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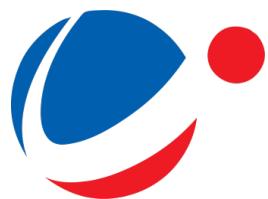
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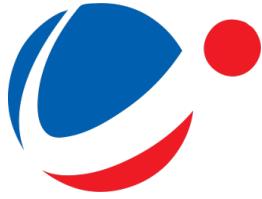


ESSAY

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ESSAY TOPIC: HEALTHCARE IN INDIA

Quotes by famous personalities

- **Buddha** - “To keep the body in good health is a duty, Otherwise we shall not be able to keep our mind strong and clear”
- **Herophilus**- “When health is absent, wisdom cannot reveal itself, art cannot manifest, strength cannot fight, wealth becomes useless, and intelligence cannot be applied.”
- **Robin Sharma**- “Health is the crown on the well person’s head that only the ill person can see”
- **Publilius Syrus** “Good health and good sense are two of life’s greatest blessings”
- **Winston S. Churchill** - “Healthy citizens are the greatest asset any country can have”
- **Upanishads** - “Sarve Bhavantu Sukhinah, Sarve Santu Niramayah” – It means “May All become Happy, May All be Healthy”
- **George Bernard Shaw**- “Give a man health and a course to steer, and he’ll never stop to trouble about whether he’s happy or not.”

Introduction

Health in ancient India was defined as physical, mental, emotional, spiritual and social wellbeing of an individual. Thus, the system of medicine of medicine was not about illness and standalone treatment. It combined many concepts such as diet, climate, beliefs, supernatural, empirical, and culture into treatment of the person. The emphasis was on natural and preventive approach to healing. It was aimed at treating the illness from the root cause.

The most important practitioners in this field included Susruta, Charvaka and Vagbhata. Susruta is also considered as the "father of Indian surgery". Thus, the most important contributions of India included Yoga, Meditation and Ayurveda. Also, Indian medical practices were gradually dispersed all over Asia, including the southeast, Indonesia, Tibet, and Japan.

Health in modern times has been often defined in a negative connotation i.e. absence of illness. However, this definition is restrictive and narrow. As **Amartya Sen** has argued that, “*Health is a social good. A person should be termed healthy, if he is able to actively participate in a society*”.

Our vedic texts also dwell on the concept of health in totality. It was viewed as the greater form of wealth and a path to happiness.

“आरोग्यं परमं भाग्यं स्वास्थ्यं सर्वर्थसाधनम्॥”

(Arogyam parvam bhagyam, swasthyam sarvarthasadhaanam)

{It means that Good health is the greatest blessing. Health is means of everything.}

Thus, **health cannot be seen in isolation but needs to be seen in wider perspective of human life, as a part of human life, as an instrument for fruitful human life**. Being healthy is a process. It starts right from morning, the way we breathe, the way and what we eat, and all the way to the modalities of our sleep. This sense is aptly captured in the new Indian perspective towards health where there has been an increasing shift towards Health assurance as opposed to insurance.

Paradoxes & Contradictions Related To Health in Indian Society

- June 21st is every year celebrated as 'Yoga Day', an acknowledgement for one of the greatest contribution of India to healthcare systems, especially in wake of emerging lifestyle diseases like depression, diabetes etc.
- However, among all this, was another fact - **India was declared as the Diabetes Capital of the world** by International Diabetes Federation (IDF) with the highest number of people suffering from Type-2 diabetes. However, this contradiction is reflective of a wider problem in our health system - The dismal state of our healthcare system.
- It is a huge travesty that the land of Susruta, Charvaka, Vaghbhata, Ram Chandra Sharma (Designer and developer of Jaipur foot) and the Generic pharmacy of the world in modern times has been ranked 145 out of 195 countries on the Healthcare Access and Quality Index (HAQ) of The Lancet.

Why Health - Importance /Dimensions to Health

- **Health as a Social good**
 - Social good refers to any good which benefits the largest number of people in the largest possible way.
 - Health as a social good enables a society to become more egalitarian, tolerant, sustainable, sensitive and moral-based society.
 - It also helps in better absorption of other social goods like Education, Skills and better relationship with natural resources.
- **Health as a Political good**
 - Political good refers to any good which enable participation of people into the political process.
 - Health as a political good enables the political discourse of a society to become more democratic, more accountable, more decentralized.
 - In addition, it becomes very easy to develop consensus on critical issues especially on critical issues like clean energy, sustainable development etc.
- **Health as a Economic good**
 - Economic good refers to a good which enable economic growth, prosperity etc.
 - Health as an economic good helps in better absorption of skills, better productivity of workforce, better involvement of workforce in industries, better decision making regarding technologies etc.
 - In addition, lower spending on health leads to lesser burden on family, government and society as a whole.
 - According to According to Centre for Disease control and prevention (CDC), there is a \$10 return on investment for every \$1 spent on childhood vaccinations.
- **Health as an Ecological good**
 - Health as a ecological good can enable in sustainable development, sustainable consumption and environment-friendly policy making.
 - The recent Sterlite protests in Tamil Nadu were owing to the impact on health of the people around. Similar protests have also been in Delhi because of growing pollution and increasing adverse impact on health.
- **Health as a Ethical good**
 - Right to Health is now being increasingly recognized as a basic human right.
 - Universal Declaration of Human Rights, International Covenant on Economic, Social and Cultural Rights etc. have recognized health as a basic human right, Sustainable Development Goal # 3 - Good Health and Wellbeing - have recognized health as a basic human right.
 - Also, there has been an increasing consensus in India to declare right to health as a part of fundamental rights under part III of Indian constitution.
 - Thus, it is incumbent on society and societal institutions to fulfill this right.

Status of Health in India

- **Health expenditure:**
 - **General Government expenditure on health** as percentage of GDP in 2019-20 was 1.6% (up from 1.5% in 2018-19).
 - **Out-of-Pocket Expenditure (OOPE)** as a percentage of Current Health Expenditure fell down to 58.7% in 2016-17 from 60.6% in 2015-16.

- **Population with health insurance coverage:** About 14% of the rural population and 19% of the urban population had health expenditure coverage.
- **Source of hospitalisation expenditure:** Rural households primarily depended on their ‘household income/savings’ (80%) and on ‘borrowings’ (13%) for financing expenditure on hospitalisation. The figure is 84% and 9% respectively for Urban households.
- **Life Expectancy:** As per the 2019 Human Development Report released by **United Nations Development Programme (UNDP)**, between 1990 and 2018, **life expectancy at birth increased by 11.6 years** in India.
- **Child Health:** As per estimates developed by the UN Inter-agency Group for Child Mortality Estimation
 - **Under-five mortality rate (U5MR)** (deaths of children less than 5 years per 1,000 live births) has declined from 126 in 1990 to 34 in 2019, with a Annual rate of reduction (ARR) of 4.5 per cent in the time period 1990-2019.
 - **Infant mortality rate** (deaths of children less than 1 year per 1,000 live births) has declined from 89 in 1990 to 28 in 2019.
 - **Neonatal mortality rate** (deaths of children within a month per 1,000 live births) has declined from 57 in 1990 to 22 in 2019.
- **Status of Immunisation among children aged 0-5 years:**
 - About 97% of children across the country received at least one vaccination — mostly BCG and/or the first dose of Oral Polio Vaccine at birth, but two out of five children (40%) do not complete their immunisation programme.
 - Among States, Manipur (75%), Andhra Pradesh (73.6%) and Mizoram (73.4%) recorded the highest rates of full immunisation.
 - In Nagaland, only 12% of children received all vaccinations, followed by Puducherry (34%) and Tripura (39.6%).
- **Maternal Health:**
 - **Institutional deliveries:** In rural areas, about 90% childbirths were institutional (in Government/private hospitals) and in urban areas it was about 96%.
 - **Pre and Post Natal Care:** Among women in the age-group 15-49 years, about 97% of women took prenatal care and about 88% of women took post-natal care.
 - **Maternal Mortality Rate** (proportion of maternal deaths per 1,00,000 live births reported) of India has declined from **130 in 2014-2016 to 122 in 2015-17**.
- **Profile of ailments:** About 31% of the hospitalised cases had infectious diseases followed by injuries (around 11%), cardio-vascular (around 10%) and gastro-intestinal (around 9%).

Challenges in Health in India

- **Inadequate Healthcare Personnel and Infrastructure**
 - India has **8.5 hospital beds per 10,000 citizens, one doctor for every 1,456 citizens** (WHO's prescribed norm is 1:1000) and **1.7 nurses per 1,000 people** (WHO's prescribed norm is 3:1000).
 - ✓ This problem is even more acute for specialised doctors like cardiologists, psychiatrists etc.
 - ✓ Availability of limited accredited diagnostic labs delays testing and consequent understanding of disease progression.
 - In addition, there is a clear rural-urban divide, regional divide, gender-divide etc. regarding healthcare facilities. **For example:**
 - ✓ Urban areas command 73% of the public hospital beds, even when 69% of India's population resides in rural areas.
 - ✓ There is one government hospital bed for every 614 people in Goa compared with one every 8,789 people in Bihar.
- **Weak primary health care sector**
 - Expansion of public services has been inequitably distributed eg. there is one government hospital bed for every 614 people in Goa compared with one government hospital bed for every 8789 people in Bihar.
 - India's **doctor to population ratio remains dismal** at less than 1 doctor per 1,000 population in-spite of being a hub for medical tourism and an exporter of healthcare experts.
- An overwhelming **70% of healthcare expenses in India are met by out of pocket expenditure** in-spite of India being the Global Pharmacy of the World.

- Around 5 crore Indians are pushed into poverty because of healthcare expenses.
- **Recently 42 children died over two days at Gorakhpur; A case related to Dengue where the patient died was charged 16 lakh by Fortis, Gurgaon.**
- These all reflect on the broken system from quality, quantity, footprint, access and affordability issues
- **Inadequate Financing:**
 - Government spending on healthcare in India remains at a dismal 1.28% of GDP which is less than 30% of total health spending. India's per capita expenditure is only Rs 3 per day on each citizen.
 - Apart from this, the funding pattern is skewed i.e. in favour of curative and communicable diseases. This despite the well established fact that expenditure on preventive healthcare is more favourable and non-communicable diseases form 60% of India's health burden.
- **Weak Regulatory Framework and Private Sector**
 - India's regulatory framework for health remains in shambles. The nodal agency i.e. Medical Council of India (MCI) has been marked by corruption, nepotism and favouritism.
 - Apart from this, the recent cases of Fortis charging exuberant etc. only reflect on the dismal regulatory framework.
- **Fragmented health information systems**
 - The systems of collecting data have many weaknesses like incomplete data gathering and non-inclusion of private sector in it means excluding the major health provider in India.
- **Denial of healthcare:** Private hospitals are reportedly denying treatments to the poor along with the cases of overcharging patients despite accounting for about 62 percent of the total hospital beds as well as ICU beds and almost 56 percent of the ventilators.
 - This has been seen in Bihar, which has witnessed an almost complete withdrawal of the private health sector which has nearly twice the bed capacity of public sector.
- **Dysfunctional state of Integrated Disease Surveillance Programme (ISDP):** It was launched in 2004 to strengthen decentralized laboratory-based IT enabled disease surveillance system for epidemic prone diseases to monitor disease trends and to detect and respond to outbreaks in early rising phase through trained Rapid Response Team (RRTs). But it continues to struggle for manpower and resources and has failed to create a robust and decentralized data collection system involving the district health system across states.
- **Medical Education**
 - While Indian-educated healthcare professionals are world renowned, medical education in India has been dismal.
 - Most of the problems include nepotism, capitation fees, weak regulatory structure etc. Apart from these national exams like NEET have failed to take variation according to state into account.
- **Negative perception of medical career:** The stories of shortages of PPE leading to health workers getting infected, and health workers getting attacked by infuriated patients and relatives etc. may create a negative perception towards medical career in India in long run.
- **Social Reasons**
 - Healthcare can't be seen in isolation but needs to be studied in a social context. The poor state of healthcare in India is also because of wide poverty, lack of gainful employment, ignorance, illiteracy, poor status of women, problem of open defecation and poor sanitation facilities.
 - Discrimination on the basis of diseases is also a huge problem in Indian society esp in case of TB, leprosy, HIV/AIDS, etc
 - For example, Diarrhoeal diseases which are closely linked to open defecation kill 1 lakh children under 11 months old in India each year.
- **Status of Indigenous systems**
 - While, there has been increasing emphasis on indigenous system of Yoga, Ayurveda etc., their supporting system for implementation remains weak.
 - There is an absence of proper regulatory framework, certification benchmarking and research into these systems.
- **Emerging Health Issues**
 - Modern way of life, increasing violence, increase individualism, reproductive health facilities, urban lifestyle, exam pressure, work pressure, corporate culture is giving way to new challenges in healthcare discourse and rise of non-communicable diseases.

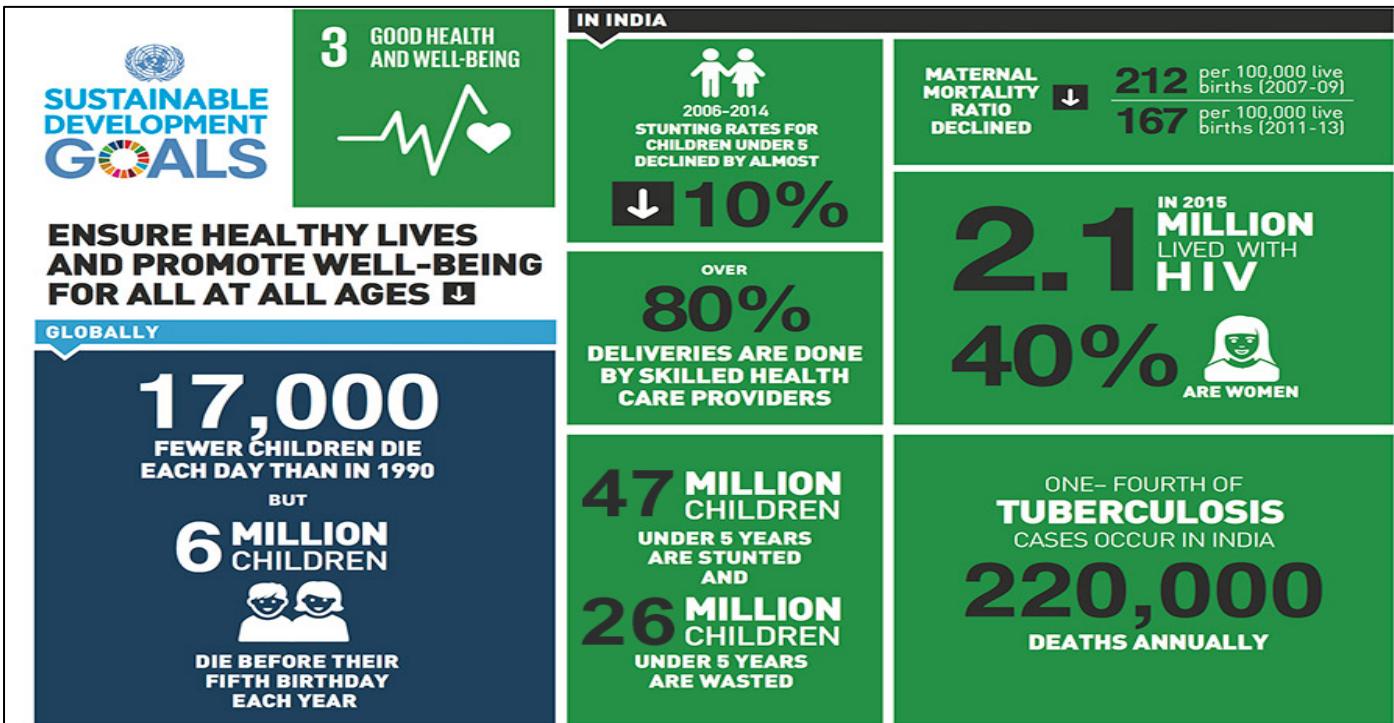
- In India, lifestyle diseases like diabetes, anxiety disorder, depression etc. are becoming major challenges especially in urban areas.
- However, despite the scale of the epidemic, India spends only 0.06 per cent of its healthcare budget on mental healthcare.
- Ethics in overall health as a sector esp deteriorating values when it comes to doctor-patient relationship like treatment of the patients, trafficking of organs, not abiding to secrecy of diseases or sex of a child, etc
- Also, India's aged population has reached 100 million and is predicted to grow only more. However, Indian healthcare continues to be abysmally underprepared for geriatric health care which includes cardiovascular diseases, psychological diseases etc.
- Apart from this, there are emerging challenges of drug resistance and rise in epidemics because of climate change and globalisation. For e.g. recent case of Zika Virus, NIPAH virus, MERS virus etc.
- Finally, issue like Euthanasia are throwing new challenges to medical ethics.
- **Other issues-**
 - **India's dependence on imports** for pharmaceutical products like Active Pharmaceutical Ingredients (APIs)
 - **Disbelief in alternative/traditional medicines for treatment** due to lack of research in AYUSH treatments, lack of precise standards for herbal formulations etc.
 - **Lack of focus on preventive healthcare:** Of all healthcare spending, only 7% was spent on preventive healthcare, while more than 80% was spent on treatment and cure as of FY17.

UPSC – 1997 - The modern doctor and his patients.

UPSC- 2009 - “The focus of health care is increasingly getting skewed towards the ‘haves’ of our society”.

India's Achievements in Health Sector

- **As a Generic Pharmacy of the World**
 - India's accounts for close to 10% of the global pharmaceutical industry in terms of volume. This number goes to 20% for generic-drug exports by volume.
 - The Indian pharmaceutical sector has many advantages - Low cost of land, labor, utilities and equipment; Favourable domestic laws etc.
- **Medical Tourism**
 - It has been one of the highest source of foreign exchange for India owing to its relatively inexpensive healthcare systems, trained healthcare personnels, indigenous healthcare systems like Yoga, Naturopathy etc.
 - As of 2015, Medical tourism is valued at 3 billion USD and expected to reach 9 billion USD by 2020.
 - India is also one of the Exporter of Healthcare professionals.
- **Cost effective solutions**
 - India has been hub for cost-effective solutions for medical issues.
 - The Jaipur Foot was designed and developed in India by Ram Chandra Sharma in 1968.
 - India has also emerged as a hub for research and development in vaccines. More than 60% of the world's vaccines are being made by India.
 - Recently, for the first time, a vaccine named Rotavac vaccine has been conceived and developed from scratch in India has been “pre-qualified” by the World Health Organisation.
- **Major health indicators have improved** like India's MMR at 167(2011-13) has improved significantly from 212 (2007-09). Our Target is to reduce it to 100; Under 5 mortality rate has declined to 49/1000 live births in 2013, etc.



Other Steps Taken to Improve Health Care in India

- Constitutional Provisions**
 - Supreme Court in its various judgements has declared right to health within the purview of Article 21 of Indian constitution.
 - Apart from, this several article in Part IV (Directive Principles) Article 39(e), 41, 42, 47 and 48 call upon State to strengthen healthcare system in India.
- Legislations, Schemes and Policies for healthcare**
 - National Health Policy 2017:** It aims at providing healthcare in an “assured manner” to all by addressing current and emerging challenges arising from the ever changing socio-economic, epidemiological and technological scenarios.
 - It aims to raise public healthcare expenditure to 2.5% of GDP by 2025, from current 1.2%, with more than two-thirds of those resources going towards primary healthcare.
 - The policy also seeks to achieve and maintain elimination of leprosy by 2018, and to achieve ‘90:90:90’ global HIV target by 2020.
 - Ayushman Bharat-** It envisages a Rs 5 lakh annual insurance cover at no cost to 10 crore households, with the joint collaboration of both central and union governments.
 - Health and Wellness Centers (HWCs)** at the primary level under Ayushman Bharat is a progression towards promotive, preventive, curative, palliative and rehabilitative aspects of Universal Healthcare.
 - Affordable Healthcare Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP)** was launched to provide quality medicines at affordable prices to the masses "Jan Aushadhi Medical Store"
 - National Digital Health Mission (NDHM)-** It is a voluntary healthcare programme that aims to reduce the gap among stakeholders such as doctors, hospitals, citizens etc by connecting them in an integrated digital health infrastructure.



- **Electronic Vaccine Intelligence Network (eVIN):** It is an indigenously developed technology system in India that digitizes vaccine stocks and monitors the temperature of the cold chain through a Smartphone application.
- **National Health Portal (NHP):** It aims to establish a single point access for authenticated health information for citizens, students, healthcare professionals and researchers. Users can access detailed information pertaining to health related issues.
- **Intensified Mission Indradhanush-** It is aimed at reaching each and every child under two years of age and all those pregnant women who have been left uncovered under the routine immunisation programme.
- Government of India has set the target of working towards **elimination of Tuberculosis by 2025**.
- Apart from this there has been growing impetus on reviving indigenous healthcare system. **Government has launched National AYUSH Mission and Yoga day has been officially declared as a global annual exercise.**
- The **Mental Healthcare Act, 2017** passed by the government takes a rights-based approach to all aspects of mental healthcare.
- **National Cold Chain Management Information System (NCCMIS)** to track the cold chain equipment inventory, availability and functionality.
- Recently, **National Medical Commission (NMC)** was constituted which replaces Medical Council of India (MCI).
- **Efforts of Civil Society Organisations**
 - **Smile India foundation** - It is aimed at bringing quality healthcare services to doorsteps of the needy and to promote healthcare awareness.
 - **Rural Health Care Foundation** - It is aimed at addressing the gap in the availability of low cost primary health care in rural areas.
 - **Seva Nilayam** - It is working in partnership with the Government of Tamil Nadu an objective to reduce the maternal mortality rate in its rural area.
- **International Organisations**
 - Some of the international organisation working in health sector include WHO, UNDP, FAO etc.
 - Apart from this, Bill and Melinda Gates foundation is aimed at enhancing healthcare and reducing extreme poverty.
 - Doctor without Borders - It is best known for its projects in conflict zones and in countries affected by endemic diseases.

Best Practices in India

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| <ul style="list-style-type: none"> ● Kerala and Tamil Nadu Model Insurance Model <ul style="list-style-type: none"> ○ Globally acknowledged healthcare models, these have helped in better healthcare service at cheap and affordable cost. ○ The burden of premium and primary health care is borne by the state, whereas the private participation is mostly restricted to tertiary healthcare services. ○ Apart from these, Ardram Mission in Kerala is aimed at making government hospitals people-friendly by improving their basic infrastructure. ● Mohalla Clinics Model <ul style="list-style-type: none"> ○ Mohalla Clinics are primary health centres in the state of New Delhi that offer a basic package of essential health services including medicines, diagnostics, and consultation free of cost ○ These clinics serve as the first point of contact for the population, offer timely services, and reduce the load of referrals to secondary and tertiary health facilities in the state. ● Odisha e-Healthcare <ul style="list-style-type: none"> ○ Started in 2009, Odisha telemedicine has set up 127 telemedicine centres and trained about 900 telemedicine technicians. ○ It has collaboration agreements with several super-specialty hospitals in the country and has benefitted nearly five lakh patients in the State. ● ASHA Health Workers <ul style="list-style-type: none"> ○ Accredited Social Health Activists (ASHA) have emerged as a very fruitful model for preventive healthcare. ○ Launched as a part of National Rural Health Mission, it led to reduced cost on healthcare, better health indicators like IMR and MMR. |
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Way forward - Can India's broken healthcare system be fixed?

While the conventional reforms like increasing expenditure, strengthening public health systems, strengthening health regulation etc. are indispensable, some areas of reforms which haven't been given adequate attention but are important and can be game-changer:

- **Shift to Preventive healthcare**
 - India's health system continue to be guided by curative healthcare. There is a need to shift to preventive healthcare which is more inclusive, cheaper and offers a better life experience.
- **Change in conception of Health**
 - There is a need to view health not as absence of illness but a state of well being. There is a need to shift from hospital-centred model of health.
 - Thus, the value system needs to be re-oriented to inculcate importance of sports, right surroundings, right food, right sleep etc.
- **Women as agency of health**
 - One of the major ways of reforming healthcare has been through agency of Women. Amartya Sen in his capability approach has highlighted how Women empowerment has led to significant improvements in fertility rates, IMR and MMR.
- **Use of technology**
 - Information Technology can be a huge game changer in healthcare sector. New technologies like Big Data, Artificial Intelligence and Machine Learning can enable to strengthen and enhance the reach healthcare delivery.
 - States like Odisha, Chhattisgarh etc. are now using telemedicine for strengthening healthcare delivery.
 - India needs to put more emphasis in research and innovation especially in biotechnology which can enable the healthcare to be more affordable, available and accessible.
- **Use of SHGs, PRI and Strengthening of ANMs, ASHAs**
 - There is a need to develop decentralized institutions like SHGs, PRIs for delivering health.
 - Apart from that The ASHA, the Dai with traditional skills and modern hygiene, the re-skilled ANM and the ICDS workers, should be trained together to form a multi-skilled team at the village level.
- **Rejuvenating our indigenous systems**
 - While there has been an increasing focus on Yoga and AYUSH, the supporting and regulatory systems for the policy initiatives continue to remain weak.
 - There is also need for further research into these systems to make them in-line with needs of today.
 - For e.g. Recent studies have shown the use of turmeric in fighting cancer and depression.
- **Learning from other successful models/examples**
 - Countries like Bangladesh, Thailand, Performance-based financing in Rwanda have developed successful healthcare model.
 - Even within India, states like Kerala, Karnataka, Andhra Pradesh etc. have developed successful healthcare model.
 - These models be replicated and moulded to the needs and requirements of the health sector in India.
- **Bridge Courses**
 - While there has been an attempt to introduce bridge courses for AYUSH doctors for allopathy medicine.
 - There is also a needs for bridge course for allopathy doctors for AYUSH.
- **Ethics**
 - There is also need to inculcate ethical values of service, truthfulness, confidentiality, autonomy, informed consent and justice in healthcare professionals.
 - Apart from that even the patients needs to be more sensitive about the position of healthcare professionals.

International Practices - Models of Healthcare – From which India can learn

- **The Beveridge Model - Great Britain, Spain, most of Scandinavia and New Zealand, etc**
 - It named after William Beveridge, a social reformer who was responsible for designing Britain's National Health Service.
 - In this, health care is provided and financed by the government through tax payments, just like the police force or the public library.
 - These systems tend to have low costs per capita but compromise on efficiency and effectiveness.
- **The Bismarck Model - Germany, France, Belgium, the Netherlands, Japan, Switzerland**

- It uses an insurance system where insurers are called “sickness funds” - Usually financed jointly by employers and employees through payroll deduction.
- The plan covers everybody and doesn’t make any profit.
- Owing to tight regulation, government has significant cost-control clout.
- The National Health Insurance Model - Systems in Canada, Taiwan and South Korea.
 - This system has elements of both Beveridge and Bismarck.
 - It uses private-sector providers, but payment comes from a government-run insurance program that every citizen pays into.
 - Since there’s no need for marketing, no financial motive to deny claims and no profit, these universal insurance programs tend to be cheaper and much simpler.
- The Out-of-Pocket Model - rural regions of Africa, India, China and South America.
 - This is mostly a feature of countries which are too poor and too disorganized to provide any kind of mass medical care.

Conclusion

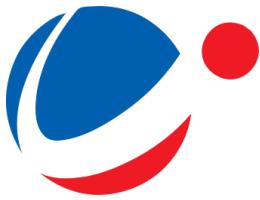
A healthy productive population is an enabler for sustainable development and hence it is critical that the Government remains committed to improve public health delivery, reduce health inequities and ensure affordable health care for all. Though India has made substantial progress, there are areas which require policy interventions to attain the goals of accessible, affordable and quality health care.

Indian healthcare currently stands at a critical juncture. To borrow Amartya Sen analogy, India’s healthcare represents islands of California (achievements) in a sea of sub-Saharan Africa (Challenges). However, there is a need for overhaul of healthcare sector in India. This also includes a complete different perception of healthcare, where it is seen as a process, as a part of life.

It is important to note that even our ancient texts also subscribed to a similar view. In today’s world, where people are running after wealth, where wealth has become the ultimate desire, it is important to go back to what father of the nation, Mahatma Gandhi said, ‘It is only health, that is the real wealth’. The choice is ours!

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ESSAY TOPIC: WOMEN EMPOWERMENT

Quotes of famous personalities

- “No better tool of empowerment than Women themselves” - **Kofi Annan**
- “I measure the progress of a community by the degree of progress which women have achieved” - **B. R. Ambedkar**
- “You educate a man; you educate a man. You educate a woman; you educate a generation” - **Brigham Young**
- “Man can never be a woman's equal in the spirit of selfless service with which nature has endowed her” - **Mahatma Gandhi**
- “If one man can destroy everything, why can't one girl change it?” – **Malala Yousafzai**
- “Women helping each other – coaching, mentoring, and providing tips – is a great way for us to be our own force.” – **Indra Nooyi**
- “The difference between a broken community and a thriving one is the presence of women who are valued.” – **Michelle Obama**
- “As women must be more empowered at work, men must be more empowered at home.” - **Sheryl Sandberg**

Inspiring Women Personalities

- The story goes to the dark days of 1950s when black-colored people in USA were facing worst ever discrimination. It was **Rosa Parks**, a woman, a black woman, who dared to do the unthinkable - Rode at the front of a Montgomery, Alabama, bus on the day the Supreme Court's ban on segregation of the city's buses took effect.
- The only thing one could hear were shouts, whistles and claps when Agni-IV missile was successfully tested. But, behind all these was the story of grit, of determination - The story of **Tessy Thomas**, An Indian scientist and Project Director for Agni-IV missile.
- The life of **Helen Keller**, an American educator who overcame the adversity of being blind and deaf to become one of the 20th century's leading humanitarians and founded American Civil Liberties Union.
- The highest-grossing Indian film ever, the fifth highest grossing non-English film ever is Dangal, a story about **Geeta Phogat and Babita Kumari** who go on to become India's first world-class female wrestlers.
- **Margaret Thatcher** became Britain's first female Prime Minister in 1979 till 1990. She was the longest-serving British Prime Minister of the 20th century. For her determined politics and leadership style, a Soviet journalist nicknamed Margaret Thatcher as “The Iron Lady.”
- **Charlotte Cooper** was a female tennis player from England who won the tennis singles game at the Olympics becoming the first female Olympic champion. On 11th July 1900, she became the first woman to win an Olympic gold medal.
- **Marie Curie** founded the science of radioactivity and her discovery proved to be quite helpful in the treatment of cancer. She was the first woman to win a Nobel Prize in 1903. She was the first person to win a second Nobel Prize in 1911.

Introduction: Role of women in society

- Throughout history, the central role of women in society has ensured the stability, progress and long-term development of nations and societies. In modern day context, the role of women in society has only gained further importance.
- Agriculture: Globally, women comprise 43 percent of the world's agricultural labor force – rising to 70 percent in some countries.
- Caregiver: Women are the primary caretakers of children and elders in every country of the world. When the economy and political organization of a society change, women take the lead in helping the family adjust to new realities and challenges.
- Education: It is the mother in the family who most often urges children of both genders to attend – and stay – in school. The role of women is at the front end of the chain of improvements leading to the family's, the community's long-term capacity.
- Women's formal and informal labor can transform a community from a relatively autonomous society to a participant in the national economy. Today, the median female share of the global workforce is 45.4 percent.
- Leaders: Female leaders tend to be more inclusive and community-driven. They're more likely to lead by consensus, rather than try to dictate the rules. The 'feminine' leadership style wants others to be involved and take ownership of the goal so that everyone contributes. Companies with women in leadership roles outperform all-male teams by up to 66%. Women leaders have a variety of techniques for getting people on board, from using inspiring words to showing how their plans will benefit the bottom line.

Role of women in Ancient Indian Society

- Women in ancient India enjoyed high status in society and their condition was good. The Vedic women had economic freedom. Some women were engaged in teaching work. Home was the place of production. Spinning and weaving of clothes were done at home. Women also helped their husbands in agricultural pursuit. In the religious field, wife enjoyed full rights and regularly participated in religious ceremonies with her husband.
- The Rig Veda says, "The wife and husband, being the equal halves of one substance, are equal in every respect; therefore, both should join and take equal parts in all works, religious and secular." Also, the Upanishads clearly declare that we individual souls are neither male nor female.

Defining women empowerment

- Empowering women means giving them means to be financially and intellectually independent in their choices on one side, and on the other side, it also means seeding the belief that they are equal to everyone else and that they have the same rights and can choose what and where to be and to do in their lives.
- According to United Nations** - Women's empowerment has five components:
 - Women's sense of self-worth;
 - Their right to have and to determine choices;
 - Their right to have access to opportunities and resources;
 - Their right to have power to control their own lives, both within and outside the home; and
 - Their ability to influence the direction of social change to create a more just social and economic order, nationally and internationally.
- Economic Survey 2017-18** has defined gender inequality in the following dimensions -
 - AGENCY - Exclusive decision making power over reproduction; financial resources, spending on their own health and mobility.
 - ATTITUDE - Attitudes about violence against women/wives, and the ideal number of daughters preferred relative to the ideal number of sons.
 - OUTCOMES - Son preference (measured by sex ratio of last child), female employment, choice of contraception, education levels, age at marriage, age at first childbirth, and physical or sexual violence experienced by women.
- According to the World Bank, empowerment is the process of increasing the capacity of individuals or groups to make choices and to transform those choices into desired actions and outcomes.

Dimensions of Women Empowerment

- SOCIAL & CULTURAL EMPOWERMENT**
 - At individual level:** Involvement in decisions about their own health; in decisions about large household purchases; in decisions about their mobility outside domestic sphere like visits to family and relatives, at

marketplace, visiting/staying their friend's; decisions about their own earnings; in decisions about contraception, menstrual hygiene, sanitation, health, surrogacy, abortion.

- **At familial and societal level:** Involvement in decisions related to their career and education, children (esp. son preference), marriage (eg. honour killing if one does not abide by family's decision), share in parental/ancestral property, involvement in collective decisions like family planning, management of expenses, decision involving their lifestyle - how they should dress, choice of friends, mannerisms/behaviour etc. India belongs to a land where women are revered as 'Devi' or goddess yet they are denied entry to some religious places.
- **At the governance level:** Non-recognition of marital rape as a crime at the first place; Implementation deficit and misuse of social laws like Dowry prohibition act - 1961, The Protection of Women from Domestic Violence Act - 2005; No separate definition or classification of Honour Killing as an offence in India (treated as a murder under Section 300 of the IPC punishable under Section 302).

- **ECONOMIC EMPOWERMENT**

- Women's economic empowerment refers to the ability for women to enjoy their right to control and benefit from the resources, assets, income and their own time, as well as the ability to manage risk and improve their economic status and well being.
- Status in India: Women in India represent 29 percent of the labour force, down from 35 percent in 2004. Nearly half of India's women do not have a bank or savings accounts for their own use, and 60 percent of women have no valuable assets to their name. The IMF estimates that equal participation of women in the workforce will increase India's GDP by 27 percent.
- **Some of the challenges faced by women in this domain are: Restrictions in career for women:** Women's household work (Care economy) is unpaid and undervalued; Pink-collared jobs; Feminization of agriculture and informal sector; Entrepreneurship as a career option is not promoted.
- **Inequity at workplace:** Salary differential; Creche facilities; Maternity leave; Sexual harassment at workplace; Glass-ceiling effect; Continuous discrimination regarding women's share in parental/ancestral property; Poor implementation of Sexual Harassment laws.
- However, despite several adversities, some Indian companies have leveraged women power as their key workforce. Some excellent examples of such women cooperatives in India include Shri Mahila Griha Udyog Lijjat Papad; Amul and Kudumbshree.

- **POLITICAL EMPOWERMENT**

- Political empowerment refers to the process of transferring various elements of power (resources, capabilities, and positions) to those who do not have it. Political empowerment requires inclusion in democratic decision-making processes. Women need to actively participate in government and politics in order to maintain democracy.
- **Status in India:** India stands at the lower rung of the Inter-Parliamentary Union (IPU) 2018 rankings at 152 among 193 countries in women's representation in parliaments. Women make up 11.8% of the Lok Sabha and 11% of the 245-member Rajya Sabha. Women constitute only 9% of the State Assembly members and 5% of the State Council members. States like Mizoram and Nagaland have zero women MLAs. Women constitute only 7.28% of the police force in India according to the government data.
- Some key challenges faced in political empowerment of women are: Discrimination at party level regarding number of tickets (Sexual favours or compromises in lieu of party tickets/promotions); Less number of women legislators; Poor representation at legislatures; Discrimination against women, Sexual harassment against women.
- Reservation of seats for Women in India's parliament is an ongoing debate. Some factors that support the argument are that issues related to women will get due prominence and the overall ambience in the parliament will be more conducive to debates and discussions. On the other hand, it is argued that providing reservation to women takes away the democratic right of the electorate to choose their representatives. Also the problem of forcing women to act as dummies for their husbands is debated. For instance despite having a constitutional mandate of 33.3% reservation of seats for women at the level of Panchayati Raj; these positions still continue to be effectively manned by their husbands as 'Sarpanch Patis'.

- **ECOLOGICAL EMPOWERMENT**

- Nature or Earth is ascribed with the status of 'Mother'.
- **Eco-feminism** - "Ecofeminism" was a term first used by Francoise D'Eaubonne in 1980 and gained popularity in protests and actions against continued ecological disaster. It is a joining of environmental, feminist, and

women's spirituality concerns. As the environmental movement along with environmental crises raised the consciousness of women to the decay of the earth, they began to see a parallel between the devaluation of earth and the devaluation of women. Thus, the concept of Ecofeminism has been introduced to highlight the convergence between nature and women.

