renewable power and 6th in solar power in the world and initiative such as ISA provides a platform for sharing knowledge and practices, capacity building and joint research. The African countries are expected to benefit immensely from this Indian initiative. With enhanced focus and support through fiscal and financial incentives, the solar tariff has come down from around ₹ 18 per kwh in 2010 to ₹ 2.44 kwh in bids conducted in 2018. This can solve problem of lack of access and finance in rural areas of many countries. At the World Future Energy Summit held in Abu Dhabi in January, 2018, the Government of India announced the establishment of a USD \$ 350 million solar development fund to enable finance of solar projects.

Challenges for ISA

The first challenge is raising such a large amount of money for its various programmes. It is going to be difficult, because in the past, developed countries have been miser in funding renewable energy projects to developing countries. In addition, such a large sum like US \$ 1000 billion cannot be raised from public sources alone. Thus, the ISA will have to devise mechanisms to mobilise private finances.

Another challenge is that the ISA has to work in coordination with other similar bodies which have already been working in this area. These are Renewable Energy and Energy Efficiency Partnership (REEEP), an International NGO and International Renewable Energy Agency (IRENA), a UN organisation.

There are several countries 'blessed with high solar radiation. Through ISA, India is making efforts to bring these countries together for enhanced solar energy utilisation through research and technology upgradation.

ISA is a reflection of India's commitment for universalisation of the use of solar energy. It has the potential to transform the world's energy scenario while yielding social and economic gains for the global population.

155

BHARAT RATNA AWARDS

Bharat Ratna' is the highest Civilian Award of the country. It was instituted in the year 1954. It is awarded in recognition of exceptional service/performance of the highest order in any field of human endeavour without distinction of race, occupation, position or sex. The recommendations for Bharat Ratna are made by the Prime Minister himself to the President with a maximum of three nominees being awarded per year.

Criteria/Significance of Bharat Ratna

On conferment of the award, the recipient receives a Sanad (certificate) signed by the President and a Medallion. Bharat Ratna recipients rank seventh in the Indian order of precedence.

In terms of Article 18 (1) of the Constitution, the award cannot be used as a prefix or suffix to the recipient's name. However, if an award winner consider it necessary, he/she may use the expression 'Awarded Bharat Ratna by the President' or 'Recipient of Bharat Ratna Award'.

Specifications of the Award

The current Bharat Ratna medal is in the shape of a Peepal Leaf, about 59 mm long, 48 mm wide and 3.2 mm thick and rimmed in Platinum. The carved sun burst design, made of platinum, on the obverse side of the medal has a diameter of 16 mm with rays spreading out from 21 mm to 13 mm from the centre of the sun. The text 'Bharat Ratna', in Devanagari Script, is inscribed on the upper edge in silver gilt with a wreath set along the lower edge.

A platinum State Emblem of India is placed in the centre of the reverse side with the National motto, 'Satyameva Jayate' (Truth alone triumphs) in Devanagari Script, inscribed in burnished bronze on the lower edge. A 51 mm white ribbon is attached to the medal so that it can be worn around the neck.

The recipient receives a certificate signed by the President along with the medallion without any monetary grant. When the awards were first awarded, they were originally limited to achievements in the arts, literature, science and public services, but the government expanded the criteria to include 'any field of human endeavour' in December 2011. The original rules did not allow posthumous awards but were amended in January 1955 to permit them.

Famous Recipients of Bharat Ratna

The first recipients of the Bharat Ratna Award were Politician C Rajagopalachari, Philosopher Sarvepalli Radhakrishnan and Scientist CV Raman, who were honoured in 1954. Since then, the award has been bestowed upon 48 individuals, including 14 who were awarded posthumously. Former Prime Minister Lal Bahadur Shastri became the first individual to be honoured posthumously.

Sachin Tendulkar (Cricketer) is the youngest recipient of this award at the age of 40 in 2014. Whereas Social reformer Dhondo Keshav Karve is the oldest recipient of the award at the age of 100 in 1958.

The award is not limited to Indian citizens only, as it has also been bestowed on one naturalised citizen, Mother Teresa and two non-Indians, Pakistani National Khan Abdul Ghaffar Khan and former South African President Nelson Mandela.

2019 Awardees

On eve of the Republic Day 2019, the government announced the award to social activist Nanaji Deshmukh (Posthumously) from Maharashtra, Singer-music director Bhupen Hazarika (Posthumously) from Assam and to Former President of India Pranab Mukherjee from West Bengal.

The detail of the working of the person who received Bharat Ratna Award on the eve of the Republic day 2019 are given below

- **Chandikadas Amritrao Deshmukh**, also known as Nanaji Deshmukh, (1916-2010) was a social activist who worked in the fields of education, health and rural self-reliance. He was inspired by Bal Gangadhar Tilak and his nationalist ideology. He showed an acquired interest in social service and related activities. Although, he was born in Maharashtra, most of his social work was done in Uttar Pradesh.

After independence, he was a member of the Parliament twice, once as an elected member of the Lok Sabha (1977-1979) and second as a nominated member of the Rajya Sabha (1999-2005). He was honoured with the Padma Vibhushan in 1999.

- **Bhupen Hazarika** (1926-2011) was a playback singer, lyricist, composer, singer, poet and film-maker from Assam, widely known as Sudhakantha. His songs, written and sung mainly in the Assamese language by himself, are marked by humanity and universal brotherhood. They have been translated and sung in many languages, but mostly in Bengali and Hindi. His songs based on the themes of communal amity, universal justice and empathy, have become popular among the people of Assam, West Bengal and Bangladesh.

He has been awarded all the National Civilian Awards as well as other awards, including Padma Shri (1977), Dadasaheb Phalke Award for lifetime contribution to Indian Cinema (1992), Padma Bhushan (2001), Sangeet Natak Akademi Fellowship (2008), Asom Ratna (2009) and Padma Vibhushan (2012, posthumously).

- **Pranab Mukherjee** (born in 1935) was a politician who served as the 13th President of India from 2012 to 2017. In a political career spanning almost 50 years, he had been a senior leader in the Indian National Congress and had occupied several ministerial portfolios in the Government of India. Prior to his election as President, he was Union Finance Minister from 2009 to 2012. He had been a member of both the Rajya Sabha and Lok Sabha at various times. He had also received the Padma Vibhushan Award in 2008. He died on 31st August, 2020

Controversies

Over the years, the Bharat Ratna Award has been surrounded by several controversies and a number of Public Interest Litigations (PILs) had been filed against the conferral of the award. Important personalities such as Dr BR Ambedkar and Vallabhbhai Patel were awarded as late as 1990 and 1991, respectively. The posthumous award to MG Ramachandran (1988) was considered to have been aimed at placating the voters for the state assembly election in the Tamil Nadu.

Jawaharlal Nehru was also targeted of awarding Bharat Ratna to himself while serving as Prime Minister of India in 1955. However this claim is not completely true as the then President of India, Rajendra Prasad confessed to have decided to confer this award on Nehru. Similar claims have been made with regards to Indira Gandhi but this accusation has also been found to be incorrect.

Further, the posthumous conferments of the award on those recipients who died before institution of award have been criticised by historians. According to them such conferments could lead to more demands to honour people like Ashoka, Akbar, Shivaji and Swami Vivekananda. Some critics also argue that this award is awarded only after recipient get global recognition. They cite the examples of Mother Teresa and Amartya Sen.

The Bharat Ratna Award have been instituted to honour persons who have given exceptional service to the nation. There is need of objectivity while recommending names for the award, further they should not be politicised, as has been done in some cases in the past.

UNITED NATIONS AND WORLD PEACE

The United Nations was established in 1945 with an aim to save the future generations from the evil of war. The major objectives of United Nations was to maintain world peace and security, promoting human rights, protecting environment and ensuring socio-economic justice.

Agencies of UN for World Peace

The charter of the United Nations gives the Security Council primary responsibility for the maintenance of international peace and security. Over the decades, the UN has helped to end numerous conflicts. The conflicts were mainly resolved by the actions of Security Council. However, the other organs of United Nations like, the General Assembly, Secretary General, World Health Organisation (WHO), the World Food Programme (WFP), United Nation's Children's Fund (UNICEF) also contributes in maintaining peace throughout the world.