- **Women & Climate Change - A changing climate affects everyone**– but it's the world's poorest and those in vulnerable situations, especially women and girls, who bear the brunt of environmental, economic and social shocks. In many developing countries, women and girls often carry the burden of water and fuel collection and food provision. Thus, climate change has direct and indirect impact on women - drought, floods, etc.
- **Prominent Examples where women have been at the forefront of movements against ecological destruction**
 - ✓ Bishnoi movement in 1700s was led by Amrita Devi
 - ✓ Chipko movement was primarily women-led movement where the women of Chamoli village hugged trees to protect them from being cut. Vandana Shiva an ecofeminist was involved in it.
 - ✓ Narmada Bachao Andolan was led by Medha Patkar
 - ✓ The First World Commission on Environment and Development (WCED) to take into account ecological degradation was headed by a woman, Gro Harlem Brundtland.
 - ✓ UN Women and UN Environment have joined forces under a global programme to promote women's entrepreneurship for sustainable energy. The programme will initially roll out in Senegal, Morocco, Myanmar, India, Indonesia and Bolivia.

Challenges faced by women throughout their lifetime

- Women face lots of peculiar difficulties throughout their life. Their suffering knows no bounds based on culture, race, religion, or region.
- **Survival Is The First Challenge For The Girl Child:** Right from the time a girl child is conceived, she is the less preferred choice for the parents. Female foeticide is the process of finding out the sex of the foetus and undergoing abortion if it is a girl. India has one of the highest female foeticide incidents in the world. The female child population in the age group of 0-6 years declined from 78.83 million in 2001 to 75.84 million in 2011.
- Discrimination does not end with sex-selective abortion of female fetus. Brutal treatments of mother and newborn girls are reported, particularly in cases of higher birth order (when there are more than two in the family).
- **Health and nourishment:** Girls who are granted the 'right to be born' are then denied the right to basic life-sustaining nutrition and health. India is home to the largest proportion of malnourished children in the world, with widespread prevalence of stunting, wasting and people being underweight. Jean Drèze and Amartya Sen document that girls are breast-fed for a shorter period of time than boys.
- In contrast to the global trends, child mortality in India is higher for females than that for males. India's under-five mortality rates for males and females, stands at 38.4 and 40.4 respectively.
- Undernourished girls grow up to become undernourished mothers and give birth to potentially undernourished, low-birth-weight children, who are more susceptible to death and disease. If this inter-generational self-perpetuating cycle is not broken, the problem of malnutrition would continue to fester.
- **Educational opportunities:** Given the prevailing influence of patriarchal values, right from their birth, a lot many girls bear the brunt of gender inequality, gender stereotypes and are treated inferiorly, as compared to boys.
- Due to extreme taboos, lack of affordable sanitary napkins, lack of decent functioning toilets, and inadequate school infrastructure, several teenage girls of menstrual age lag in schooling.
- In fear of exploitation and abuse, many girls are not sent to school and kept at home only to be married off early. And even if she is not married off, the young girl is still denied a deserving education, quality healthcare, employment opportunities and equal rights. Recent national data reveals that the dropout rate for girls at the elementary level are 4.10% which rises to 16.88% at the secondary level, with the figures being substantially higher for girls from vulnerable groups (19.05% for SC and 24.4% for ST groups).
- **Child marriage:** Child marriage robs girls of their childhood as they step into adult roles that they are unprepared for – be it managing households, bearing children, making decisions and so on. It not only hampers her schooling but also pushes young girls into early pregnancy which harms the health and nutrition of the teenage mother as well as her child.

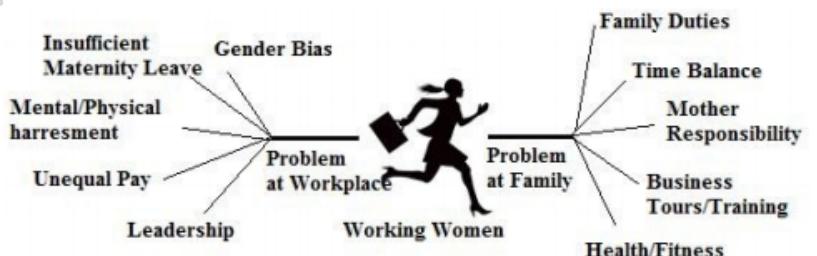
- Out of the 12.15 million children married in India, 8.9 million are girls, and married girls are three times the boys. Rural girls constitute 55% of married children.
- Right to bodily autonomy:** Throughout their lives women are denied bodily autonomy. Bodily autonomy is the right to governance over our own bodies. The right of a woman or girl to make autonomous decisions about her own body and reproductive functions is at the very core of her fundamental right to equality and privacy.
- Equality in reproductive health includes access, without discrimination, to affordable, quality contraception, including emergency contraception. India has the highest number of women — 31 million — with an "unmet need" for contraception. The burden of using contraceptives falls mostly on women. Nearly 75.4% of married men in India currently use no method of contraception, as per the National Family Health Survey. Young men need to be convinced that male contraception is safer and simpler than female sterilization.
- Women elderly in India:** Senior citizens in India face a number of challenges, but the situation is worse in case of elderly women. Old women who are single, abandoned or widowed face multiple barriers due to illiteracy, malnourishment, abuse, ill-health, lack of housing and exclusion from economic benefits. About 48.2 percent of elderly persons are women, out of whom 55 percent are widows. In the Global Age Watch Index 2014, India ranks 71 among 96 countries in elderly (60 years plus) care.

Examples of life course events that increase women's vulnerability to poor health in older age

- Gender discrimination against girls child leading to inequitable access to food and care by female and male infants and children.
- Restrictions on education at all levels.
- Childbirth without adequate health care and support.
- Low incomes and inequitable access to decent work due to gender-discrimination in the labour force.
- Caregiving responsibilities associated with mothering, grandmothering and looking after one's spouse and older parents that prevent or restrict working for an income and access to an employee-based pension.
- Domestic violence, which may begin in childhood, continue in marriage and is a common form of elder abuse.
- Widowhood, which commonly leads to a loss of income and may lead to social isolation.
- Cultural traditions and attitudes that limit access to health care in older age, for example older women are much less likely than older men to receive cataract surgery in many countries.

Challenges faced by working women

- In the era of 21st century, a woman wants equal opportunities as a man and the foremost challenge is how to balance work and home. Gender bias, unequal pay, mental and physical harassment, insufficient leave are some of the key issues of working woman at the workplace.
- Working women suffer from the phenomena of Glass ceiling where there is an unacknowledged barrier to advancement in a professional life. In addition, certain jobs are reserved only for women like jobs in care industry, often referred to as Pink Collared Issues. Currently, the number of women CEOs on the Fortune 500 list is just a dismal 38. And only three women on the list of Fortune 500 female CEOs are women of color.
- Although working women handle their professional life in facing competition and challenges at work place and personnel life in managing household work, handle children, family, cooking, social responsibilities are still considered as the duty of women only. They have to take up a full day job plus handle all household activities that they handled as homemaker. This has also been referred to as 'The Second Shift'.
- Waking up early, ignoring her health issues and get all the stuffs ready for her family is big practical challenge. It is reported that on an average women have lost 2 hours of sleep per day.
- The belief of male superiority in the society also creates several hurdles for women at their workplace. Women discover that they must be much better than their male colleague to reach at the top. These types of problems make women less eager to progress in their career.
- Insufficient Maternity leave is also the cause of stress for working women as they have to take care of their baby as well as achieve the targets given to them in office.
- There are many cases where women subordinates are asked for sexual favours from their male superiors in return of the promotion and growth granted to them.



Challenges faced by Working Women

- Unequal pay is another issue for working women. It has been observed that women are paid low salaries as compared to male employees. Although women prove themselves more efficient than male employees, most of the time they are not paid equally. This creates depression and demotivation in them which also affects her personnel life.
- Poor security is another issue for working women at workplace. Women working in corporate sectors and other private organizations mostly face the various crimes at their workplace because of lack of security provided to them.
- If working women have to go for business tour or any training programs for their career development, then they have to take permission from the husband & family members. They also have to do proper arrangements for their children. But this is not the case for men in India.
- Working women are denied ownership of their labour. Their participation regarding how and where to spend their own salary is either negligible or completely absent.

PARADOXES & CONTRADICTIONS

- On one hand properties are registered/brought in the name of women for financial benefits, on the other hand the benefit isn't passed on to these women.
- The road to economic recovery in India's post global financial crisis of 2008 was led by women headed banks - Shikha Sharma of Axis Bank, Arundhati Bhattacharya of SBI. However, women continue to be denied leadership positions constituting just 7% of seats on boards of publicly traded companies (as per World Economic Forum's 2015 Gender Gap report).

Other Issues

- **IMPACT OF DISTRESS, CONFLICT AND WAR ON WOMEN**
 - Women play a negligible role in decision regarding conflict and war. However, the impact of distress, conflict and war isn't gender neutral.
 - Rape and sexual violence against women during conflict are used as tools in order to humiliate enemies, to demonstrate victory, terrorise the population, break up families, and, in some instances, change the ethnic makeup of the next generation.
 - Sexual Slavery against women is used as an incentive for recruits into terror groups. Sexual violence tends to continue post-conflict as it has been demonstrated increased gender violence and detrimental effects on family relations.
 - Also problems of rejection by families and communities, unwanted pregnancies and children as a result of rape, rejection of these children, the stigmatisation and ostracisation of traumatised women, the spread of sexually transmitted infections and HIV, suicide and coerced suicide (under pressure from husbands or community members).
- **VIOLENCE AGAINST WOMEN**
 - Violence against women is experienced by women of all ages and social classes, all races, religions and nationalities, across the world. The United Nations Declaration on Violence against Women identifies three areas in which violence commonly takes place:
 - ✓ **Physical, sexual and psychological violence that occurs in the family**, including battering; sexual abuse of female children in the household; dowry-related violence; marital rape.
 - ✓ **Physical, sexual and psychological violence that occurs within the general community**, including rape; sexual abuse; sexual harassment and intimidation at work, in educational institutions and elsewhere; trafficking in women; and forced prostitution;
 - ✓ **Physical, sexual and psychological violence perpetrated or condoned by the State**, wherever it occurs.
 - Sexual violence against women is pervasive in India. According to latest data released by the National Crime Records Bureau (NCRB), India recorded 88 rape cases every day in 2019. These figures are likely to be just the tip of the iceberg as only a fraction of women who are raped file a complaint.
 - It is reported that between 2014 and 2018, there have been 1,483 victims of acid attacks in the country.

REPRESENTATION OF WOMEN IN OTHER FIELDS

- **Media**
 - The representation of women in media has always suffered from a perception bias. For example, in movies, women are assigned insignificant or stereotypical roles such as mothers or wives, instead of the main protagonists. Even in advertisements, women are seen more in household or child or food/nutrition related items whereas men are seen shown in the outside world. Songs are alleged to justify or glamorize eve-teasing/sexual harassment.
 - Though the recent trends have shown an improvement. For e.g. Many women centric movies have been made representing the changing roles and shift of the society towards equality (movies like Raazi, Queen, Hichki, etc.)
 - While Women in Indian film industry have huge fan following, stardom and are used for attracting viewership, they continue to be underpaid as compared to their male counterparts.
- **Technology**
 - Enabled access and affordability of education, health, skills.
 - Provision for employment opportunities especially in service sector eg. IT, ITES.
 - Upcoming challenges to women labour owing to Artificial intelligence and Machine labour.
 - Women centric technologies or inventions are not given priority or importance. For example, the movie Padman was based on Arunachalam Muruganantham, a social entrepreneur who invented a low cost sanitary pad making machine as poor women used unsanitary rags due to high cost of commercial pads.

PARADOXES & CONTRADICTIONS

- Where on one hand, media has given a voice to more women, it has become a place where women have suffered harassment in various forms such as trolling, cyber-stalking, cyber-harassment, image-morphing,
- Technology has led to dispensability of women labour in agriculture, manufacturing, leading to female foeticide, sex selective abortions.

- **WOMEN IN SPORTS**
 - Sports is mostly characterized by aggression, physical strength etc. and viewed as a male-bastion; Women keen in a sports as a future not only face wrath of their family but also sports administrators, coaches etc.
 - Issues of pay parity; Discrimination regarding resources; Issues of sexual harassment; Poor representation of women in sports governing bodies; Post-retirement from sports, the status of women has continued to be same.
 - While women have continued to face discrimination in sports starting right from family, sports personnels and to society as a whole, it were two women sportspersons - P. V. Sindhu and Sakshi Malik who brought glory to India in 2016 Olympics.
- **WOMEN IN AGRICULTURE**
 - Women have broadened and deepened their involvement in agricultural production over the last few decades as they increasingly shoulder the responsibility for household survival and respond to economic opportunities in commercial agriculture. This trend has been called the **feminization of agriculture**.
 - In rural India, the percentage of women who depend on agriculture for their livelihood is as high as 84%. They make up about 33% of cultivators and about 47% of agricultural labourers.
- **Issues**
 - While women have increased their work time in agricultural production, there has been little change in the gender division of labor within the household with regard to reproductive work.
 - Men are not assuming child care and domestic tasks, even as women are increasing their participation in on-farm and off-farm productive activities
 - Differentiated access to productive resources and markets for female farmers.

Important Supreme Court Judgements

- **Vishaka Vs State of Rajasthan:** On August 13, 1997, the Supreme Court commissioned the Vishaka guidelines that defined sexual harassment and put the onus on the employers to provide a safe working environment for women.

- **Mary Roy Vs State of Kerala:** In 1986, the Supreme Court delivered a landmark judgment that granted Syrian Christian women the right to seek an equal share in their father's property.
- **Vineeta Sharma v Rakesh Sharma:** In a latest judgment in August 2020, a three-judge bench of the Supreme Court held that daughters and sons have equal coparcenary rights in a Hindu undivided family.
- **Roxann Sharma Vs Arun Sharma:** The Supreme Court ruled that when estranged parents are involved in a legal tussle over the custody of a child who is under the age of five years, the custody of the child will remain with the mother.
- **Tamil Nadu Vs Suhas Katti:** This case led to the first conviction under the Information Technology Act, 2000. The victim was being harassed by the accused, Suhas Katti, when she refused to marry him.
- **Laxmi Vs Union Of India:** In 2006, Laxmi, an acid attack victim, filed a petition seeking measures to regulate the sale of acid and provide adequate compensation to the victim. Taking cognizance of the number of cases relating to acid attacks against women on the rise, the Supreme Court imposed stringent regulations on the sale of acid in 2013.

Conclusion

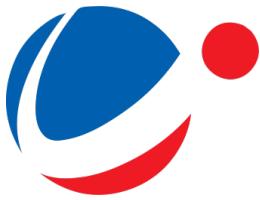
- While we may walked few miles towards women empowerment, the road is a long one. **Empowering women is key to our tomorrow, our future.**
- Women's empowerment is not and cannot, be separated from the empowerment of nature, empowerment of all the marginalised people and countries.
- Women's struggles and movements are closely linked to peace movements, ecology movements, workers' and peasants' movements, human rights movements and movements for democratisation and decentralisation of society.
- The **need of the hour is to enable women to realize their potential.** While government must take measures like for health, education, employment, awareness for women etc. it is incumbent on society to create awareness and create public values which will promote women empowerment.
- Even women have internalized norms of Patriarchy that they themselves dominate other women. Like domination of daughter- in-laws by their mother-in-law It is the culture which needs an overhaul. As **famous Sociologist Andre Beteille has said- "Law only decides the direction which a society should take, the actual direction of the society is decided by its culture".**
- Finally, women must be at the forefront for demanding their own empowerment. As **Kofi Annan say that there is no better tool of empowerment than Women themselves.**
- **"Yatra naryastu pujyante ramante tatra devta"** – As per Manusmriti- **"Where Women are honoured, divinity blossoms there, and where ever women are dishonoured, all action no matter how noble it may be, remains unfruitful."**

PREVIOUS YEAR UPSC ESSAY TOPICS RELATED TO WOMEN

- Men have failed: let women take over (1993)
- The new emerging women power: the ground realities. (1995)
- Greater political power alone will not improve women's plight. (1997)
- Woman is god's best creation. (1998)
- Women empowerment: challenges and prospects. (1999)
- Empowerment alone cannot help our women. (2001)
- Whither women's emancipation? (2004)
- If women ruled the world. (2005)
- The hand that rocks the cradle. (2005)
- Women's reservation bill would usher in empowerment for women in India. (2006)
- Managing work and home – is the Indian working woman getting a fair deal? (2012)
- If development is not engendered, it is endangered. (2016)
- Fulfillment of 'new woman' in India is a myth. (2017)

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ESSAY TOPIC: SOCIO-CULTURAL DIVERSITY IN INDIA

Quotes of famous personalities

- “Diversity may be the hardest thing for a society to live with, and perhaps the most dangerous thing for a society to be without” - **W. S. Coffin Jr.**
- “When we lose the right to be different, we lose the privilege to be free” - **C. E. Hughes**
- “The highest result of education is tolerance” - **Helen Keller**
- “We may have different religions, different languages, different colored skin, but we all belong to one human race” - **Kofi Annan**
- “Civilization will reach maturity only when it learns to value diversity of character and of ideas” - **Arthur C. Clarke**

Anecdotes/Short Stories

“Like sugar in milk” - Meeting between Jadi Rana and the Parsi emigrants

- When the Parsis requested asylum, Jadi Rana motioned to a vessel of milk filled to the very brim to signify that his kingdom was already full and could not accept refugees.
 - However, one of the Parsi priest added a pinch of sugar to the milk, thus indicating that they would not bring the vessel to overflowing and indeed make the lives of the citizens sweeter. Jadi Rana gave shelter to the emigrants and permitted them to practice their religion and traditions freely.
- In India society, diversity permeates all aspect of socio-cultural life, both temporally and spatially.

CEPA with Japan

- While concluding CEPA with Japan, Japanese officials argued that it was impossible to grant concessions to Indian pharmaceuticals companies as they didn't test their medicines on population from Mongoloid race.
- However, Indian officials were quick to point out that the companies have already tested their products for north-east people who were from Mongoloid race. Eventually, the Indian officials were able to convince their Japanese counterparts leading to concessions for Indian companies as part of CEPA.

Introduction

- It is often said that the concept of diversity is in itself so diverse that it is tough to arrive at a uniform and standard definition. However, it is always possible to define diversity in terms of salient and necessary features.
- Thus, ‘diversity’ may be defined on following parameters :-
 - *Understanding* that each individual is unique and different. These differences can be along the dimensions of race, ethnicity, gender, sexual orientation, socio-economic status and, political beliefs.
 - Recognition of these differences.
 - *Mutual tolerance and acceptance* of these differences, and to embrace and celebrate the rich dimensions of diversity contained within each individual.
- Indian society provides the most potent illustration of socio-cultural diverse society as manifested in form of different religions, languages food habits, customs, dresses, festivals, beliefs etc. It has also been referred to as the oldest surviving civilisation (approximately 5000 years old) in-spite of being a target for invasions from Mughals, Britishers etc.

- The values of tolerance, mutual respect, dissent and debates have been a permanent feature of Indian society. It has enabled people coming from other parts of the world to adapt and integrate with rest of the society while giving them sufficient space to preserve their culture.
- As Shashi Tharoor has said, "*If America is a melting-pot, then to me India is a thali, a selection of sumptuous dishes in different bowls. Each tastes different, and does not necessarily mix with the next, but they belong together on the same plate, and they complement each other in making the meal a satisfying repast.*"
- Globalisation also has influenced socio-cultural diversity. Loss of group identity occur when globalization encourages a 'Western ideal of individualism'. This promotes a homogeneous set of values and beliefs, popularly known as 'McDonaldisation'. Global access to information has opened the gateway to acquiring cultural property and information.
- However, this has also reinforced the cultural roots in the sense that people are becoming more aware and assertive for their culture. Fear of losing out the cultural identity has led to the initiatives for establishing and popularizing the local culture of India as well. In fact, this has led to an amazing fusion of cultural worlds as can be seen from the examples of Turmeric Latte, celebration of Christmas as well as Diwali with same rigour etc.

Manifestation of India's Socio-cultural diversity



Racial Diversity:

- Race refers to a group of people with a set of distinctive physical features such as skin colour, type of nose, form of hair etc.
- Indian sub-continent has been a major hub for a large number of migratory races from both directions - east and west.
- India has often been described as an ethnological museum consisting of six main ethnic groups –

Ethnic Group	Strain in India
Negrito	In some of the tribes in South India; Andaman Islands in Bay of Bengal etc.
Proto-Australoids	In the tribes of Middle India etc.
Mongoloids	In North Eastern regions etc.
Mediterranean	In Tamil-Nadu and Andhra Pradesh etc.
Western Brachycephals	In Odisha, Parsis of Bombay etc.
Nordic	In Bania castes of Gujarat; the Kayasthas of Bengal, etc.

Paradoxes and Challenges

While migration and diversity of race has been a continued phenomena since time immemorial, instance of racism and xenophobia have also been part of Indian discourse. For e.g Problems faced by people from North-East and also from countries like Africa as seen in the case of attacks on African nationals in India.

- **Geographical Diversity**

- India has been endowed with a very diverse geographic features like dry deserts, evergreen forests, Himalayan mountains, long coastlines and fertile plains.
- Climate -Blazing heat of the plains, as hot in places as hottest Africa to freezing points of the Himalayas
- Fertility - Indo-Gangetic plains are counted among amongst the most fertile regions of the world, while other regions like Thar desert are very unproductive
- Rainfall - India is heavily dependent on Monsoons, the rainfall is not uniform across the country. While places in Western Ghats and North-East like Mawsynram and Cherrapunji receive heavy rainfall, places like Sindh and Rajasthan gets hardly any rainfall in a year.
- This variation in the climate has also contributed to a variety of flora and fauna in India. In fact, India is of the 17 megadiverse countries globally. In addition, India is also home to 3 biodiversity hotspots.

Paradoxes and Challenges

While geographical diversity has enabled existence of a diversity of climatic conditions, soils, biodiversity etc. in India, it has also bred problems of geographical neglect, inadequate infrastructure linking, alienation among people and governance challenges.

For e.g. North East continues to be neglected and there is a growing problem of alienation among people from North-East; A similar case is also seen in case of Tribal areas; Public service delivery continues to be challenge in hilly areas, forest areas etc.

- **Religious Diversity - Land of Spirituality and Philosophy**

- India is home to 4 of the major religions of the world namely Hinduism, Sikhism, Buddhism and Jainism.
- Apart from these, due to migration and receptive nature of India society followers of Islam, Christianity, Zoroastrianism etc. continue to form a major component of our population.
- Right from the beginning of our civilisation, since the times of the vedic and later vedic age, there existed both vedic (Nyaya, Vedanta etc) as well as non-vedic school of thoughts (Charvaka, Buddhism etc.).
- Thus religious diversities and their beliefs vary from -:
 - ✓ One God to multiple to no concept of God
 - ✓ Prescribing only Veg food to Non-Veg food to Satvik food.
 - ✓ From following course of meditation to pursuing penance to pursuing knowledge for attaining liberation.

Paradoxes and Challenges

While religious diversity has been the hallmark of Indian Civilisation, it has also lead to series of dysfunctions. Some of the prominent among them include - Religious Conflicts, Religious Polarization; Appeasement politics; Communalism; Also acts as fault-lines for foreign countries to exploit and de-stabilize Indian society as is being frequently used by Pakistan.

- **Caste Diversity**
 - While Caste groups have been mostly a feature of Hindu Society, they have now slowly become a major component of other societies also - Islam, Christianity.
 - Caste system owes its origin to chaturvarna theory which later on became heredity and rigid.
 - Conventionally, there are four varnas - Brahmins, Kshatriyas, Vaishyas and Shudras. However, at the ground level, there are numerous major castes and subcastes.
 - These castes have distinct occupations, rituals, rules for marriage and dining etc.

Paradoxes and Challenges

- While caste has continued to be a core entity of Indian Society since time immemorial and had a genesis in occupational basis, it became rigid and exploitative in due course of time.
- Consequently, it has led to series of problems in form of caste conflict especially against lower-castes; caste based violence; protests for and against caste based reservation and phenomena of vote-bank politics. For e.g. the protests by Marathas, Patels for reservation; Cases of violence against Dalits.

- **Language Diversity**

- Indian constitution recognizes 22 languages under Schedule Eight.
- However, according to People's Linguistic Survey of India, there are 780 languages and 86 scripts in India.
- It is often said in India, that the language changes for every 4 miles.
- The Yuelu Proclamation, made by the UNESCO in 2018, says: "The protection and promotion of linguistic diversity helps to improve social inclusion and partnerships, helps to reduce the gender and social inequality between different native speakers, guarantee the rights for native speakers of endangered, minority, indigenous languages, as well as non-official languages and dialects to receive education, and enhance the social inclusion level..."

Paradoxes and Challenges

While India has been marked by unity and functional governance in-spite of many languages, linguistic diversity has also led to series of problems and challenges:

- **Division of States** - It has continued to be a unresolved issue even after 70 years of Independence and often found resurgence in some form or the other as can be seen in case of Harit Pradesh (UP), Bodoland (Assam), Saurashtra (Gujarat) etc.
- **Constitutional Recognition**- While, there are very high number of languages in India, only 22 languages have been recognized under Schedule Eight of the Constitution.
- **Language Chauvinism** - There has been growing attempt to impose Hindi throughout India and make it as a national language thus inviting resentment from non-Hindi speaking population. For e.g. Protests in Tamil Nadu against imposition of Hindi.

- **Family Diversity**

- Family system has been one of the most important institution of Indian society. However, there is a huge variation in form and structure of family :-
 - ✓ While north India mostly have a patriarchal form of family, matriarchal form is also found in Tribes and Nairs of Kerala.
 - ✓ India has had a distinct joint family system, rarely seen in any society. In modern day, there has been a shift towards nuclear family system, live-in relationships, single parent family etc, families with working women.
 - ✓ One of shift has been in emergence of LGBT community who have a distinct sexual orientation as compared to heterogeneous families.

Paradoxes and Challenges

While India boasts of a wide variety of family structures, there have issues w.r.t recognition of new family forms like Single Parent family, LGBT apart from the continuing poor status of women.

- **Food Habits, Dress Code, Music, Festivals**

- Food habits vary from non-vegetarian to vegetarian; wheat-centric to rice-centric; spicy to sweet and non-spicy food. Even something as universal as Pani-puri has different regional names and varieties.

- Dress Code - Salwar-suit; Saree; Dhoti etc.
- Music - Hindustani, Carnatic, Western, Folk music etc.
- Festivals - Diwali; Holi; Ganesh Chaturthi; Eid; Durga Pooja; Folk festivals etc.

Paradoxes and Challenges

While diversity in food habits, dress Code, festivals have led to development of a composite culture, there have also been certain issues like -: Problem of moral policing regarding dresses; Issues of banning certain food like Beef ban etc.; Prohibition of celebration of certain festivals in certain areas.

- **Political diversity**

- Different ideologies - Centrist like Congress; Right-Wing like BJP; Left-wing like CPI; Anti-corruption based parties like AAP etc.; Regional parties like BSP, SP, DMK, TDP etc.
- Various pressure groups, NGOs, Civil Society organisation etc - FICCI; MKS; ADR etc.

Paradoxes and Challenges

While political diversity has enabled success of democracy and democratic institutions in India, it has also led to problems of: Accommodation of diverse interests; Proliferation of Parties, Pressure groups etc.

Also, NGO groups which were meant for the welfare of the people, have now became an avenue for profit making. They have became opaque in their functioning and frequent violations of Foreign Contribution (Regulation) Act - 2010 have been reported.

Debate on socio-culture diversity

- There has been a sustained debate about whether socio-culture diversity is a boon or bane for the society. As a boon:
 - **Innate to human nature**
 - ✓ Diversity comes naturally to humans. It forms the very basis of our existence.
 - ✓ Example - Our physical features; thought process; natural talent etc.
 - **Opening and broadening of mental horizon; Intellectual growth**
 - ✓ Culture of debate and diversity in ideas, values has been an integral component of Indian society.
 - ✓ Amartya Sen - Book 'Argumentative Indian' - Ancient Indian society during the vedic times promoted debates and discussion through the institution of sabha and samiti.
 - ✓ This tradition continued during times of Ashoka and Akbar in the form of Ibadat Khana. In modern India, this is manifested in form of temple of democracy - Parliament and State legislature.
 - **Recourse to debates and discussion for solving disputes**
 - ✓ Diversity enables a society to resolve disputes through debates rather than recourse to violence or crime.
 - ✓ For e.g. Case study by Jean Dreze and Reetika Khera concludes that society with higher sex ratio has lower crime rate; India approach to problem of national integration; Problem of North-East insurgency etc.
 - ✓ India has become a test case for conflict-ridden countries and facing problems of terrorism, extremism, separatism etc.
 - **Economic growth**
 - ✓ Case of modern cities -: Cities like Mumbai and Hyderabad have become centres of development owing to their cosmopolitan culture and receptivity to diversity.
 - ✓ Case of organisations - Companies which have embraced diversity w.r.t gender, region etc. have made huge strides in their respective field. For e.g. ISRO, Amul, Biocon etc.
 - ✓ According to IMF chief Christine Lagarde, India can increase its GDP by 27% on account of greater participation of women in labour force.
 - **Prudent and effective solution to modern day problems**
 - ✓ Modern society is embracing properties of Tulsi, Neem etc. which were earlier restricted to usage by local people.
 - ✓ Potential of Yoga has now been acknowledged globally for enhancing concentration, fitness etc.; Celebration of International Yoga day.

- **Impetus to foreign policy**
 - ✓ Representation at International Fora;
 - ✓ Recognition of Yoga Day
 - ✓ Role of Indian Diaspora who are recognized for their diverse views and ability to integrate with other cultures. For e.g. Sundar Pichai as CEO of Google or Satya Nadella as CEO of Microsoft.
- **Development of Syncretic culture**
 - ✓ Rise of Buddhism, Jainism, Bhakti movement, Parsis, Sufi movement etc.
 - ✓ Influence on visual arts, performing arts, architecture etc. - Impact of Islam, Christianity, Greco-Roman etc.
 - ✓ For e.g. Gujarat girls from Muslim community practise Yoga for coping with fasts during the month of Ramzan; chanting of Navkar Mantra by 5000 Jains chants for 36 lakh times for global peace under the aegis of Shri Vardhaman Sthanakvasi.

Organizational Diversity – Diversity @ Workplace

- With a lot of human movement taking place around the world, **issues of migration, assimilation, adaptation and the politics associated with organizational diversity** is being discussed vociferously in world forums. Diversity thus, in organizations or work place then becomes all the more important subject now.
- **Organisations in different nations have different diversity challenges to moot.** For e.g. in several countries of Europe where **increased migration in recent years** has shifted the long-held monochrome cultures, there is serious debate about assimilating diversity. In the US, which has long been more **open to multi-cultural traditions, race relations have been at the centre of the diversity debate**, in the Philippines capital of Manila, where Sun Life Financial has one of its Asia Service Centres, the **presence of a strong and open LGBT community mandates diversity handlers to make the workplace open and discrimination free**.
- Workplaces are in many ways a microcosm of a nation, representing multiple kinds of people based on race, gender, ethnicity, culture, religion, sexual orientation -- all under one banner, working towards the same goal.
- India is touted as one of the most diverse nations in the world. Yet, our behaviour as a society often reflects problems with assimilation and shows a lack of acceptance of differences. **The problems faced by people from the north India is touted as one of the most diverse nations in the world. Yet, our behaviour as a society often reflects problems with assimilation and shows a lack of acceptance of differences.**
- Bias may be a part of social settings, but as an ethical institution, an organisation has to ensure that individual employees do not carry such biased attitudes to the workplace when interacting with their colleagues.
- Diversity and inclusiveness have to be built into the very culture of various organisations despite challenges like – language barrier, bias during hiring, low interest on coming up of policies on working or pregnant mothers, etc.

Unity in Diversity

The term ‘Unity in Diversity’ refers to a state of togetherness or oneness in-spite of presence of immense diversity. As a concept, Unity in Diversity can be referred to as :-

- Diverse groups of people cooperating and working together as a single force,
- Different areas or states being united as a single country,
- Different people set aside their differences and look forward towards a common goal.

Indian society is synonymous with diversity. It presents endless varieties of physical features, religious beliefs and cultural patterns. It is the land of many languages and is often referred to as “The epitome of the world”.

However, this diversity is suitably accompanied with elements of unity since ancient times :-

- **Geographical Unity** - Since the ancient times India was called by the name ‘Bharata Varsha’ which stood for fundamental unity. In addition, theologians, political philosophers and poets have always referred to India as one.
- **Political Unity** - Rulers of India established their sway over the whole country and contemplated over it as a unit. Some of the prominent rulers include Ashoka, Samudragupta and Akbar. In modern times, political unity is ensured by Indian constitution, Parliament and Bureaucracy especially All India Services.
- **Religious Unity** - While India is the birth place of 4 of the major religions, there is an under-current of unity throughout India. The worship of Vishnu and Shiva under different names is as widespread in the North as in the South. The Ramayana and the Mahabharata are read throughout India.

- **Cultural Unity** - The festivals like Diwali, Dussehra, Eid etc. are celebrated in almost every part of the country. In addition, the values of tolerance, mutual respect, respect for family etc. are present throughout India. Apart from this, Cricket, Bollywood Movies etc. reflect on the Indian unity.

Conclusion

- In-spite of the challenges posed by diversity, there can be no doubt on the role played by socio-cultural diversity in sustaining and developing Indian society.
- **Problem is not of diversity per se, but the handling of diversity in India society. The problems of regionalism, communalism, ethnic conflicts etc. have arisen because the fruits of development haven't been distributed equally or the cultures of some groups haven't been accorded due recognition.**
- Examples - **Problem in Punjab** accelerated because the youths remain unemployed owing to negligible industrialisation; **Problem of North-East insurgency** is because of unemployment and non-recognition of their culture.
- It is in this context that Constitution and its values must form guiding principles of our society. Indian constitution while respecting diversity (Secular state; Fundamental Rights; DPSPs; Assertive action; Schedule 5,6,8;) also favours development of national identity.
- Any society which has tried to homogenise itself, has witnessed stagnation in due-course and ultimately decline. The most important example is this case is of Pakistan which tried to impose culture on East-Pakistan ultimately leading to creation of Bangladesh.
- Historically, one of the prime causes for India succumbing to foreign invaders have been absence of internal cohesion. If history has a lesson for us, it is that social cohesion and nationalism hold the nation together.
- India is often held as a case of 'Unity in Diversity' and must continue to promote and preserve it. The idea should be to promote constitution and its values as our Prime Minister, Narendra Modi has often said that - "**Constitution is our holy book**".
- Our ancient texts also teach us to accept and respect diversity of thought and ideas. The very famous quote from Rigveda "Let noble thoughts come to us from every side", advocates us to embrace diversity of ideas.
- Respect for diversity and nurturing national identity must be the goal of Indian society. At a time when the world is looking at India for guidance - A Vishwa Guru, any attempt to dent our socio-cultural diversity would be tragedy of highest order.
- As **Gandhiji** said - "**Our ability to reach unity in diversity will be the perfect present for the test of our civilisation.**"
- The essence of diversity is beautifully captured in the following quote from **Rigveda**:

"Ekam Sat Vipra Bahudha Vadanti"

(There are many paths that lead to God and people use different names and forms while explaining it. Irrespective of the apparent deviations, the core is same.)