Role of UNSC in Maintaining World Peace

The Security Council adopts a range of measures to secure peace and harmony in a region. The establishment of United Nations peacekeeping operations is one such measure. The council may also decide on sanctions, such as trade ban to enforce its decisions. There are several instruments of the UN's peace efforts. These instruments are conflict prevention and peacemaking, peacekeeping, peacebuilding, disarmament, counter terrorism operations and fighting organised crimes.

Instruments Adopted by UN in Achieving Peace

There are several instruments adopted by UN in achieving peace. Some of them are mentioned below

- **Conflict Prevention and Peacemaking** United Nations uses the political tools of preventive diplomacy and mediation to help nations prevent and resolve conflicts peacefully. United Nations envoys are dispatched to areas of tension and assist in diffusing crisis. The UN Secretary General also facilitates in resolving the conflict.
- **Peacekeeping** UN Peacekeeping Operations plays an active role in intra-state peacemaking efforts. The United Nations Truce Supervision Organisation (UNTSO) was set up in 1945 to monitor an armistice agreement between Arab and Israel and its Arab neighbours, or the UN Mission on the Golan Heights.

Today, they often play an active role in intra-state peacemaking efforts and get involved in peacebuilding activities. The complex multi-dimensional peacekeeping process includes military, police and civilian components. UN peacekeeping process is guided by three principles such as consent of parties, impartiality and non-use of force except in self-defence and defence of the mandate.

UN peacekeeping operations may use force to defend themselves, their mandate and civilians particularly in situations where the state is unable to provide security and maintain public order.

- **Peacebuilding** United Nations also focus on peacebuilding efforts to reduce a country's risk of getting into conflict. United Nations strengthen the national capacities for conflict management and also lays the foundations for sustainable peace and development. The United Nations has established the Peacebuilding Commission in 2005 to better anticipate and respond to the challenges of peacebuilding.
- **Disarmament** The need for peace and reduction in arms worldwide has led United Nations to pursue disarmament. The goal of United Nations is to eliminate nuclear weapons, destroy chemical weapons as well as biological weapons. For this purpose United Nations Office for Disarmament Affairs (UNODA) was established in 1998. It foster disarmament measures through dialogue, transparency and confidence building on military matters and encourages regional disarmament efforts. It also provides objective, impartial and up-to-date information on multilateral agreements, intergovernmental organisations and agencies of the United Nations system.

The Non-Proliferation Treaty is an international treaty. Its objective is to prevent the spread of nuclear weapons and weapons technology. The treaty binds the nuclear weapon nations to the goal of disarmament.

Another important treaty adopted by United Nations is the Comprehensive Nuclear Test Ban Treaty (CTBT). It is a multilateral treaty that bans all nuclear tests, both civilian and military purposes in all environments.

- **Counter Terrorism** United Nations is also trying to counter the evil of terrorism. Eighteen universal instruments against international terrorism have been elaborated within the framework of the United Nations system relating to specific terrorist activities. A global strategy to counter terrorism was agreed in September 2006 in which all member states of the United Nations have agreed to a common strategic and operational framework to fight terrorism.
- **Organised Crimes** It occurs in many forms such as trafficking in drugs, firearms, money laundering and corruption. Today organised crime has diversified, gone global and constitute a threat to peace and security. The United Nations Office on Drugs and Crime (UNODC) is the guardian of the United Nations Convention against Transnational Organised Crime (Organised Crime Convention) and three supplementary protocols on trafficking in persons, smuggling of migrants and trafficking of firearms.

It has three primary functions, research, guidance and support to governments in the adoption and implementation of various crime-drug, terrorism and corruption related conventions, treaties and protocols as well as technical/financial assistance to the governments to face their respective situations and challenges in these fields.

- **Human Rights** United Nations promote and protect human rights around the world. United Nations Human Rights Council (UNHRC) addresses human rights issues across the world which are central to the international peace.

Another specialised agency, United Nations High Commissioner for Refugees (UNHCR) has also contributed in maintaining world peace. The agency currently oversees the influx of refugees from any war torn, restive nation. The agency provides in situ and ex situ assistance to migrants and refugees like shelter, food, education, healthcare, etc at relief camps set up by it.

Challenges Before UN

There are certain weaknesses in UN organisational structure, in restoring peace worldwide. The UNSC which is exclusively mandated to maintain international peace does not have true international representation. This has led to the accusations that UNSC only addresses the strategic interests of particular nations. The veto power in Security Council is mainly used by its permanent members to promote self-interest and geo-political concern of allies.

Furthermore, the charter only enables UNSC to observe, report and make recommendations regarding international conflicts. Apart from these challenges, lack of permanent army, highly bureaucratic structure and depleting funding proves hindrance for UN to fulfill its mandate in maintaining peace.

Suggestions

The challenges and limitations of United Nations has compromised its working. It has failed to resolve the greater and older issues of the world like, Kashmir, Cyprus and Palestine. The hands of this great institution ought to be untied. Some of the suggestions in this regard are as follows

- Veto power of UNSC should be cancelled.
- A joint venture army should be provided to United States permanently.
- UN should launch efforts to preach tolerance and indiscrimination.
- The Imperial powers should be barred from interfering into the matters of smaller states.
- The world should be made armless gradually.

In the present time, whole world is grappling with religious fundamentalism and multi-ethnic violence. UN backed intervention is necessary in a world to restore peace and non-violence. Peace keepers of UN monitor and observe peace processes all over world. Global peace is the need of the hour. In this regard, United Nations Organisation has greater role to play.

INDIA-PAKISTAN CONFLICT

TIME TO RESET OUR RELATIONS

India-Pakistan relationship is grounded in the political, geographical, cultural, and economic links between the two countries of South Asia. The two countries share common geographic location, but differ greatly in religious demographics.

India is a secular country with majority Hindu religion, whereas Pakistan is an Islamic country with Muslims in majority. Diplomatic relations between the two are defined by the history of the violent partition of British India into these two countries and numerous military conflicts and territorial disputes thereafter.

Historical Context of Indo-Pak Conflict

India-Pakistan conflict is one of the long lasting and unresolved conflicts of modern times. It started with the birth of Pakistan as a different state in 1947 after the British empire came to an end in India. Since the partition, these two South Asian countries have been the arch rivals. The rivalry has gone through several wars, terrorist activities and nuclear tests by these countries. The origin of the India-Pakistan conflict is deep-rooted in the issues such as religion and the politics of revenge. Problem of Kashmir is the most important issue for the tension between India and Pakistan. Some of the other issues between these two nations are sharing of water, terrorism, arms race etc.

In the last two to three decades, India has witnessed many insurgent attacks in different parts of the country. The attack on the Indian Parliament (2001), Samjhauta Express blasts (2007), Mumbai Attacks (2008), Uri Attack (2016) and Pulwama Attack (2019) and Pakistan sponsored proxy wars have further led to the strained relationship between the two countries.

Reason for Indo-Pak Conflict

Some of the factors which led to the hostile relationship between the two countries and ultimately resulting into a full scale war are as follows:

- **Terrorism and Drug Trafficking** Pakistan has been trying a proxy war by supporting terrorist activities in Kashmir and rest of India. India has often tried to draw the attention of international community towards it. Pakistan has also aided and sponsored the terrorist activities on their soil to attack India. Besides this, Pakistan has also sponsored the insurgency especially in Kashmir and Punjab by fueling anti-India sentiments. Illegal drug trafficking across the border has also spoiled the future of youths in Pakistan.