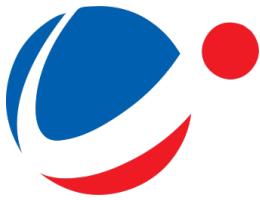
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ESSAY TOPIC: SOCIAL MEDIA AND ITS EVILS

Quotes by famous personalities

- “Social media has played a key role in democratising our discourse” - **Narendra Modi**
- “Technology and social media have brought power back to the people” - **Mark McKinnon**
- “The great thing about social media was how it gave a voice to voiceless people” - **Jon Ronson**
- “Whoever controls the media, controls the mind” - **Jim Morrison**
- “Connectivity is a human right” - **Mark Zuckerberg**
- “Monitor, engage, and be transparent; these have always been the keys to success in the digital space.”- **Dallas Lawrence**
- “The social media is not a media. The key is to listen, engage and build relationships.”- **David Alston**

Anecdotes/Short Stories

- **Year-2008 saw the election of Barack Obama as the first black President of USA.** However, his rise was accompanied by the silent rise of social media - Twitter, Facebook - which played a major role in influencing people. A similar story, but in another year - 2014, for another leader - Narendra Modi and for another country - India.
- **During 2010,** there was widespread **discontent against autocratic regimes across Middle-East often referred to as Arab Spring.** While discontent wasn't new, what was new was the Social media and its power. Social media played a huge role in mobilising people who were demanding democracy and voice in decision making.
- **#MeToo campaign on Social media against sexual harassment and assault,** became a global movement and helped in demonstrating the widespread prevalence of sexual assault and harassment, especially in the workplace.
- The **war for Net Neutrality in India** wasn't fought on any ground, water or space but on Social Media. The support on social media finally led to government confirming the principle of net neutrality.
- “Humans are lamentably insecure creatures, and often they pick up their modern devices to alleviate that insecurity, in a subconscious attempt to receive some thrill and reward. And the longer we keep on practicing such habit, the more hooked we get to our devices, often to the point of losing our mental stability. So, devices that were mainly invented as means of communication have become weapons of mental devastation.”— **Abhijit Naskar, The Gospel of Technology**

Introduction

- Connectivity and communication form the basis for sharing, learning, debating and discussing.
- Beginning from the **ancient times**, they have been an integral component of our lives, our society. They not involve direct modes like talking, sending letters etc., but also indirect modes like - performing arts and non-performing arts.
- Hence, it is of no surprise that human beings are often referred to as social animal.
- However, the content and means of communication have not remained static. They started with **Pigeon post**, moved on to **postal letters, then to telephones and now to smart phones and social media.**
- **Interestingly, Social Media is not only changing how people communicate but also what people communicate.**

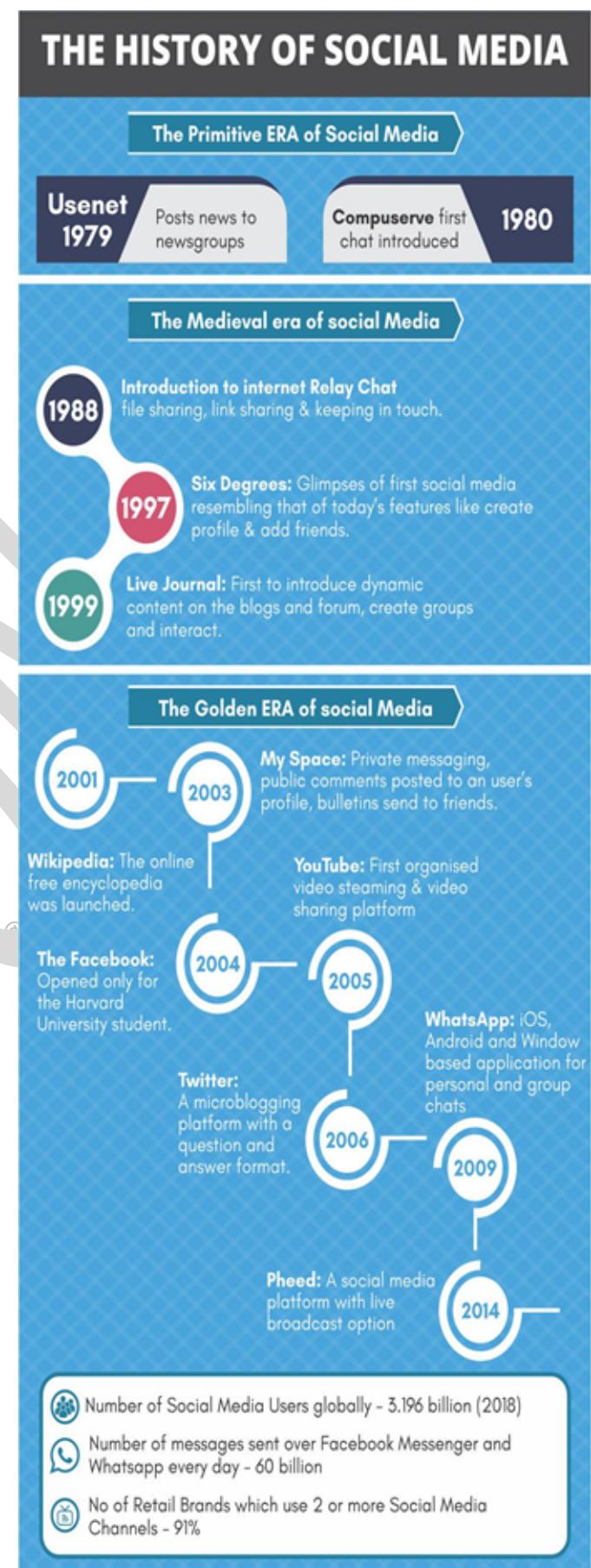
- As of today, social media is becoming an integral part of our life. Our days starts with checking and updating our social media accounts and ends on a similar note.
- However amidst all these, there has been growing debate on the problems and the challenges of social media.
- Social media has its benefits and drawbacks. It is useful for research, has an educational value as a medium for learning about current events and of course, as a platform for conversation and opposing arguments with others. It gives people a way to stay in touch with people who live far away. It lets people share fun, interesting and informative content. It gives businesses a way to engage with customers. What's not debatable however, is that it can be addictive and extremely dangerous for youth (and some adults) who do not use it sparingly and who do not exercise restraint or precaution when sharing content that is not suitable or appropriate for an open forum.

Social Media Statistics for 2021

- 3.5 billion social media users worldwide.
- Facebook is the most popular social media platform.
- 90.4% of Millennials, 77.5% of Generation X, and 48.2% of Baby Boomers are active social media users.
- Users spend an average of 3 hours per day on social networks and messaging.
- 73% of marketers believe that social media marketing has been "somewhat effective" or "very effective" for their business.
- 54% of social browsers use social media to research products.
- 71% of consumers who have had a positive experience with a brand on social media are likely to recommend the brand to their friends and family.
- 49% of consumers depend on influencer recommendations on social media.
- 500 million daily active Instagram stories are uploaded worldwide.
- 91% of all social media users access social channels via mobile devices.

Definition

- In common parlance, Social media is seen synonymous with Facebook, Twitter, Whatsapp, LinkedIn etc.
- However, social media goes beyond this and has a much more broader scope. It is an umbrella term and, refers to interactive digitally-mediated technologies that enable users to create, share content, interact and to participate in social networking.
- This interaction can take many forms, but some common types include:
 - Sharing opinions, links of third parties, photos, videos and posts
 - Public updates to a profile, including information on current activities and even location data
 - Commenting and rating on the photos, posts, updates, videos and links shared by others.



Characteristics of Social Media

Social media is best understood as a group of new kind of online media, which share most or all of the following characteristics:

- **Participation:** Social media encourages contribution and feedback from everyone who is interested. It blurs the line between media and audience.
- **Openness:** Most social media services are open to feedback and participation. They encourage **voting, comments and the sharing** of information. There are rarely any barriers to accessing and making use of content, password-protected content is frowned on.
- **Conversation:** Whereas traditional media is about “broadcast” (content transmitted or distributed to an audience) social media is better seen as a **two-way conversation**.
- **Community:** Social media allows communities to form quickly and communicate effectively, sharing common interests.
- **Connectedness:** Most kinds of social media thrive on their connectedness, making use of links to other sites, resources and people.

Rise of Social Media - Why?

- Social media has often been described as the **silent revolution** of the 21st century. Recently the total number of social media users crossed 3 billion with no sign of slowing down.
- But why is the Social media so popular? Why is it becoming indispensable? Why is it becoming the first choice for almost everything from news to governance; from buying and selling goods to mobilising support for social movements?
- Some of the factors:
 - **USPs of Social Media**
 - ✓ Speed; Ease of use; Flexibility; No User fees (Most of the social media applications don't charge any fees for registration or usage); All it takes is a click to send, post, share and receive information.
 - ✓ Popular Social Networking sites are built in such a way that they are very much user friendly. Most sites are so easy to navigate that they require very less knowledge of the internet. In fact they offer a better way of connecting with new people than other internet channels like bulletin boards and emails
 - **Digital Penetration and applications**
 - ✓ Number of Indian internet users have already reached 500 million with their number increasing day-by-day. In addition there has been a proliferation of social media sites and applications.
 - **As a marker of Social status**
 - ✓ Social media has emerged as a marker of social status with people increasingly sharing their pictures, videos and personal information. Increasing number of comments, likes, followers have become a status symbol; Rise of social media celebrities.
 - ✓ Anyone can use social media as a promotional tool. People have been using it to promote their business, products, services, brands, etc. worldwide.
 - **Urbanisation, individualism and breakdown of traditional social structures**
 - ✓ Owing to rising urbanisation, individualism and breakdown of traditional social structures like family etc. people are becoming lonely, isolated and emotionally insecure. The traditional comfort of social relations has waned away as work demands geographical mobility.
 - ✓ In addition, the rising expectations and uncertainties, growing ambitions without adequate resources leads to people being labelled as ‘losers’ leading to anxiety and frustration.
 - ✓ In such a scenario, social media along with the option of being anonymous becomes a safety valve for people to vent out their frustration without the fear of being judged. For e.g. Increasing popularity of **Blue Whale Challenge game** was more among children who were isolated, branded as ‘loser’.

What has Social Media done?

- The introduction of social media has changed the world in many ways. Today, Social media has penetrated every aspect of human life and society. It has connected people like never before.
- Accessibility through smart phones, tablets, computers, and other mobile devices has made accessing information and connecting with people just a touch away. It has made the world stronger and a better place to live in. Some of the prominent benefits :-

- **Politics and Media**
 - As a tool for political campaigning and advertising; as a tool for eliciting opinion of people on schemes, initiatives, legislation; as a tool for policy implementation and monitoring; as a tool for enforcing transparency and accountability; as a tool for mobilising support for political movements
 - **Examples** - Role of Social media in winning elections for Barack Obama, Narendra Modi etc; MyGov.in, a portal by government for taking feedback from people; Arab Spring - Social media had a huge role in mobilising support for the Arab Spring.
 - Social media has made massive, unprecedented changes across all forms of media. Twitter and Facebook have emerged as major forums for news. Social media has given rise to Citizen journalism. Social media is now being touted as the 5th pillar of democracy.
- **Social Issues & Media**
 - Have helped in making people more tolerant, aware about other's beliefs, culture etc.; Broadening of mental horizon;
 - Have enabled people to maintain contact with families, friends, relatives etc.
 - Aided in giving voice to voiceless like Women, Black people in USA, Tribals etc.
 - Have helped in enhancing the reach of delivery of education, health.
 - Examples - #Metoo Campaign; #BlackLivesMatter; Khan academy; SWAYAM
- **Economy & Media**
 - New source of employment - Every organisation now has a separate social media department; As a tool for feedback for companies - Concept of PROSUMER; e-Commerce; Boost to start-up; Digital Marketing; Enabled even remote handicrafts
 - Examples - e-Commerce; Startups; Patanjali Ayurveda Limited has made huge impact through social media; Dettol's Global Handwashing Day social media campaign.
- **Ecology & Media**
 - Social media has also enabled people to become more consciously aware about environment and environment protection.
 - It has propelled the rise of the independent activism. For e.g. During Deepwater Horizon Oil Spill, Gulf Coast residents used Facebook and Twitter as platforms to share and provide independent or alternative news sources and media that was captured by their communities.
 - It is also being used as a influence and encourage support during specific campaigns. For e.g. Greenpeace targeted Shell Oil operations in the Arctic Circle using social media; Rise of European Green Party (EGP) to a large part is attributed to social media activism.
 - #WorldEnvironmentDay and #EarthDay became global trendsetters and helped in raising awareness about environment; Mobilisation for protests against Sterlite Plant in Tamil Nadu were led by Social media.
- **Ethics & Media**
 - Social media has become a means for free speech and expression guaranteed under Article 19 of Indian constitution; Social media given voice to the voiceless; Right to Internet is now being gradually recognized.
 - For e.g. UN had made Internet access a human right; Recently Supreme Court has declared Right To Internet Access as a fundamental Right Of Every Indian;

Social Media – Its Challenges

- **Access**
 - Digital penetration in India still continues to skewed against rural areas, women, lower class etc.
 - In addition, there is serious lack of digital literacy and social media application in Vernacular languages.
- **Privacy**
 - Social media has put a huge question mark of privacy of people. E.g. Case of Facebook and Cambridge Analytica where personal information of users was being traded for monetary gains.
- **Challenges to internal Security**
 - Social media has also enabled radical and terrorist groups to promote radicalisation, recruit people and distribute their literature; Issue of Lone-wolf attacks who have been radicalised by these literature.
 - For e.g. ISIS has successfully used social media
 - **Fake news** has emerged as a major problem for law enforcement agencies. For e.g. Cases in Kashmir; Exodus of people from North-eastern region from Bangalore because of fake news.

- **Psychological and Health Problems**
 - **Problem of social media addiction** - Facebook addiction disorder; Studies have found that it social media usage triggers more sadness and less well-being.
 - **Problem of FOMO (Fear of Missing Out)**; Continuous comparing our lives with others has been found to be mentally unhealthy; Has led to problems of Jealousy; Also social media is making it tough for people to engage in prolonged concentration.
 - **Live-streaming of suicides** - New phenomena of live streaming of suicides by teens has emerged on social media. A series of reasons have emerged for such a phenomenon - To get their name in the media; To get attention; As a response to growing isolation where suicide is considered as a statement.
 - **Physical problems**
 - ✓ Carpal Tunnel Syndrome affecting hands or wrists because of too much typing; Eye problems;
 - ✓ Fatigue - Because of too much use of social media and lack of requisite sleep
 - ✓ Lack of exercise - Social media is making people especially children, lazy and immobile by cutting duration people would otherwise be spending outdoors or exercising.
 - ✓ Distraction - One of the most dangerous potential consequences of social media addiction is driving while being distracted. For e.g. A number of road accidents are happening owing to usage of mobiles.
 - **Commodification of public life**
 - Social media has led to commodification of life where

Trolling in India

The Amnesty International India has released a report titled “**Troll Patrol India: Exposing Online Abuse Faced by Women Politicians in India**”. The report analysed more than 114,000 tweets sent to 95 women politicians in the three months during and after last year’s general elections in India.

Highlights of the report

- The research found that women are targeted with abuse online not just for their opinions – but also for various identities, such as gender, religion, caste, and marital status.
- Indian women politicians face substantially higher abuse on Twitter than their counterparts in the U.S. and the U.K.
- Around 13.8% of the tweets in the study were either “problematic” or “abusive”. Problematic content was defined as tweets that contain hurtful or hostile content, especially if repeated to an individual on multiple occasions, but do not necessarily meet the threshold of abuse.
- While all women are targeted, Muslim women politicians faced 55% more abuse than others.
- Women from marginalized castes, unmarried women, and those from non-ruling parties faced a disproportionate share of abuse

REGULATION ISSUE OF SOCIAL MEDIA

- **Regulation of Social media** presents a very common dilemma of attempting to balance between right to freedom of speech and expression guaranteed under article 19 and restrictions to it as enumerated under article 19(2).
- There is no explicit provision in India regulating Social Media. However, there are series of laws which do regulate content on Social media :-:
 - **Information Technology Act, 2000** - Social networking media is an “intermediary” within the meaning of the act and is liable for various acts or omissions that are punishable under the laws of India; Section 79 of the act mandates that if there is some objectionable material on a site then there is ought to be action within 36 hours of the offence being pointed out.
 - **Indian Penal Code (IPC)** - Promoting Enmity Between Groups On Grounds Of Religion, Race etc. (S. 153A), Defamation (S. 499), Insulting The Modesty Of A Woman (S 509), Criminal Intimidation (S 506), Sedition (S124-A), Defamation (S 499 and S 500) etc. can be invoked against content on social media.
- Recently, the Supreme Court observation on regulating social media has triggered a fresh debate on pros-cons of regulation of social media.

Pros-

- Will help in censorship of posts related to religious fundamentalism or radicalism and help in averting any danger to peace and societal cohesion.
- Will also aid in preventing terrorists from spreading their agenda or giving shape to national security threats
- Will help in censorship of certain content which is vulgar or misleading may be essential for keeping it away from the reach of Children.

Cons-

- It can be used as an excuse to mute the voices of dissent and constructive criticism.
- It can subvert creativity in the name of morality, sedition or blasphemy.
- It can restrict a person to fully express his views (Peaceful) and violate his Fundamental right to speech.
- It risks into creating a repressive and intolerant society without democratic ideals.

Recent initiatives

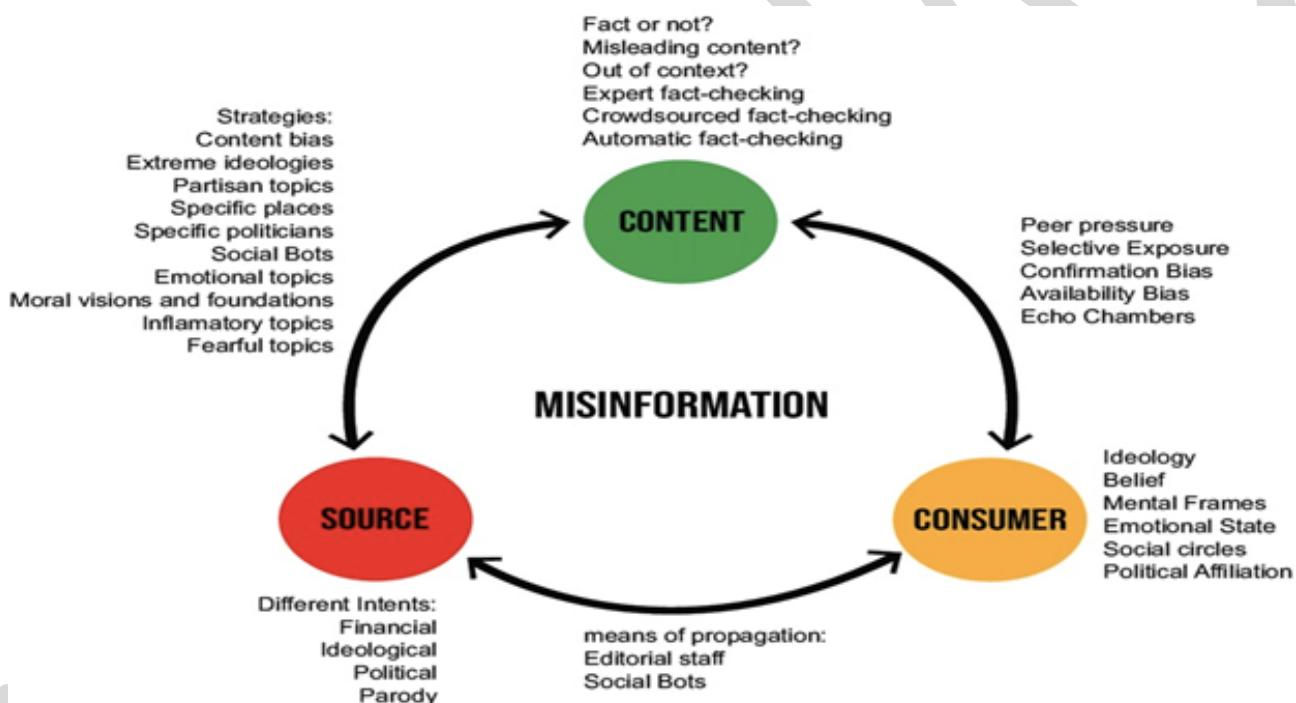
- Government is finalising a policy which is aimed at keeping a hawk's eye vigil on the social media to check if it is being "misused" to conspire against India and spread anti-national propaganda.
- Government is also planning to put in place a regulatory framework for social media and online content.

Way forward

- The way forward must be to strengthen privacy laws, better law enforcement and secure active cooperation of social media sites and application.
- In addition, there is a need to spread awareness about the possible misuses of social media.

every aspect of life is being open for public consumption. The line between private and public life is not clear anymore. For e.g.- craze for selfies, location updates on Facebook, etc.

- **Problem of Cyber crimes**, cyber bullying, cyber abuse, trolls and law enforcement
 - Social media has emerged as an avenue for cyber crimes like **cyber-bullying, cyber-stalking**.**Cyber-bullying, Identity theft, piracy** etc.
 - In addition there has **problem of trolls** where people have been subjected to incessant abuse. For e.g. *Recent case of Foreign Affairs Minister Sushma Swaraj being subjected to abuse*.
 - Law enforcement is another challenge in Social media because of the speed at which information spreads, problems of identifying perpetrators of crimes and lack of cooperation from social media websites like Facebook, Youtube, Whatsapp etc.
- **Problem of Fake News and Propaganda**
 - Fake news such as rumours of former Prime Minister Atal Bihari Vajpayee's death, during US elections, closure of messaging app Snapchat etc. have caused emotional setbacks, reputational damage, monetary losses and brand image crisis.
 - Social media has also become a tool for propaganda; Emergence of websites, social media accounts etc. which are funded by an organisation with an agenda like, damaging the reputation of a brand or person, spreading hatred or violence, influencing voters during an election, creating noise around a subject, and so.



UPSC 2017 – “Social media is inherently a selfish medium”

Miscellaneous Issues

- **Data harvesting and Data Mining**
 - Social media 'mining' is a type of data mining, a technique of analyzing data to detect patterns. Social media mining is a process of representing, analyzing, and extracting actionable patterns from data collected from people's activities on social media.
 - Google mines data in many ways including using an algorithm in Gmail to analyze information in emails. This use of the information will then affect the type of advertisements shown to the user when they use Gmail.
 - Some social media outlets have added capture time and Geotagging that helps provide information about the context of the data as well as making their data more accurate.
- **Ownership of content**
 - Social media content is generated through social media interactions done by users through the site. There has always been a huge debate on the ownership of the content on social media platforms because it is generated by the users and hosted by the company.

- Added to this is the danger to the security of information, which can be leaked to third parties with economic interests in the platform, or parasites who comb the data for their own databases.

- **Censorship by governments**

- Social media often features in political struggles to control public perception and online activity. In some countries, Internet police or secret police monitor or control citizens' use of social media.
- For example, in 2013 some social media was banned in Turkey after the Taksim Gezi Park protests. Both Twitter and YouTube were temporarily suspended in the country by a court's decision.
- More recently, in the 2014 Thai coup d'état, the public was explicitly instructed not to 'share' or 'like' dissenting views on social media or face prison. In Egypt, two women were sentenced to two years of imprisonment for posting TikTok videos, which the government claimed were "violating family values".

- **Deplatforming**

- Deplatforming is a form of Internet censorship in which controversial speakers or speech are suspended, banned, or otherwise shut down by social media platforms and other service providers that normally provide a venue for free expression.
- Law professor Glenn Reynolds dubbed 2018 the "**Year of Deplatforming**", in an August 2018 article in The Wall Street Journal. According to Reynolds, in 2018, "the internet giants decided to slam the gates on a number of people and ideas they don't like. If you rely on someone else's platform to express unpopular ideas, especially ideas on the right, you're now at risk."

The Social Dilemma

- It is a documentary that examines the effect that a handful of companies, including but not limited to Google, Facebook, Instagram, and Twitter have over the public; it is emphasized that a relatively small number of engineers make decisions that impact billions of people.
- It examines the current state of social media platforms focusing more specifically on problems in the industry and includes conversations that tackle concepts in technology such as data mining, technology addiction, machine learning, artificial intelligence, and surveillance capitalism.
- It highlights that social media is a "useful service that does lots of good with a parallel money machine" and has many beneficial qualities, a few include the facilitation of interpersonal connection across long distances, acquiring knowledge, and even finding organ donors.
- However, former employees of social media companies explain how user data can be used to build models to predict user actions and how companies keep user attention to maximize the profit from advertisements. It also dives into the manipulation techniques used by social media companies to addict their users and the psychology that is leveraged to achieve this end.
- It debates that this often leads to increased depression and increased suicide rates among teens and young adults. It also touches upon how user actions on online platforms are watched, tracked, measured, monitored, and recorded. Companies then mine this human-generated capital to increase engagement, growth, and advertising revenue.
- The final point the film touches on is fake news based on "disinformation-for-profit business model" and that companies make more money by allowing "unregulated messages to reach anyone for the best price". It highlights the dangerous nature of the flow of fake news regarding COVID-19 and propaganda that can be used to influence political campaigns.

Countermeasures

The following countermeasures can be used to protect oneself against social media.

- Turn off notifications or reduce the number of notifications you receive
- Uninstall social media and news apps that are wasting time
- Use a search engine that doesn't store search history, like Qwant
- Use browser extensions to block recommendations
- Fact-check before sharing, liking, or commenting when the information looks surprising
- Obtain sources of information with different perspectives, including sources one might disagree with
- Do not give devices to children; no screen time.
- Never accept recommended video on YouTube, Facebook or anywhere
- Try to avoid any clickbait material
- Keep devices out of the bedroom after a certain time
- Do not allow social media use until children reach high school

Conclusion

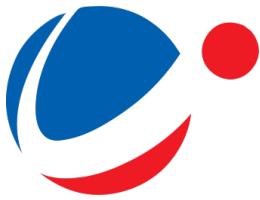
- Social media today has emerged as a double-edged sword. While it has transformed the way what we think, believe and act, it has led to violation of privacy, problem of trolls, fake news etc.
- These volley of problems has called for regulations and restrictions regarding social media. However, regulating social media is not only desirable but also not possible. It is the uniqueness of social media that is self regulating:
 - **Issues of privacy are being tackled with technology and better laws.** For e.g. Privacy with Technology; EU's General Data Protection Regulation (GDPR) has become a model law for protecting privacy.
 - Fake news is increasingly being tackled by **Social media activism and citizen journalism.**
 - Social media is itself becoming the means for educating and making people aware of the issues and challenges of social media.
 - While social media is making law enforcement tough, it is also helping in preventing and resolving crimes at the same time.
- **Need a code of practice on disinformation:** In line with the code by EU, it should allow platforms and agencies to take action in 5 areas:
 - Disrupting advertising revenues of certain accounts and websites that spread disinformation;
 - Making political advertising and issue based advertising more transparent;
 - Addressing the issue of fake accounts and online bots;
 - Empowering consumers to report disinformation and access different news sources, while improving the visibility and findability of authoritative content;
 - Empowering the research community to monitor online disinformation through privacy-compliant access to the platforms' data.
- The way forward must be to ensure :-
 - Formulation and enforcement of Strict Privacy Law
 - Strict cyber security system and Law enforcement
 - Making children aware of the problems of social media right from the beginning by Parents, Teachers and Society at large.
- The potential of social media is revolutionary. With increasing digital penetration and increasing development of application, social media rise is indispensable. Also, the values of social media like freedom, transparency, openness etc. are innate to human being, part of their social being.
- As Victor Hugo said, "**No power on earth can stop an idea whose time has come". Today, this power is "Social Media".**

Measures towards Data Localisation

- In 2018, a draft data protection law by BN Shrikrishna Committee also recommended that all personal data of Indians have at least one copy in India. It also defined a category of data as critical personal data, which must be stored and processed only in India.
- A similar clause was incorporated in Government's draft e-commerce policy, which recommended localization for "community data generated by users in India from various sources including e-commerce platforms, social media, search engines etc."

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ESSAY TOPIC: TOURISM IN INDIA

Quotes by famous personalities

- *"The one land that all men desire to see and having seen once, by even a glimpse, would not give the glimpse for all the shows of all the rest of the globe combined"- Mark Twain*
- *Travel makes one modest. You see what a tiny place you occupy in the world." — Gustave Flaubert*
- *"Travelling unveils new dimensions of this world not known to the naked eye." — Wayne Chirisa*
- *"To other countries, I may go as a tourist, but to India, I come as a pilgrim": Martin Luther King Jr.*

Definition

- **UN World Tourism Organization** - *"Tourism comprises the activities of persons traveling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes.".*

Introduction

- ***The world is a book and those who do not travel read only one page***. This saying by **St. Augustine** truly captures the spirit of travel, and India as a vibrant country, provides scores of reasons for travelers from across the world to choose India as their destination.
- The growing influence of the tourism sector as an economic powerhouse and its potential as a tool for development are irrefutable. Not only does the tourism sector spearhead growth, it also improves the quality of people's lives with its capacity to create large scale employment of diverse kind. It supports environmental protection, champions diverse cultural heritage and strengthens peace in the world.
- Therefore, the PM of India Mr. Narendra Modi, while addressing the nation from the ramparts of the Red Fort on the 73rd Independence Day, urged Indians to visit at least 15 tourist destinations within India by 2022.
- While tourism is often resource-intensive, it is a major driver of poverty reduction in developing countries. **Pandit Jawaharlal Nehru** for the first time brought to notice the importance of tourism in the country. According to him, *it was not only an instrument of earning foreign exchange but also a means of seeking international cooperation, understanding and peace between the nations.*

Facts/Statistics related with Tourism

- **Employment:** In FY20, 39 million jobs were created in the tourism sector in India; this accounted for 8.0% of the total employment in the country. The number is expected to rise by two% annum to 52.3 million jobs by 2028.
- **Contribution to the GDP:** According to World Travel and Tourism Council (WTTC), India ranked 10th among 185 countries in terms of travel & tourism's total contribution to GDP in 2019. During 2019, contribution of travel & tourism to GDP was 6.8% of the total economy.
- **Foreign tourist arrivals:** During 2019, foreign tourist arrivals (FTAs) in India stood at 10.89 million, achieving a growth rate of 3.20%. In 2019, arrivals through e-Tourist Visa increased by 23.6%.
- **Investments:** India was globally the third largest in terms of investment in travel and tourism with an inflow of US\$ 45.7 billion in 2018, accounting for 5.9% of the total investment in the country. Hotel and Tourism sector received cumulative FDI inflow of US\$ 15.48 billion between April 2000 and June 2020.



Types of tourism

- Recreational tourism:** Tourism is an often activity for recreational purpose. Most tourism took for a change and rest; this is the reason why package tours have become so popular.
- Environmental tourism:** Rich and affluent tourist are preferred to spend more visits to remote places where they get pollution free airs to breath.
- Historical tourism:** Tourist is interested to know how our forefather lived and administered in a particular area. They visit heritage locations, temples, churches, museums, forts etc.
- Ethnic tourism:** This refers to people traveling to distance places looking to their routes and attending to family obligations. Marriage and death bring people together to their native places. Persons who are settled overseas during later part of life visit place of their birth for giving boost to ethnic tourism.
- Cultural tourism:** Some people are interested to know how other people or communities stay, survive and prosper. The kind of culture they practice their art and music is different from ours. So in order to acquire knowledge, understands culture well, to become familiar with the culture, they undertake journey.
- Adventure tourism:** There is a trend among the youth to take adventure tour. They go for trekking, rock climbing, river rafting etc. They organized camp fire and stay under the blue sky. This tourism is meant for people with strong nerves who can tolerate stress.
- Health tourism:** In recent years, health tourism has become highly popular. People visit nature cure centers and hospitals providing specialist treatment. Many foreigners visit India for treatment because similar services in their country are costly.
- Religious tourism:** India represents multi-religious composition of population. Various package tours are organized to enable people to attend the religious duties and visit places of religious importance. E.g. Char Dham yatra.
- Music tourism:** It can be part of pleasure tourism as it includes moment of people to sing and listen music and enjoy it.
- Village tourism:** It involves traveling and arranging tours in order to popularize various village destinations.

EMERGING TOURISM AND HOSPITALITY SEGMENTS



- **Wild life tourism:** It can be an Eco and animal friendly tourism. Wild life tourism means watching wild animals in their natural habitat.

Dimensions of tourism

- **Historical:**
 - Historically, the ability to travel was reserved for royalty and the upper classes. From **ancient Roman times** through to the 17th century, young men of high standing were encouraged to travel through Europe on a **"grand tour"**. Through the middle Ages, many societies encouraged the **practice of religious pilgrimage** (the most popular form in India).
 - The continued popularity of **rail travel** and the **emergence of the automobile** presented additional milestones in the development of tourism.
 - Fast forward to **1952** the **first commercial air flights** from London, to Johannesburg and Colombo and later the dawn of the **jet age**, heralded the start of the modern tourism industry.
 - The **Industry growth** however had also been **interrupted** at several key points in history, including World War I, the Great Depression, and World War II and most recently due to Covid 19 pandemic.
 - At the same time, the industry began a **massive technological shift** as increased internet use revolutionized travel services.
- **Social and Cultural**
 - Social and cultural impact signifies the impact which it creates in terms of changes in the lives of local population, influence of culture on each other, improvements in infrastructure, resurgence of traditional crafts and ceremonies, lifestyle changes, increased intercultural communication and understanding.
 - The negative effects may vary from increased crime rates, dilution in traditional cultures, exploitation of primitive societies and their culture and resources by the outsiders.
- **International Dimensions: Tourism and Peace**
 - Tourism can play a key role in building peace and supporting reconciliation processes, Community engagement and empowerment, capacity building and training, and public/private sector partnerships are key factors in advancing the message of peace and conciliation in the post-conflict societies.
 - It is a vehicle for trust and goodwill. Cultural understanding can change attitudes and build trust. Tourism's role in peace building is also enacted through its contribution to poverty alleviation, cultural preservation and environmental conservation.

Economic Impacts of Tourism

POSITIVE	NEGATIVE
1. Foreign exchange earnings 2. Contribution to government revenues 3. Generation of employment 4. Balance of payment / trade account balance 5. Stimulation of infrastructure investment 6. Contribution to local economies	1. Inflation 2. Opportunity costs 3. Dependency 4. Seasonality 5. Leakage 6. Enclave tourism 7. Seasonal character of jobs 8. Prostitution and the underground economy

Gender & Tourism

- **Why Gender and Tourism?**
 - Tourism has the potential to contribute to greater gender equality and the empowerment of women.
 - However, women are concentrated in the lowest paid, lowest skilled sectors of the industry and carry out a large amount of unpaid work in family tourism businesses.
- The **Global Report on Women in Tourism 2010** is the first concrete output of the UNWTO-UN Women collaboration. This represents a first attempt to map the participation of women in tourism worldwide, with a particular focus on developing countries.

Its Key Findings

- **Employment**- women are well represented but tend to be working at a service or clerical rather than professional or decision-making level.
- **Entrepreneurship**- women are almost twice as likely to be employers in the tourism industry than in other sectors, and often employ more women than men.
- **Education** - there are proportionally fewer women graduates in services than in other fields.
- **Leadership** - women still only represent one fifth of all tourism ministers and tourism board chairs.
- **Community development**- women are contributing a large amount of unpaid work in tourism family businesses, especially when compared to other sectors.
- **Women in tourism are typically earning 10% to 15% less than their male counterparts.**

- **Economic**

- The tourism industry generates substantial economic benefits to both host countries and tourist's home countries. Especially in developing countries, one of the primary motivations for a region to promote itself as a tourism destination is the expected economic gain.
- **Environmental Dimensions**
 - Tourism has the potential to increase public appreciation of the environment and to spread awareness of environmental problems when they get closer with nature and the environment. This confrontation may heighten awareness of the value of nature and lead to environmentally conscious behavior and activities.
 - Tourism can significantly contribute to environmental protection, conservation and restoration of biological diversity and sustainable use of natural resources. Because of their attractiveness, pristine sites and natural areas are identified as valuable and the need to keep the attraction alive can lead to creation of national parks and wildlife parks.
 - ✓ Even though many areas of the world are conserved in the form of parks and protected areas, tourism development can have severe negative impacts. According to UNEP, these can include:
 - Depletion of natural resources (water, forests, etc.)
 - Pollution (air pollution, noise, sewage, waste and littering)
 - Physical impacts (construction activities, marina development, trampling, loss of biodiversity)

Challenges facing tourism in India

- **Infrastructure roadblocks**
 - The It is a major challenge for the Indian tourism sector. This includes hotels, connectivity with other cities, health facilities, and transportation etc. Poor budgetary allocation is one of the major reasons for this issue.
 - There are many tourist destinations in the country, which are not accessible to poor, women and elderly because of the high cost of transportation and poor connectivity with cities.
- **Environmental concerns**
 - The quality of the environment, both natural and man-made, is essential to tourism.
 - The negative impact of tourism development can gradually destroy the environmental resources on which it depends.
 - Tourism not only contributes to climate change, but is affected by it as well. Climate change is likely to increase the severity and frequency of storms and severe weather events, which can have disastrous effects on tourism in the affected regions.
- **Resources concern**
 - Lack of professionals who can cater to the needs of the tourists is also a major concern.
 - India has thousands of incredible archaeological sites that need restoration and maintenance.
- **Fragmented Policy and Programs**
 - Failure to have a comprehensive Tourism policy and involvement of multiple stakeholders in the implementation of current programs and schemes are other major issues.
- **Safety and security:**

Safety & security of tourists is the most important factor which governs whether people will come to that destination or not. Attacks on foreign tourists, especially on the woman tourists have raised this question. India is placed at 114th position in terms of safety.
- **Regulation:**
 - Stringent visa norms and movement viz a viz other countries (e.g. Schengen region in Europe) are also a roadblock in promoting tourism.

Sustainable tourism

- Sustainable tourism is any form of tourism that can be consumed in a more responsible way. It is the one which: minimizes negative social, economic and environmental impacts. Generates greater economic benefits for local people and enhances the well-being of host communities.
- The international community declared 2017 as “International Year of Sustainable Tourism for Development”. In this context, it may already become visible how seriously the international community and the nation states are taking the 2030 Agenda.

SUSTAINABLE TOURISM



LOCAL PROSPERITY

To maximize the contribution of tourism to the economic prosperity of the host destination



EMPLOYMENT QUALITY

To increase the number and quality of local jobs created and supported by tourism



SOCIAL EQUITY

To seek a widespread and fair distribution of economic and social benefits from tourism throughout the community

VISITOR FULFILMENT

To provide a safe, satisfying and fulfilling experience for all visitors, without discrimination



LOCAL CONTROL

To engage and empower local communities in planning and decision making about the development of tourism in their area



COMMUNITY WELLBEING

To maintain and strengthen the quality of life in local communities



CULTURAL RICHNESS

To respect and enhance historic heritage, authentic, culture, traditions and distinctiveness of host communities



PHYSICAL INTEGRITY

To maintain and strengthen the quality of urban and rural landscapes



ENVIRONMENTAL PURITY

To minimize the pollution of air, water and land and the generation of waste by tourism enterprises and visitors



ECONOMIC VIABILITY

To ensure the viability and competitiveness of tourism destinations and enterprises



BIOLOGICAL DIVERSITY

To support the conservation of natural areas, habitats and wildlife



RESOURCE EFFICIENCY

To minimize the use of scarce and non-renewable resources in the development and operation of tourism facilities and services



Solutions and Way forward

- Tourism requires a **strong coordination at inter-ministerial** levels as the customer experience is dependent on visas, air passage, and health regulations, import restrictions, which come under the jurisdiction of home, civil aviation, health, finance, environment and commerce ministries.
- Need to have **Tourism Councils** in all districts of India.
- **Eco-tourism needs to be promoted** so that tourism in India helps in preserving and sustaining the diversity of India's natural and cultural environments.
- Build roads and access points, **promote accessible infrastructure**.
- Allow corporate sponsorship for heritage buildings like **Adopt A Heritage Scheme**.
- **Boost Niche areas** in tourism like – Temple, Festivals, rich village heritage.
- Aspire for **creating world class museums**. A case in point is the city of Geneva, Switzerland, which has a population of less than 2 lakh people. It has more than 40 museums and 50 art galleries, all exquisitely maintained.

India's recent steps in promotion of Tourism

- A growing recognition of tourism's contribution to employment and economic growth, the availability of better infrastructure, focused marketing and promotion efforts, liberalization of air transport, the growth of online travel portals, growing intra-regional cooperation and more effective public private partnerships are seen as key drivers for tourism in the next decade.
- According to the World Travel and Tourism Competitiveness Index 2019, India has moved up six places to rank 34th due to its rich natural and cultural resources and strong price competitiveness.
- Ministry of Tourism developed an initiative called **SAATHI** (System for Assessment, Awareness & Training for Hospitality Industry) by partnering with the Quality Council of India (QCI) in October 2020. The initiative will effectively implement guidelines/SOPs issued with reference to COVID-19 for safe operations of hotels, restaurants, B&Bs and other units.
- The "**Incredible India 2.0**" Campaign of the Ministry marks a shift from the generic promotions being undertaken across the world to market specific promotional plans and content creation. The Campaign covers the important source markets for Indian tourism and also takes into account emerging markets with significant potential. Thematic creatives on different Niche products being produced are being used in the Campaign.
- **100% FDI** is allowed under the automatic route in tourism and hospitality, subject to applicable regulations and laws.
- **ADOPT A HERITAGE scheme** - The project plans to entrust heritage sites/monuments and other tourist sites to private sector companies, public sector companies and individuals for the development of tourist amenities. They would become '**Monument Mitras**' and adopt the sites. The basic and advanced amenities of the tourist destinations would be provided by them. They would also look after the operations and the maintenance of the amenities.