- **Kashmir** Kashmir remains the biggest issue of dispute between India and Pakistan. Jammu and Kashmir has been Central to Indo-Pak conflicts since the partition of the two countries. Pakistan claims it to be its territory, since the majority of population is Muslims. On the other hand, India believes that the Kashmir is a legal part of their territory as the Maharaja of Kashmir had already acceded the territory of Kashmir to India in October 1947. In 2019, after the revocation of Article 370 of Indian Constitution, tension between the two countries has further escalated. Pakistan, as a reaction, downgraded the diplomatic ties with India and also stopped bilateral trade between two countries.
- **Issue of River Water** Another issue which is causing the problem with these two countries is the use of water. Many rivers rise from India and flow down to the Pakistan. Pakistan accuses India of not abiding by Indus Waters Treaty (1960) under which India can use the waters of three Eastern rivers and Pakistan can use water of three Western rivers. Pakistan says India is diverting these waters by building dams. Pakistan is very much dependent on these waters for the farming and other needs of its population. India, on the other hand, has denied all these accusations made by Pakistan.
- **Siachen Glacier and Sir Creek Issue** Siachen Glacier is under the control of Indian Army. There has been a demand for withdrawal of Indian troops from Siachen. However, Siachen holds a strategic importance for India and India has refused to agree to the demand. The objection of Pakistan has led to further tension between the two countries.

On the other hand, Sir Creek is a 60 km estuary in the Rann of Kutch. The Rann of Kutch lies between Gujarat on the India side and Sindh on Pakistan side. The main problem arises between India and Pakistan because of the boundary line which divides Sir Creek.

- **Arms Race** The rivalry among two nations in India-subcontinent has led to an arms race. India conducted its first nuclear test in 1974 and after that Pakistan has also succeeded in wielding nuclear weapons. However, the instability in politics and governance of a nuclear weapon state like Pakistan is a constant threat to India.

Indo-Pak Wars

Conflicts arising due to border dispute, Kashmir problem, water dispute and other terror controversy have led to most violent outbreaks in terms of Indo-Pakistan wars. The Indo-Pak War of 1947-48, 1965 and Kargil War of 1999 was fought primarily on Kashmir issue. In 1971, Pakistan faced a Civil War between West Pakistan Army and East Pakistan Army.

The Civil War resulted in many people escaping to India from East Pakistan. After that, Indian Army invaded the East Pakistan to help the persecuted people. Consequently, Pakistan Army surrendered to Indian Army and war came to end with the birth of another country, called Bangladesh.

Need for Peace in South Asia

South Asia is majorly under geo-political tensions owing to sectarian and ethnic violence, communalism and terrorism. India has suffered many wounds as a result of cross-border terrorism. Since South Asian countries constitute a major proportion of world; the need of hour is to bring peace in the region.

Peace in the region will enable the countries especially India and Pakistan to counter other issues pertaining to poverty, education, unemployment and equitable growth. Creating a neighbourhood of compatible interests in South Asia appears to be difficult many a times, however, revival of South Asian Association for Regional Cooperation (SAARC) can be a good start. Further, to establish permanent peace, South Asian countries should commit themselves to a single defence and security structure to combat terrorism.

Solution to Indo-Pak Conflict

- Deterioration of bilateral relations between India and Pakistan has created a need for comprehensive and sustainable conflict resolution mechanism.
- India-Pakistan conflicts are the manifestation of several factors which has plagued the history of these two nations since the partition. If decades of conflict are to be settled, the two sides must do much more to address grievances and deal with the legacies of a half century.
- India-Pakistan needs to foster all forms of bilateral contact.
- Dialogue will have to be expanded beyond high governmental levels if real constituencies for peace are to be nurtured.
- People to people contact can be another paradigm which is capable of restoring normalcy in relationship.
- In addition to this, full fledged trade relation can further bridge the gap between two countries.
- Soft diplomacy, in terms of culture, medicine, colonial linkages and shared history, hockey and cricket can be vital in restoring the peace among two neighbouring countries.

The perfect balance of soft and hard power diplomacy coupled with International diplomacy is the need of the hour to strengthen the bilateral engagements between India and Pakistan. A lot of efforts are being made by both the sides to improve the relationship. There have been several peace talks between India and Pakistan.

However, militant attacks continue to obstruct the progress to maintain the peace. Pakistan must stop supporting the terrorist activities in India to ensure peace process. Previous attempts to reach agreement have all faltered due to violence. It is vital that the peace attempts be structured in such a way that makes them more durable and less prone to disruption by extremists or violence.

BREXIT PROCESS

DEAL OR NO DEAL

Brexit is a combination of ‘Britain’ and ‘exit’ and had become the short name for the 23rd June, 2016 referendum on the question, “Should the United Kingdom (UK) remain a member of the European Union (EU) or leave the EU?”. The referendum was held throughout England, Scotland, Wales and Northern Ireland. This was the first vote of its kind in the history of the economic and political bloc in its modern form.

Background of Brexit

The EU is a grouping of 27 countries (after Brexit) that trade and allow their citizens to move freely between nations to work and live. Initially, it was built on the ruins of World War II to end centuries of bloodshed and to integrate economic power.

The UK joined the European Economic Community (a regional organisation that aimed to bring about economic integration among its member states) in 1973, which then became the part of the EU when it was created in 1993. However, the UK always had maintained a distance from the EU. It has its own currency, the Pound Sterling and refrained from joining the Schengen Agreement, which removes internal border controls within the EU. The political fraternity in Britain always included people who were opposed to the idea of EU and this opposition intensified after the 2008 financial crisis.

Immigration of migrants from poorer EU states and the fear of refugees from Syria, Africa and the Middle East further intensified scepticism among voters and the politicians. In 2012, the then Prime Minister David Cameron had promised to hold a referendum on whether the UK should remain in the EU or leave it. Accordingly, UK held the referendum on 23rd June, 2016. The leave (Pro-Brexit) campaigners won the referendum by 51.9% to 48.1%.

Withdrawal Process from European Union

Withdrawal from the European Union is governed by Article 50 of the ‘Treaty on European Union’ and introduced by the ‘Treaty of Lisbon’ at the insistence of the UK. The article states that any member state can withdraw, in accordance with its own constitutional requirements by notifying the European Council of its intention to do so. The notification triggers a two-year negotiation period, in which EU negotiates with the leaving state, sets out the arrangements for its withdrawal and takes account of the framework for its future relationship.

Present Scenario of Brexit

Parliament of United Kingdom in 2017 had issued a formal notice as per Article 50 of the Treaty on European Union. It marked the beginning of the legal process for UK to depart from the EU. The UK Parliament passed the European Union (withdrawal) Act, 2019 which received royal assent on 9th September, 2019. On 28th October, 2019, the third extension was agreed to by the EU, with a new withdrawal deadline of 31st January, 2020.

Subsequently, the government introduced a bill to ratify the withdrawal agreement and it became law on 23rd January, 2020 as the European Union (Withdrawal Agreement) Act 2020. Finally, on 31st January, 2020, the UK formally withdrew from the European Union. At present, there is transition period during which UK and EU are negotiating their future relationship. This transition period will end on 31st December 2020.

Reason for Brexit

Several reasons have been attributed for Brexit. However, two major driving forces that led to the win of leave (Pro-Brexit) campaigners were issues of immigration and the repercussions of the financial crisis of 2008.

The EU was expanded to include post-communist countries in the mid-2000s and people in those countries were poorer. Many of their citizens immigrated to wealthier countries like the United Kingdom. This led to the discontent among local population. With the rise of nationalistic identity, many Brits identified 'immigration/race relations' as a top issue being faced by the country.

The 2008 market crash hit some European countries really hard. Since, people from those countries couldn't find a job in their own country; their citizens went to find jobs in other countries like the United Kingdom. This further aggravated the situation. Furthermore, Brits faced suffocating amount of red tapism in hands of EU officials. This led to the English people deciding to 'take back control' of their country's bureaucracy.

Arguments in Favour of Brexit

Arguments given in favour of Brexit are as follows

- **Brexit Control Immigration** Immigration is a sensitive subject to UK. Brexiteers argued that EU has struggled to address the migrant crisis effectively. Migrants are also taking the jobs from British citizens.
- **Brexit Reasserts British National Sovereignty** Many people who wanted Britain to leave the EU, see it as an opportunity to reassert British national sovereignty and in a sense, liberate Britain from the bottlenecks of EU both politically and financially.
- **Brexit Make Britain Great Again** Brexiteers argue that Britain's economy would be better off after an exit. They argue that UK would be more competitive because it could make its own trade deals with other nations and legislate in the interest of British manufacturing.
- **Brexit Reflects the Brussels Bureaucrats** According to the Brexiteers, EU has become centralising institution with strict rules and regulations. According to them, the countries that succeed in the future global economy will need to be flexible, adaptable and control their own destiny which Brexit allows.
- **Security Concerns** The Brexiteers argue that the security risk will increase if the UK does not have control over its borders as leaving EU will mean strict regulation over borders.