Schemes to boost Tourism in India

- **Swadesh Darshan:** include development of 15 thematic circuits like North East Circuit, Buddhist Circuit, Himalayan Circuit, etc. having tourist potential in a planned and prioritized manner, integrated development of infrastructure in identified circuits, promote cultural heritage of country, developing world-class infrastructure in circuit destination, pro-poor tourism approach, promote local arts, handicrafts, cuisine, generate employment.
- **National Mission on Pilgrimage rejuvenation and Augmentation Drive, PRASAD:** Aims to promote sustainable pilgrimage tourism in the country, to strengthen measures for safety, security and proving the quality tourism services in pilgrim cities, etc.
- **Hunar Se Rozgar Tak:** for creation of employable skills amongst youth. The initiative is fully funded by the Ministry of Tourism.
- **Swachh Bharat Swachh Pakwan (Hunar Zaika):** The street food vendors constitute a significant percentage of the hospitality service providers, are part of the Indian milieu through the ages and have a pan India presence.
- **Incredible India Helpline:** On a pilot basis, the Ministry of Tourism has set up the 'Incredible India Help Line' to be operated in-house to address and guide the tourists natural calamities or on being stranded.

Global Code of Ethics for Tourism

- The **Global Code of Ethics for Tourism (GCET) adopted in 1999 by the General Assembly of the World Tourism Organization** is a comprehensive set of principles designed to guide key-players in tourism development i.e. governments, the travel industry, communities and tourists alike.
- It aims to help maximize the sector's benefits while minimizing its potentially negative impact on the environment, cultural heritage and societies across the globe.
- It deals with various dimensions such as Child Protection in Tourism, Accessible Tourism, Gender and Tourism, Cultural Heritage and Intangible Cultural Heritage (ICH), Community Empowerment through Creative Industries and Tourism with Special focus on Women, Youth, Indigenous Communities and People with Disabilities etc.
- **The Code's 10 principles amply cover the economic, social, cultural and environmental components of travel and tourism:**
 - Article 1: Tourism's contribution to mutual understanding and respect between peoples and societies
 - Article 2: Tourism as a vehicle for individual and collective fulfillment
 - Article 3: Tourism, a factor of sustainable development
 - Article 4: Tourism, a user of the cultural heritage of mankind and contributor to its enhancement
 - Article 5: Tourism, a beneficial activity for host countries and communities
 - Article 6: Obligations of stakeholders in tourism development
 - Article 7: Right to tourism
 - Article 8: Liberty of tourist movements
 - Article 9: Rights of the workers and entrepreneurs in the tourism industry
 - Article 10: Implementation of the principles of the Global Code of Ethics for Tourism

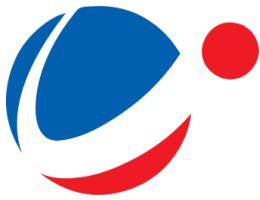
Conclusion

- Tourism can also be seen as a tool to **promote pluralism and multiculturalism**, which can further help to build and spread the feeling of secularism and communal harmony among the various communities of India.
- Tourism has enormous **potential in terms of job creation through tourist guide, tour packages, hospitality services** and India should leave no stone unturned to tap the potential to improve India's "**SOFT POWER**" through Tourism.
- India's tourism industry is experiencing a strong period of growth, driven by the burgeoning Indian middle class, growth in high spending foreign tourists, and coordinated government campaigns to promote tourism in India
- Tourism is a complex set of industries including **accommodation, recreation and entertainment, food and beverage services, transportation, and travel services**. It encompasses domestic, inbound, and outbound travel for business, leisure, or other purposes. And because of this large scope, tourism development requires participation from all walks of life, including private business, governmental agencies, educational institutions, communities, and citizens.
- Hence, India is trying to grow its peripheral vision apart from various Industry to tourism Industry which also income generating and also being a part of those league of nation who have better tourism infrastructure.
- The future of tourism in India is certainly bright but we do have a long road ahead. **Philosopher Lao Tzu said "a journey of a thousand miles must begin with a single step"**, and with recent developments in the sector, that step has already been taken.



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ESSAY TOPIC: EDUCATION IN INDIA

Quotes by famous personalities

- “Educating the mind without educating the heart is no education at all.” – Aristotle.
- “I have never let schooling interfere with my education”- Mark Twain.
- “Education breeds confidence. Confidence breeds hope. Hope breeds peace.”- Confucius.
- “Learning is not the product of teaching. Learning is the product of the activity of learners” - John Holt
- “There is no school equal to a decent home and no teacher equal to a virtuous parent” - Mahatma Gandhi
- “Don’t limit a child to your own learning, for he was born in another time” - Rabindranath Tagore
- “The best teachers are those who show you where to look but don’t tell you what to see” - Alexandra K. Trenfor
- “Intelligence plus character that is the goal of true education” - Martin Luther King
- “Learning gives creativity, creativity leads to thinking, thinking provides knowledge and knowledge makes you great” - Dr. Abdul Kalam

Definition

- Education is derived from two Latin words "educare" which means to train or to mold, and "educere" meaning to lead out.
- *Educere* is usually with reference to bodily nurture or support, while *educare* refers more frequently to the mind.
- **How does Education differ from Literacy?**
 - “Literacy” is simply the ability to read and write. It is mostly linked to skills where education is linked with all-round development of man. It not includes skills but also values, morals etc.
 - Literacy is mostly confined to formal schooling whereas education not only includes formal schooling but also parents, family and society at large.
 - In contrast with literacy, the goal of education is not necessarily the mastery of a subject but mastery of a person.
 - Great philosopher Rabindranath Tagore has also dwelled on education. According to him, the aim of education is creative self-expression through physical, mental, aesthetic and moral development.

History of Education in India

- The earliest education system to develop in India was known as '**Vedic system**' with the ultimate aim being complete realization of self. This system was based on '**Gurukul**', which fostered a bond between the Guru & the Shishya and established a teacher centric system in which the pupil was subjected to a rigid discipline and was under certain obligations towards his teacher.
- The world's first university was established in Takshila in 700 BC and the University of Nalanda was built in the 4th century BC dominated by Indian scholars like Charaka and Sushruta, Aryabhatta, Chanakya, Patanjali etc. made seminal contribution to world knowledge in diverse fields as mathematics, astronomy, physics, chemistry, medical science and surgery, etc.
- Prior to the advent of Modern School system, the content of education was mostly religious and esoteric in nature.
- Since the East India company wanted educated Indians who could assist them in the administration of the land and understand the local customs and laws well, the Britishers also made a few important strides in imparting

education. Warren Hastings established the **Calcutta Madrassa** in 1781 for the teaching of Muslim law. In 1791, a **Sanskrit College** was started in Varanasi by Jonathan Duncan for the study of Hindu philosophy and laws.

- In 1835, it was decided that western sciences and literature would be imparted to Indians through the medium of English by Lord William Bentinck's government. Bentinck appointed Thomas Babington Macaulay as the Chairman of the General Committee of Public Instruction. **Macaulay's Minute** is famous for the propagation of English as a medium of instruction and its 'infiltration theory'.
- In 1854, Sir Charles Wood who was the President of the Board of Control of the company sent a despatch to the then Governor-General of India, Lord Dalhousie. This is called the 'Magna Carta of English education in India.' The **Wood's Despatch** is known for its contribution towards regularizing education system from school to university levels; setting up the University of Madras, Calcutta and Bombay etc.
- During the **freedom struggle**, several leaders like **Gokhale, Ram Mohan Roy and Mahatma Gandhi** worked for better education for our people, particularly women. **Indigenous model of education was a major component of Gandhi's conception of Swaraj and Swadeshi.**
- **Post-Independence**, the importance of **education as a precondition for development** was very well recognized by the leadership.
- In the last 20 years, **education discourse in India has undergone a major transformation and new concepts such as rights-based approach to elementary education**; shift in emphasis from literacy and basic education to secondary, higher, technical and professional education; the endeavour to extend universalization to secondary education; reshape the higher education scenario.

Commissions and Committees related with Education over the years

- **University Education Commission (1948) under chairmanship of Dr. S. Radhakrishnan** – recommended to make higher education accessible to all sections of society, irrespective of region, caste, gender and region.
- **Secondary Education Commission (1952) chairmanship of Dr. A. Lakshmanaswami Mudaliar**- proposed to increase efficiency of production, diversification of high school courses, establishment of multipurpose high schools, introducing a uniform pattern throughout India and recommended the setting up of technical schools.
- **Indian Education Commission (1964-66) under the chairmanship of D. S. Kothari**- recommended a comprehensive reconstruction based on three main aspects -a) Internal transformation b) Qualitative improvement and c) Expansion of educational facilities.
- **National Educational Policy of 1968** was formulated in accordance with the recommendations of the Kothari Commission. It recommended for - provision of compulsory education to children in the 6-14 years age group as proposed in the Indian Constitution; emphasis on regional languages in secondary schools; English had to be the medium of instruction in schools, considered Hindi as the national language and promoted the development of Sanskrit; 6 percent of the national income be spent on education.
- **National Policy on Education (1986)** - provide education to all sections of society esp. SCs, STs, OBCs & women; provision of fellowships for the poor, imparting adult education, recruiting teachers from oppressed groups and also developing new schools and colleges; Providing primary education to students; education be given to rural people in consonance with the Gandhian philosophy; establishment of Open Universities; promotion of IT in education ; besides opening up the technical education sector in a rather big way to private enterprise.
- **National Policy on Education (1992)** - The Government of India had set up a commission under the chairmanship of Acharaya Ramamurti in 1990 to reassess the impact of the provisions National Policy on Education, 1986. It recommended for - The setting up of **Central Advisory Board of Education (CABE)** as the highest advisory body to advise the Central and State Governments; focus on quality enhancement in education; stressed on developing moral values among students and bringing education closer to life.
- **T.S.R. Subramanian committee** major recommendations – an Indian Education Service (IES) should be established as an all India service; outlay on education should be raised to at least 6% of GDP; There should be minimum eligibility condition with 50% marks at graduate level for entry to existing B.Ed courses; Teacher Entrance Tests (TET) should be made compulsory for recruitment of all teachers; Compulsory licensing or certification for teachers in government and private schools should be made mandatory; Pre-school education for children in the age group of 4 to 5 years should be declared as a right; mid-day meal (MDM) program to be extended to secondary schools; Top 200 foreign universities should be allowed to open campuses in India.
- **The central government has constituted Kasturirangan Commission (2017) to draft a new education policy for India. Points to be focused on in the new education policy** – Address key areas of concern – access and participation, quality, equity, research and development and financial commitment to education development.

Inclusion of culture education having 'ethics education' These will be addressed through policy interventions broadly into preschool and adolescent education, curriculum development and examination reform, teacher and faculty training, lifelong literacy, higher education and long distance learning.

Different Levels of Education in India – Their Issues, Challenges and Solutions

- Pre-Schooling level
 - **Issues and Challenges**
 - ✓ *Early childhood is a very important period of life* when the foundations are laid for cumulative lifelong learning and human development.
 - ✓ *Rapid urbanisation , rise in nuclear family and breaking of Joint Family* forcing many parents to send their children to preschool.
 - ✓ *Role of State - Early childhood Care and Education up to the age of 6 doesn't form part of the formal education under Central or State governments.* In addition, this vacuum has been partly filled by schools and pre-schools which have mushroomed in the private sector without adequate regulation.
 - ✓ Pre-schooling has mostly tended to emphasize on a universal or *one-size-fits-all approach* -approach to schooling without taking into consideration different demands of children. Also, *pre-schooling has become a platform for admission into prestigious school rather than a platform for learning.*
 - ✓ *Lack of resources and absence of a universal curriculum.*

ASER 2019 report

ASER 2019 survey by NGO Pratham was focused on Early childhood education. Its Key findings include:

- **Status of Pre-school and school enrolment patterns among young children (age 4-8):** More than 90% of young children in this age group are enrolled in some type of educational institution.
- **Status of Children in early primary grades (Std I-III):** The variation in age distribution which is widest in Std I, decreases in each subsequent grade. And older children continue to do better than younger ones on every task.
- **Private schools performing better than the Government schools:** They have a learning advantage on all the crucial factors, such as, age distribution in grade one, home factors such as affluence, mother's education and some baseline abilities that children enter grade one with. They expose children to school-like curricula even before they have entered school.
- **Role of Mother's education:** Among the pre-primary section, children with mothers who completed eight or fewer years of schooling are more likely to be attending anganwadis or government pre-primary classes. Whereas their peers whose mothers studied beyond the elementary stage are more likely to be enrolled in private LKG/UKG classes.

- **Solutions**
 - ✓ Early childhood care and education for children from 4-5 years of age should be declared as a right within the purview of Right to Education Act, 2008.
 - ✓ There is a need to introduce a new education component in Anganwadi practices, to ensure that the pre-school children are exposed to elementary education.
 - ✓ NCERT and SCERTs should formulate curricular framework for pre-primary education apart from conducting intensive training programs for teachers to orient them with handling of pre-school children.

- Primary level
 - **Issues and Challenges**
 - ✓ Out of School Children - As per official records, over 92 lakh children still remain out of schools.
 - ✓ High Dropout and Low Attendance
 - ✓ Poor Learning Outcomes - Corroborated by Annual Status of Education Survey
 - ✓ Absence of basic facilities
 - ✓ Absence of support outside Schooling
 - ✓ Inadequate support for vulnerable sections like women, tribals etc.
 - ✓ Rising cost of education because of mushrooming of private schools
 - **Solutions**
 - ✓ There is a need to amend RTE Act, to provide for norms for learning outcomes which directly affect quality of education.

- ✓ There is a need to restore detention policy under RTE especially at the upper primary stage along with provisions for remedial coaching and offering of at least two extra chances to move to a higher class.
- ✓ There is a need to use technology to help slow learners to make up for lost ground.
- **Secondary level**
 - **Issues and Challenges**
 - ✓ *Access to schooling* - States are mainly responsible for provision of education at secondary level and ensuring quality of education with the Central government playing only a marginal role.
 - ✓ *High dropout rates* - Secondary education reflects a very high level of dropouts especially for vulnerable groups because of poverty, social restrictions or lack of belief in usefulness of education
 - ✓ *Curriculum* - It has negligible or no emphasis on IT and vocational areas.
 - ✓ *Poor linkage with higher education* - Secondary level education has failed to prepare students for higher education w.r.t skills or values. As a result there is mushrooming of coaching institutions and skewed selection of courses for higher education.
 - **Solutions**
 - ✓ There is a need to gradually extend provision of RTE to cover secondary education.
 - ✓ There is a need to scale up the existing National Skills Qualification Framework to include more students. There is also a need to in-line choice of vocational courses in accordance with local opportunities and resources.

Important Findings related to School Education in India

- The enrolment ratios for the elementary level are close to **100 per cent**. In addition, the gross enrolment ratios (GER) for secondary education have also increased, even though the net enrolment ratio (NER) is still low. Moreover, data shows enrolment is largely similar across gender and castes.
 - Despite increasing access, enrolment in government primary schools **declined by 2.31 crores in absolute numbers from 2007-08 to 2015-16** while enrolment in private primary schools increased by 1.45 crores over the same period owing to perception of better quality of education.
 - The **Gross Enrolment Ratio (GER) for Grades 6-8 was 90.9%**, while for Grades 9- 10 and 11-12 it was only **79.3% and 56.5%**, respectively - indicating that a significant proportion of enrolled students drop out after Grade 5 and especially after Grade 8.
 - As per the 75th round household survey by NSSO in 2017-18, the number of out of school children in the age group of 6 to 17 years is **3.22 crore**.
- As per the 2019 Human Development Report released by United Nations Development Programme (UNDP), between 1990 and 2018, mean years of schooling increased by **3.5 years** and expected years of schooling increased **by 4.7 years** in India.
- The ASER surveys estimate that **national attendance in primary and upper primary schools is 71.4 per cent and 73.2 per cent respectively**, with considerable differences across states.
- According to U-DISE 2016-17 data, about **19.6%** of students belong to Scheduled Castes at the primary level, but this fraction falls to **17.3%** at the higher secondary level. These enrolment drop-offs are more severe for Scheduled Tribes students (**10.6% to 6.8%**), and differently abled children (**1.1% to 0.25%**), with even greater declines for female students within each of these categories. The learning outcomes of those enrolled in the schooling system need improvement.
 - **Large proportion of students currently in elementary school** - estimated to be over 5 crore in number - have not attained foundational literacy and numeracy, i.e., the ability to read and comprehend basic text and the ability to carry out basic addition and subtraction.
 - Our educational system is of **General Education** in nature. Development of technical and vocational education is quite unsatisfactory. So our education is unproductive. Hence number of educated unemployed persons is increasing day by day.
 - The **present pattern of board and entrance exams** also force students to learn a very narrow band of material in a single stream, rather than allowing the flexibility and choice.
- **Pupil-Teacher ratio** at national level for elementary schools was 24:1 and for secondary schools it was 27:16.
- Finally, the mental pressure on students, especially in secondary education, has been increasing. Data from the National Crime Records Bureau shows that student suicides have increased from about **6,600 in 2012 to about 9,000 in 2015**, many of these because of stress related to examinations and careers. Thus, there is a need to reduce the mental stress students suffer from.

- **Higher level**
 - As per All India Survey of Higher Education (AISHE) for the year 2018-19
 - **Enrolment in Higher Education:** Gross Enrolment Ratio (GER) in higher education in India has risen marginally from **25.8% in 2017-18 to 26.3%** in 2018-19, with men constituting 26.3% and women 26.4%.
 - ✓ However, we lag behind the world average of 33 per cent and that of comparable economies, such as Brazil (46 per cent), Russia (78 per cent) and China (30 per cent). Korea has a higher education GER of over 93 per cent.
 - **Number of Institutions of Higher Education:** Number of universities (from 903 in 2017-18 to 993 in 2018-19) & total higher educational institutions has increased.
 - ✓ The number of university-level institutions has grown by about 25 per cent and the number of colleges by about 13 per cent in the last five years.
 - ✓ The private sector accounted for a large share of these institutions, managing approximately 37% of universities, 78% of colleges and 76% of standalone institutions in 2016-17.
 - **Narrowing gender gap:** Nearly 51.36% of enrolled are male & 48.64% are female, indicating narrowing gender gap in higher education.
 - **Social Backwardness:** SC & ST student enrolment is 14.89% & 5.53% respectively. Among minorities, 5.23% students belong to Muslim category and 2.32% to other minority communities.
 - **Regional Disparities:** The college density (number of colleges per lakh eligible population) varies from 7 in Bihar to 59 in Telangana as compared to all India average of 28.
 - ✓ Also, most of premier universities and colleges are centred in metropolitan and urban city, thereby leading to the regional disparity in access to higher education.
 - ✓ GER varies from 5.5 per cent in Daman & Diu to 56.1 per cent in Chandigarh.
 - **Pupil Teacher Ratio (PTR):** Pupil Teacher Ratio (PTR) in Universities & Colleges is 29 if regular mode enrolment is considered.
 - Further **Quality** is a challenge in higher education in India. Few Indian institutions feature in the Student Notes: top 200 in world rankings.
 - In comparison, China has seven universities in the top 150 (3 in top 50) of the Quacquarelli Symonds (QS) world rankings.
 - These rankings did rank three IITs and the IISc amongst the top 20 BRICS universities in 2018.
 - Another issue is the employability of graduates.
 - Only 2.5% Colleges offer Ph.D. programme & 34.9% Colleges offer Post Graduate Level programmes. The foreign student enrolment has also been increased from 34,774 in 2012-13 to 47,575 in 2016-17 with a greater increase in male foreign students as compared to female students.
- **Solutions**
 - There is a need for regulatory overhaul in apart from streamlining the financing of higher education sector.
 - Also, there is a need to reform the process of recruitment, opportunities etc. for teachers. There is a need to introduce performance-based incentives on a objective criteria to rate and promote teachers.
 - Finally, there is a need to also reform the accreditation institutions, their methodology and accountability.

Stakeholders in Education – Issues, Challenges & Solutions

- **Parents: "Home is the first school, parents are the first teachers."**
 - **Issues & Challenges**
 - ✓ **Urban Families-**
 - Lack of time spent with children leads to communication-gap/generation-gap.
 - Forced decisions on career-choices/selection of stream after 10th Boards, etc.
 - Passing of the pressure to children for high grades.
 - High income families resort to too much donations to get their

Children with Special Needs

- India has huge population of children with special needs (Differently abled) who in-spite of provisions in RTE for statutory right to education continue to be denied this right.
- A **recent report of CAG** has highlighted that transport, aid and appliances were not provided as envisaged in the act to all the eligible children with special needs.
- It is no surprise that the number of illiterates in this category of children continue to very high in proportion in comparison with rest of the children.
- The **way forward** must include - Availability of proper study material; Adequate sensitivity among teachers and their proper training; Availability of aid devices for education.

child admitted in elite schools rather than emphasizing upon them the real value and essence of education e.g. parents supporting fake degrees, cheating, etc.

✓ **Rural Families-**

- Education is seen merely as a means to get the label of a degree.
- High dropout rates because of unaffordable fees and lack of awareness about welfare schemes.
- Transportation or commutation for girls a major hurdle to give them access to education.
- Medium of instruction also becomes a hurdle.
- Caste based discrimination
- Huge and wide gap between parent's education and the environment they get in schools.
- There is a need to convince parents of first generation students about the value and importance of education.

• **Students: "The Ideal Student Would Be One Who Was Not Working For Grades, But Was Working because he was interested in the work and not try to compete with his fellow students".**

○ **Issues & Challenges**

- ✓ Heightened expectations and pressure from family to become part of rat race - competition, admission in colleges, good grades in board exams, etc.
- ✓ Mass copying and use of unfair means to pass exams.
- ✓ Lack of critical enquiry abilities, capacity to think clearly, rationally and engage in reflective, independent and deep thinking.
- ✓ Influence of media - films, internet, and computer games, etc.
- ✓ Mental disorders - depression, attention deficit disorder, anxiety, addiction, etc.
- ✓ Crimes like stealing, sexual assault, intolerance towards teachers, etc.
- ✓ Disconnect with family because of too much time spent on internet, with friends, etc.

According to a **World Economic Forum Report**, Indian parents spend an average of 12 hours a week helping with homework compared to 6.2 hours in the US and 3.6 in the UK. Also, 62 per cent Indian parents help homework, which is significantly higher than many other countries.

• **Teachers: "The task of the modern educator is not to cut down jungles, but to irrigate deserts."**

○ **Issues & Challenges**

- ✓ While teacher education institutes churn out a large number of candidates with a Bachelor's and Master's in education, the quality of teacher education has not been assured. As per the Right to Education (RTE) Act, a teacher appointed in schools should have passed the teacher eligibility test (TET) conducted by the relevant government body.
- ✓ In institutions of higher education, passing the National Eligibility Test (NET)/State Level Eligibility test (SLET) has been the minimum eligibility criterion for teaching.
 - In 2015, only 13.53 per cent candidates who sat for the Central Teacher Eligibility Test (CTET) qualified. A primary reason for this is inadequate accreditation and grading process followed by NCTE in the past.
 - At the higher educational level, the pass percentage in the UGC-NET exams is also low, where only 6 per cent candidates qualify. o Besides, the quality of PhDs in several institutions does not rise to the required standard.
 - While only about 20 per cent of school teachers are still professionally untrained, only 14.9 per cent teachers received in-service training for elementary education in 2015-16 even though the Sarva Shiksha Abhiyan (SSA) has a provision of 20 days of in-service training for all teachers.
- ✓ Education is no longer seen as a service to transform students' future but as a profession.
- ✓ In many cases, entry into the teaching profession is out of compulsion rather than choice esp for women as it's seen as a 'pink collared job', chances of good marriage proposals increase, etc.

Expenditure on Education

- At present, allocations to the education sector by the centre and states remains close to 3 % of GDP, while according to the World Bank, the world average in this regard is 4.7 % of GDP.
- Developing countries like South Africa and Brazil spend about 5.8% whereas neighboring Bhutan spends more than 7% of its GDP on education.
- **According to World Bank**
 - countries like Norway, Sweden and Finland spend an average 7.5% of GDP on education.
 - US, UK, France, Germany and Australia spend between 5 to 6 percent.

- ✓ Usage of mechanical/outmoded techniques and lack of innovative methods to teach.
 - ✓ Overburdening and involvement of teachers in other non-teaching tasks.
 - ✓ Low pay scale, especially in private institutions, compared to workload leading to disinterestedness. Also, lack of incentive to work harder and improve. Hence, little zeal or enthusiasm for teaching.
 - ✓ No teachers' accountability and system of feedback from the students.
- **Solutions**
 - ✓ *Need for sensitivity/emotional intelligence:* Teachers need to factor in the socio-economic backgrounds of children, for instance a hungry or an abused child will not be able to learn effectively. Programmes must guide teachers on how to nurture and develop this set of children. The more a teacher knows about a student, the better they will be able to support their learning and progress.
 - ✓ *Teachers need to be made more accountable* through enhanced involvement of the school management committees.
 - ✓ Recognising the *need for supportive supervision and incentives* to ensure teacher performance and accountability, as well as use of technology to monitor teacher attendance and curb absenteeism.
 - ✓ *Need for acquaintance with best practices practiced across India and world* and adaptation of newer techniques for better absorption and assimilation of knowledge by students.
- **Institutions:** “*School is a building which has four walls with tomorrow inside*” Educational Institutions are seen as temples of learning but today they are working as industries.
- **Issues & Challenges**
 - ✓ **Access and Equity**
 - *Commercialisation of Education* – Schools and Colleges have become money making institutions rather than providing quality education. E.g. capitation fees, excessive fee hikes, additional costs for uniform, books, etc.
 - The poor, despite the subsidies, still find education unaffordable and are often forced to drop out. Schools regularly flout rules such as 25% reservation for the Economically Weaker Section (EWS) / Disadvantaged Groups (DG) in private non-aided schools.
 - Distortion of welfare schemes such as Mid-Day Meal by asking parents to pay for meals.
 - Issue of fake income and caste certificates leaves out the intended beneficiaries of government initiatives.
 - Child labour, migration, child marriage are others barriers to education
 - Lack of transparency and fairness in admission process and absence of grievance redress mechanisms are obstacles to proper implementation of the Right to Education Act.
 - ✓ **Quality**
 - *Lack of Infrastructure* – lack of facilities such as drinking water, toilets, etc; overcrowded classrooms and improper construction of classrooms/schools (inadequate ventilation and lighting); lack of open spaces, greenery and playgrounds for students.
 - Poorly trained faculty, large vacancies and absenteeism especially in public institutions.
 - Overburdening of students with homework.
 - *Lack of secure environment* provided to the children – security breaches leading to rapes, murder of children etc.
 - Inadequate internships, quality of teaching and insufficient exposure to technologies such as Internet of Things, Artificial Intelligence and Industry 4.0
 - Lack of diversity in streams chosen - Only 10 Programmes out of approximately 180 cover 83% of the total students enrolled in higher education. (AISHE).
- Solutions to improve quality issue in education**

 - *Leveraging technology:* There is a need to increasingly employ latest technologies in the field of education for enhancing the learning outcomes as well as making the teaching process easier and more enjoyable for the students.
 - Several initiatives by NGOs, like Azim Premji Foundation and Digital Studyhall, and corporations like ILFS, Educom, Intel, Medialabs, have taken lead in content creation, teacher training and classroom learning.
 - Tie-ups between foreign and Indian institutes can be explored to provide expertise and faculty for teaching, curriculum building, and organizing student and teacher exchange programs.

- Despite high enrolment, learning outcomes are low as seen in the Annual Status of Education Report – (ASER). For example, about 25% of 14-18 age group cannot read basic text fluently in their own language.
- ✓ **Curriculum**
- Emphasis on memorizing factual information instead of applied knowledge.
 - Need for multidisciplinarity* – There is need for a shift from traditional single subject focussed education towards combining multiple disciplines to address real world problems and solve complex societal and business challenges.
 - Restructuring of examination system* – Bringing an end to similar assignments and exams each term which leads to plagiarism/cheating specially in this age of free access to information. Students need to taught ethics and academic integrity as well.
 - Significant changes in India's academic culture are required to ensure that meritocracy operates at all levels.

Language and Culture in Education

- The importance of early education in mother tongue and knowledge about indigenous culture has been conclusively proved to be very beneficial for better development of a human being.
- However, Indian record in this case has been very discouraging.
- In-spite of provisions in constitution and corroboration by several committees on education, India has done very little to implement the issues.
- Issues* - Poor training of teachers; Lack of resources like books and study material; Inadequate funds etc.
- Some of the **steps** in this regard must include - Provision for education upto Class V in mother tongue, local or regional language; Indian culture, local and traditional knowledge should be given adequate space in the school education.

New Education Policy, 2020

Union Cabinet has approved the New Education Policy (NEP) 2020. This policy will replace the 34-year-old National Policy on Education (NPE), 1986. It has been formulated after an unprecedented process of consultation that involved nearly over 2 lakh suggestions from 2.5 lakhs Gram Panchayats, 6600 Blocks, 6000 ULBs, 676 Districts. It aims for India to have an education system by 2040 that is second to none, with equitable access to the highest-quality education for all learners regardless of social or economic background.

Area of reform	Key provisions
Early Childhood Care and Education (ECCE)	<ul style="list-style-type: none"> Universal Access to ECCE for children of 3-6 years ECCE will be delivered through Anganwadis and pre-schools that will have teachers and Anganwadi workers trained in the ECCE pedagogy and curriculum. Pre-school sections covering at least one year of early childhood care and education will be added to Kendriya Vidyalayas and other primary schools, particularly in disadvantaged areas. NCERT will develop a National Curricular and Pedagogical Framework for ECCE for children up to the age of 8 Implementation to be jointly carried out by Ministries of HRD, Women and Child Development (WCD), Health and Family Welfare (HFW), and Tribal Affairs.
Attainment of Foundational Literacy and Numeracy	<ul style="list-style-type: none"> National Mission on Foundational Literacy and Numeracy by MHRD: Under it, States/UTs will prepare an implementation plan for attaining universal foundational literacy and numeracy in all primary schools for all learners by grade 3 by 2025. National Book Promotion Policy is to be formulated to ensure the availability, accessibility, quality, and readership of books across geographies, languages, levels, and genres. National Repository of high-quality resources on foundational literacy and numeracy will be made available on the Digital Infrastructure for Knowledge Sharing (DIKSHA).
Curtailing Dropout Rates and Ensuring Universal Access to Education at All Level	<ul style="list-style-type: none"> Providing effective and sufficient infrastructure so that all students have access to safe and engaging school education. Open and Distance Learning (ODL) Programmes offered by the National Institute of Open Schooling (NIOS) and State Open Schools will be expanded and strengthened with special emphasis on Socio-Economically Disadvantaged Groups (SEDGs). Tracking students as well as their learning levels through counsellors or well-trained social workers.
Curriculum and Pedagogy	<ul style="list-style-type: none"> Restructuring school curriculum and pedagogy in a new 5+3+3+4 design <ul style="list-style-type: none"> 5 years of the Foundational Stage (covering ages 3-8): 3 years of Anganwadi/pre-school + 2 years

	<ul style="list-style-type: none"> in primary school in Grades 1-2 ○ 3 years of the Preparatory Stage (covering ages 8-11): Grades 3, 4, 5. ○ 3 years of the Middle Stage (covering ages 11-14): Grades 6, 7, 8. ○ 4 years of the High Stage (covering ages 14-18): Grades 9, 10, 11, 12. ● Reduced curriculum content to its core essentials to enhance essential learning and critical thinking. ● Experiential learning will be adopted in all stages, including hands-on learning, arts-integrated and sports-integrated education. ● Freedom of choosing a variety of subject-combination: no rigid separation among ‘curricular’, ‘extracurricular’, or ‘co-curricular’, among ‘arts’, ‘humanities’, and ‘sciences’, or between ‘vocational’ or ‘academic’ streams. ● Introduction of contemporary subjects such as Artificial Intelligence, Design Thinking, Holistic Health, Organic Living, Environmental Education, Global Citizenship Education (GCED), etc. ● Vocational education through 10-day bagless period sometime during Grades 6-8 where students will intern with local vocational experts such as carpenters, gardeners, potters, artists, etc. ● National Curricular Framework for School Education will be developed by the NCERT.
Student Assessment	<ul style="list-style-type: none"> ● School examinations in Grades 3, 5, and 8 which will be conducted by the appropriate authority. ● Board exams for Grades 10 and 12 will be continued but redesigned. ● National Assessment Centre, PARAKH (Performance Assessment, Review, and Analysis of Knowledge for Holistic Development), will be set up as a standard-setting body under MHRD. ● Holistic Progress Card with 360-degree, multidimensional report that reflects the progress as well as the uniqueness of each learner in the cognitive, affective, and psychomotor domains. ● National Testing Agency (NTA) to serve as an autonomous testing organization to conduct entrance examinations for undergraduate and graduate admissions and fellowships in higher education institutions.
Multilingualism and the power of language	<ul style="list-style-type: none"> ● Medium of instruction up till grade 5, and preferably till Grade 8 and beyond, will be home language/mother-tongue/ local language. ● ‘The Languages of India’ a fun project/ activity on to be taken by every student under the ‘Ek Bharat Shrestha Bharat’ initiative. ● Three languages formula with greater flexibility. ● All classical languages (Sanskrit, Tamil, Telugu, Kannada, Malayalam, Odia) will be widely available in schools as options. In addition, Pali, Persian, and Prakrit will also be widely available as options. ● Indian Sign Language (ISL) will be standardized across the country.
Equitable and Inclusive Education-Provisions for Socio-Economically Disadvantaged groups -SEDGs	<ul style="list-style-type: none"> ● Setting up of Gender Inclusion Fund for female and transgender students ● Areas having large populations from SEDGs to be declared as Special Education Zones (SEZs). ● Children with disabilities will be enabled to fully participate in the regular schooling process from the foundational stage to higher education. ● Every state/district will be encouraged to establish “Bal Bhavans” as a special daytime boarding school, to participate in art-related, career-related, and play-related activities. ● Special mechanisms for children belonging to tribal groups to receive quality education ● Fee waivers and scholarships will be offered to meritorious students from all SEDGs ● Setting-up of additional JNVs and KVs in aspirational districts/SEZs.
Robust Teacher Education and Recruitment	<ul style="list-style-type: none"> ● New and comprehensive National Curriculum Framework for Teacher Education (by 2021) ● By 2030, the minimum degree qualification for teaching will be a 4-year integrated B.Ed. degree. ● Setting-up of National Mission for Mentoring with a large pool of outstanding senior/retired faculty ● Teacher Eligibility Tests (TETs) for all teachers across Foundational, Preparatory, Middle and Secondary stage in both public and private schools. ● More autonomy to teachers in choosing aspects of pedagogy in classroom teaching ● National Professional Standards for Teachers (NPST) will be developed by the National Council for Teacher Education by 2022. ● National Council for Teacher Education (NCTE) to be restructured as a Professional Standard Setting Body (PSSB) under General Education Council (GEC).
School governance	<ul style="list-style-type: none"> ● Schools can be organized into complexes or clusters which will be the basic unit of governance and ensure availability of all resources including a strong professional teacher community. ● Schools will develop School Development Plans (SDPs). These plans will then become the basis for the creation of School Complex/Cluster Development Plans (SCDPs) ● The twinning/pairing of one public school with one private school will be adopted across the country, so that such paired schools may learn from each other, and also share resources, if possible.
Standard-setting	<ul style="list-style-type: none"> ● Clear, separate systems for policy making, regulation, operations and academic matters.

and Accreditation for School Education	<ul style="list-style-type: none"> • Independent State School Standards Authority (SSSA) to be set up by States/UTs. • School Quality Assessment and Accreditation Framework (SQAAF) to be developed by SCERT. • Public and private schools (except the schools that are managed/aided/controlled by the Central government) will be assessed and accredited on the same criteria. • For a periodic 'health check-up' of the overall system, a sample-based National Achievement Survey (NAS) of student learning levels will be carried out by the proposed new National Assessment Centre, PARAKH.
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Key Provisions for Higher Education

Area of reform	Provisions
Institutional Restructuring & Consolidation	<ul style="list-style-type: none"> • All higher education institutions to be consolidated into three types of institutions: <ul style="list-style-type: none"> ○ Research Universities - equal focus on research and teaching ○ Teaching Universities - primary focus on teaching with significant focus on research ○ Autonomous degree-granting colleges - almost exclusive focus on teaching • Affiliation of colleges is to be phased out in 15 years and a stage-wise mechanism is to be established for granting graded autonomy to colleges. • Over a period of time, it is envisaged that every college would develop into either an Autonomous degree-granting College, or a constituent college of a university. • By 2040, all higher education institutions (HEIs) shall aim to become multidisciplinary institutions. • There shall, by 2030, be at least one large multidisciplinary HEI in or near every district. • The aim will be to increase the Gross Enrolment Ratio in higher education including vocational education from 26.3% (2018) to 50% by 2035.
Holistic Multidisciplinary Education	<ul style="list-style-type: none"> • The policy envisages undergraduate education with flexible curricula, creative combinations of subjects, integration of vocational education and multiple entry and exit points with appropriate certification. • An Academic Bank of Credit is to be established for digitally storing academic credits earned from different HEIs so that these can be transferred and counted towards final degree earned. • Multidisciplinary Education and Research Universities (MERUs), at par with IITs, IIMs, to be set up as models of best multidisciplinary education of global standards. • The National Research Foundation will be created as an apex body for fostering a strong research culture and building research capacity across higher education.
Regulation	<ul style="list-style-type: none"> • Higher Education Commission of India (HECI) will be set up as a single overarching umbrella body for entire higher education, excluding medical and legal education. • Public and private higher education institutions will be governed by the same set of norms.
Internationalization of HEIs	<ul style="list-style-type: none"> • Internationally relevant curricula, meaningful opportunities for social engagement, quality residential facilities and on-campus support, etc. • An International Students Office at each HEI hosting foreign students to support students arriving from abroad. • High performing Indian universities will be encouraged to set up campuses in other countries, and similarly, selected universities e.g., those from among the top 100 universities in the world will be facilitated to operate in India. • Research collaboration and student exchanges between Indian institutions and global institutions will be promoted. • Credits acquired in foreign universities will be permitted, where appropriate as per the requirements of each HEI, to be counted for the award of a degree.
Equity and Inclusion	<p>Steps to be taken by Governments</p> <ul style="list-style-type: none"> • Earmark suitable Government funds for the education of SEDGs • Set clear targets for higher GER for SEDGs • Enhance gender balance in admissions to HEIs • Enhance access by establishing more high-quality HEIs in aspirational districts and Special Education Zones containing larger numbers of SEDGs <p>Steps to be taken by all HEIs</p> <ul style="list-style-type: none"> • Mitigate opportunity costs and fees for pursuing higher education • Provide more financial assistance and scholarships to SEDGs • Make curriculum more inclusive • Ensure sensitization of faculty, counsellor, and students on gender-identity issue • Strictly enforce all no-discrimination and anti-harassment rules

Vocational Education: A need to tap the 'NEET' (Not in Employment, Education or Training)

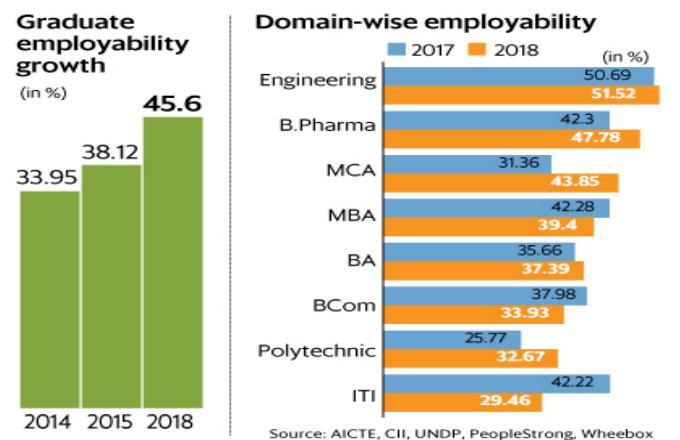
- The **Not in Employment, Education or Training or NEET** was a little-known measure in the early 2000s to highlight the vulnerabilities faced by adolescents who had dropped out of education. It assumes even more significance now as we look at youth productivity as a whole—especially of young adults from disadvantaged and high-risk backgrounds.
- According to the OECD, youth inactivity presents the share of young people (age 15-29) not in employment, education or training (NEET) as a percentage of the total number of young people in the corresponding age group.**
- Thus, NEETs include all youth left outside paid employment and formal education and training systems. They are NEET because there are not enough quality jobs being created in the system and because they have little incentives or face too high constraints to be in the education and training systems.
- According to **World Bank , ILO, (2017)** , in India, share of NEET youth is 32.6 (%age of youth population)
- According to OECD & Eco. Survey 2017, over 30%(30.83) of youth aged 15-29 in India are not in employment, education or training (NEETs). This is more than double the OECD(14.56%) average and almost three times that of China(11.22%).
- Challenges in vocational/skills education and training**
 - Containing migration and decreasing the demand supply gap* with a large rural/semi-urban workforce seeking to exit farming along with impact on job creation by automation, analytics, artificial intelligence, etc.
 - Failure of Industrial Training Institutes (ITIs)* in producing a skilled labour force in the country.
 - Skills training continues to be departmentally-scattered* and fragmented in the country
 - Higher education system has been aloof from the skills ecosystem* . Department of Higher Education's contribution in offering skills education and training is only about 4%, whereas the MSDE's is 58%.
 - The **Sharda Prasad Committee Report, released in 2017**, explains how private training partners have made a “mockery” of skills training by doling out short-term courses.
 - National Apprenticeship Promotion Scheme** of the Government of India needs to expand its purview to the institutes of higher education as well, which are currently under the Ministry of Human Resource Development (MHRD).
 - India needs to learn from examples of countries like UK whose model of vocational education called Technical & Vocational Education & Training (TVET) which integrates skills and higher education at the level of policy, funding and implementation, regulatory powers to examine and assess skills is also given to a single non-ministerial department.
 - Need for an interactive platform between educational institutions and corporate industry so as to have visibility on the expectations from students.

Steps taken recently by the government in Skill training

- Skill India Development Mission
- Pradhan Mantri Kaushal Vikas Yojana (PMKVY)
- Deen Dayal Upadhyay Gram Kaushal Yojana (DDU-GKY)
- Udaan for Jammu and Kashmir
- National UrbanLivelihoods Mission

EMPLOYABILITY OF FRESH GRADUATES ON THE RISE: STUDY

Fresh graduates are becoming more employable and job-readiness among engineering graduates is improving, finds a joint survey by the All India Council for Technical Education, the Confederation of Indian Industry, the UN Development Programme and HR consulting firms PeopleStrong and Wheebox. The results challenge the perception that poor employability is affecting the hiring market in India. The survey shows that most of the core higher education domains are showing improvements in graduate employability—except for management and industrial training institute graduates.



Financing in Education

- **HIGHER EDUCATION FINANCING AGENCY (HEFA)** created in 2016 is aimed at giving a major push for creation of high quality infrastructure in premier educational institutions.
- It is being jointly promoted by the identified Promoter and the Ministry of Human Resource Development (MHRD) with an authorised capital of Rs.2,000 crore.
- It would leverage the equity to raise up to Rs. 20,000 crore for funding projects for infrastructure and development of world class Labs in IITs/IIMs/NITs and such other institutions.
- Apart from these, HEFA is also engaging in mobilisation of CSR funds from PSUs/Corporates to promote research and innovation.
- Recently, the government has approved the proposal for expanding the scope of HEFA by tasking it to mobilise Rs 1,00,000 crore for Revitalizing Infrastructure and Systems in Education (RISE) by 2022 along with enhancing its capital based to Rs. 10,000 crore.
- **Concerns -**
 - Institutions need to be revenue surplus in order to borrow from HEFA and return the money, thus throwing concerns over possible fee hike.
 - Some critics have also pointed out that education is a public good and a primary responsibility of State. Hence, setting up of HEFA dilutes the responsibility of State towards education.

Security Issues & Challenges

- While schools are regarded as "Temples of Learning", in recent times they have become breeding grounds of crime against children!
- In 2017, a seven-year-old boy was found murdered inside a school in Gurugram and the next day a five-year-old girl was raped in a school in Delhi.

Cracking the whip A look at the new CBSE guidelines for schools

CLOSE WATCH

- CCTV cameras should be installed on the school premises
- Security audit of school premises should be conducted
- Access should be limited to outsiders



FOR ILLUSTRATIVE USE

SELECTION AND TRAINING

- Police verification is a must for all staff members
- Supporting staff should be hired via authorized agencies
- Staff should be trained to protect children from any form of abuse

PANELS TO BE SET UP

- Parent-teacher-students committee, grievance redressal committees and committees under the POCSO Act, 2012, among others

• Areas of Security of children in schools

- **Physical Safety**
 - ✓ The buildings should be built to ensure "life safety", and be more resilient to hazards
 - ✓ School administration, staff, teachers as well as students need to be better aware and prepared to respond to any catastrophe, natural or man-made
 - ✓ The schools must leverage low cost and environment-friendly technologies without compromising on structural soundness and safety of the buildings
- **Psychosocial Safety**
 - ✓ Children who are victims of violence show continuous symptoms of depression, dissociative reactions, feelings of helplessness, lack of emotional intelligence, and aggression
 - ✓ Installing CCTV cameras at strategic locations across school premises would ensure that a child's day-to-day life in school is constantly being monitored and recorded.

- ✓ The security cameras can be effective in school safety investigations, or even act as deterrents to such behaviour.
- ✓ The schools must be vigilant and constantly be on the lookout for any forms of child abuse, whether physical, emotional, or sexual. The staff should be trained to understand key indicators of child abuse, and be prepared to respond instantly to inappropriate or harmful behaviour.
- ✓ The policy framing process of schools must follow the prevention, preparedness, response, and recovery (PPRR) model of risk management. In matters pertaining to child safety, this model would help the school administration to be vigilant.
- **School transportation and safety**
 - ✓ In 2014, CBSE made it mandatory for all school buses to install GPS systems to ensure safe transportation of children to and from schools
 - ✓ However, the actual need of the hour is to provide the school administration with an easy-to-use system to ensure safety of children and fleet management in real-time, and provide parents with constant updates of their children's whereabouts
 - ✓ With GPS integration, the performance of the driver can be gauged, while the live vehicle tracking app assures the parents of their child's safety at all times.
- **Background verification of staff**
 - ✓ When it comes to hiring teachers, administrators and other school staff, there are many good reasons to conduct pre-employment background checks for student safety.
 - ✓ Verification should include place of residence, past employment, and checking for any past criminal records as well as ongoing criminal cases.
 - ✓ This will help schools in screening people who come in contact with students within the school premises, including teachers, administrators, sports coaches, cleaning staff and volunteers.
- **Visitor Management System**
 - ✓ Generic tags for visitors and handwritten late slips and permission slips for students will not really serve the purpose of recording and analysing information
 - ✓ A digital visitor management system with visitor sign-in information and photo ID badges will instantly increase the level of security in schools.
 - ✓ Biometric security systems in schools automatically track student's attendance records based on their swipe time
 - ✓ The devices available can range from RFID (radio frequency identification) cards to fingerprint and facial recognition devices, eliminating any chances of unauthorised entry into school premises.
- **Other Steps that can be taken for security of children**
 - ✓ Ensure that every part of the school is **supervised by a teacher especially during break and sports**. Corridor, Break and Sports grounds duties to be assigned separate from teaching duties
 - ✓ Create a **buddy system** where children are paired up, or are in groups of three. They are responsible for knowing where their buddies are at any point of time, and preferably staying with them. It will also reduce in bullying incidents or atleast help in quick reporting.
 - ✓ **Awareness** - educate children and make them aware of their own rights over their bodies, **sex education in children-friendly and age-friendly manner**.
 - ✓ **Include parents in the safety community**. Share their tools of keeping children safe.
 - ✓ Create an **atmosphere of open communication within the school**. Let children chatter freely with teachers, with head teachers and each other, sharing their fears and hopes.

Privatisation in Education

- **Need**
 - The status of higher education continues to be dismal as can be seen in the recently published Times Higher Education (THE) Emerging Economies University Rankings – 2018.
 - Issues in education in India - Lack of funding, poor quality of teachers, poor learning outcomes and problem of brain drain.
 - **Amartya Sen says "India is trying to be the first country to become an industrial giant with an illiterate and unhealthy labour force".**

- **Benefits**
 - Better access to infrastructure, faculty, global exposure and wider interaction with global educational institutions along with higher level research and innovation.
 - It will act as platform for faculty exchange between different institutions resulting better training of teachers and opening more opportunities for them.
 - It will lead to more competition in education sector thus leading to better quality for students.
- **Challenges**
 - More inequity as it will deepen the already prevalent class divide in the Indian higher education system.
 - The privatisation of education has benefited mainly the ***parallel system of coaching classes***. The middle and even the lower class people are spending a fortune on their wards' education by enrolling them in coaching classes.
 - **Kota in Rajasthan is a classic example** of how coaching classes have turned themselves into factories. The students are under tremendous pressure to perform with no time to rest and relax. Some **24 students, taking tuitions at these coaching factories, have committed suicide in 2017, unable to cope up with the rigorous schedule of the coaching classes**. And last year, nearly **450 teenagers in AP and Telangana have committed suicide, due to the pressure of academic performance**.
 - Privatisation will lead to commodification of education as most of the private player in education view it as a business - Issues of capitation fees, poor accountability, fake degrees, fly-by-night operators etc.
 - The privatisation should not be an alibi for the corrupt and inefficient functioning of public educational institutions.
 - The indiscriminate privatisation of education has deprived the children of weaker section and under privileged the opportunity to receive quality.

Importance of Physical Education

- Sports forms a major part of a child's education. It helps in building qualities of leadership, sharing, team spirit, obedience, discipline, willpower, and tolerance.
- It enhances their academic performance by increasing their physical and mental fitness.
- It teaches respect for teammates, opponents and rules of the conduct.

- According to AISHE, 1,26,451 students are enrolled in Ph.D. in India, that is less than 0.4% of the total student enrolment.
- According to the International Property Rights Index (IPRI) Report 2017, India ranks fifth globally in terms of research publications but its patent profile needs a major boost as it is ranked 45th in the indicator of intellectual property rights (IPR).

UPSC 2002 -Privatization of higher education in India.

Physical Education

- Since 2010, the **Central School Board for Secondary Education** instituted a policy requiring schools to provide opportunities for at least 40 to 45 minutes of physical activity during school hours for grades 1 to 10, and at least 90–120 minutes/week of Physical activity/ training/yoga for grades 10 to 12.
- According to **India's 2016 Report Card on Physical Activity for Children and Youth by Active Healthy Kids Global Alliance**, most Indian children do not achieve recommended levels of PA and spend most of their day in sedentary pursuits.
- A **recent government research** showed that children are spending 7.2 hours studying (no physical activity) against only 39 minutes playing any sports in a day.
- **Issues & Challenges**
 - **Inappropriate allocation and use of budget-** The budgetary allocation for sports, which comes under the Union Ministry of Sports and Youth Affairs, is not as much as compared to the countries that excel in the Olympics and other International sports events.
 - **Lack of qualified coaches-** Coach training programmes are not encouraged in India, as a result schools lack trained coaches.
 - **Inadequate provision of facilities and equipment** and teaching materials, large class sizes.
 - **Lack of Investment by schools** as well as by parents for excellence in sports
- **Solutions**
 - Development of a national strategy for physical activity of children and youth

- Investments at national, state, local jurisdictional, and school and community levels
- Culturally and geographically appropriate policy interventions
- Facilitating active living through urban planning policy
- Physical activity education and promotion directed towards families and educators
- **The Khelo India Programme** launched in 2016 is a good initiative to promote sports among the youth.

Entrepreneurship, Innovation and Research

- Currently research in India is suffering from **low standard, quality as well as lack of interest towards research as a career due to paltry and unsustainable stipend amounts**
- **Issue of ‘predatory journals’** with allegations of plagiarism, fabrication of fraudulent papers and fake peer reviews for monetary benefits. Researchers focus only on publishing research findings rather than filing patents and reaping financial benefits.
- More students prefer to go abroad for research due to better facilities, laboratories, more favourable culture of research, accessible top faculty, ease of affiliation with a laboratory or institute and higher perception of a foreign degree in the Indian job market compared to a local degree.
- **Steps that can be taken in this regard -**
 - Need for making researchers and faculties aware about patent filing and the advantages of collaboration with the industrial sector for commercialising innovations.
 - Resolving of issues like - Lack of financial support from the government for filing and maintenance of a patent, the long time taken to process a patent in India and absence of incentives or recognition for patent filing.
 - Very few top-quality programmes in advanced degrees - There is a need to build up high-quality capacity in key disciplines at national institutions.
 - **Steps taken by Government**
 - ✓ **Prime Minister’s Research Fellows (PMRF) Scheme** of Rs 70,000 monthly fellowship and Revitalising Infrastructure and Systems in Education (RISE) announced in the Union Budget 2018-19 by 2022 with a total investment of ₹1,00,000-crore in the next four years are good steps to promote research.
 - ✓ **Atal Innovation Mission** – Atal Tinkering Labs and Atal Incubators for supporting an innovative ecosystem in schools, universities, small and medium industries, corporate, NGOs and research institutions.

Regulation in Higher Education

- Higher education in India is currently regulated by a number of agencies like UGC, MCI, AICTE etc.
- Issues and Challenges
 - *Poor global rankings*
 - ✓ Currently, India continues to perform abysmally in global ranking of higher educational institutions.
 - *Archaic Law*
 - ✓ University Grants Commission Act was enacted in 1956. However, it is unsuitable for regulation today and needs to be changed in-line with the growing complexity and number of higher educational institutions.
 - *Inadequate financial resources and problems of corruption, nepotism, favouritism*
 - ✓ Higher educational sector in India has been characterized by inadequate financial resources and problems of nepotism, corruption and favouritism.
 - *Accreditation*
 - ✓ Indian accreditation discourse has been marked by politicisation, conflict of interest, corruption and unscientific methodology.
 - *Other Challenges*
 - ✓ Other challenges include Deemed Universities, fake universities, fake degrees, Politicization of UGC (Four year undergraduate programme etc.)
- **Recent initiatives by government**
 - Recently government prepared a draft act for repeal of UGC and setting up of HECI (Higher Education Commission of India).
 - Government has enacted the National Medical Commission Act which is aimed at overhauling medical education in India and replace the Medical Council of India.

- **Way forward**
 - An independent mechanism for administering the national higher education fellowship programme should be put in place.
 - A Central Educational Statistics Agency (CESA) should be established as the central data collection, compilation and consolidation agency with high quality statistical expertise and management information system should be used for predictive analysis, manpower planning and future course corrections.
 - An expert committee should be constituted to study the systems of accreditation in place internationally.
 - Ensure effective coordination of roles of different higher education regulators, such as the UGC, All India Council for Technical Education (AICTE) and National Council for Teacher Education (NCTE), and restructure or merge these where needed. Amend the UGC Act to provide legislative backing to the tiered regulatory structure.
 - Create a framework to allow foreign universities of global repute to operate in India, in collaboration with Indian institutions to offer joint degree programmes.
 - Ensure that the selection process of Vice-Chancellors of universities is transparent and objective.
 - Link at least a proportion of the grants to performance and quality.

Value based education

- Since ancient times, it is said "**Sa Vidya Ya Vimuktaye,**" which means that with education we finally attain salvation. This small Sanskrit phrase essentially contains the thought and essence of Value Education that is relevant in all perspectives.
- In simple terms Value-based Education is one which imparts certain essential moral, ethical, cultural, social, spiritual value in child necessary for their all-round development and prepares them as a complete man.

Importance of Value-based Education -WHY?

- *Need of the Nuclear and Working parents' family - because* most of them are busy in work, they spend only a few hours with their children.
- *There is too much violence and dishonesty in society* - every day students are exposed to violence, dishonesty, and other social problems in the media and the real world. They tend to see and replicate these crimes - sexual violence, shooting bullying in school and fights between gangs. If moral values were taught in schools. We would have fewer of these problems.
- *To Counter Bad Influences in Society* - Unfortunately, many of the role models of young people are setting bad examples. These bad examples range from sexual promiscuity, degrading of women, advocacy of violence, and the condoning of dishonesty in order to succeed.

What Value-Based Education can instill in students?

- *It will prepare children for Future Roles in Society:* The primary goals of education should be enabling students to gain knowledge and moral values. Children need both in preparing themselves to be good parents and citizens in society.
- *It builds the character and is necessary for development of personality of an individual:* It includes physical health, mental health, etiquettes and social behavior, civic rights and duties etc.
- *Moral values teach us what is right or wrong.* Thus, we can conduct our life in a right direction.
- *Children will develop a secure sense of self.* They become more empowered to take responsibility for their own learning.

Some Important Moral Values in School Curriculum

1. **Swami Vivekananda:** "if we want to make our students as a moral human being, school curriculum is one of the best ways to serve this purpose" He suggested some important moral values which should be included in our school curriculum.
 - *Unconditional Love and Kindness:* With more love in the world kindness will follow and replace cruelty
 - *Honesty & Hard work:* No cheating in schools, telling truth
 - *Respect for Others* i.e. respecting different religions, races, sexes, ideas, and lifestyles, etc.
 - *Co-operation:* His motto, "united we stand and divided we fall,"
 - *Compassion:* If there were more compassion in the world. There would be less homeless, hunger, wars, and unhappiness
 - *Forgiveness:* Anger in most cases is caused by unwillingness to forgive. There would be less violence and fighting in

- school if students could learn this moral virtue.
- 2. Mahatma Gandhi:** "Education means all-round drawing out of the best in child and man—body, mind, and spirit." He conducted Educational experiment at phoenix Ashram and Tolstoy wadi (Garden) in South-Africa. These include:
- Education for character building
 - Educational of soul should be imparted thought teacher's (model) life rather than through books
 - Health education for physical fitness and health and insistence for simple life.
 - Importance for self-help and self-reliance, education for thoroughness (strength)
 - Education for equality of all the religions, education based (founded) on truth, non-violence and justice.
 - He presented "**Wardha educational Scheme (also known as Nai Talim)**" before the nation(1937) based upon: free and compulsory education for all boys and girls between the ages of seven to fourteen; Education Through Craft or productive work; Education through the mother tongue; Ideal of citizenship
- 3. Rabindranath Tagore:** "The highest education is that which does not merely give us information, but makes our life in harmony with all existence".
- There are four fundamental principles in Tagore's educational philosophy; naturalism, humanism, internationalism and idealism. They are incorporated through -
 - Tagore's education marked a novel blending of the ideas of the East and West.
 - He envisaged that nature is the best teacher to the pupil.
 - He rejected a book-centered education for students.
 - With these objectives he opened Shantiniketan, Sri Niketan and Brahmachari Ashram.
 - He gave **importance to fine arts (dance, drama, music, poetry, paintings etc.)** as he believed that these finer aspects of human life are very essential to enrich soul.
 - He wanted to **eradicate poverty through education** especially through skill training on rural areas thereby helping out in the process of rural reconstruction.
- 4. J. Krishnamurthy** - "To understand life is to understand ourselves and that is both the beginning and the end of education".
- The **aim of education** should be to encourage every pupil **to find out for himself his peculiar individual talent and develop it as fully as possible.**
 - He condemns the present system of mass education and **advocates individual teacher-pupil relationship.**
 - **School must have to be temple of learning and not factories of knowledge.** He advocated the absence of comparison and competition.
 - He believes in an **all-round development of child of today**, going to be a father of tomorrow, is the prime responsibility of the teacher instead of merely imparting information and knowledge.
 - He believes that the **education in the modern world has been concerned with the cultivation not of intelligence, but intellect, of memory and its skill.** In this process little occurs beyond passing on information from the teacher to the taught in which there is little human relationship. If one has no intelligence, one is doomed to be slave to environment.

UPSC Essay Previous Year Topics

- Value-based science and education. (1999)
- Modern technological education and human values. (2002)
- What is real education?(2005)
- Education without values, as useful as it is, seems rather to make a man more clever devil. (2015)

Credit – based higher education system – status, opportunities and challenges – UPSC 2011

- A flexible system of grading which allows students to opt for subjects from other disciplines.

Positives of CBCS

- Greater *flexibility* to choose subjects
- Wide options as per students' interest
- Development of cognitive, emotional, spiritual, innovative, social, moral, environmental aptitude.
- Enable the concept of 'Rainbow' Intelligence.
- Reduces the need for training of graduates
- Encourages a healthy cooperation and competition between institutions.
- Restricting the flight of Indian students abroad for higher studies.
- Will lead to better learning outcomes.

- Lead to improvements in ranking of Indian Universities.
- Aims to become an inter-university model giving the students the choice between subjects across universities.
- **Challenges**
 - Huge shortage of faculty and infrastructure in higher education as close to 40% of vacancies for faculty members in central universities and IITs are vacant.
 - Lack of uniformity in mandate, role, profile, etc. across universities.
 - Mainly aimed at vocational needs and neglecting research and innovation needs.

Evaluation Systems – Issues & Initiatives

- **Students**
 - Student evaluation has been one of the most debatable topics in education sector.
 - While there has been consensus on quantitative parameters for evaluation like Gross enrolment ratio (GER), mean years of schooling, dropout ratio etc., qualitative parameters for evaluation continue to remain debatable.
 - One of the initiatives for measuring learning outcomes has been the Annual Status of Education Report published by NGO Pratham. Some of the parameters used :-
 ✓ Foundational reading skills through letter identification, word decoding and reading passages
 ✓ Basic math abilities like number recognition, subtraction and division.
 - In addition, in-spite of having provisions for Comprehensive and Continuous evaluation (CCE), the emphasis on rote learning continues to predominate.
- **Government Initiatives**
 - Recently government has proposed to introduce a system of measuring annual learning outcomes in schools.
 - NITI Aayog has also been conducting workshops on School Education Quality Index (SEQI) to improve the learning outcomes among school children.
 - **National Testing Agency (NTA)**
 ✓ Government has recently announced that JEE Main and NEET will be held twice a year from 2019 by NTA.
 ✓ Apart from these, NTA will also conduct National Eligibility Test (NET), Common Management Admission Test (CMAT) and Graduate Pharmacy Aptitude Test (GPAT) exams.
- **Way forward**
 - Norms for learning outcomes should be developed and applied uniformly to both private and government schools.
 - Within the parameters prescribed by the RTE act, States should have the flexibility to design and plan for the infrastructure keeping in view the local conditions.
 - There is an urgent need for examination reforms emphasize on understanding and knowledge as opposed to rote learning and only facts.
- **Teachers**
 - Currently there is absence of any uniform methodology for evaluating teachers' performance.
 - Some of the possible steps towards a uniform methodology for evaluation can be :-
 ✓ A transparent and merit based norms of evaluating teacher performance periodically should be formulated.
 ✓ At the national level, a Teacher Education University must be set up with the responsibility of various aspects of teacher education as well as evolving such norms.
- **Institutions**
 - **Rankings**
 ✓ While global rankings like **Times Higher Education World University Rankings**, **QS Rankings** etc. have developed a stable methodology for globally comparing higher educational institutions, they fail to take local conditions into account.
 ✓ In India, a series of private organisation including media like **India Today**, **Dataquest** etc. have come out with ranking of educational institutions at the national level.
 ✓ Recently, the government in 2015 has launched the **National Institutional Ranking Framework** to ranks institutions within five broad generic parameters - Teaching; Learning and resources; Research and professional practice; Graduation outcomes; Outreach and inclusivity; Perception.

- **Accreditation**
 - ✓ National Assessment and Accreditation Council (NAAC) is the nodal agency under UGC responsible for accreditation. Apart from, the National Board of Accreditation (NBA) under AICTE is responsible for undertaking periodic evaluation of technical institutions.
 - ✓ **Issues and Challenges**
 - Huge backlog of cases related to accreditation.
 - The same template for evaluation is applied to all units irrespective of their specialized characteristics, which renders the approach largely imprecise.
 - There is no scope for participation in assessment and accreditation sector for external players.
- **Way Forward**
 - Need for an overarching management board, the National Accreditation Board, which will :-
 - ✓ Oversee the entire process
 - ✓ Set standards and define guidelines
 - ✓ License private (not for profit) agencies in adequate number
 - Need to develop a scientific methodology for grading educational institutions as per their specialities.

Provisions Related to Education

- **Sustainable Development Goal 4:** Ensure inclusive and quality education for all and promote lifelong learning
- **DPSPs:** Article 41 (Right to work, to education and to public assistance in certain cases), Article 45 (Provision for early childhood care and education to children below the age of six years), Article 46 (Promotion of education and economic interests of SC, ST, and other weaker sections).
- **Fundamental Right:** Article 21-A provide free and compulsory education of all children in the age group of six to fourteen years in such a manner as the State may, by law, determine.
- **Fundamental Duty:** Art. 51-A(k) to provide opportunities for education by the parent the guardian, to his child, or a ward between the age of 6-14 years as the case may be.

Highlights of RTE ACT, 2009

- It is compulsory and free education of all children in the age group of six to fourteen years as a Fundamental Right.
- Minimum standards are set
- Quantity and Quality of Teachers
- No discrimination and No harassment
- School Management Committees- By the people, for the children
- No denial in Admission of children without any certification (birth proof)

RTE Innovations

Globally validated concepts –AAC i.e. Admission to Age Appropriate Class - Admission for all in age appropriate class:

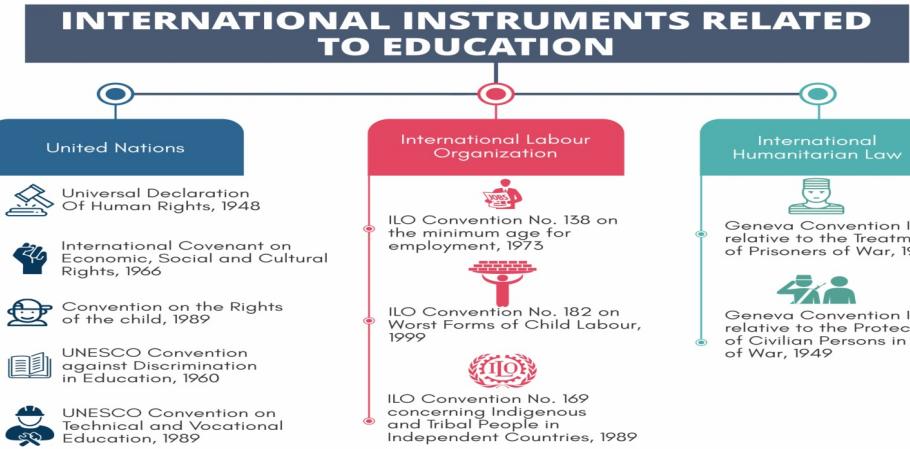
- CCE i.e. Continuous and Comprehensive Evaluation
- NDP i.e. No Detention Policy

Hitches and Glitches in the RTE Act

- 25% seats reserved of EWS in private schools (aided or unaided)
- No Detention Policy vs Old pass-fail system.

International examples in the field of education

- **Australia-** Incentives to teachers taking rural hardship postings, 20-plus years of schooling
- **Japan-** Intense focus on academics starting at age 6 (low primary level drop-out rate of 0.2 percent)
- **Finland-** Mandatory 15-minute break for every hour of five-hour school day, No grades until fourth grade
- **Netherlands-** Teaching in languages other than Dutch for students to foster learning in all subjects, extra funding to poorer and ethnic minority students, primary schools with the highest proportion of disadvantaged students have about 58 percent more teachers and support staff.



ONLINE EDUCATION – Advantages & Disadvantages

- Advantages-**
 - Cheaper medium:** one can learn using any device connected to the Internet. There's no need to spend a lot of money renting a building, paying an expensive electricity bill, internet, etc.
 - Consumes less time:** there's no need to spend time commuting to and from the classroom, for both the teacher and the students. Also, the teacher/trainer doesn't need to give the same class over and over again to a different group of students.
 - Allows for self-paced learning:** students or trainees can take their courses anytime, anywhere. Using their own devices. Students who don't have time for regular classes can learn online whenever they do have time.
 - Modern:** Most people today prefer to consume content using the Internet rather than in any other way.
- Disadvantages –**
 - Ensures self-discipline:** although experience has shown that online students become more self-disciplined.
 - Plagiarism:** students may plagiarize essays and other assignments
 - Cheating:** it can be easier to cheat if you are taking an online exam.
 - Isolation:** since one doesn't have to be physically present in a classroom in order to learn, it might be more difficult (or impossible) to get in touch with other learners.

Advantages	Disadvantages
<ul style="list-style-type: none"> Flexibility to plan schedule Ease of Access More Affordable as online programs are cheaper. Solves teacher scarcity Environmentally friendly as it consumes less energy and it is a paperless learning method 	<ul style="list-style-type: none"> Weak Student Feedback Social Isolation and lack of communication skill development due to the absence of human communication. Requires strong self-motivation Cheating prevention during online assessments is complicated.

Challenges for India	Way forward
<ul style="list-style-type: none"> Digital Divide: less than 15% of rural Indian households have Internet connection. only 4.4% of rural households and 23.4% of urban households have computer/laptop. Parents complain of increased screen time for children and they aren't comfortable with technology themselves Increased domestic responsibilities especially for girls impairs learning. Lack of vernacular content Inadequate training of teachers in using technology 	<ul style="list-style-type: none"> Deployment of ed-tech applications which takes into account the low internet bandwidth and patchy connections. Improve content in regional language Leveraging community owned tablets and smart devices Establishing quality assurance mechanisms and quality benchmark for online learning Inclusive learning solutions need to be developed. For example - leveraging expanding access to mobile internet

Government Initiatives for Online Education

- **VidyaDaan 2.0:** It was launched due to the increasing requirement for e-learning content for students (both school and higher education) in the backdrop of COVID-19. VidyaDaan is national program, in which individuals (teachers, educationists, subject experts etc.) & organizations (schools etc.) can contribute to e-learning in the education domain.
- 200 new textbooks have been added to **e-Paathshaala**. E-Paathshaala is a portal/app developed by NCERT. It hosts educational resources including textbooks, audio, video, periodicals, and a variety of other print and non-print materials for teachers, students, parents, researchers and educators.
- **PRAGYATA guidelines on Digital Education** was released by Ministry of Education, along with Students' Learning Enhancement Guidelines (prepared by NCERT) that addressed issues related to students with no or limited access to online and digital technologies.
- **Manodarpan:** It is an initiative for psychosocial support of teachers, students and their families with regard to their mental health and emotional wellbeing.
- **NISHTHA (National Initiative for School Heads' and Teachers' Holistic Advancement)** has been customized for online mode
- **12 new SWAYAM PRABHA DTH channels** were added to support and reach those who do not have access to the internet. Government has also tied-up with private DTH operators like Tata Sky, Airtel etc. to air educational video content in order to enhance the reach among students.
- **PM eVIDYA:** A programme for multi-mode access to digital/online education consisting of:
 - DIKSHA for school education in states/UTs. DIKSHA (Digital Infrastructure Knowledge Sharing) portal provides supplementary learning material for students and for upgrading the skills of teachers s (one nation, one digital platform).
 - One earmarked TV channel per class from 1 to 12 (one class, one channel)
 - Extensive use of Radio, Community radio and Podcasts
 - Special e-content for visually and hearing impaired.
 - Top 100 universities will be permitted to automatically start online courses

UPSC Essay Previous Year Topics

- "Education for All" Campaign in India: Myth or Reality. (2006)
- Literacy is growing very fast, but there is no corresponding growth in education. (1996)
- Restructuring of Indian education system. (1995)
- Irrelevance of the classroom. (2001)
- Destiny of a nation is shaped in its classrooms. (2017)

SCHEMES



- **Scheme - Institutions of Eminence (IoE)**

- The continued dismal state of higher education in India as reflected in various global ranking and the growing demand for quality higher education owing to rising middle class and demographic dividend has led to the launch of IoE scheme which is aimed at establishing 20 world-class educational institutions.
- However, in-spite of the best intentions IoE continue to suffer from a number of issues and challenges :-
 ✓ Regulating such institution hasn't been defined in clear and precise terms.
 ✓ To sustain such institutions quality teachers would be required which continue to be a major issue in Indian higher education sector.
 ✓ The issue of brain drain also needs to be tackled post completion of education from such institutions.

Ready With Strategy

WHAT WILL MAKE INSTITUTIONS 'EMINENT'

RESERVATION POLICIES will apply only to govt institutions conferred the status

THE INSTITUTIONS WILL BE multi-disciplinary but unitary, meaning they will not affiliate with colleges or use the word 'university' for description

ELIGIBILITY CRITERIA

For existing pvt institutions, initial corpus fund of ₹60 cr to be hiked to ₹150 cr in 10 years

For greenfield institutions, an initial corpus of ₹60 crore to be hiked to ₹150 crore in a decade

Institution to be accredited by NAAC or its international equivalent

SELECTION NORMS

NO UGC INSPECTION FOR these institutions, which will follow a disclosure-cum-review mechanism with the review by the EEC, which may rope in foreign experts. EEC will review the institutions once in three years for adherence to their implementation plan until they achieve the top 100 global ranking slot for two consecutive years

FAILURE TO MEET GOALS could mean withdrawal of any or all additional incentives given to an institution or replacing the status to ordinary deemed to be university status affiliated to a state university

Conclusion

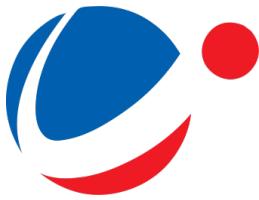
- India has one of the youngest populations in an aging world. By 2020, the median age in India will be just 28, compared to 37 in China and the US, 45 in Western Europe, and 49 in Japan. For India to become the human resource capital of the world, we shall have to leverage this demographic dividend.
- Education with a holistic perspective is concerned with the development of every person's intellectual, emotional, social, physical, artistic, creative and spiritual potentials.
- To leverage the advantage of demographic dividend India needs to invest into its abundant human capital through quality education, reforming the curriculum and pedagogical processes, improving delivering by utilizing public-private partnerships, evolving an efficient audit and accountability mechanism and resolving the existing lacunae in the current institutional system which will help unleash the true potential of Indian citizens and lead to economic and social prosperity.
- A shloka from Chanakyaniti -

“माता शत्रु पिता वैरी येन बालो न पाठितः न शोभते सभा मध्ये हंस मध्ये वाको यथा”

(The parent who does not facilitate and guide their child for studies is like the greatest enemy of the child. The presence of an uneducated person in the company of educated people is like a goose in the company of swans.)

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ESSAY TOPIC: AGRICULTURE

Quotes on Agriculture

- “Agriculture is the most Healthful, most useful and most Noble Employment of Man.” - George Washington
- “Everything can wait, but not Agriculture.” - Jawaharlal Nehru
- “The discovery of agriculture was the first big step toward a civilized life.” - Arthur Keith
- “Agriculture is the foundation of civilization and any stable economy.” - Allan Savory
- “Agriculture is the backbone of Indian economy.” - M. K. Gandhi
- “Jai Jawan, Jai Vigyan, Jai Vigyan!” - Atal Bihari Vajpayee
- “If agriculture fails, everything else will fail.” - M. S. Swaminathan
- “Our farmers are pride of our Nation.” - Narendra Modi
- What we need is an “Evergreen revolution” in Agriculture - A. P. J. Abdul Kalam

Introduction

Pt. Nehru, the first PM of India advocated that “Everything, except agriculture can wait”. It is of no surprise that farmers and farming activity were given sacred status in Indian civilisation where **Goddess Annapurna** is the goddess of food and nourishment in Hinduism. In modern times, Agriculture in India boasts of a series of achievements - *Largest producer of milk; Second largest producer of rice, wheat, fruits, and vegetables, Fifth largest producer of poultry*. However, it also continues to suffer from **problems of malnutrition, farmer distress, farmer suicides, post-harvest losses, challenges of climate change etc.** Thus, while agriculture in India may have come a long way, it continues to face series of challenges.