Arguments Against Brexit

The remain with EU or the people who argue against the Brexit has also put some of the reasons against Brexit deal. Some of them are as follows

- The pro-EU members argue that the migrants from European Union member countries contributed more to the national economy than they took out.
- The remain side argue that in the era of international terrorism and criminality, cooperating with the EU would have made the UK safer.
- The remain side also argues that as three million jobs are tied to the EU there could be a jobs crisis after UK leaves the EU.
- The remain side argues that access to the single European market, free of tariffs and border controls, is critical for the UK as 45% of its trade is with the EU.
- Anti-Brexiters argue that Brexit would have adverse affect on British Economy and will make the Britain poorer.
- The remain side argues that Britain had proved that it could opt out of some EU policies which it considered counterintuitive, such as adoption as the Euro, Schengen Agreement and hence keep its sovereignty intact.
- The remain side also argues that million of jobs linked to Britain's membership would be put at risk after Brexit. Some sectors such as nursing and manufacturing could experience a slump in skilled labour.

Impact of Brexit on European Union

Brexit will weaken those forces in the EU that favour greater integration. Brexit will strengthen the claim of countries like Greece and Spain which wants greater autonomy in their internal functioning. An impending fear of greater German dominance might become a reality. Britain's presence is somewhat balanced the power of Germany.

While the trade impact of Brexit on the UK is likely to be significantly negative, its impact on the EU is also expected to be negative, but small. The UK and the EU would become each other's biggest trading partner but some member states, notably Belgium, Cyprus, Ireland, Germany and the Netherlands are more exposed to a Brexit induced economic shock.

Impact of Brexit on India

Britain, since decades, has proved to be a gateway to Europe but the end of this union will perhaps make Britain less attractive for Indian investors. India will have to maintain separate trade negotiations with Britain and the European Union after Brexit deal. Also, India is the second largest source of Foreign Direct Investment (FDI) for Britain and it would not want to lose its Indian investors. Thus, India can expect a less regulatory British market for trade and investment. However, the Brexit negotiation has also created a sense of 'grave uncertainty' about the future trading scenario with respect to India.

The Brexit is termed as a major ideological shift, characterised by strong immigration laws, strict borders and inward-looking economy. This is against the major strain of globalisation. Its effect might be far-reaching. Rescuing a workable and reasonable outcome from the damage caused by Brexit is massively challenging. But it is vital to try, for the sake of future generations above all.

Britain, as of now, has a transition period where it can negotiate issues like trade, migration, taxes and regulations on different sectors. But to see the impact of Brexit, the world will have to wait and watch.

ENERGY CRISIS

AN OPPORTUNITY TO PUSH CLEANER ENERGY

The current challenges faced by the world's energy systems are far greater than those many decades ago. The world is dependent upon fossil fuels for its energy needs. The fossil fuels of the world are limited in volume. These are depleting fast due to improved standards of living and increasing energy needs of the world. Burning fossils such as coal, petroleum etc. also released greenhouse gases which are harmful for the environment as they contribute to climate change. Over the years, energy needs have skyrocketed because of transportation and industry and the exhaustible resources of the world are close to exhaustion. This has created an unprecedented situation for the world in terms of energy crisis. Though renewable and cleaner energy sources such as wind, solar energy are a sustainable solution to energy crisis but these have not been promoted on a large scale so as to really replace the fossil fuels.

In recent decades, scientific community has raised its voices against use of fossil fuels and promotion of the use of renewable clean energy resources to meet the increasing energy demands of the world and strongly face the challenge of energy crisis.

Causes of Energy Crisis

Energy needs of the world have grown so huge that it has become unsustainable to meet the demands with the help of current resources. Various factors have been responsible for creating a global energy crisis

- **Increasing Population** The global population has increased to over 7 billion people. Such large number of people have increased the energy demands across the world. The growth of fossil fuel based energy can not be increased as they are limited resources which takes millions of years to regenerate. Increasing population leads to overconsumption of resources. It is estimated that it will take 70 more years only to exhaust the current oil resources and another 30 more years to exhaust the natural gas.
- **Ageing Infrastructure** Presently, the world companies use ageing infrastructure to exploit energy resources which slows down production. It is required to carry out infrastructure upgrades so that energy production and distribution can be enhanced and energy crisis can be managed.
- **Unexplored Renewable Energy** Renewable energy is still unexplored and unexploited as it has not matched the costs at which non-renewables can be exploited. Thus we have not yet been able to make renewable energy resources viable and accessible and produce cleaner energy.

- **Wastage of Energy** The world does not yet realise the importance of conservation of energy. Still energy resources are wasted as they are not efficiently used. Energy conservation is limited to books, papers, research etc. Simple actions like switching off fans, lights when not in use. Usage of solar energy etc. leads to energy efficiency and lesser wastage.
- **Accidents and Disasters** Accidents such as volcanic eruptions, earthquakes, disruption in pipelines etc. can cause interruptions in power supply. Energy generating infrastructure installed in disaster prone areas can make power supply vulnerable to disruptions.
- **Wars and Attacks** Wars and conflicts between countries can lead to disruption in global energy supplies. Most of the world's current oil output comes from the gulf states. Any disruption in the West Asian region can seriously affect oil production and create disturbances in energy supplies.

Renewable energy-fighting energy crisis

Renewable energy resources such as solar energy, wind energy, hydroelectricity etc. has great potential to fight energy crisis. Renewable energy is generated from infinite natural resources that do not have a negative and harmful impact on the environment. Energy crisis across the world can be fought with these resources because of the following qualities

- **Found in Abundance** Renewable energy resources are found on the planet in abundant quantities. They are not exhaustible unlike the non-renewable resources. They will not get exhausted if they are used in infinite quantities. These resources get rejuvenated within a short period of time.
- **Require Low Maintenance** Renewable energy resource facilities require less maintenance as compared to the traditional fossil fuel based generators. This enhances the working of renewable energy resources and improves production capacity. This can improve energy production according to the demands in the world and can prevent energy crisis.
- **Lesser Reliance on Imports** Most of the world's non-renewable energy resources such as coal and petroleum resources are imported by domestic countries. There is no need to import renewable energy resources as they are locally available in the environment in the form of air, water, heat, sunlight etc. Reduced dependence upon imports makes the country more secure about the energy needs.
- **Environmental Benefits** Apart from the economic benefits, renewable energy resources have apparent environmental benefits too. They are non-polluting energy resources that can be generated and distributed without causing any harm to the nature. Traditional resources such as coal and petroleum creates environmental hazards that are harmful for the energy security of the country.
- **Promotes Regional Economy** Renewable energy resources are beneficial for such as wind and solar energy the regional local economies as most of the renewable energy resources such as wind and solar energy are produced away from the bigger cities. Production in regional areas can bring economic benefits to these economies at the local scale. It improves local purchasing power and reduces the dependence of local population of large cities and towns for getting services and employment. If local regions become self-sufficient, it can fight any crisis.

- **Improved Public Health** Promotion of renewable energy resources can have ripple effects which can improve public health as they emit lesser pollution in the environment. Improvements in public health will put lesser burden upon the health infrastructure. Thus, renewable energy resources not only makes a country energy secure but also provides other benefits that are positive in nature.
- **Resource Stability** Renewable energy resources are stable energy resources as the power generated by these resources is stable and reliable. They are relatively cheap to produce if technology is developed properly. In many parts of the world renewable resources have already become more viable than most of the fossil fuel based energy resources.
- **Diverse Base** Renewable energy can be created by using various methods such as wind, nuclear, hydropower, solar energy, thermal energy etc. Thus, there is a diverse base from which energy resources can be obtained by renewables. It improves the scope of generating power without relying upon other forms of energy.