Definition

Agriculture is defined as a primary economic activity. In other words, it is the science or practice of farming, including cultivation of the soil for the growing of crops and the rearing of animals to provide food, wool, and other products.

The implications of agriculture are huge for human life in spheres such as - social, political, cultural, ecological, security, strategic etc. Hence, it is of no surprise agriculture is possibly the only economic activity which has ‘culture’ as a suffix corroborating its multiple and multi-dimensional implications.

Types of Agriculture

Agriculture isn't a uniform activity but dependent on physical and human factors giving rise to different types of farming. Some of which are:

- **Subsistence agriculture**
 - It is the cultivation of small and scattered holdings with the help of draught animals and family members with primitive techniques. It is practiced by majority of farmers across the world.
- **Nomadic Herding**
 - It is based upon the rearing of animals on natural pastures. This practice is performed by the people of semi-arid and arid regions. Northern Africa, parts of Arabia and parts of northern Eurasia are the typical regions of this type of farming. This is a subsistence type of activity.
- **Plantation agriculture**
 - It was introduced in India by Britishers and involves growing and processing of a single crop purely meant for sale. Examples include plantations of Tea, Rubber, Coffee, Cocoa etc. Practiced mainly in Assam, sub-Himalayan, West Bengal, Nilgiri, Annamalai and Cardamom Hills.

- **Shifting agriculture**
 - It involves clearing of forest land by felling and burning and then growing crops. The land is abandoned in 2-3 years after the fertility of the soil is lost. It is practiced by nearly 250 million people, especially in the tropical rain forests of South America, Central and West Africa, and Southeast Asia.
- **Livestock Ranching**
 - Under this system of farming, the major emphasis is laid on rearing animals. Unlike nomadic herding, the farmers live a settled life. This type of farming has developed on a commercial basis in areas of the world where large plots of land are available for animal grazing, such as the low rainfall areas of North America, South America and Australia.
- **Commercial Grain Farming**
 - This type of farming is a response to farm mechanization and is the major type of farming in the areas with low rainfall and population. These crops are prone to the vagaries of weather and droughts, and monoculture of wheat is the general practice. Prairies, steppes, and temperate grasslands of South America and Australia are the main areas for this type of farming.

Agriculture in India - A Timeline

- **Early History**
 - By 9000 BCE, Wheat, Barley, Jujube were domesticated in the Indian subcontinent. This was soon followed by domestication of sheep and goat.
 - During the Indus Valley Civilization, cotton industry was well developed. Rice was cultivated in the Indus Valley Civilization.
 - Mixed farming formed the basis of the Indus Valley economy. Also, irrigation developed around 4500 BCE.
- **Vedic period – Post Mahajanapadas period (1500 BCE – 200 CE)**
 - In the later Vedic texts (c. 1000–500 BC), there are **repeated references to iron. Cultivation of a wide range of cereals, vegetables, and fruits** is described. Meat and milk products were part of the diet as animal husbandry was important. The **soil was plowed several times**. Seeds were broadcast. Fallowing and a certain sequence of cropping were recommended. Cow dung provided the manure. **Irrigation was practiced**.
- **The Mauryan Empire (322–185 BCE)**
 - **Soils were categorized** and meteorological observations for agricultural use were prepared.
 - In addition, the administration facilitated **construction and maintenance of dams**, and provision of **horse-drawn chariots**.
- **Early Common Era – High Middle Ages (200–1200 CE)**
 - The Tamil people cultivated a wide range of crops such as **rice, sugarcane, millets, black pepper, various grains, coconuts, beans, cotton** etc.
 - **Systematic ploughing, manuring, weeding, irrigation** and crop protection was practiced for sustained agriculture.
 - Spice trade involving gained momentum as **India started shipping spices to the Mediterranean**.
- **Late Middle Ages – Early Modern Era (1200–1757 CE)**
 - There were advancements in Irrigation technologies along with **division of agricultural 'Zones'** into producing rice, wheat or millets.
 - Cultivation of **tobacco** (introduced by the Portuguese) spread rapidly. **Malabar Coast became the home of spices, especially black pepper**.
 - **New species of fruit**, such as the **pineapple, papaya, and cashew nut**, also were introduced by the Portuguese.
 - Land management was particularly strong especially during the **regime of Akbar**, under whom **Todarmal** formulated and implemented elaborated **methods for agricultural management**.
- **Colonial Era (1757–1947 CE)**
 - Agriculture in India during this time was marked by a downward spiral. The **new methods of land revenue system** led to **massive agrarian distress and poverty**.
 - In addition, deliberate **de-industrialisation** led to massive pressure of land leading to further poverty.
 - The **emphasis on Commercial Crops over food crops** led to series of **famines** and increases risks for agriculture.

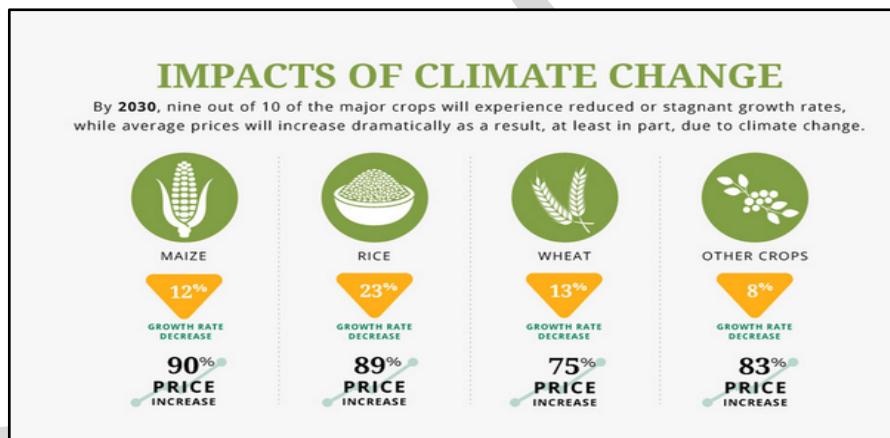
- The state of agriculture during the interwar period was even more tragic and marked by high population growth but almost stagnant food output. The crisis was most acute in Bengal leading to **infamous Bengal famine of 1943**.
- **Republic of India (1947 CE onwards)**
 - Post-Independence, India was faced **problems of food shortage, war with Pakistan and refugee crisis**. Hence, tackling food shortage became utmost priority and formed the basis of first five year plan.
 - Gradually, there was a more coherent and balanced approach to agricultural development.
 - **"Agenda of Land reforms"** led the strategy of agricultural development followed by development of Dams which were touted as "Temples of Modern India".
 - **Grow More Food Campaign (1940s)** and the **Integrated Production Programme (1950s)** focused on food and cash crops supply respectively. In addition land reclamation, land development, mechanization, electrification, use of chemicals—fertilizers in particular, and development of agriculture oriented 'package approach' of taking a set of actions instead of promoting single aspect soon followed under government supervision.
 - Introduction of a series of production revolutions from 1960s :: **Green Revolution**; **Yellow Revolution** (Oilseed - 1986-1990), **Operation Flood** (Dairy - 1970-1996), and **Blue Revolution** (Fishing - 1973-2002) etc.
 - **Institutional support** -Indian Council of Agricultural Research; Dairy Development Board; National Bank for Agriculture and Rural Development
 - **Post 1991** - Growth in agricultural sector benefiting from the earlier reforms and the newer innovations of Agro-processing and Biotechnology.
 - **Presently** - Food security as well as export house for the world; Contract farming along with e-commerce in agriculture is propelling agricultural sector; Organic farming has become a major potential for export.
 - **Challenges** - Declining public expenditure, small landholdings, exposure to global glut in agri-commodities, inadequate governance capacity continue to create problems for India's farmers.

Importance of Agriculture

- **Political**
 - It forms the **largest vote-bank** as more than 50% of the Indian workforce is engaged in agriculture and allied activities.
 - Agricultural priorities become **major part of manifesto of every party**. The BJP had set a target of doubling farmers income by 2022 in its manifesto for 2019. It would invest Rs 25 lakh crore on rural development to improve the productivity of farm sector and enable the formation of 10,000 new farmer producer organization as well as provide PM-KISAN for all farmers, pension support to many. The Congress Manifesto, 2019 promised to waive the outstanding loan of farmers and ending the non-payment of loans as a criminal offence. The manifesto also introduces a separate 'Kisan budget' to prioritise issues affecting the agriculture sector.
 - Peasant and farmer movements have been a continued feature of Indian society. Some of the most prominent ones include **Champaran Satyagrah**, **Kheda Peasant Struggle**, **Bardoli Movement** in Gujarat, **Moplah rebellion** in Malabar, Peasant revolt in Telangana etc.
- **Social**
 - Agriculture forms the very basis of rural life; penetrating into every aspect of social and cultural life. The rising **agricultural surplus** caused by increasing agricultural production and productivity tends to **improve social welfare**, particularly in rural areas.
 - Agriculture influences every aspect of culture - beliefs, food, festivals, dress etc – For e.g. **Makar Sankranti**, **Baisakhi**, **Onam**, **Pongal** etc. are examples of harvest festivals
 - A number of trees like Peepal and animals like Cow are revered in India culture.
 - Status of agriculture has a huge impact on **health and status of women and children**. It is considered as the best tool for tackling malnourishment.
- **Economic**
 - Agriculture is one of the most **employment-intensive sectors**. In fact, agriculture in India has been characterized by a high degree of **disguised unemployment**.
 - It forms the basis for other manufacturing (as raw material) and service sector (for supporting services). Many **raw materials** and inputs used in industrial production, e.g., cotton, jute, sugarcane, tobacco, etc., is supplied by the agricultural sector. Such production linkages demonstrate that a **10% increase in agricultural**

output results in an **increase in industrial output by as much as 5%**.

- It is becoming a hub for **Entrepreneurship** in Agri-based start-ups e.g. **Kamal Kisan** which develops customized low-cost farm equipment, **Ninjacart** which is a technology based supply chain management system.
- **Security and Strategic**
 - Food is an important source of **security for a nation**.
 - During **world wars**, attacking food carrying ships/submarines became a **potent tool** for winning wars.
 - **Food-price spike** formed the final nail in the coffin for regimes in Middle-east during Arab Spring.
 - Recently, countries are **buying land in foreign countries for Agriculture**. For example, more than 80 Indian companies have invested about £1.5 billion (about Rs. 11,300 crore) in buying huge plantations in countries in eastern Africa, such as **Ethiopia, Kenya, Madagascar, Senegal and Mozambique** that will be used to grow food grain for the domestic market.
- **Ecological**
 - Agriculture combined with forestry and other land use is the **second biggest contributor** to **Green House Gas emissions** after the energy sector.
 - The prospects of future intensification of agriculture will have major detrimental impacts on the non-agricultural **terrestrial and aquatic ecosystems** of the world.
 - The doubling of agricultural food production during the past 35 years was associated with a 6.87-fold increase in nitrogen fertilization, a 3.48-fold increase in phosphorus fertilization, a 1.68-fold increase in the amount of irrigated cropland.



Status of Agriculture in India

- Agriculture in India represents a very paradoxical situation -
- **Food security vs nutrition & hunger** – Today, India is a net exporter of food grains and produces enough food to feed its population. But, on the other hand faces the triple threat of over-nutrition, under-nutrition and malnutrition across the country. Further, India faces the problem of hunger. India is ranked 94th out of 107 countries on Global Hunger Index, 2020 much behind Bangladesh, Pakistan and Nepal. The very people who made India self-sufficient in food themselves at times go hungry.
- **Farm suicides** - People in the farm sector accounted for 7.4 per cent of the total suicides in India, according to the latest NCRB report. Every day, 28 people dependent on farming die by suicide in India.
- While agricultural exports are rising, yet agricultural sector is not generating enough revenues to keep farmers profitable for nearly two decades now (As per study by OECD).
- Green revolution has ensured food security for India but has led to many disparities amongst farmers (big & small), regions (Northern states vs Eastern states), crops (wheat & rice vs the rest) etc.

Issues and suggested reforms

Factors	Issues	Suggested Reforms	Case Studies/ Best Practices
Land and Soil	<ul style="list-style-type: none"> ● As per World Bank, India has close to 60% of its land as agricultural land and is the second largest agricultural land globally. ● However, the land reforms agenda still continues to be an unfinished agenda. 	<ul style="list-style-type: none"> ● There is a need to conclude the agenda land reforms by modernising and digitising of land records, distribution of ceiling-surplus and waste lands. ● In addition, there is a 	<ul style="list-style-type: none"> ● West Bengal and Kerala are often cited as model states for land reforms implementation. ● China's 'Great Green Wall' programme has been highly successful in fighting

	<ul style="list-style-type: none"> As per latest Agriculture census, close to Landholding Statistics (2010-11) <table border="1"> <thead> <tr> <th>Size Groups</th> <th>Share of Total Land Holdings (%)</th> <th>Share of Operated Area (%)</th> <th>Average Size of Land Holding (acres)</th> </tr> </thead> <tbody> <tr> <td>Large</td> <td>4.3%</td> <td>10.6%</td> <td>42.95 acres</td> </tr> <tr> <td>Medium</td> <td>0.7%</td> <td>22.1%</td> <td>14.23 acres</td> </tr> <tr> <td>Semi-Medium</td> <td>10.0%</td> <td>23.6%</td> <td>6.70 acres</td> </tr> <tr> <td>Small</td> <td>17.9%</td> <td>21.2%</td> <td>3.51 acres</td> </tr> <tr> <td>Marginal</td> <td>67.1%</td> <td>33.5%</td> <td>0.96 acres</td> </tr> </tbody> </table> <p>67% of India's farmland is held by the marginal farmers (< 1 hectare).</p> <ul style="list-style-type: none"> In addition, only 5% of Indian farmers control a massive 32% of land. Though often neglected, close of one third of India's soil has turned problematic. The organic matter content has been reduced to a critical level of 0.3% to 0.5%. Subsequently, the conventional problems of soil salinity, soil degradation, desertification and soil erosion have continued to persist. 	Size Groups	Share of Total Land Holdings (%)	Share of Operated Area (%)	Average Size of Land Holding (acres)	Large	4.3%	10.6%	42.95 acres	Medium	0.7%	22.1%	14.23 acres	Semi-Medium	10.0%	23.6%	6.70 acres	Small	17.9%	21.2%	3.51 acres	Marginal	67.1%	33.5%	0.96 acres	<p>need to prevent diversion of prime agricultural land and forest land for non-agricultural usage.</p> <ul style="list-style-type: none"> As per Swaminathan Committee, there is a need to establish a National Land Advisory Service. 	desertification in Gobi Desert.
Size Groups	Share of Total Land Holdings (%)	Share of Operated Area (%)	Average Size of Land Holding (acres)																								
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Seeds	<ul style="list-style-type: none"> Seeds play a major input in agriculture with close to 20-25% productivity dependent on seed quality. However, India suffers from a dismal seed replacement ratio due to huge demand supply gap. There has been a failure of extension service and gradual withdrawal of state agencies from seed sector especially post 1991 leading to introduction of unreliable technologies in seed production. Recently, the emergence of hybrid seeds without due awareness and absence of a prudent regulatory framework has adversely impacted the self-sufficiency of farmers. For e.g. Controversy over GM Mustard DMH-11 is a case in point. 	<ul style="list-style-type: none"> There is a need for reforming the regulatory framework in seeds sector along with encouraging private sector participation in seed production and distribution In addition, there is a need for encouraging robust third party quality certification system for seeds. There is a need for encouraging community seed and germplasm banks for both conservation and breeding purposes along with a Seed information system 	Village level Seed banks in Tumkur (Karnataka), Datia (Madhya Pradesh) etc. have helped in making these villages self-sufficient in Seeds.																								
Irrigation	<ul style="list-style-type: none"> Only 46% of India's net sown area is irrigated and rest continues to depend on monsoons. This problem is aggravated by the huge regional imbalance w.r.t rainfall and water availability. In addition, there is a sub-optimal utilization of irrigation infrastructure. For e.g. India uses 2-4 times water to produce one unit of major food crops as compared to other major agricultural countries like China, Brazil and USA. Also, Indian agriculture largely depends on groundwater with more than 60% dependence. 	<ul style="list-style-type: none"> There is a need for promoting rainwater harvesting and water level recharging by mandatory aquifers. A mission mode project - Million Wells Recharge programme - needs to be initiated targeted at private wells. In addition, there is need for reforming the method of irrigation with use of 	Israel has been cited as a model example in irrigation owing to its expertise in micro-irrigation, desalination and recycling techniques. It has emerged as a template for reusing wastewater for irrigation.																								

		<p>techniques like Drip irrigation, Micro-irrigation, System of Rice Intensification (SRI) etc.</p> <ul style="list-style-type: none"> Finally, there is a need to increase funds for Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) along with establishment of a dedicated agency at national level to push PMKSY. Also, the programme of inter linking of river projects needs to be given serious consideration. 	
Fertilizer	<ul style="list-style-type: none"> Indian fertilizer sector suffers from a series of problem. While 80% of Urea requirement is met domestically, production of Potassium and Phosphorus is heavily dependent on imports. In addition, India's per hectare consumption (around 146 Kg) is far lower than developed countries; The impact of keeping Urea out of Nutrient Based Subsidy Scheme (NBS) has led to series of adverse consequence :- <ul style="list-style-type: none"> Worsening of N:P:K ratio to 8.2:3.2:1 (2013-14) as opposed to the desired 4:2:1. Worsening of Soil nutrient quality along with problem of algal bloom. Smuggling of cheap Urea to Nepal, Bangladesh etc. 	<ul style="list-style-type: none"> There is a need to include Urea within purview of NBS system. Also, there is a need to deregulate fertilizer sector along with establishment of a healthy regulatory ecosystem. Farmers need to be made aware of the optimal nutrient mix and optimal level of fertiliser in accordance with the quality of soil and choice of crops. Finally, there is also a need for focusing on micronutrients needs apart from NPK. 	Farmers in Tamil Nadu are successfully using the technique of fertigation leading better fertilizer efficiency and crop productivity.
Agriculture Labor & Mechanization	<ul style="list-style-type: none"> Agriculture in India is mostly dominated by manual labor. However, the composition of labour is skewed towards women, lower castes and tribals who have migrated to mainland. In addition, agriculture also suffers from problem of disguised unemployment and labour shortage owing to competition with MNREGA. In addition, mechanization in agriculture is restricted due to low and fragmented size of land-holdings and inadequate access to credit for buying equipments. <p>Scientific Know-How</p> <ul style="list-style-type: none"> Scientific know-how in agriculture forms an important part in agriculture productivity. However, India has only 1 extension worker per 800-1000 farmers. Also, around 60% farmers don't receive 	<ul style="list-style-type: none"> There is a need to impart agricultural scientific know-how to farmers by reforming Kisan Call Centres. Also, imparting agricultural skills to farmers along with participation of self-help groups and Primary Agricultural Cooperative societies (PACS). In addition there is a need to promote :- <ul style="list-style-type: none"> Genetically modified (GM) seeds with adequate safeguards 	<ul style="list-style-type: none"> The participation of private sector under the supervision of public sector in Agricultural Extension participation in Nigeria has been a successful model in agri-extension services. 'eSagu' in Andhra Pradesh has been a successful case-study for providing web-based personalized agro-advisory system which uses Information Technology to solve the unscientific agricultural practices.

	<ul style="list-style-type: none"> technical know-how. India farming scenario is also characterised by lack of crop rotation, predominance of cereal-centric and water-intensive crops. 	<ul style="list-style-type: none"> Precision farming and related new technologies like the system of rice intensification, poly house cultivation of fruits and vegetables, laser land levellers, self-propelled sprayers and multi-crop threshers and harvesters <p>Finally, there is a need to promote a vibrant, responsive, market oriented and globally competitive agricultural research ecosystem.</p>	<ul style="list-style-type: none"> Madhya Pradesh has emerged as a role model in agri-mechanization by providing for Custom Hiring centres which rents out machinery to small farmers.
Credit	<ul style="list-style-type: none"> In-spite of series of financial inclusion programs, close to 44% of rural houses borrow from informal credit sources. Also, credit taken has been found to be mostly cornered by rich farmers and used for consumption as opposed to productive purposes. 	<ul style="list-style-type: none"> There is a need to expand financial inclusion. Also, there is a need to provide moratorium on debt recovery especially during disasters like floods or droughts. There is a need to constitute an Agricultural risk fund. In addition, Women farmers must be issued Kisan Credit Cards and an integrated Credit-cum-Crop-Livestock Human Health insurance package must be launched for farmers. 	M-Pesa in Kenya has emerged as a successful model for enhancing financial services to farmers and field workers.
Post-harvest losses	<ul style="list-style-type: none"> India suffers from huge post-harvest losses which stand at 40% because of poor infrastructure- Transportation and Cold-storage facilities and use of unscientific practices. 	<ul style="list-style-type: none"> There is a need of enhancing investment in transportation, cold storage infrastructure and dissemination of best post-Harvest practices. There is a need for promotion of Food Processing Industries especially through SHGs and MSMEs. Finally, Food Corporation of India (FCI) must be reformed on the lines of Shanta Kumar Committee recommendations. 	

Remunerative prices for farmers	<ul style="list-style-type: none"> ● Marketing related issues <ul style="list-style-type: none"> ○ Indian agriculture suffers from policy distortions and also problem of proliferation of intermediaries. ○ In addition, poor infrastructure, lack of vertical integration and stranglehold of official mandis sanctioned by the Agricultural Produce Marketing Committees (APMC) acts of the states have acted as a major hindrance to agricultural marketing. ● MSP related issues <ul style="list-style-type: none"> ○ It has led to distorted cropping patterns with excessive focus on the cultivation of wheat, rice and sugarcane. ○ It has also resulted in depletion of water resources, soil degradation and deterioration in water quality in some states, especially in the north-western region. ○ Finally, procurement under MSP remains abysmally low, especially in Eastern states. For e.g. only 28-30% of Wheat and 30 to 35% of paddy is procured while for coarse grains the procurement is less than 1%. ● International Issues <ul style="list-style-type: none"> ○ There has been emerging concerns regarding WTO subsidies and Agreement on Agriculture. ○ For e.g. Recent issue of public stockholding for food security at WTO. ○ Countries especially developed countries have also erected tariff and non-tariff barriers for trade in agricultural goods. ● Value addition <ul style="list-style-type: none"> ○ In-spite of record production, value addition remains dismal at only 2%. 	<p>Marketing</p> <ul style="list-style-type: none"> ● There is a need for state-wide adoption of reformed APMC laws and exemption of perishables from the APMC act. ● Policies must be formulated to encourage investments in supply chains. ● In addition, Contract farming and group farming through Farmer Producer Organisation (FPO) must be encouraged. ● Finally, revamping e-NAM with third party assaying and quality certification mechanisms, dispute settlement mechanisms, digital infrastructure must be included within the ambit of NAM. <p>MSP</p> <ul style="list-style-type: none"> ● Government may introduce Price Deficiency Payment in place of MSP. 	<ul style="list-style-type: none"> ● Maharashtra has recently removed trade in fruits and vegetables from the purview of APMC act. ● Price deficiency payment schemes in Madhya Pradesh, Haryana and Telangana have been hailed as a model scheme for country wide emulation.
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Government Initiatives

Government Initiatives	
Sector	Schemes
Land and Soil	<ul style="list-style-type: none"> ● Soil Health Card ● National Project on Soil Health and Fertility ● National Action Programme to Combat Desertification
Seeds	<ul style="list-style-type: none"> ● National Seed Policy 2002 ● Sub-mission on Seeds and Planting material under National Mission on Agricultural Technology ● Seed Village Scheme ● Establishment and maintenance of Seed Bank ● Assistance for Boosting Seed Production in the Private Sector
Irrigation	<ul style="list-style-type: none"> ● Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)

Fertilizer	<ul style="list-style-type: none"> • Revamping Urea Production • Neem Coating of Urea • DBT for Fertilizers
Scientific Know-how	<ul style="list-style-type: none"> • National Mission on Agricultural Extension and Technology (NMAET) • Use of ICT
Mechanization	<ul style="list-style-type: none"> • Macro-Management of Agriculture
Credit	<ul style="list-style-type: none"> • Reforming Priority Sector Lending • Pradhan Mantri Jan Dhan Yojana • Increased allocation in Budget • Interest Subvention Scheme • Kisan Credit Cards • Promoting of Joint Liability Groups (JLGs) by Banks
Post-Harvest losses	<ul style="list-style-type: none"> • Pradhan Mantri Fasal Bima Yojana
Marketing	<ul style="list-style-type: none"> • National Agriculture Market (e-NAM) • Formulation of Model Contract Farming (Promotion & Facilitation) Act, 2017 • 22,000 Rural hats to be upgraded and turned into Gramin Agricultural Markets (GrAMs) • Encouragement to Organic farming by Farmer Producer Organizations (FPOs) and Village Producers Organizations (VPOs) in large Clusters
Miscellaneous	<ul style="list-style-type: none"> • Pradhan Mantri Kisan Mandhan Yojana, an old age pension scheme for all land holding Small and Marginal Farmers (SMFs) in the country with a view to provide social security net as they have minimal or no savings to provide for old age and to support them in the event of consequent loss of livelihood. • Minimum support price (MSP) for crops in accordance with the Swaminathan report. (Further, read about the farmer's protest around the three farm bills in 2020 in Vision IAS monthly magazines)

Reforms – The Unconventional Agenda

While a series of reforms have been suggested in the earlier sections and recommended by a series of committees and experts, some of the other areas worth considering but lesser prioritised are :-

- **Change of attitude**
 - Must be viewed as a sector of infinite opportunities;
 - Shift of attitude from viewing farmers as poor, vulnerable etc. to one of hope, hardworking, risk-taking etc.
- **Integrative approach**
 - Need to formulate, implement and monitor policies which adopt a integrative approach to agriculture as a part of rural development - Agriculture, Livestock, Forestry, Water resources etc.
- **Agri-tourism**
 - India has huge potential for agri-tourism which must become a core element of our Tourism policy.
- **Urban farming**
 - Agriculture is mostly viewed as a rural practice; Need to change the perception by promoting Urban farming - Truck farming in Semi-Urban areas, Rooftop farming
- **Agriculture as Entrepreneurship - Next Start-up sector**
 - Like IT, Agriculture must be promoted as the new start-up sector in India.
- **Governance Initiatives**
 - A series of steps by government like :-
 - ✓ Agri-Budgeting
 - ✓ Setting up of Agri Innovation Hubs
 - ✓ Constituting an Indian Agriculture Service or Indian rural service
- **Export potential and Value addition**

- Agriculture needs to be viewed as a ‘Sunrise sector’; Huge potential owing to Organic farming, Huge domestic market, Food Processing Industry, ‘Vegan’ movement
- **Cooperative and competitive federalism**
 - Agri-Federalism on the lines of fiscal federalism
 - Constitute an empowered committee of State rural development/Agriculture ministers on Agriculture.

Miscellaneous

FOOD PROCESSING INDUSTRY

- **Facts**
 - Share of Food Processing Sector in GVA of manufacturing sector was 8.71% and in that of agriculture, forestry and fishing stands at 10.04% in 2015-16
 - Major employment intensive industry, constituting 12.77% of employment generated in all manufacturing factories
 - Makes up for 13% of India’s exports and 6% of total industrial investment.
 - Considered as a Sunrise sector and the 13th largest recipient of FDI in India.
- **Challenges**
 - Low level - Currently only 2% as compared to USA and China where it is 90% and 40% respectively; About 75% is Unorganized; Low adherence to quality standards - For e.g. EU bans pest-ridden Indian mangoes;
 - Supply side and Infrastructure bottlenecks - Small and fragmented holding; Archaic APMC laws; >30% post-Harvest losses; Weak Regulatory Structure; Restrictions on Contract farming
- **Government Schemes**
 - SAMPADA or Scheme for Agro-Marine Processing and Development Of Agro-Processing Clusters
 - 100% FDI for trading through e-commerce and manufacturing of food products through automatic route.
 - Establishment of 60 fully equipped Agri-Export Zones (AEZs), in addition to 42 mega food parks and 128 cold chains;
- Success stories - Amul; Mother Dairy; Lijjat Papad; Pepsico etc.

FARMER SUICIDES

- Suggested ways to deal with preventing farmer suicides
 - Providing affordable health insurance at primary healthcare centres in villages;
 - Mapping suicide hotspots on priority basis;
 - State level farmers’ commissions with representatives of farmers;
 - Covering all crops by crop insurance;
 - Providing Psychological Counselling through mass media like Radio and Television;

TAXING AGRICULTURAL INCOME

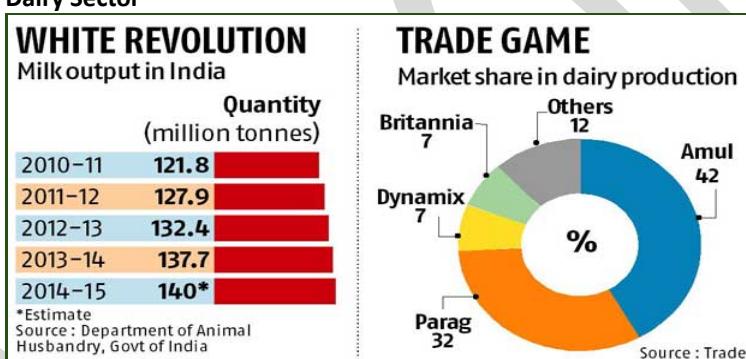
- **Background**
 - Was in vogue during Mughals and British period; Discontinued post-Independence.
 - Post-independence committees like K.N. Raj Committee and Vijay Kelkar Committee recommended for taxing agricultural income
 - For assessment year 2014-15, nine of the top 10 claimants for tax exemption of agricultural income were corporations;
- **Rationale**
 - Brings equity to tax structure; Increase Tax to GDP Ratio (Currently 16.5%) ; More resources at the disposal of government for development ; Enable better data collection about rural economy;
 - International examples - Japan, Soviet Union and China extracted a large part of resource for industrialisation from agriculture; Prevent misuse of exemption as agricultural income of non-agriculturists is being increasingly used as a conduit to avoid tax and for laundering funds;
- **Challenges**
 - Problem of reliable and credible data regarding Land titles, Crop etc.; Difficulty in assessing productivity of Crop; Issue of Crop failures; Lack of political consensus on the issue especially in wake of farm distress and suicides;

AGROFORESTRY

- Practice of cultivating trees on farm;
- **Benefits**
 - Food, Fodder, Wood, Fuel and Fertilizers.
 - India's 65% timber needs met through farm grown trees; st Half of its fuel wood is sourced from farm forestry.
 - Helps in fighting Climate Change - Carbon sequestration
 - Prevents Deforestation, Promotes Soil and Water Conservation;
- **Government Initiatives**
 - India has become the first country to have separate policy on agroforestry - *National Agroforestry Policy, 2014*
 - **Salient Features:**
 - ✓ Impetus to simplification of rules and land tenancy reforms
 - ✓ Provision for Loans and Insurance for trees
 - ✓ Provision for R & D, Quality Seeds
 - ✓ Provision for PPP model for non-farm land
 - ✓ Emphasis on awareness and education

LIVESTOCK

- **Livestock Sector** - Animal Husbandry, Dairy and Fisheries Sector
- **Facts**
 - World's Highest Livestock Owner at 512 million;
 - Contributes 16% to the income of Small farm households; Provides employment to 8.8 % of the population in India; Contributes 4.11% to GDP and 25.6% of total Agriculture GDP.
- **Contribution of Livestock** - Food -> Milk, Meat and Eggs; Fibre and Skins; As Drafts; Provides Dung and other Animal Waste materials; As Biological method for controlling Weed; For Sports / recreation; As Companion animals; For Income and Employment
- **Government Initiatives** - National Livestock Mission; Rashtriya Gokul Mission (RGM)
- **Dairy Sector**



- **Facts**
 - ✓ Largest Milk producer; Expected to grow at a compounded 15% annually till 2020;
- **Challenges**
 - ✓ Continues to be a subsistence activity; Only 20% of the milk produce is channelled for Organised marketing; Quality and Standards Issue - FSSAI survey in 2012 pointed out that 70% of the Urban and 31% of rural supplies don't meet standards; Shortage of feed/fodder; Lack of value addition and marketing facilities; Lack of Veterinary Services
- **Government Schemes**
 - National Programme for Bovine Breeding and Dairy Development
 - National Dairy Plan (Phase-I)
 - Dairy Entrepreneurship Development Scheme
- **Fisheries**
 - **Facts** - Globally 3rd in Fisheries 2nd in Aquaculture; Engage about 14 million people in different activities; About 6.3% of the global fish production; Contributes to 1.1% of the GDP and 5.15% of the agricultural GDP; Nearly 65% contribution from the inland sector
 - **Challenges**
 - ✓ **Lack of Infrastructure** - Usage of Old wood boats, Low quality Trawlers and Fishing nets; Potential of Deep-Sea

- fishing is yet to be realized; Poor quality of Fish Feeds; Security of Fishermen especially along the maritime boundaries with Sri Lanka and Pakistan; Structural issues with National Fisheries Development Board (NFDB)
- **Government Schemes**
 - ✓ **Blue Revolution:** Integrated Development and Management of Fisheries
 - ✓ National Fisheries Action Plan-2020
 - **Buzz Words**
 - ✓ Coastal aquaculture; Inland fisheries; Freshwater aquaculture; Coldwater fisheries; Ornamental Fishing

HORTICULTURE

- Horticulture comprises of fruits, vegetables, plantation crops, flowers, spices and aromatics.
- **Trends**
 - Second largest producer of fruits and vegetables in the world;
 - Leader in several horticultural crops including mango, banana, papaya, cashew nut, potato and lady's finger etc.
 - Horticulture production - 313 mt (2019-20)
- **Reasons**
 - **Access to irrigation**
 - ✓ Around 70% of area under horticulture has access to irrigation
 - **Rising incomes, urbanization**
 - ✓ Better incomes, urbanization and higher consumption of fruits and vegetable -> Driving demand for protein rich diets
 - **Infrastructure**
 - ✓ Infrastructure facility like Cold Storage; Transportation etc. have helped in marketing of produce.
 - **Forward Linkages**
 - ✓ Forward linkages such as contract farming (where allowed) have helped reduce wastage, increase yield and ensure greater income realization for farmers.
 - **Government Support**
 - ✓ National Horticulture Mission launched in 2005 focused on nutritional security and increasing farm income in horticulture
- **Challenges**
 - High Post-Harvest Losses; Low Productivity; Inadequate Finance; Marketing Challenges; Lack of Cold Storage; Low Value addition
 - For e.g. Vegetables and Fruits continue to come under the purview of APMC laws; Only 10-11% of the fruits and vegetables in India uses Cold Storage;
- **Government Schemes**
 - Mission for Integrated Development of Horticulture (MIDH)
 - National Horticulture Mission (NHM)
 - Horticulture Mission for North East & Himalayan States (HMNEH)
 - Operation Green

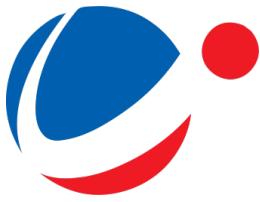
Conclusion

The agriculture sector in India is experiencing structural changes which are opening up new challenges and opportunities. The Government has initiated reforms in the field of agricultural marketing, given a big push to the use of technology in agriculture, and also adopted Direct Benefit Transfer (DBT) mode for timely delivery of extension services, credit and other inputs to small and marginal farmers.

However, the challenges in agricultural sector can't be handled by government alone. There is a need to involve corporates, civil society organisations, academia and society as a whole for reforming agriculture. While infrastructure support like land, irrigation, seed etc. are necessary, there is also a need for cultural shift, need for viewing agriculture in a positive light, need for perception change. In this context, our past provides us with the guiding light where land was used as a gift to people with intellectual prowess, had a sacred status. Or as famous agricultural scientist M. S. Swaminathan has said - "**If agriculture fails, everything else will fail!**". The choice is ours!

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ESSAY TOPIC: CLIMATE CHANGE

Previously asked Questions

- Ecological considerations need not hamper development. -1993
- Urbanization is a blessing in disguise. -1997
- Protection of ecology and environment is essential for sustained economic development. -2006
- Urbanization and its hazards -2008
- Should a moratorium be imposed on all fresh mining in tribal areas of the country? -2010
- We may brave human laws but cannot resist natural laws. (2017)
- Alternative technologies for a climate change resilient India (2018)

Quotes by Famous Personalities

- "One of the first conditions of happiness is that the link between man and nature shall not be broken." ~Leo Tolstoy
- "The Earth will not continue to offer its harvest except with faithful stewardship. We cannot say we love the land and then take steps to destroy it for use by future generations." ~ Pope John Paul II
- "We won't have a society if we destroy the environment." Margaret Mead
- "A nation that destroys its soils destroys itself. Forests are the lungs of our land, purifying the air and giving fresh strength to our people." ~ Franklin D. Roosevelt
- "We do not inherit the earth from our ancestors; we borrow it from our children."
- "The best time to plant a tree was 20 years ago. The next best time is today." – Chinese proverb.

Introduction

Climate change refers to significant changes in global temperature, precipitation, wind patterns and other measures of climate that occur over several decades or longer.

Various factors are responsible for it including-

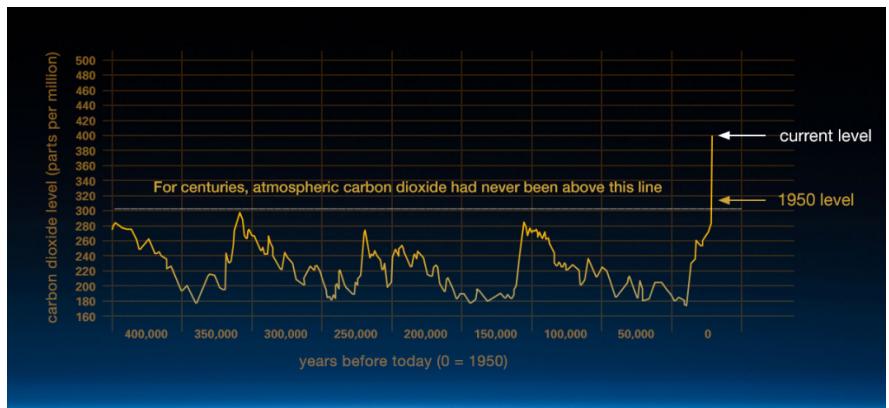
- **Natural Factors:** such as continental drift, volcanoes, ocean currents, the earth's tilt, and comets and meteorites. The natural factors affect the climate change in long term and persist for thousand to millions of years.
- **Anthropogenic Factors:** includes greenhouse gases, aerosols and pattern of land use changes etc.

Human activities since the nineteenth century have contributed to substantial increases in the atmospheric concentrations of heat-trapping **greenhouse gases (GHG)**, such as carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and fluorinated gases. For instance, rapid increase of atmospheric CO₂ levels from 280 parts per million during 1850 to more than 416 parts per million in February 2020. GHGs, along with other anthropogenic activities such as aerosols and changes in **land use and land cover (LULC)** have caused **global average temperature to rise by around 1°C** since pre-industrial times.

Climate Change Evidences

- **Global Warming:** Intergovernmental Panel on Climate Change Report titled "Global Warming of 1.5°C" says that human-induced global warming has in 2017 already reached 1°C above preindustrial levels; the current climate efforts of countries will take the world to 1.5°C between 2030 and 2052.

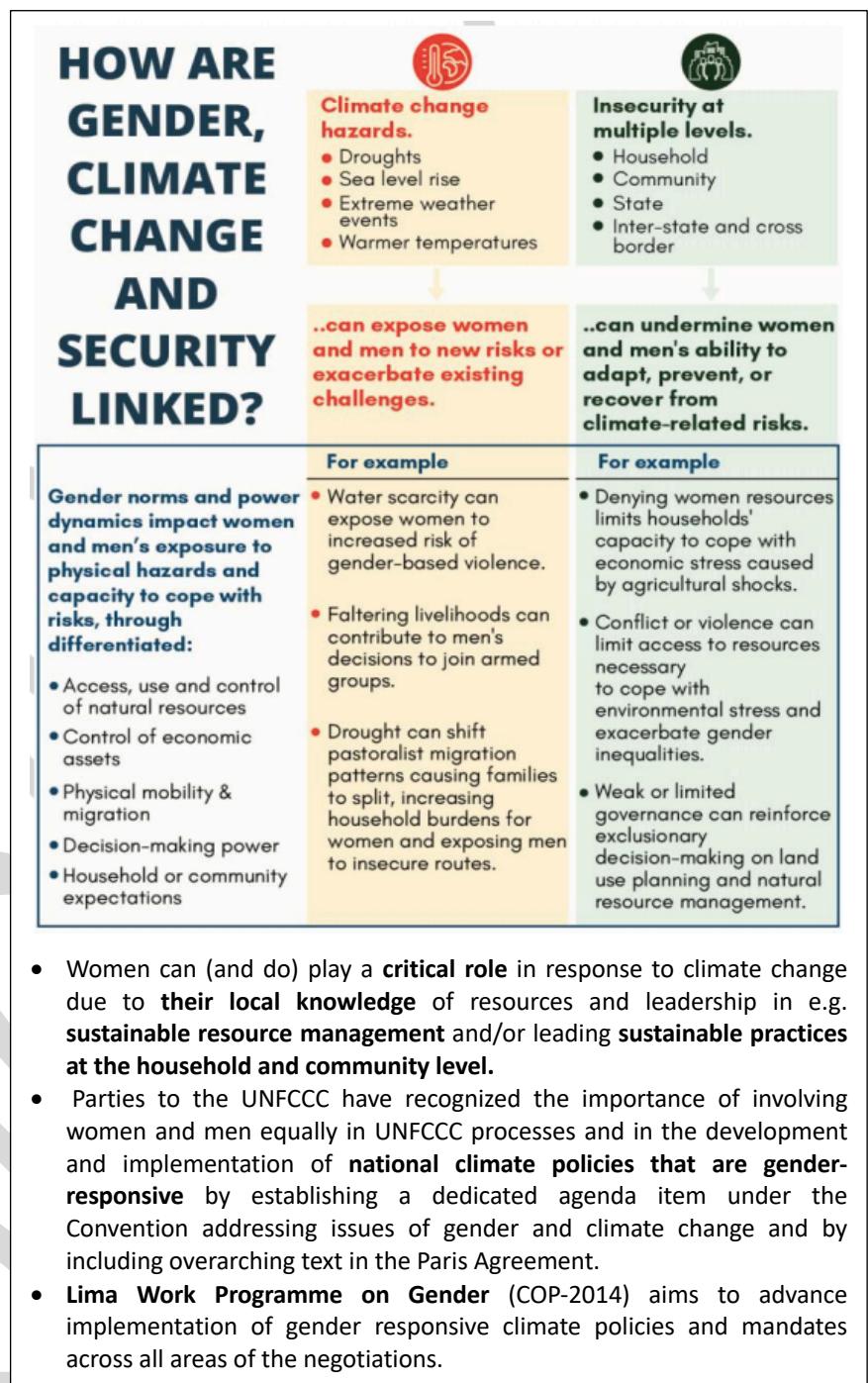
- According to IPCC "on average the temperatures in Northern Hemisphere during the second half of the twentieth century were very likely higher than in the past 500 years".
- **CO₂ concentrations:** The IPCC has pointed out that "atmospheric concentrations of CO₂ exceed by far the natural range over the last 650,000 years."
- **Ocean acidification:** In the past decade, the oceans absorbed around 25% of anthropogenic carbon dioxide emissions and the decrease in global ocean oxygen has continued. More than 90% of the energy trapped by greenhouse gases, goes into the oceans.
- **Cryosphere continues to shrink:** Arctic sea-ice extent was well below average throughout 2018. The Greenland ice sheet has been losing ice mass nearly every year over the past two decades.
- **Sea Level Rise:** As per IPCC special report on the Ocean and Cryosphere in a Changing Climate (SROCC), if global temperatures are limited to well-below 2 degree Celsius in 2100, then the rate of SLR will still increase from around 4mm per year today to 4-9mm/year by 2100.



Climate Change Impacts

- **Biodiversity:** The rapid change of climate change is likely to exceed the ability of many species to migrate or adjust. Experts predict that one-fourth of Earth's species will be headed for extinction by 2050 if the warming trend continues at its current rate. Recently scientists discovered that the **Bramble Cay Melomys** – an Australian rat-like rodent – went extinct (it was last seen in 2007) due to rising seas inundating its tiny coral island. It's the first mammal confirmed to be pushed to extinction entirely due to climate change.
- **Economic Losses:** If no action is taken to curtail the global carbon emissions, **climate change could cost around 5 to 20 percent of the annual global gross domestic product**, in comparison, it would take 1 percent of GDP to lessen the most damaging effects of climate change.
 - A recent report of the World Bank found that climate change could effectively negate economic progress, pushing **45 million Indians into extreme poverty** over the next 15 years.
 - Climate change may significantly alter shoreline habitats and cost millions for the **relocation of ports and shore infrastructure**. The value of global assets exposed to sea level rise is projected to be between \$6-\$9 trillion or 12-20% of the global GDP.
 - Globally, more intense hurricanes and downpours could **cause billions of dollars in damage to property and infrastructure**.
 - High sea temperatures also threaten the **survival of coral reefs**, which generate an **estimated \$375 billion per year in goods and services**.
- **Population Displacement and Human Mobility:** According to **World Migration Report 2020** released by the UN, **Climate change displaced 2.7 million Indians** in 2018. Report also highlights that the **largest new internal displacements in Asia resulted from disasters**.
- **Human Health:** The World Health Organization (WHO) estimates that climate change may have caused more than 150,000 deaths in the year 2000 alone, with an increase in deaths likely in the future.
 - Warming of regions would allow disease-carrying insects, animals and microbes to survive in areas where they were once blocked by cold weather.
 - Studies indicate that climate change may seriously **compromise human health particularly among children and the elderly**. Higher temperatures, extreme weather events, and higher climate variability could **elevate risk of heat strokes, cardiovascular and neurological diseases, and stress-related disorders**.
 - Heat stress in urban areas is often compounded by the **heat island effect**. Warmer, higher moisture conditions, on average, are also **more favourable for the spread of vector-borne diseases** such as malaria and dengue fever.

- In addition, a decrease in the availability or affordability of food and potable water caused by climate change may lead to **reduced nutritional intake, particularly among economically weaker sections.**
- **Food Security**
 - Due to lack of irrigation, a large number of farmers are dependent on monsoon rainfall to practice agriculture (between **50 to 60 percent of Indian agriculture is rainfed**, without access to any form of irrigation).
 - Rising temperatures, heat extremes, floods, droughts and increasing year-to-year rainfall variability **can disrupt rainfed agricultural food production and adversely impact crop yield.**
 - ✓ For instance, as per the NITI Aayog document, of the total pulses, oilseeds and cotton produced in the country, **80% pulses, 73% oilseeds and 68% cotton come from rain-fed agriculture.**
 - Ocean warming has **reduced the abundance of some fish species** by killing parts of the coral reefs they depend on.
- **Water security**
 - The growing propensity for droughts and floods because of changing rainfall patterns would be **detrimental to surface and groundwater recharge**. Also, the rising sea level leads to **intrusion of saltwater in the coastal aquifers** contaminating the groundwater. E.g. in Gujarat, Tamil Nadu, and Lakshadweep etc.
 - Declining trend in snowfall and retreat of glaciers in HKH region may **impact the water supply in the major rivers and streams** including the Indus, Ganges, and Brahmaputra.
 - ✓ These rivers collectively provide about 50% of the country's total utilisable surface water resources.
- **Energy infrastructure and supply**
 - Rising temperatures are likely to **increase energy demand for space cooling**, which if met by thermal power would further add to the global warming by increasing GHG emissions.
 - In addition, thermal power plants require substantial amounts of water for cooling to generate electricity. A rise in water withdrawal by power plants would **directly compete with water withdrawal for agriculture and domestic consumption**, particularly in water stressed areas.
 - On the other hand, **power plants sited around the coast** that use sea water for cooling are **vulnerable to damage** from sea-level rise, cyclones, and storm surge.



Changes in Climate in the Indian Region

India is a vast country with many climate zones. The regional climate over the Indian subcontinent involves **complex interactions of the atmosphere–ocean– land–cryosphere system** on different space and time scales. In addition, **anthropogenic activities** have influenced the regional climate in recent decades.

In a **first ever attempt** to document and assess climate change in different parts of India, Ministry of Earth Sciences' (MoES) has come up with the report titled '**Assessment of Climate Change over the Indian Region**'. As per the report, following are the observed and projected changes in various climatic dimensions over the Indian region:

Temperature Rise	<ul style="list-style-type: none">India's average temperature has risen by around 0.7°C during 1901–2018By the end of the twenty-first century, relative to the recent past (1976–2005 average) it is projected<ul style="list-style-type: none">Average temperatures to rise by approximately 4.4°C.frequency of summer (April–June) heat waves over India is projected to be 3 to 4 times higher. Amplification of heat stress is expected across India, particularly over the Indo-Gangetic and Indus river basins.
Sea-level rise in the North Indian Ocean (NIO)	SST of the tropical Indian Ocean has risen by 1°C on average during 1951–2015, markedly higher than the global average SST warming of 0.7°C.
Change in Rainfall pattern	<ul style="list-style-type: none">Summer monsoon rainfall (June to September) over India which contribute to more than 75% of the annual rainfall has declined by 6% between 1951–2015 especially in the densely populated Indo-Gangetic plains and the Western Ghats.The frequency of localized heavy rain occurrences has significantly increased by 75% during 1950–2015.
Floods	Flooding events over India have also increased since 1950 , in part due to enhanced occurrence of localized, short-duration intense rainfall events.
Droughts	<ul style="list-style-type: none">The area affected by drought has increased by 1.3% per decade over the last 6–7 decades. Climate model projections indicate a high likelihood of increase in the frequency (>2 events per decade), intensity and area under drought conditions in India by the end of the twenty-first century.
Tropical Cyclonic Storms	<ul style="list-style-type: none">The intensity of tropical cyclones (TC) is closely linked to ocean SST and heat content.There has been a significant reduction in the annual frequency of tropical cyclones over the NIO basin since the middle of the twentieth century (1951–2018). In contrast, the frequency of very severe cyclonic storms (VSCSs) during the post-monsoon season has increased significantly (+1 event per decade) during the last two decades (2000–2018).Climate models project a rise in the intensity of tropical cyclones in the NIO basin during the twenty-first century.
Himalayan Cryosphere	<ul style="list-style-type: none">The Hindu Kush Himalayas (HKH) (largest area of permanent ice cover outside the North and South Poles, also known as the 'Third Pole') underwent rapid warming at a rate of about 0.2°C per decade during the last 6–7 decades. Higher elevations of the Tibetan Plateau (> 4 km) experienced even stronger warming in a phenomenon alluded to as Elevation Dependent Warming. With continued global warming, the temperature in the HKH is projected to rise by about 5.2°C during the twenty-first century.The HKH experienced a significant decline in snowfall and glacial area in the last 4–5 decades. With continuing warming, climate models project a continuing decline in snowfall over the HKH during the 21st century.The Kathmandu-based International Centre for Integrated Mountain Development's (ICIMOD) "Hindu Kush Himalaya Assessment" reveals that more than one-third of the glaciers in the region could retreat by 2100, even if the global temperature rise is capped at 1.5°C.

Agriculture and climate change

Agriculture and fisheries are highly dependent on the climate. India's agricultural sector faces a significant threat from climate change and directly impacts the daily lives of farmers in India. However, Agriculture sector also contributes up to 25% of the total anthropogenic emissions.

Impact of Climate change on Agriculture

- Decline in agricultural productivity**
 - Agricultural productivity is sensitive to two broad classes of climate-induced effects. The first one is its **direct effect** due to changes in temperature, precipitation and carbon dioxide concentrations; and the other is the **indirect effect**

- through changes in soil moisture and the distribution and frequency of infestation by pests and diseases.
- According to IPCC, Agricultural productivity in India was estimated to decrease by 2.5 to 10 % by 2020 to 5 to 30 % by 2050.
- Nutritional Security:** Rising levels of atmospheric carbon dioxide reduce the concentrations of protein and essential minerals in most plant species, including wheat, soybeans, and rice.
- Impact on Livestock** increasing their vulnerability to disease, reducing fertility, and declining milk production.
- Impacts on fisheries by** affecting the timing of reproduction and migration. Some marine disease outbreaks have also been linked with changing climate.
- On Economies of Agriculture:** According to Economic Survey of 2018, noted farmers' income losses from climate change would be between 15 % and 18 % on an average.
- Farmer Suicide:** A study conducted at the University of California – Berkeley estimated that climate change could have contributed the deaths of 59,300 farmers or farm workers over the last 30 years.

Measures for Reducing the Impact of Climate Change

- Adoption of Climate Smart Agriculture (CSA):** Food and Agricultural Organization of the United Nations (FAO), defines CSA as “agriculture that sustainably increases productivity, enhances resilience (adaptation), reduces/removes GHGs (mitigation) where possible, and enhances achievement of national food security and development goals”.
 - National Innovations on Climate Resilient Agriculture (NICRA)** is a network project of the Indian Council of Agricultural Research (ICAR) launched in 2011.

Adoption of techniques like permaculture & Zero Budget Natural Farming.

Resource conservation technologies like:

- crop establishment system (zero tillage, minimum tillage or reduced tillage etc.);
- water management (adoption of laser land leveller technique); and
- nutrient management (use of site-specific nutrient management, slow release fertilizers etc.)

Enriching soil organic matter: by applying Farm yard Manure, compost or by practising organic farming we can improve the soil organic matter which can help in improvement of soil health.

Establishing Agro-Ecological Zones and Farms, establishing weather-based insurance programs, and leveraging Internet and Communication Technologies (ICTs) to disseminate information to farmers will be helpful in identifying and scaling up sustainable agricultural practices in different agro-climatic zones, to address the food security and for tackling climate change.

Other steps like implementation of effective land use and management practices, such as the conservation reserve programme, forestry incentive programme, integrated nutrient management and conservation tillage, crop diversification help in increasing above ground carbon sequestration and mitigate climate change.

Environmental Migration

- Various studies have pointed out that disasters due to climate change have been displacing more people than conflicts. This phenomenon is being referred to as **Environmental Migration**.
- According to Global Report on Internal Displacement (GRID, 2019), in 2018, of the total **new 28 million internally displaced people** in 148 countries, **61% were due to disasters (such as floods, windstorms, earthquakes or droughts)** as compare to 39% due to conflict and violence.
- In **India**, climate change led to the displacement of 2.7 million Indians in 2019 (highest in the world).
- The United Nations High Commissioner for Refugees (**UNHCR**) predicts that in the next 50 years between **250 million and 1 billion** humans will leave their homes because of climate change.

How climate change affect the movement of people and their living conditions?

- Higher risk of humanitarian emergencies** due to greater frequency and intensity of weather-related natural disasters.
- Rising sea levels** may make coastal areas and low-lying islands uninhabitable.
- Competition over shrinking natural resources** may exacerbate tensions.
- Exacerbate pre-existing vulnerabilities:** When household income in rural areas decreases, livelihood stress linked to climate change could, in some places, result in lower levels of outmigration. As migration requires resources, those people wanting to move but could not due to lack of resources become **trapped populations**.

International Conventions on Environmental Migrants

- New York Declaration for Refugees and Migrants, UNHCR (2016):** It seeks to protect the human rights of all refugees and migrants, regardless of their status.
- The Global Compact on safe, orderly and regular migration,2018:** It is the first-ever UN global agreement on a common approach to international migration in all its dimensions. 'Climate refugees', migrants who move due to natural disasters and climate change, are now recognised under its Objective.
 - Recently, to advance its objectives **Global Refugee Forum (GRF)** was held in Geneva, Switzerland.

- **The Peninsula Principles on Climate Displacement Within States (2013):** The Principles provide a comprehensive normative framework, based on principles of international law, human rights obligations and good practice, within which the rights of climate displaced persons within States can be addressed.
- **Nansen Initiative Protection Agenda for Cross-Border Displaced Persons (2015):** It's a state-led consultative process to build consensus on a protection agenda addressing the needs of people displaced across borders in the context of disasters and the effects of climate change.
- **Platform on Disaster Displacement (2016):** It was launched to implement the recommendations of the **Nansen Initiative Protection Agenda**.
- **Climate Migrants and Refugees Project:** It aims to spread the word about this challenge, its potential impacts, and to seek out solutions and connections that will help the people most threatened by climate change live safe, dignified, and prosperous lives.

Way Forward

- **Climate migration discussions should not lose their focus on preventive measures:** The Paris Agreement offers anchorage for climate action that considers human mobility to avert, minimize and address displacement in the context of climate change.
- **Full use of all already existing bodies of laws and instruments** such as highlighted already in the 2011 International Dialogue on Migration and the recently adopted Global Compact for Safe, Orderly and Regular Migration.
- **Human rights-based approaches are key for addressing climate migration.**
- **Regular migration pathways** can provide relevant protection for climate migrants and facilitate migration strategies in response to environmental factors.

Key actions taken by India Towards Combating and Adapting to Climate Change

- **Plans and policies**
 - **National Action Plan on Climate Change (NAPCC)** identifies measures that simultaneously advance the country's development and climate change related objectives of adaptation and mitigation through focused National Missions. India has **decided to revise the NAPCC** in line with the NDCs under the Paris Agreement to make it more comprehensive in terms of priority areas.
 - **Climate Change Action Program (CCAP)** is a central sector scheme to build and support capacity at central and state levels, strengthening scientific and analytical capacity for climate change assessment, establishing appropriate institutional framework and implementing climate actions.
 - **National Electric Mobility Mission Plan (NEMMP) 2020** under which Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India (FAME India) scheme was formulated to promote manufacturing and sustainable growth of electric and hybrid vehicle technology.
 - **Adoption of the BS-VI norms** to reduce emissions from the vehicles based on diesel and petrol.
 - **Environmental Impact Assessment (EIA)** under the Environment Protection Act, 1986 enables integrating environmental concerns into developmental activities and encourages the adoption of mitigation strategies in the developmental plan.
 - **Energy Conservation Building Code** to promote low carbon growth by integrating the renewable energy sources in the design of the buildings and **achieve a 50 per cent reduction in energy use** by 2030.
 - Solar cities, Ultra mega solar parks, National Biofuel Policy, National Offshore Wind Energy Policy, Renewable Purchase Obligation etc **to promote renewable energy development** in the country.
 - **Other schemes** such as **Ujjwala, UJALA, AMRUT, Swachh Bharat Mission**, Green Rating for Integrated Habitat Assessment (GRIHA) etc.
- **Financial tools**
India has aligned the financial system with sustainability through following measures:
 - **National Adaptation Fund on Climate Change** that supports concrete adaptation activities for the States/UTs that are particularly vulnerable to climate change and are not covered under on-going schemes.

Eight National Missions under the NAPCC

- National Mission for Enhanced Energy Efficiency
- National Solar Mission
- National Water Mission
- National Mission for a Green India
- National Mission on Sustainable Habitat
- National Mission for Sustainable Agriculture
- National Mission for Sustaining the Himalayan Ecosystem
- National Mission on Strategic Knowledge for Climate Change

- **RBI had sensitized banks** to various international initiatives and was asked to keep abreast of the developments in the field of sustainability and dovetail/modify their lending strategies/plans in the light of such developments.
- **Green bonds** issued by financial, non-financial or public entities where the proceeds are used to finance 100% green projects and assets specifically linked to climate-change mitigation, adaptation and resilience. **India also has the second largest Emerging green bond market after China.**
- Other measures include **Polluter Pay Principle, Perform Achieve and Trade (PAT) scheme, Carbon tax, Energy Saving Certificates (ESCert).**
- **Satellite technology** to observe and tackle Climate Change includes HySIS Megha-Tropiques SARAL mission, Oceansat3-Argos mission etc.
- **At International stage**
 - **India's NDCs targets submitted under the Paris Climate agreement.** India's NDCs is threefold:
 - ✓ reducing the emission-intensity of its GDP by 33%–35% (vis-à-vis 2005) by 2030;
 - ✓ achieving 40% cumulative electric power installed capacity from non-fossil fuel resources by 2030;
 - ✓ creating **additional carbon sink** of 2.5–3 billion ton of CO₂ equivalent by 2030 through forest and tree cover.
 - Clean Development Mechanism (CDM) for achieving GHG emissions reduction under the Kyoto protocol.
 - **International Solar Alliances (ISA)** to provide a dedicated platform for cooperation among solar resource rich countries to harness their solar energy potential by collaborative efforts in the field of solar technologies.
 - **Coalition for Disaster Resilient Infrastructure (CDRI)** launched by India to promote the resilience of new and existing infrastructure systems to climate and disaster risks.
 - India joined the **International Platform on Sustainable Finance (IPSF)** that acknowledges the global nature of financial markets which has the potential to help finance the transition to a green, low carbon and climate resilient economy by linking financing needs to the global sources of funding.

Efforts at Individual and community level

Individual level – At an individual level, several actions could result in a substantial decrease in an individual's carbon footprint.

- **Eating a plant-based diet, avoiding air travel, living car free or using public transport, and having smaller families** can have a high impact on reduction in carbon footprint.
- Simple steps like replacing regular cars with **electric and hybrid models, recycling waste** and **upgrading light bulbs** can also have a moderate effect on reduction of one's carbon footprint.
- For example, **living car-free saves about 2.4 tonnes of CO₂ equivalent per year**, while **eating a plant-based diet saves 0.8 tonnes of CO₂ equivalent a year**.
- Efforts of remarkable individuals like **Jadav Payeng** (creating a 550 hectares forest on Majuli) & **Tulasi Gowda** (planted more than 1,00,000 trees in Karnataka) are worth emulating.

Community/ Regional Level

While several initiatives are being taken at the community level, some of the following case studies can be seen as examples to reinforce the power of community actions at the regional level.

- **Climate friendly construction techniques in Gorakhpur** which include bricks from local areas and use of indigenous knowledge has helped in reducing cost of building and carbon footprint.
- Village Edatheruvu in Palakkad, Kerala has devised a **unique citizen initiative** aimed at collection, segregation and **scientific disposal of the waste** from as many as 160 households. Started 5 years ago, the village has a waste collection center which works under the supervision of representatives of families in the village.
- **Swayam Shikshan Prayog**, an Indian NGO, trains rural women in entrepreneurship and builds their capacities for **marketing clean-energy projects in their communities**.
- In Senegal with financial aid from UNDP, communities of 203 villages are establishing about 26 **Community Natural Reserves (RNC)** to improve the living conditions of households, specifically women groups and enhance climate change resilience.

Challenges and Policy Options for India to Tackle Climate

If India is to successfully tackle climate change—both in terms of mitigation and adaptation—it will need to address several complex, intertwined challenges- local as well as global. Following challenges, in particular, loom large.

- **Managing the politics of global climate change policy**
 - This involves ensuring equity in climate actions based on Common but Differentiated Responsibility and Respective Capabilities (CBDR-RC). India is the world's fourth-largest emitter of GHGs, but in terms of cumulative emissions, it has imparted marginal harm. This principle is important for India to gain finances, technology, and knowledge from the developed world to enhance its capacity for the climate response.
- **Reforming Fragmented domestic climate policy:**
 - At present, India has not formulated any law for the purpose of giving effect to the goals of the Paris Agreement. NAPCC- the official recognition of India's climate change concerns is “too broad and lacks specificities”. Institutional, systemic and process barriers, including financial constraints, inter-ministerial coordination, lack of technical expertise and project clearance delays, deficiency of knowledge on climate change impacts stand as major challenges in the efficient implementation of the missions.
 - “Climate change” does not figure on either list under seventh schedule as a distinct head of legislative competence. However, Climate change, and more broadly, environmental concerns, can be traced to a number of areas of legislative competence, with no overall authority or clear responsibility being identified at either the central or the state level.
 - Budgetary allocation for the implementation of climate policy by the centre and states does not recognise relative vulnerability of certain states. Most states have also shown reluctance in adopting the Energy Conservation Building Code (ECBC) even after a decade of its release.

Thus, India's domestic climate policy urgently needs a coherent vision for tackling climate change that should be clearly reflected in the framing of legislation and policy documents addressing multiple sectors and aligned with multiple levels, and in the design of appropriate institutional frameworks to achieve climate policy objectives of mitigation and adaptation in a holistic and non-fragmented way.

- **Reducing India's coal dependency**
 - More than 2/3rd of India's GHG emissions come from energy production, which remains largely reliant on coal power plants. Government is trying to wean off coal by investing significantly in renewable energy, expanding capacity and incentivizing private sector investment. Yet, given coal's centrality to the country's power, it is being questioned how far it can be displaced, especially since integrating renewable energy into the grid can be costly.
- **Reforming climate-insensitive agriculture policy**
 - India's agricultural policies aggravate water shortages, encourage crop burning and do little for climate change mitigation. For instance, the minimum support price combined with helpful electricity and fertilizer subsidies, encourages farmers to grow water-intensive crops, such as paddy, even if their land is ill-suited to do so (for instance, Punjab). This is partly why, despite widespread water shortages, India is a net exporter of water due to the excess water used in agricultural exports.
 - Changing these policies may be politically delicate, but one potential solution put forth by several economists is cash transfers. Rationalization of food subsidy alongwith cash in hand, may make farmers more judicious in their use of inputs such as water and fertilizer.

Role of private sector in climate change efforts

- **Mobilize financial resources:** The private sector has a critical role in generating new finance to help fill the massive deficit in available funds for the same.
- **Leverage the efforts of governments:** Private entities dominate many investments that are critical to adaptation, such as the location and design of buildings, roads and other infrastructure investments, agricultural research (e.g., to develop more drought-resistant seeds); water management infrastructure and technologies.
- **Develop innovative climate services and adaptation technologies:** Private-sector corporations develop – and often dominate – the design and delivery of many adaptation services such as weather observation technology and early warning systems. This will enable lower cost and accelerate the replication of climate-resilient technologies.

Barriers to Increasing Private Sector Efforts in climate action

- Limited government incentives to attract private investment.

- **Limited or no access to information or tools** to assess risks and opportunities related to climate change and identify potential adaptation measures to be taken.
- Lack of availability of or access to advanced technologies and issues with IP rights and technology transfer.
- **Lack of demand in the market** due to low awareness leads to high cost of production of innovative climate resilient products and technologies.

Enablers for the private sector to invest in climate actions

- **Reforming the regulatory framework**
- **Raising awareness**
- **Build the capacity** by providing them with decision support tools to help them.
- **Build a shared vision between the public and private sector**

Steps taken to promote private participation in climate change

- **UNFCCC's Adaptation Private Sector Initiative (PSI)**
- **Green Climate Fund's Private Sector Facility.**
- In India:
 - **The India Climate Collaborative (ICC)** (formed by over ten of the country's foremost philanthropies)
 - **Inclusion of Renewable energy sector in the PSL norms**
 - Policies related to implementation of the **coal cess**, market mechanisms including perform achieve and trade (**PAT**), renewable energy certificates (**REC**) and a regulatory regime of renewable purchase obligation (**RPO**) have arguably led to an indirect carbon pricing by private sector.
 - **The National Solar Mission (NSM)** aims to achieve grid parity for solar electricity through research & development, domestic production, large scale deployment, and long term and predictable policy that encourages private sector participation in the solar business.

Best practices

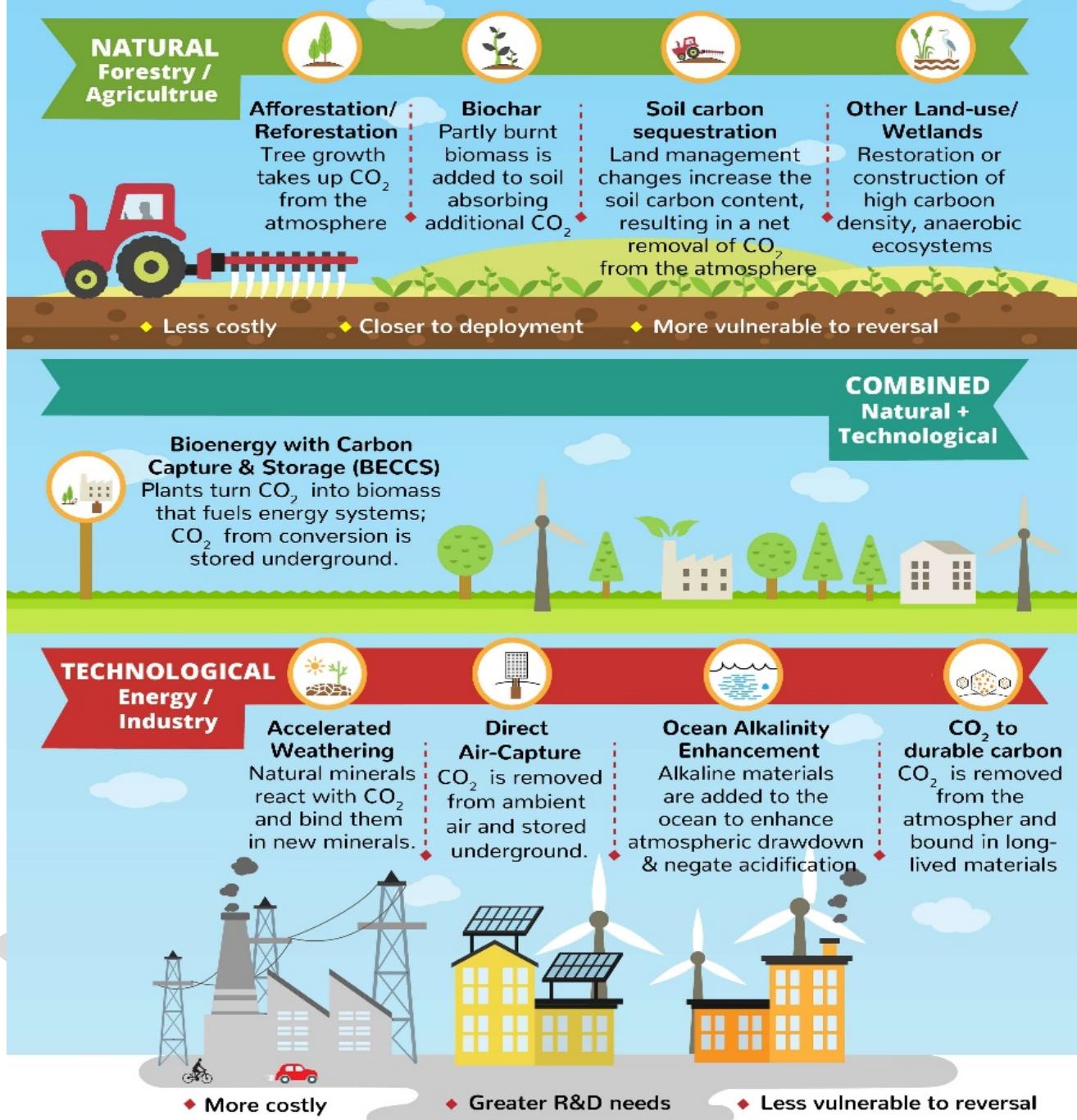
- **Internal Carbon Pricing:** Companies like Mahindra & Mahindra, Infosys Limited have implemented internal carbon pricing (ICP) in some form or the other. For instance, Mahindra & Mahindra has adopted an ICP of \$10 per tonne of carbon emitted.
- **The International Union of Railways (UIC)** has undertaken an extensive feasibility study analyzing the impacts of climate change on rail transportation infrastructure and taking stock of ongoing and planned work on climate change adaptation in European, Canadian, Australian and Indian railway companies.

Role of Technology in combating Climate Change

Negative emission technologies remove carbon dioxide from the atmosphere as an additional way to mitigate climate change, over and above conventional abatement strategies.

Cost-effective measures in six sectors viz. agriculture, forestry, buildings, energy, industry, and transport, could reduce emissions by up to 36 GtCO₂e a year by 2030,

MAJOR STRATEGIES FOR NEGATIVE EMISSION TECHNOLOGIES



Physical potential and technical feasibility of the technological intervention must be understood properly along with their environmental and political consequences. It must be an integrated research effort that considers the physical, ecological, technical, social, and ethical issues related to Geoengineering.

Case Studies on How Technology can solve Climate Change related Issues

- Shell has demonstrated that even people playing on a football field can be the source of power generation, developing a technology that transforms footsteps into energy in a Brazilian favela.
- The greenhouse gas emissions of buildings are also significant. We need lighting, power, heating and cooling whether at home or in the office, at school or in a hospital. The combined emissions from these sources contribute almost 20% of global emissions. **Green Building Technology:** It refers to both a structure and the application of processes that are environmentally responsible and resource-efficient throughout a building's life-cycle: from planning to design, construction, operation, maintenance, renovation, and demolition.

- **Biological or chemical feed supplements** that inhibit methane production, or even new low-emission livestock breeds, are some potential examples of reducing GHG emissions in Agriculture.
- Transport represents 23% of global energy-related CO₂ emissions. Some scientists have discovered **new materials offering an alternative to battery power** and proven to be between 1,000-10,000 times more powerful than the existing battery alternative. The new technology is believed to have the **potential for electric cars to travel to similar distances as petrol cars** without the need to stop for lengthy recharging.
- About a quarter of all global emissions come from feeding the world's 7 billion people, and part of that comes from the consumption of meat. One of the alternatives is to **start producing lab-grown meat**, and to produce meat substitutes that look, taste and feel like the real thing. The company **Beyond Meat**, already supported by Bill Gates, has created the world's first meat burger that is entirely plant based. It's made mostly from vegetable protein found in peas.
- Farmers in Kenya can now take better care of their crops through an early warning system that alerts communities of potential floods or other risks, thanks to **UNEP's Climwarn project**.
- **Sidewalk Labs** is harnessing digital technologies to solve today's pressing urban problems. One of their current projects involves looking at **how traffic flows through a city and how hotspots of congestion might be solved**. This could dramatically reduce air pollution in our cities.

Effects of COVID-19 on Climate Change efforts

COVID-19 may result in an approximately **five to eight percent reduction in average global emissions** for the year, and while this is a small amount in the context of the whole system, it offers a rare opportunity to see how Earth responds to cuts on carbon emissions.

COVID-19 is also resulting in **changes in individual behaviour and social attitudes**, and in **responses by governments** that will have impacts on the environment and on our ability to combat climate change. Many of these will make matters worse, while others could make them better. Some of the adverse impacts of COVID-19 are listed below.

- **International negotiations delayed:** 2020 was supposed to be a “a pivotal year” for efforts to address climate change. COP26 of UNFCCC, World Conservation Congress, Convention on Biological Diversity and 2020 UN Ocean Conference etc. all are postponed.
- **Weakening of climate policies:** For instance, European Union has come under pressure to shelve crucial climate initiatives, with Poland calling for a carbon trading program to be put on hold and the Czech Republic urging that the EU’s landmark climate bill be abandoned. Airline companies have pressed regulators to delay emissions-cutting policies.
- **Less money for climate resilience and renewable energy:** The need for **more emergency services** coupled with a **reduction in tax revenue** has taken an economic toll on governments’ efforts. As a result, some have had to delay and divert funding away from climate resilience projects and renewable energy.
- **Scientific research disrupted:** Due to lockdowns and travel bans, scientists have been unable to travel to do their fieldwork, and there’s a limit to how much some can accomplish with data and computers alone.
- **Increased waste and More plastic:** COVID-19 has vastly increased our use of plastic: gloves and masks and PPE kits, and disposable shopping bags etc. Ordering all sorts of items online has also resulted in more packaging materials, increasing the carbon footprint of e-commerce.
- **Deforestation in the Amazon:** As Brazil, hard hit by COVID-19, is focused on controlling the virus, **illegal loggers and miners** are taking advantage of the situation to cut down large swaths of the Amazon. Between January and April, 464 square miles of the rainforest were razed, **55% more area than was destroyed** in the same period in 2019.