Conclusion

As the renewable energy resources start to run out of volume, the world is moving towards a situation of energy crisis. Renewable energy resources offer huge potential to fight against energy crisis. Fossil fuels have been long used now for energy generation. It is imperative that the world shifts from non-renewables to the renewable energy resources as they offer huge advantages in terms of economy, society and the environment. Renewable energy seeks to make the country independent in terms of its energy requirements. Moving closer to renewable energy means moving far away from the situation of energy crisis. Till renewable energy resources are fully developed and made viable, there must be increased focus upon using energy efficient products and performing regular energy audits so that it can be ascertained at the local level that how much energy can be saved. Though renewable energy is expensive to install and has limited distribution and generation across the world, it still pays off in the longer term. The technologies to develop renewable energy is still immature and needs to be made more viable so that dependence upon non-renewable polluting energy resources can be reduced and renewable & cleaner resources can be used. There will be no energy crisis if there is better use of environmental friendly resources.



INDIA-NEPAL RELATIONS



India enjoys a relation of friendship and cooperation characterised by open borders between the two countries and deep rooted ties between people of both nations. Traders, businessman, doctors, engineers, IT professionals, labourers etc. from India reside in Nepal. Nepalese citizens enjoy unparalleled advantages in India, availing opportunities equal to Indian citizens. Relations with India has allowed the Nepalese citizens to enjoy freedom of movement to and from India without any hesitancy. Nepal shares its border with five Indian states of Uttarakhand, Uttar Pradesh, West Bengal, Sikkim and Bihar. These states themselves share important economic and cultural ties with Nepalese citizens.

About 250 small and large rivers flow from Nepal to India and form an important part of the Ganga river basin. These rivers form an important source of irrigation and power for both the countries. There have also been initiatives to promote people to people contacts in areas of culture, academics, media etc. There are many Hindu and Buddhist religious sites in Nepal making it an important pilgrim site for a large number of Indians.

Indo-Nepal Border

India-Nepal border is an open international border having a length of 1770 km. Indo-Nepal border runs across the Himalayan Mountain regions as well as the great plain region. The border was delimited after the Sugauli Treaty of 1816 between Nepal and British Raj. During the late 18th century, the Nepali Kingdom launched an expansion drive which brought them into direct conflict with the British that resulted in Anglo-Nepalese war between 1814-16. Nepal was defeated and through the Treaty of Sugauli, it was forced to cede large areas of its territories to Britain.

After the Independence of India, Nepal and India signed friendship treaty by which both the countries agreed to respect each other's territorial integrity. There have not been many disputes along the Indo-Nepal border and the border has remained peaceful. Minor disputes over the Kalapani region and Susta region have remained unaddressed but they have not significantly affected the relations between both countries. Tens of thousands of people cross the border everyday for tourism and employment. The Indian side of the border is regulated by Sashastra Seema Bal along with local police, whereas the Nepal side is regulated by Armed Police Force along with local branch of Nepal police.

Areas of India and Nepal Relations

India and Nepal cooperate and coordinate with each other in spheres of economy, trade, development, disaster management, connectivity, culture and defence. There are people to people contacts and deep ties between the people of both countries.

The India Nepal ties span in following areas

- **Religion and Cultural** There are strong religious and cultural relations between both countries. Hinduism and Buddhism flourish in Nepal having various centres of worship. Buddha was born in Lumbini located in present day Nepal. Nepal has more than 80% of people as Hindus and several Hindu shrines and temples.
- **People to People Ties** People to people ties are strong between both countries. There are marriage and familial ties across the border on both sides. There is unhindered access and movement of people from the border across both sides. Famously, the ties between people on both side is known as Roti-Beti ka rishta, which means employment and familial relations.
- **Economic Sphere** India is Nepal's largest trading partner as well as largest source of foreign investments. Nepal has unhindered access to Kolkata port for its sea trade. Indian firms are engaged in manufacturing and service activities in Nepal.
- **Connectivity** Nepal is a landlocked nation having a difficult terrains. India plays a crucial role being a gateway to Nepal with open borders and connectivity initiatives. India has developed various infrastructure to enhance connectivity in Nepal. Railways connectivity is established between Kathmandu and Raxaul in Bihar.
- **Water Resources** Several cross border rivers flow in India and Nepal. Cooperation in developing the water resources in both countries is one of the most important areas of relations between both countries. The rivers flowing between both the countries are a potential source of irrigation water and power. These rivers also create flood conditions during monsoons. India has provided training and assistance to Nepal in constructing embankments to deal with floods.
- **Humanitarian Assistance** As Nepal lies in ecologically fragile zones, it is prone to small as well as large Earthquakes and floods causing massive damage to life and property in Nepal. India provides regular humanitarian assistance and relief to Nepal to fight against these natural disasters. India generously extended 1.5 billion Nepalese rupees to Nepal so that rebuilding efforts can be started after the devastating earthquake of 2015.
- **Defence** India trains and equips the Nepalese Army and assists in its development on modern lines. According to the 1950 Treaty of Friendship, Nepal can buy arms from India. There is a joint military exercise between India and Nepal known as Suryakiran. The Gorkha regiments of Indian Army are raised partially from recruiting youngsters from the hill districts of Nepal.
- **Multilateral Forums** India and Nepal cooperate with each other in several multilateral forums such as BBIN - Bangladesh, Bhutan, India, Nepal initiative, BIMSTEC - Bay of Bengal Initiative for Multi-sectoral Technical and Economic Cooperation, Non-aligned Movement and SAARC-South Asian Association for Regional Cooperation etc.

Challenges in India Nepal Relations

India and Nepal have strong ties that both the countries have established long time ago. But there has been a certain trust deficit between India and Nepal. India-Nepal relations have faced a deterioration and tensions have emerged because of following reasons

- **Political Instability** Nepal has witnessed political instability including a 10 year violent insurgency which severely damaged Nepal's economy and development. This has significantly brought tensions between India and Nepal as there has been changes in the government which have sometimes favoured China and at other times, India. Any opportunity grabbed by China in the Nepal region is a lost opportunity for India. There was an economic blockade during Madhesi protest in Nepal in 2014 where Nepal even accused India of instigating the protests. Thus, there has been a significant strain between both the countries.
- **Internal Security** India shares an open border with Nepal. It creates security challenges for India as the open border is often used for illegal activities. There is infiltration of North-Eastern insurgents, supply of arms, supply of fake Indian currency into the Indian territory.
- **China-Factor** Chinese influence is growing in Nepal. Nepal has acted as a buffer state between India and China. Nepal has seen different regimes which were either Pro-India or Pro-China. But Chinese initiatives of Belt and Silk road and Maritime Silk road are dominating the South Asian regions. Nepalese regime has been feeling insecure because of the upper hand that India seeks to play in the relations between two countries. Whereas China has become more generous towards Nepal. This has created tensions between India and Nepal.
- **Border Dispute** Though Indo Nepal border has remained peaceful but there has been a dispute over the Kalapani region. The dispute emerged when Nepal government published a new map which showed Kalapani region as Nepal's territory. The reemergence of dispute has been attributed to Chinese pressure on Nepal. Though it has led to the emergence of new tensions in India-Nepal relations but the border dispute is easily solvable as long as there is political goodwill exercised on both sides.

Way Forward

Nepal is strategically and politically important for India. Hence, India should seek to strengthen its ties with Nepal. Issues can be sorted out between both countries on account of special relations that both the countries enjoy with each other. The open border should be managed so that it does not harm the interests of both the countries. There must be enhanced focus upon cultural ties and strengthening people to people contacts. India should mitigate Nepal's concerns by taking them into confidence. Nepal's perception of playing the role of a big brother rather than coequal neighbours should be addressed. With growing Chinese influence, Nepal's significance for India has increased further. India should confidently invest in Nepal's infrastructure so that Chinese dominance can be reduced. A stable, secure and prosperous Nepal is in India's best interests. Normal relations with the most friendly neighbour will be a foundation of prosperity in both the nations.

ISRAEL ARAB PEACE DEAL

The middle east region has suffered more rivalry and conflict than any other part of the world. The Arab world and state of Israel have fought bitter battles. These two regions have been at loggerheads with each other to achieve self-determination and emancipation. The idea of Zionist nationalism promoted the belief that Jews were entitled to the land of Palestine. This creates the fundamental idea that Israel is the land of the Jews. To the Arab nations, Israel was an enemy due to its injustices against the Palestinian people. There have been several attempts in the past to restore peace between the Arabs and Israeli establishment. But the current peace deals with UAE and Bahrain are of much significance.

The Normalisation Agreement with UAE and Bahrain

The Israel-UAE Normalisation Agreement, also known as the Abraham Accords Peace Agreement was signed between the UAE Foreign Minister Abdullah bin Zayed Al Nahyan and Israeli Prime Minister Benjamin Netanyahu in August 2020. With the signing of this agreement, mediated by the USA, UAE has become the third Arab country to agree to fully normalise its relationship with Israel. Before this, Egypt and Jordan had normalised their relations with the state of Israel. After the signing of the Abraham Accords, Israel has suspended its plans for annexing the parts of West Bank. Both Israel and UAE will establish full diplomatic relations with Israel. They will also cooperate in the areas of investment, tourism, security, telecommunications, technology, energy, healthcare, cultural exchange, environmental issues, establishment of embassies etc. in addition to their other areas of cooperation. Both the countries will be forging closer people-to-people relations.

A similar agreement was signed by Israel with the State of Bahrain in September 2020. It was signed between Israeli Prime Minister Benjamin Netanyahu and Bahrain Foreign Minister Abdullatif bin Rashid Al Zayani. Bahrain accepted and recognised the state of Israel. As per the agreement, both the countries will exchange ambassadors and open embassies in each country. They will closely cooperate in the fields of technology, health and agriculture as well as other areas. It is believed that if Israel, Bahrain and UAE can set the stage right and move in the right direction, then these agreements could have a positive impact on Israel-Palestine relations that may also progress towards a two state solution.

History of Peace Deals with Israel

Earlier, Israel had signed peace deals with only two countries. An accord for peace was signed between Israel and Egypt in 1979 and Jordan signed an accord with Israel in 1994.

- **Egypt, 1979** An accord was signed between Israel and Egypt in 1979. This deal remains one of the most famous and well publicised peace deal struck between Israel and any Arab state. The deal was signed between Israel PM Menachem Begin and Egypt President Anwar Sadat at Camp David, USA. This deal was signed between both the countries after the bloody war of 1973 which depleted both the countries enormous amount of military as well as financial resources. The deal still remains intact.
- **Jordan, 1994** Jordan was forced to accept waves of migration of Palestinians who had fled Israel as refugees after its formation. After the 1967 war where Israel captured East Jerusalem from Jordan, a formal body was constituted by Jordan's King Hussein. This body made an agreement for peace with the Israeli state in the year 1994. The treaty was signed between Jordan's King Hussein and Israeli Prime Minister Yitzhak Rabin in the USA.

Both these treaties signed were for close cooperation in the border areas, for diplomatic relations, security and defence, demilitarisation and for normalisation of bilateral relations with each other.

Relations of Other States with Israel

Other states in the Arab world such as Qatar have good relations with Israel since 1990s. Kuwait has declared that its relations with Israel remains unchanged.

Morocco, Tunisia and Mauritania have all maintained relatively stable relations with Israel. Countries such as Syria, Sudan, Iraq do not have any diplomatic ties with Israel. Iraq and Israel have not had any ties but the presence of Kurds, the enemies of Israel in the North of Iraq has made both countries maintain policies and cooperation for the exchange of intelligence and formed alliances.

Countries such as Sudan and Yemen have moved closer to Israel. The agreements that have been signed have shaken up the geostrategic platform in West Asian Arab world.

At the core of the issue of the peace deal lies the state of Palestine that has termed the deal as a betrayal. Despite a promise by the Israel establishment of halting the annexation of Palestine territories, Palestinian leadership has rejected the deals.

Israel-Palestine Conflict

The Israel-Palestine issue dates back to the mid of 20th century. The roots of the Israel-Palestine conflict can be traced back to the Jewish immigrations into the Palestine territory which is the land between Jordan river in the East and Mediterranean sea in the West, in the late 19th century. By the 1st World War, Palestine had a sizeable population of Jews. With this, there were several attempts by the British colonialists to establish a state for Jews in Palestine.

After the 2nd World War, the UN proposed a plan to partition Palestine into an independent Arab State, an independent Jewish state and an international city of Jerusalem. The plan was rejected by Arabs so it never got implemented. The war started between Arabs and Israel and by the time the war was over, Israel had captured more and more Palestinian territories.

The Palestinian Liberation Organisation (PLO) was formed in 1964. It was cracked down by Israel forces by invading Lebanon from where it operated. Later, Israel agreed to the formation of a provincial government known as the Palestine Authority. Several initiatives such as Oslo Accords, UN groups were taken to restore peace between Israel and Palestine but none of these were successful.

Key Issues in Israel-Palestine Conflict

The three key issues in the Israel Palestine conflict are

- **Boundary** The Palestinians and Arab countries say that a state of Palestine should be formed on the basis of 1967 border. But Israel has already redrawn this border on the ground by building huge security walls that goes into the Palestine territories. They have also expanded Jewish settlement into the West Bank.
- **Issue of Capital** The Palestinians see East Jerusalem as their future capital but the city has been under Jewish control. The US President has unilaterally declared the city of Jerusalem as capital of Israel. The city of Jerusalem has Al Aqsa Mosque, the third holiest site in Islam and the Wailing Wall, which is believed to be the remains of second temple of Jews.
- **Issue of Refugees** The first Arab Israeli war has led to the displacement of hundreds of thousands of Palestinians. Israel has not accepted their right to return as it would alter the demographics of Jewish nation.

Politics Behind Abraham Accords

The agreement has several political benefits for the countries involved. Israel Prime Minister Netanyahu can enhance his image with the deal as he is facing charges of corruption. It is also a diplomatic win for the former US President Donald Trump as his earlier foreign policy outreaches were not successful. This agreement also makes the autocratic Arab Kingdoms more tolerant in West Asia and they can use it to improve their international image. Moreover, the agreement is largely being seen as a cooperation of Israel with the Sunni states of the Arab world to contain the rise of their Shia rival, which is Iran.

The Palestinians do not agree with the agreements and they believe that the normalisation agreements with UAE serves Israel's interest and ignores Palestinian's interests.

Implications for India

Geopolitically, India has welcomed the accords. It is due to the following factors

- India has significant interests in and engagement with Israel and the Gulf countries. So, any changes in the region is going to affect the interests of India.
- There is a significant risk of a proxy war in West Asia due to Shia and Sunni conflicts. So, India needs to monitor the situation in the region carefully.
- The region is significant for India due to huge energy resources, trade routes to different parts of the world and Indian Diaspora that send back huge remittances.
- It widens India's stand for possible resolution of Palestinian conflict. India can balance its diplomatic act in the region more easily.
- India should Act as a peace negotiator to normalise the relations between West Asian countries. This peace process gives India a chance to bring peace in West Asia.
- These deals will give India another opportunity to promote economic integration among Arab nations so that they can manage Israel-Palestine issue with effectiveness.

Way forward

The deals, if played in the right direction, could open the doors for a changed geopolitical engagement in the Western Asian region. A balance between Shia and Sunni groups, between Persia and Arab is key to sustainable peace. For India, this opens a new opportunity to give itself a bigger role in the region, which is its strategic backyard. It can play an important role in the peace, stability and prosperity of the region.

162

INCLUSION OF WOMEN IN ARMED FORCES

In a historic move, the Supreme Court of India in February 2020 gave a ruling that will enable women to serve as Army Commander. The court also extended permanent service, which was only applied to men so far, to all women officers. With this, women will now be allowed to command entire military units. But there are many challenges that do not allow the women to enter combat roles. With the SCs decision, the mindsets are likely to change and women are going to come forward for even these difficult roles.

The move towards gender equality has been lauded by most, with women now being able to get the same opportunities and benefits as their male colleagues, including ranks, promotions and pensions, and being allowed to serve longer tenures. In the 21st century, gender equality is a prominent issue which is getting its due importance. Women's struggle to enter the military is not about seeking special privileges; rather it is about being able to compete on the basis of ability and not to be discriminated against on the basis of gender.

History of Women in Armed Forces

The inclusion of women in the Indian army began in 1888 when the 'Indian Military Nursing Service' was formed during the British Raj. In 1992, women were first inducted into the armed forces as officers. In 2015, government also opened new combat air force roles for women as fighter pilots in addition to inducting women as helicopter pilots in the India Air Force.

All the wings of the armed forces allow combat roles in combat supervisory roles except Indian Army. It is a great leap forward for the women. As armed forces have started to open up, more women talent has joined the ranks of the army, navy and the air force. Women officers such as Punita Arora, who became the first woman in India to be both the Lt. General in army as well as Vice Admiral in Indian Navy have made India proud. Mitali Madhumita became the first woman to receive the Sena Medal for gallantry in 2011. She was at the forefront of the struggle to get a permanent commission in the armed forces for all women officers. Divya Ajith Kumar became the first woman to get the 'Sword of Honour',

the highest award given to a cadet of the Officer's Training Academy. She is a first generation soldier with no prior army history in her family and yet has made India proud. She led the first ever all women army contingent during the 2015 Republic Day parade.

Major Shweta Pandey, an army engineer became the first ever woman officer to carry the national flag and lead a first ever tri-services Indian Armed forces contingent during Russia's Victory Day parade at Red Square in Moscow in 2020. Similarly, flight officer Gunjan Saxena and flight Lieutenant Srividya became the first women pilots to fly into combat zone during the Kargil War. They made history by doing so in their Cheetah helicopters and saving wounded soldiers from the war zone. Indian women also proved themselves when an all women crew of INSV Tarini of the Indian army became the first all women India crew to circumnavigate the globe successfully. Thus, from early inclusion in 1888 to the year 2020, Indian women have made the nation proud in these 130 years and have become an inspiration to women all over the world.

Challenges Faced by Women in Armed Forces

Women in the armed forces are confronted with social, behavioural, and psychological issues. Women have to work harder as compared to their male counterparts to get to higher positions in the forces. It is believed that there are differences of physical strength that disables women in leading from the front in difficult roles such as combat. These women have to go through the following challenges

- **Physiological Challenges** Physiological aspects play an important role in the armed forces. For women motherhood, childcare and other physical attributes are major challenges that affects their role in the armed services. They are denied major roles on account of vigorous training that might affect their physical and mental health.
- **Adjusting with Masculine Setup** Most of the roles in the armed forces are carried out by males. Women have to adjust to the existing patriarchal setup by challenging the male notions. Women are forced to blend themselves in the male environment and are forced to work harder to achieve parity as compared to their male colleagues. Society too does not accept women in these roles and they are often looked on discriminatory basis and with biases.
- **Family Issues** Armed forces require sacrifices and commitments beyond the call of duty. This requires separation from the families on account of frequent transfers, affecting the education of children, and the well-being of other family members. It also forces many women officers to retire early from their services so as to spend more time with their families and look after their well being.
- **Sexual Misconduct** Sexual harrasment faced by women is a global phenomenon and it remains largely unaddressed. Women often face retaliation when they complain. Though extensive data on the pervasiveness of sexual harrasment is not available but a small study conducted for 450 women in the forces ascertains that sexual misconduct is widely prevalent in the armed forces.
- **Privacy and Hygiene Related Issues** Women have privacy and hygiene related issues in the armed forces. They have to share the male environment that is not designed for the specific needs of the women members. There is inadequate military healthcare specifically for women that leaves them far behind their male counterparts.

Need of Women in the Armed Forces

Women in the 21st century are considered at par with the men. It is the armed forces that certainly requires the services of women as they are a strength for the country if they are treated equally with every other section of the society. India needs more women in enhanced roles in the military because of following reasons

- 1. Women Empowerment** It allows the women to be more independent and take up more responsible roles in the army, navy and the airforce. It will allow the women officers to be commissioned on the basis of their abilities and capabilities that will break the gender barriers and stereotyping.
- 2. Stronger Armed Forces** Inclusion of women in the army will strength the base of the forces as they will have more number of soldiers. The capabilities of women can also be used in the army as they have huge reserves of potential if they are properly trained and calibrated in the armed forces.
- 3. Changing Nature of War** The nature of wars and battles is changing from the conventional on field battles to cyber attacks, surgical strikes, satellite warfare. It does not involve physical strength but mental strategic and tactical capabilities. Women are suitable for such roles as they are no less than men in terms of mental capabilities. Women can be included in such roles to improve the flexibility and operability of the armed forces.
- 4. International Repute** If more women are included in the armed forces, it will make India only one of the few countries that allow women to have enhanced roles in the army, navy as well as airforce. It will provide a boost to the global reputation of India as democratic, progressive and liberal nation.

Global Scenario

Many countries in the world are changing their attitude not just to promote equality, but also because they need the skills that women have. Women in Indian army make up 3% of the army as compared to 4.5% in China, 16% in the United States, 10% in Russia, 40% in North Korea and 5.5% in South Korea where women have taken senior military ranks. In the US army, women officers have also served in the Iraq military operations. They have been allowed combat support duties on voluntary basis. In 2013, all the combat positions were available for women in USA. In Israel, women are generally not allowed active battlefield duties but they serve in many technical and administrative posts.

In Australia, women are not yet allowed in field battles. In Russia, women generally serve in nursing, communication and logistics support functions. The UK has lifted ban on women serving in the close combat ground roles opening the gateway for them to serve in special forces.

Way Forward

Women, who have decided to serve in the military choose a tough path. Hence they have already proved their courage and spirit in moving forward and barriers such as Prisoner of War (PoW) and other issues shouldn't come in the way. In the contemporary warfare, the most indispensable factor is controlling stress levels where it is scientifically proven that women handle stress better and are mentally tougher. In a country like India, which aspires to be an emerging superpower in the future, discrimination on the basis of gender in the armed forces would certainly be a regressive step for the country. Women should be considered on par with men in almost every aspect. A positive change in society is required for further women empowerment, gender equality, which will pave way for a better India.

“Important Quotations”

General Quotes

- “Learn from yesterday, live for today, hope for tomorrow.” *Anonymous*
- “Life is like a beautiful melody, only the lyrics are messed up”. *Anonymous*
- “Life is a pure flame, and we live by an invisible sun within us.” *Sir Thomas Browne*
- “Don’t try to live forever. You will not succeed”. *George Bernard Shaw*
- “It is a misery to be born, a pain to live, a trouble to die.” *St Bernard*
- “Everyday is a little life, and our whole life is but a day repeated”. *Joseph Hall*
- “The question is not whether we will die, but how we will live”. *Joan Borysenko*
- “Hold fast to dreams, for if dreams die, life is broken winged bird that cannot fly”. *Langston Hughes*
- “Who has never tasted what is bitter does not know what is sweet.” *German Proverb*
- “Superstition is the religion of feeble minds”. *Edmund Burke*
- “Knowing how to get along with people is the hall mark of success.” *Theodore Roosevelt*
- “Have infinite patience, and success is yours”. *Swami Vivekananda*
- “God could not be everywhere and so he made mothers.” *Anonymous*
- “Mother is the name for God is the lips and hearts of children.” *WM Thackeray*
- “Ideas are the most dangerous weapons in the world.” *WO Douglas*
- “Men are strong only so long as they represent a strong idea. They become powerless when they oppose it.” *Sigmund Freud*
- “That country is the richest which nourishes the greatest number of noble and happy human beings.” *John Ruskin*
- “The roots of true achievement lie in the will to become the best that you can become.” *Harold Taylor*
- “If you can imagine it, you can achieve it. If you can dream it, you can become it.” *William Arthur Ward.*
- “He is able who thinks he is able.” *Gautama Buddha*
- “When you cease to dream you cease to live.” *Malcolm S Forbes*

- “Wisdom lies neither in fixity, nor in change, but in the dialectic between the two.”
Octavio Paz
- “The highest reward for a person’s toil is not what they get for it, but what they become by it.”
John Ruskin
- “An artist is not paid for his labour but for his vision.” *James Me Neill Whistler*
- “The love of money is the root of all evil.” *The Bible*

Social Quotes

- “Society prepares the crime; the criminal commits it.” *HT Buckle*
- “Crime like virtue, hast its degrees.” *Jean Racine*
- “Corruption, the most infallible symptoms of constitutional liberty.” *Edward Gibbon*
- “Among a people generally corrupt, liberty cannot long exist.” *Edmund Burke*
- “Democracy demands discipline, tolerance and mutual regard.” *Jawaharlal Nehru*
- “Democracy and socialism are means to an end, not the end itself.”
Jawaharlal Nehru
- “Culture is harmonious development of the faculty in man.” *Francis Bacon*
- “Custom, is the great guide of human life.” *David Hume*
- “Custom reconciles us to everything.” *Edmund Burke*
- “The crisis of yesterday is the joke of tomorrow.” *HG Wells*
- “A conservative is a man with two perfectly good legs who, however, has never learned how to walk forward.” *FD Roosevelt*
- “Civilisation is a method of living, an attitude of equal respect for all men.”
Jane Addams
- “The childhood shows the man as morning shows the day.” *John Milton*
- “Where there is officialism, every human relationship suffers”. *EM Forster*
- “Do your duty and leave the outcome to the God.” *Pierre Corneille*
- “The first wealth is health.” *Ralph Waldo Emerson*
- “Drunkeness is temporary suicide; the happiness that it brings is merely negative, a momentary cessation of unhappiness.” *Bertrand Russell*
- “Without labour nothing prospers.” *Sophocles*
- “Labour is the source of all wealth and all culture.” *Ferdinand Lassalle*
- “Every man is dishonest who lives upon the unpaid labour of others, no matter, if he occupies a throne.” *Louis D Brandees*
- “Laws grind the poor, and the rich men rule the law.” *Oliver Goldsmith*
- “A true leader must submerge himself in the fountain of the people.” *Lenin*
- “Child labor perpetuates poverty, unemployment, illiteracy, population growth and other social problems.” *Kailash Satyarthi*
- “Liberty means responsibility. That is why most men dread it.” *George Bernard Shaw*
- “To be poor and independent is very nearly an impossibility.” *William Cobbett*

Political Quotes

- “Political are the same everywhere. They promise to build bridges even where there are no rivers.” *Nikita Krushchev*
- “The difference between a politician and a statesman is : a politician thinks of the next election and a statesman thinks of the next generation.” *JF Clarke*
- “Politicians never accuse you of ‘greed’ for wanting other people’s money, only for wanting to keep your own money.” *Joseph Sobran*
- “Real politics are possession and distribution of power.” *Benjamin Disraeli*
- “Politics, as the word is commonly understood, are nothing but corruptions.” *Jonathan Swift*
- “Politics is perhaps the only profession for which no preparation is thought necessary.” *Robert Louis Stevenson*
- “Politics is the art of the possible.” *RA Butler*
- “That government is best which governs least.” *Thoreau*
- “Society in every state is a blessing, but government, even in its best state is but a necessary evil; in its worst state, an intolerable one.” *Thomas Paine*
- “Men well governed seek after no other liberty, for there can be no greater liberty than a good government?” *Sir Walter Raleigh*
- “An oppressive government is more to be feared than a tiger.” *Confucius*
- “The ruling ideas of each age have never been the ideas of its ruling class.” *Karl Marx*
- “A stand can be made against invasion by an army; no stand can be made against invasion by an idea.” *Victor Hugo*

Educational Quotes

- “Education is the power to think clearly, the power to act well in the world’s work and the power to appreciate life.” *Bigham Young*
- “The roots of education are bitter, but the fruit is sweet.” *Aristotle*
- “Education is gymnastics for the body and music for the mind.” *Plato*
- “The aim of all education and progress is to develop the collective instinct in man.” *Motilal Nehru*
- “A learned person is an idler, who kills time by study.” *George Bernard Shaw*
- “Education is what survives when what has been learnt has been forgotten.” *BF Skinner*
- “The aim of education is the knowledge, not of facts but of values.” *William Ralph Inge*
- “Education made us what we are.” *Claude-Adrien Helvetius*
- “Education is an admirable thing, but it is well to remember from time to time that nothing that is worth knowing can be taught.” *Oscar Wilde*
- “Only the educated are free.” *Epictetus*

- “Painting from nature is not copying the object, it is realising one’s sensations.”
Paul Cezanne
- “Research is to see what everybody else has seen, and to think what nobody else has thought.”
Albert Szent
- “Education is weapon, whose effect depends on who holds it in his hands and at whom it is aimed.”
Joseph Stalin
- “Education makes people easy to lead, but difficult to drive; easy to govern, but impossible to enslave.”
Lord Brougham
- “All the value of education rests in respect for the physical, intellectual and moral will of the child.”
Alexander Pope
- “A human being is not, in any proper sense, a human being till he is educated.”
Harace Mann
- “Every man who rises above common level has received two educations : the first from his teachers; the second, more personal and important, from himself.”
Edward Gibbon
- “Education is the chief defence of nations.”
Edmund Burke
- “Education is the most powerful weapon which you can use to change the world.”
Nelson Mandela
- “Spoon feeding in the long run teachers us nothing, but the shape of the spoon.”
EM Forster
- “The true university of these days is a collection of books.”
Thomas Carlyle
- “Education is simply the soul of a society as it passes from one generation to another.”
GK Chesterton
- “Ask me three main priorities for government, and I tell you: education, education and education.”
Tony Blair
- “Studies serve for delight, for ornament, and for ability.”
Francis Bacon
- “The main object of education is the establishment of two-fold harmony in every individual-harmony within his own self and harmony with other living beings in the whole world.”
Dr Rajendra Prasad

Inspirational and Motivational Quotes

- “The men who succeed are the efficient few. They are the few who have the ambition and will power to develop themselves.”
Herbert N Casson
- “True reconciliation does not consist in merely forgetting the past.”
Nelson Mandela
- “Talent does what it can; genius does what it must.”
Edward George Bulwer Lytton
- “The glow of inspiration warms us; it is a holy rapture.”
PubliUs Ovidius Naso Ovid
- “The greatest achievements were at first and for a time dreams. The oak sleeps in the acorn.”
James Allen
- “Who dares to teach must never cease to learn.”
John Cotton Dana

- “A liberal is a man who leaves a room when the fight begins.” *Heywood Broun*
- “Live and let live is the rule of common justice.” *Sir Roger L’ Estrange*
- “The art of life is to know how to enjoy a little and to endure much.”
William Hazlitt
- “Failure will never overtake me if my determination to succeed is strong enough.”
APJ Abdul Kalam
- “All birds find shelter during a rain. But eagle avoids rain by flying above the clouds”.
APJ Abdul Kalam
- “If you judge people, you have no time to love them.” *Mother Teresa*
- “I measured the progress of a community by the degree of progress which women have achieved.” *Dr BR Ambedkar*
- “If you believe in living a respectable life, you believe in self-help which is the best help.” *Dr BR Ambedkar*
- “The world is the great gymnasium where we come to make ourselves strong.”
Swami Vivekananda
- “Life should be great rather than long” *Dr. BR Ambedkar*
- “You have to grow from the inside out. None can teach you, none can make you spiritual. There is no other teacher but your own soul.” *Swami Vivekananda*
- “Civilisation is the encouragement of difference.” *Mahatma Gandhi*
- “Hate the sin, love the sinner.” *Mahatma Gandhi*
- “To lose patience is to lose the battle”. *Mahatma Gandhi*
- “Do not be embarrassed by your failures, learn from them and start again.”
Richard Branson
- “Success is simple. Do what’s right, the right way, at the right time.”
Arnold H. Glasgow
- “Victory is sweetest when you’ve known defeat.” *Malcolm S. Forbes*
- “Action is the foundational key to all success.” *Pablo Picasso*
- “The successful man is the one who finds out what is the matter with his business before his competitors do.” *Roy L. Smith*
- “Life isn’t about finding yourself. Life is about creating yourself.”
George Bernard Shaw
- “Patience, persistence and perspiration make an unbeatable combination for success.” *Napoleon Hill*
- “We become what we think about most of the time, and that’s the strangest secret.”
Earl Nightingale
- “Success is focusing the full power of all you are on what you have a burning desire to achieve.” *Wildfred Peterson*
- “Before anything else, preparation is the key to success.” *Alexander Graham Bell*