However, efforts to combat COVID-19 pandemic also offer valuable lessons for combating climate change.

- **Put science and scientists first:** The collaborative networks of scientists beyond political lines and national borders in finding a cure to COVID-19, offers a lesson for global response to climate emergency, where there is a need to keep science at the forefront of climate negotiations with unimpeded transparency and scientific cooperation.
- **Adopt a “whatever money it takes” approach:** Governments have quickly mobilized financial support to back businesses and expand welfare benefits in response to the COVID-19 pandemic; and this is the right thing to be done. An urgent fund mobilization is needed to avoid a climate catastrophe.

- **Protect and improve common goods:** Over-exploitation of common goods, without consideration for the long-term needs of our next generations, has resulted in the “**tragedy of the commons**”, with big environmental impacts, including the zoonotic origins of the COVID-19 pandemic.
- **Focus on those already left behind:** The COVID-19 pandemic struck fast and affected those most vulnerable, those who had little means and access to health-care services, and those in nursing homes and homes for persons with disabilities. Climate mitigation and adaptation activities should put these and other vulnerable groups at the center of attention and response.
- **Make the global value chains climate resilient:** The COVID-19 driven disruption in sectors like transport, medicine and tourism was immediate and hard. The **climate crisis with its low on-set characteristics** will drive at least similar if not larger implications in the value chains of main sectors. There is an opportunity to develop systems able to increase the resilience of value chains in climate sensitive sectors.
- **Fix and make sustainable the food systems:** The FAO has started documenting the negative impacts of COVID-19 on food security. The impacts of climate change on agriculture have also been extensively documented by the IPCC and **food supply chain** has emerged as the **most crucial global value chain** to be secured against the climate emergency.
- **Ensure credible information and not fake news leads the public discussion:** Since the causes and risks of climate change are already well examined, documented and vetted, scientific facts and solutions need to be brought widely to the attention of the public to avoid speculations and misconstrued theories, which only cause anxiety and panic, as is happening around this novel disease.
- **Institutionalise behaviour change:** The lockdown has enabled new behaviours and habits, especially among the corporate workforce, with remote work becoming normalised. Institutionalising these changes after the lockdown is eased or lifted can go a long way in lowering vehicular emissions, reducing air travel, and reducing the carbon footprints of people and products.

Conclusion

Tackling climate change is a balancing act between the present and the future. One way to do this would be to frame more holistic goalposts. Current policies seek to maximize GDP, which does not capture the potential for future prosperity entirely. An alternative could be something like the UN's Inclusive Wealth Index, which measures three different types of capital: Produced (infrastructure, etc.), human (education, etc.) and natural (land, forests, etc.), all of which are important for prosperity to sustain. The UN measure is not perfect but is useful to track multiple indicators that feed into a society's progress.

- Gandhiji had said, "**The Earth has enough for everyone's needs, but not everyone's greed.**" With the entire world coming together to secure the future and pass on the legacy of the earth to our forthcoming generations we can hope to create resources to satisfy everyone's needs.
- Integrated look at **industrial growth, good agriculture management** and **agro-forestry practices** are the need of the hour.
- As India gears to achieve a global presence in energy industry, through such initiatives, investment in R&D would increase and knowledge sharing among the various stakeholders can be organized on the national scene.
- The use of plastic bags must be substituted with eco-friendly plastics. In areas of water scarcity, drought-proofing measures through water storage and rainwater harvesting can be applied. Unless we develop indigenous green technology, we cannot attain a sustainable development.
- Finally, it needs to be reiterated that at this juncture a civilization that is ecologically balanced has to be the strategy of all countries, including India.
- **Humans have to learn to care about what happens to other species and ecosystems** that are; to treat nature as if it mattered. What is more important at this juncture is that humans can no longer treat the Environment and other species as mere objects but take care of them for their own well-being.

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ESSAY TOPIC: IS THE WORLD WITNESSING REVERSE GLOBALIZATION

Globalization of the World

Globalization refers to the movements and exchanges of goods, services, capital and human beings across national borders. This economic process is often accompanied with cultural intermingling as well.

From **1860-1914** Europe and North America were strongly affected by internationalization. The flow of goods accelerated. Capital moved relatively freely between countries. In some respects, financial integration was more pronounced than it is today. Even international migration was greater than it is today. Roughly 60 million people left Europe to seek their fortunes in the New World. This marked the first **wave of globalization**.

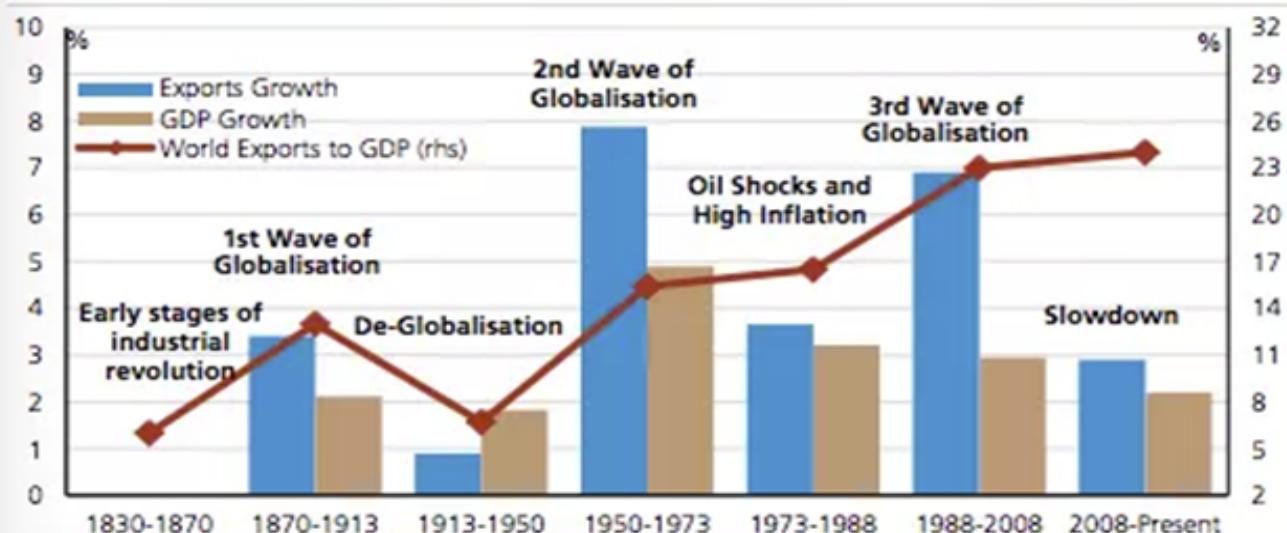
During the 19th century as whole, **trade in Europe increased by 40 percent**. Important drivers behind this wave of globalization were both the new technology of the era that could bridge long geographical distances and the fact that many countries began to embrace liberal trade policy after years of isolation.

The world economy has become much more integrated since the Second World War, **during the second wave of globalization**. This process has profoundly affected people's lives, in that globalization is widely considered to have supported the strong income growth and significant poverty reduction of recent decades, especially in emerging market economies (EMEs) like India.

Globalization, in particular tighter trade linkages, has also helped improve social conditions more broadly, such as by narrowing gender wage gaps, and it may have contributed to a reduction in inter-state wars.

The fall of the Berlin Wall in 1989 can be seen as a suitable starting point then for the **third wave of globalization**.

Figure 1: Global trade volumes and real GDP growth: The very long term view²



Source: Maddison, IMF, WTO, World Bank, Haver, UBS estimates

India's Growth in Comparison to China Since LPG Reforms

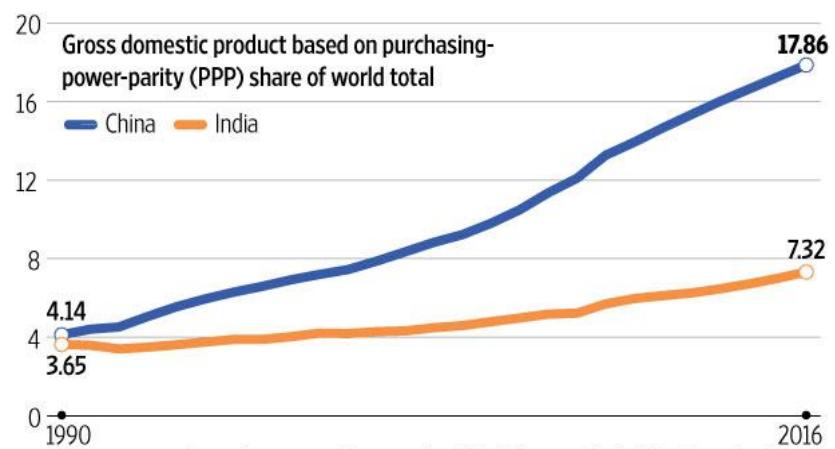
Since the economic reforms of the 1991, after a deep financial crisis, India has benefited with its slice of global GDP moving up from 3.6% in 1990 to an estimated 7.3% by 2016. As compared to India, China got an early start by gradually opening its economy to the world, which began in the 1970s. Similarly, other economies like Indonesia, Mexico, Argentina, Malaysia, Mexico undertook reforms involving investment liberalization, stabilization, and property rights and became the globalizers of 1980s and -90s.

While the share of emerging markets has increased between 1990 and 2016, the share of advanced economies (developed countries) has come down. Taken together, the emerging economies now account for 58% of the world economy, compared to 36% in 1990.

At the same time, the collective share of the major advanced economies of the G7 group—Canada, France, Germany, Italy, Japan, the UK and US—fell from more than half the world's GDP in 1990 to 30.9% in 2016. Over the same period, the share of the 28 countries that comprise the European Union was whittled down from 27.6% to 16.8%.

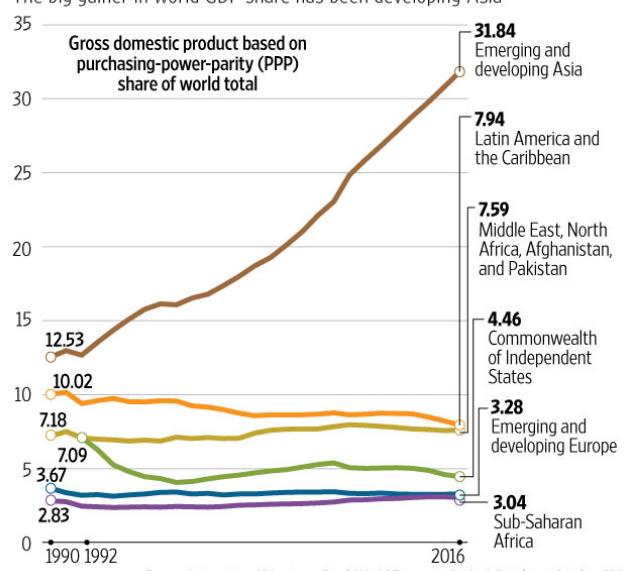
Disproportionate Benefits of Globalisation

- The lowering share of major advanced economies, however, has not directly translated into benefits for all emerging markets. The share of 'Emerging and developing Asia', which includes the heavyweights China and India and the **South-East Asian tiger economies**, saw their share going up from 12.5% to 31.8%.
- But **sub-Saharan Africa**'s improvement in share of GDP between 1990 and 2016 was minuscule—from 2.8% to 3%. The increase in share of the '**Middle East, North Africa, Afghanistan and Pakistan**' region too was marginal. The share of **Latin America and the Caribbean** region fell, from 10% to 7.9%.
- Statistically, globalization has lifted all boats. Absolute levels of poverty, in aggregate terms, are in decline everywhere. Globalization has also created winners and losers. Some people have become very wealthy. The top 1% have accumulated large portions of their countries' economic wealth, and they are also avoiding paying taxes, while incomes at the median have stagnated and unemployment of youth is increasing.

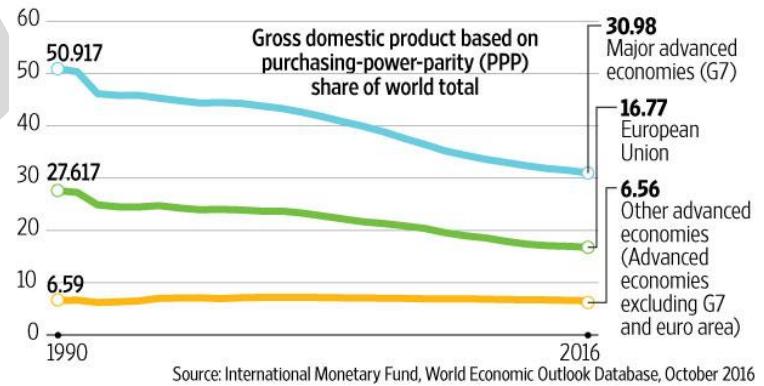


MIXED PICTURE

The big gainer in world GDP share has been developing Asia



The major advanced economies and the European Union have seen their share of world GDP shrink



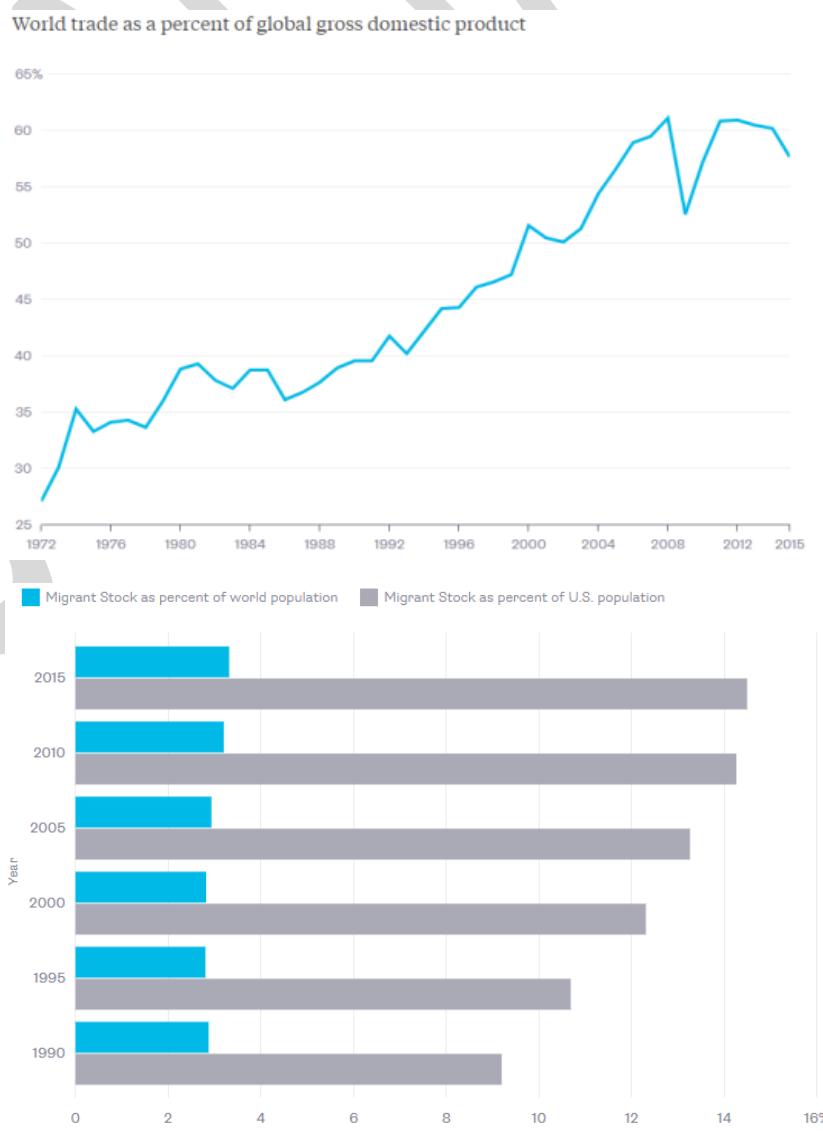
- They also recent loss of domestic jobs to foreign countries. In addition, populist movements on the right are also demanding tougher action against terror and violence. Thus, inequality and insecurity have created conditions for populist and authoritarian governments.
- In these circumstances, the rising calls for protectionism in various parts of the developed world, including the US, which can threaten global trade and growth, should not come to us as a big surprise.

Reverse Globalization and Rising Protectionism

- Although the COVID-19 pandemic has brought disruption to the globalized and inter-connected world, the process of globalization was already in retreat before that. The slowing of globalization or SLOWBALIZATION had already started in 2008 (which was initially thought to be just a banking crisis).
- The second major assault on globalization came in the shape of striking protectionism initiated by the US, after the coming of President Donald Trump in power. He had long accused China of unfair trading practices and intellectual property theft.
- Protectionism refers to the principle and practice of protecting one's domestic economy from foreign players. In the recent instance of protectionism was the world's two biggest economies the US and China locked themselves in a bitter trade battle by imposed tariffs on hundreds of billions of dollar-worth of one another's goods. That happened in 2018.
- Before the worldwide lockdown, there had been an increasing backlash against globalization and its ill effects. To protect national industries and to prop up employment and incomes, countries are increasingly rolling back globalization since the global financial crisis.
- Governments have grown frustrated with the way globalization undercuts the effectiveness of national policies. For instance, fiscal expansion to support domestic demand, may be dissipated through financial leakage, boosting imports rather than promoting domestic activity.
- Many companies enjoyed strong profit margins by outsourcing low-end jobs. As borders close, the clout of multinationals goes down, the bargaining power of local workers goes up. Since 2012, the corporate share of U.S. national income has started to decline, and the worker's share has been moving higher. The rise of leaders like Trump, whose policies are designed to bring companies and jobs back to America, will accelerate this trend.

By many measures as already mentioned, globalization has been in full retreat since the crisis of 2008.

1. **Trade:** For many decades up until 2008, global trade volumes had been increasing at a healthy clip. But the crisis and recession stopped trade growth in its tracks, and it hasn't recovered; 2008 was the all-time peak of world trade as a percent of total output. As per, IMF World Economic Outlook report, reduction of pace of trade liberalization and rising protectionism has emerged as a major cause reduction in world trade.



2. Immigration Boom has fizzled: Globally, the number of migrants living in other countries has continued to increase, however, very slowly. Anti-immigrant Fences are being constructed in countries like Greece, Macedonia, Hungary and Romania. In addition, they are being planned in countries like Guatemala, Argentina, Estonia, Norway. Another case in this point includes the travel ban by US for people from Iran, Libya, North Korea etc. and recent tightening of Visa regimes and work permits by countries like Australia, Britain and US.

In the U.S., the big immigration boom is over. From 2008 through 2014, the population of Mexicans living in the U.S. declined by more than 1 million as undocumented immigrants have been going back to Mexico in large numbers.

3. Finance: The **regulatory curtailing of the financial industry** is another factor. The big global banks, mostly based in the U.S. and Europe, suffered huge losses in the crisis, but that was only the beginning. Since then, **higher capital requirements, tighter regulatory oversight, and new rules like the U.S.'s Dodd-Frank Act** have weakened banks' business models and reduced their profitability leading to less cross-border financing.

4. Increasing Discriminatory Trade Measures: Between 2009 and 2015, three times as many discriminatory trade measures have been introduced as liberalizing ones. In 2015 alone, the latest Global Trade Alert database recorded 539 such initiatives adopted by governments worldwide that harmed foreign traders, investors, workers or owners of intellectual property.

Governments no longer impose tariffs or other crude roadblocks that would violate World Trade Organization rules. Efforts to control trade flows have grown increasingly sophisticated:

- **Channeling funds to domestic industries:** Countries ranging from the US—with the auto bailouts—to the UK, China, Brazil, Canada and several European Union members have funneled aid to domestic industries.
- To end free movement and thus put the Britons in a favorable position, **BREXIT was planned**, which came into force earlier in 2020, marking Britain's exit from the European Union. Working-class people who saw immigration as a threat to their jobs viewed that as a triumph.
- **State procurement rules**—such as in China, forbid the purchase of strategic and defense technology from abroad—favor domestic suppliers.
- **"Buy local" campaigns** like the ones launched since 2009 in the US, UK and Australia.
- **Re-shoring, or going "local-to-local"** is now becoming common in sector like computers and electronics, appliances and electrical equipment, primary metals, machinery, furniture, plastics and rubber, paper, and fabricated metals. For example, General Electric (GE) is manufacturing high efficiency light bulbs in its plants in Ohio and Illinois as a part of Made in USA initiative.
- **New safety and environmental standards** have served as well to block foreign products.
- The **restrictions** many countries place **on various food imports** are another.
- Financial policy as a trade weapon: In the US, Europe, the UK and Japan, a combination of **artificially low interest rates, quantitative easing and direct intervention in money and foreign-exchange markets** has implicitly targeted currency levels to gain a competitive advantage. **Devaluation** has reduced the purchasing power of foreign investors holding the devaluing nation's debt.
- **Special Taxes:** Several places, including Canada, Hong Kong, Singapore and Australia, have introduced special taxes or other restrictions on overseas property buyers.
- **Volatile and potentially destabilizing inflows** have prompted countries as varied as Switzerland, China, Brazil, South Korea and India to **restrict capital** in one form or another.
- Nations such as Spain and Portugal, with high levels of debt, have sought to **channel funds domestically** to support financial institutions and economic activity.
- The US, UK, the Eurozone countries and others have used **regulations and political pressure to encourage banks and investors to adopt "patriotic" balance sheets, purchasing national government bonds or prioritizing lending to domestic borrowers**. According to global rating agency Standard and Poor's, **banks have doubled their holdings of their own states' debt since 2008**.
- Nations, including the US, are pursuing **narrower bilateral and regional deals** where they don't have to satisfy so many different negotiating partners and can continue to protect key sectors. Trade deals like the **Trans-Pacific Partnership** are suddenly in danger.

- The recently launched **Atmanirbhar Bharat Abhiyan** which aims at making India self-reliant does not outrightly support de-globalization, but it certainly aspires to make India less dependent on imports and foreign players.
 - India's retaliatory measures post confrontation with China during the lockdown in the shape of banning Chinese apps, even if an economically-less-severe, was a strong gesture to counter China's growing political prowess born of its dominance in global economy.
- 5. Population decline:** Low fertility throughout most of the world is undoubtedly a drag on growth. China's working-age population is now falling by millions every year, and the rate is only set to accelerate. Europe and East Asia are graying rapidly, and fertility has fallen to replacement levels throughout much of the world. Only sub-Saharan Africa, the world's poorest region, continues to see high fertility.
- 6. Wages:** Wages have begun to equalize around the world, with an especially steep rise in China. Some estimates even suggest that making things in China is no longer significantly cheaper than making them in the U.S. Considering quality, intellectual property theft and the sheer hassle of managing supply chains across borders, the case for offshoring looks weaker than it has in decades.
- 7. Politics:** An increase in protectionism after the Great Recession has been observed. China, may now be trying to reduce its economy's dependence on overseas companies. Authoritarianism, with popular support, rose on many continents. Nor is the West being threatened only from outside, with China (and Vladimir Putin too) flexing muscles against Western hegemony. Within the West itself, various anti-establishment, populist movements from both the left and the right are shaking the system: the victory of Donald Trump's (and Bernie Sanders') anti-establishment politics in the US, and a rising tide of nativist, authoritarian, political leaders in Europe.
- 8. Global Slowdown:** Slower growth, especially in developed economies, means less trade, which leads to less international finance. It also reduces the incentive for immigrants to move for economic reasons. China, the big engine of global growth and international investment, has also slowed down.
- 9. Decline of global institutions:** There has been an increasing contempt for global institutions and international agreements. The recent withdrawal of US from Paris Climate Agreement on climate change is a case in point. Even the United Nations has come under severe criticism for its failure to resolve the West Asian crisis especially in Syria. Other instances echoing the decline of global institutions include quitting of US from UNESCO, China's refusal to implement ruling of UNCLOS on China and opening of US embassy in Jerusalem despite overwhelming opposition to it.
- 10. Weakening of regional associations:** Regional associations which have been the hallmark of globalization, have come under threat in the era of reverse globalization. Britain's divorce from the European Union is commonly interpreted as a rejection of globalization. In addition, recently G7 failed to release a communique owing to disagreements between US and other countries.
- 11. Call for Boycott of foreign goods:** Another manifestation of reverse globalization has been the growing calls for boycott of foreign goods. Two examples which standout in this case are of Turkey (where Turkish President has called for a boycott of US electronics) and Ghana (where there has been a demand for boycott Foreign goods in order to grow Ghana's Economy).
- 12. Assertion of local culture <Food for thought!>**
- 13. Global movements:** Today, demand for reverse globalization has manifested itself in the form of a social movement with formal structure and leadership. It was the "Battle of Seattle" in 1999 which marked the unofficial start of the anti-globalization movement. Organizing under the radar, this new protest movement burst onto the scene with tens of thousands taking to the streets. Today, anti-globalization movement has gained serious credence among people. They have been severely critical of neo-liberal policies and its impact on ecology, labor and least developed countries. A number of protests have been held by anti-globalization movement during meetings of WTO, G20, WEF etc. Some of these movements include Occupy Wall Street movement in USA, Homeless Workers' Movement in Brazil, The Landless Peoples Movement in South Africa etc.

Policies such as negative interest rates will require progressively tighter controls to prevent capital flight.

Way Forward

- The great globalization boom that marked the end of the 20th century and the beginning of the 21st is over. The advent of the paralyzing pandemic, COVID-19, this year was the single biggest disruption to globalization. It further sped up SLOWBALISATION. The IMF (International Monetary Fund) had made a forecast that global GDP could fall by 4.9% that is 50 times more than in 2009.

- The post-COVID world is likely to be fractious and regionalized. The sudden disappearance of sanitizers and toilet rolls in the supermarkets must have been a wake-up call for most of the nations. Many must have realized the price of dependence on imports for fulfilling their own needs.
- The trend of de-globalization also manifested in the distancing of the United States from global issues, like pulling out of the Paris Climate Agreement.
- The depth and scope of **tomorrow's globalization dynamics** will be determined entirely by the power imbalances which emerge between those industrial economies which still need access to cheap labor or commodities, and those states which have the resources but not necessarily the industrial capacity or the will to create the industrial capacity they need. It may lead to a sharp division, creating two worlds, one China-dominated and the other US-dominated.
- Before the pandemic began, the global discourse on de-globalization was on a slightly different track. The need to have a de-globalized world was due to the disproportionate economic benefits and unjust concentration of wealth that the globalization had led to. The pandemic has shifted the discourse to a new level altogether.
- This trend of de-globalization may accelerate on a number of fronts irrespective of when COVID-19 is brought under control and this could be bad news for a country like India.
- It will be worth looking at how a country like Singapore, with no natural resources and no natural economic hinterland responds to the long-term impacts of de-globalization. It will be equally interesting to see how the reverse globalization affects global value chains. It is not just going to be a competition between economies, but also between sectors and industries within the economies. Although big players like Google and Amazon seem well-equipped to counter the effects of de-globalization, it would be interesting to see how other Multi-national Companies improvise their business models to survive this reversing trend.
- As the famous late Kofi Annan had said, **arguing against globalization is like arguing against the laws of gravity. It is of no surprise that even the anti-globalization movement is the most globalized movement.**

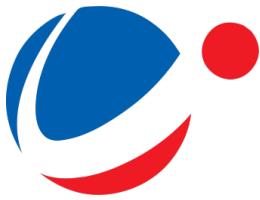
India's Stance

Despite much skepticism, it is believed that globalization is here to stay and India must not lose the competitive advantage it holds in a good demographic dividend. Despite the resurgence in protectionism in global trade, Indian industry also needs to become far more competitive to ensure our exports increase in the foreign markets.

Although the NITI Aayog had favored India's aggressive pursuing of globalization and doing away with all the remaining approval requirements for foreign direct investment and carrying forward job creation efforts in labor-intensive sectors, the balance seems to be tilted under the changed circumstances and the launch of the ambitious scheme of Atmanirbhar Bharat Abhiyan. India's self-reliance may encourage her to reconsider its stance towards globalization.

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ESSAY TOPIC: ARTIFICIAL INTELLIGENCE

Quotations

- “AI is likely to be either the best or worst thing to happen to humanity.” - Stephen Hawking
- “The development of full artificial intelligence could spell the end of the human race.” - Stephen Hawking.
- “Humans should be worried about the threat posed by artificial intelligence.” - Bill Gates
- “A computer would deserve to be called intelligent if it could deceive a human into believing that it was human.” - Alan Turing
- “Artificial Intelligence is probably the most important thing humanity has ever worked on.” - Sundar Pichai
- “With Artificial Intelligence, we are summoning the demon.” - Elon Musk

Data

- The demand for artificial intelligence and big data analytics roles will touch 5.11 lakh by the end of 2018, while people with the skills will number only 3.7 lakh, according to the NASSCOM report.
- India has been ranked on the third spot after the USA and China in terms of artificial intelligence (AI) implementation, according to BCG study.
- By 2022, around 46% of the workforce will be engaged in entirely new jobs that don't exist today, or will be radically deployed in jobs that have radically changed skillsets - Study by NASSCOM and EY.
- In a recent research done by Accenture, for evaluating the economic impact of AI for select G20 countries, and estimates AI to boost India's annual growth rate by 1.3 percentage points by 2035.

Anecdotes/Stories/Buzzwords

- During 1999, a Hollywood movie named ‘Matrix’ gave a sneak peak to a world where the machines were even more powerful than humans.
- It was the final of Champions trophy and our last hope was Dhoni. During an important phase, Dhoni was given out by on-field Umpire. However, the Decision Review System (DRS) overturned the on-field Umpire’s decision and Dhoni went on to win the match for India. Guess what was behind DRS - AI!
- The single “Not Easy” by Ambassadors, Elle King, and Wiz Khalifa reached number 4 on iTunes’ Hot Tracks list. It was created using machine learning algorithms programmed to create music found different musical elements.
- “Chef Watson’s” artificial intelligence is a programme to help you create a recipe based on the ingredients you already have or on something you’re craving.

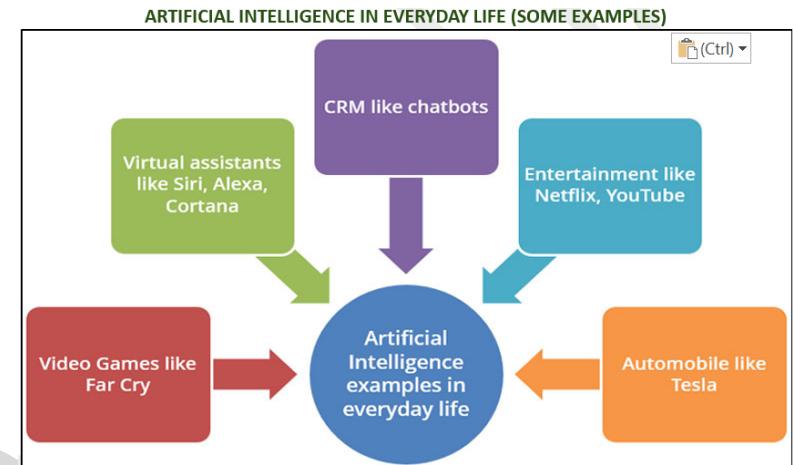
Introduction

- René Descartes said ‘I think, therefore I am’, highlighting the very essence of human beings - Capacity to think, to innovate - Intelligence.
- Conventionally, intelligence has been the privilege of humans. They have been endowed with the unique capacity to think, analyse, manipulate and innovate.
- This wisdom holds no more water in modern world. Today, intelligence no more remains the fiefdom of humans, but is now being increasingly associated even with machines.
- Artificial Intelligence has emerged as the greatest disruptive force in modern society. It is finding application in almost every aspect of human life right from health and education to finance, governance, transportation etc.

- However, Artificial intelligence has also thrown up series of challenges regarding data collection, privacy, balance between human and artificial intelligence, ethical dilemmas etc. Some of these challenges are new and unexplored!

Definition

- The term Artificial Intelligence was coined by John McCarthy, an American computer scientist, in 1956 at The Dartmouth Conference.
- Artificial Intelligence is the simulation of human intelligence processes by machines, especially computer systems. These processes include
 - Learning (the acquisition of information and rules for using the information),
 - Reasoning (using the rules to reach approximate or definite conclusions) and
 - Self-correction.
- Hence, it refers to the ability of machines to perform cognitive tasks like thinking, perceiving, learning, problem solving and decision making.
- A very common and prominent examples on Artificial Intelligence is of Carpooling services like Uber and Ola which allot Cabs, suggests routes, charges customers etc. without any human intervention; Another common examples includes Spell Check or Sentence completion which have become an indispensable part of our messaging.



Components of Artificial Intelligence

- Artificial Intelligence is an umbrella term and encompassing everything from robotic process automation to actual robotics.
- It lies at the cross-roads of a number of disciplines namely :-
 - Computer Science
 - Biology
 - Psychology
 - Linguistics
 - Mathematics and
 - Engineering
- Over series of years Artificial Intelligence has diversified into variety of sub-fields which include **Computer vision**, **Speech recognition**, **Natural Language processing**, **computational logic**, **neural networks**, **machine learning**, **Artificial Intelligence planning** and **robotics**.

Types of Artificial Intelligence

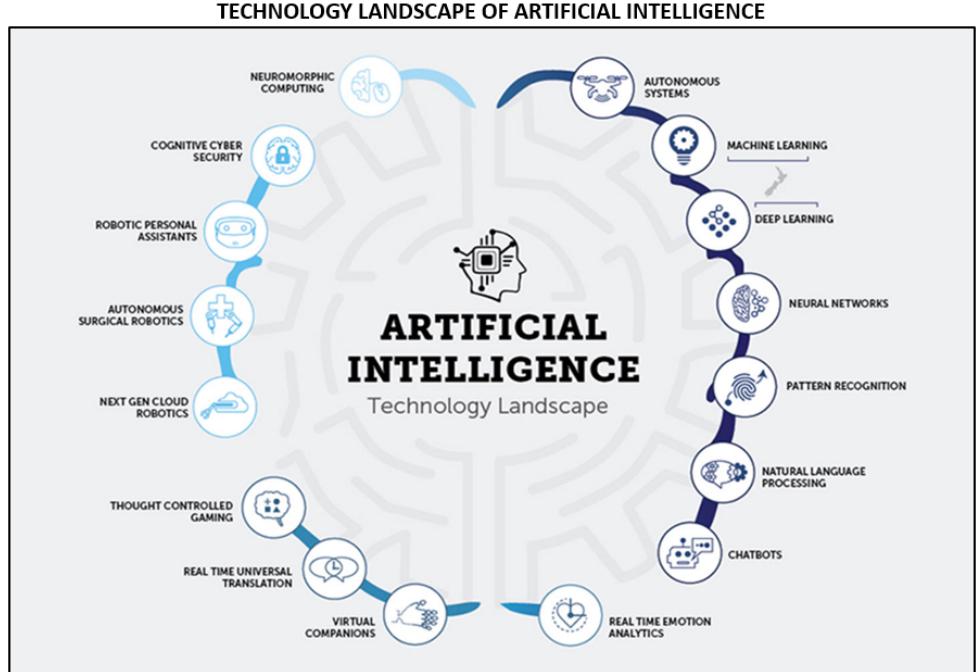
AI gets categorised in different ways:

- **Weak Vs. Strong Artificial Intelligence**
 - Weak AI describes "simulated" thinking i.e. system which appears to behave intelligently without having any consciousness about what it's doing. For example, a Chatbot.
 - Strong AI describes "actual" thinking i.e. behaving intelligently, thinking as human does, with a conscious, subjective mind.
- **Narrow AI Vs. General Artificial Intelligence**
 - Narrow AI describes an AI that is limited to a single task or a set number of tasks. For example, the capabilities of IBM's Deep Blue which beat the World champion Gary Kasparov in 1997
 - General AI describes an AI which can be used to complete a wide range of tasks in a wide range of environments. As such, it's much closer to human intelligence.

- **Superintelligence**
 - Used to refer to general and strong AI at the point at which it surpasses human intelligence, if it ever does.
- Even though big strides have been made in Artificial Narrow Intelligence (Algorithms that can process documents, drive vehicles or beat champion chess players), no one has yet claimed the first production or development of General Artificial Intelligence.

Benefits of Artificial Intelligence

- **New avenue for Job creation**
 - Artificial intelligence is creating new stream of jobs such as Man-Machine Teaming Manager, AI Business Development Manager, Data Detectives etc.
 - It has also emerged as one of the major potential streams for the startup sector in India and around the world. Some of the recent startups include - MaraxAI, Artivatic Data Labs , Fractal, Crayon etc.
 - According to a recent 'Future of Jobs in India' study, commissioned jointly by FICCI and Nasscom with EY - 5 years from now, 54 million Indians will hold jobs unheard of today.
- **Better Safety and Objectivity**
 - Involvement of humans has led to subjectivity in decision making and issues of corruption, nepotism, favouritism have plagued many organizations. Artificial Intelligence helps in negating these impacts as it reduces human involvement in decision making.
 - For instance, Self-driving cars - Nearly 1.3 million people die in car accidents every year; Google experiment in Self-driving cars with a travel of 1.8 million miles has only been involved in 13 accidents.
- **Convenience**
 - AI helps in making life simpler by eliminating repetitive tasks. For e.g. Scheduling tasks and meetings
- **Faster Advancements**
 - As more and more Artificial intelligence is being used, the technological advancements will happen at a faster rate;
 - More Artificial Intelligence is used in research the faster it will learn to find patterns and results for many of the questions that the world is exploring. For e.g. Artificial intelligence is now researched to find a cure to Cancer
- **More Efficient**
 - AI drives down time taken to perform a task. It enables multi-tasking and eases the workload for existing resources. For e.g. Many businesses are turning to artificial intelligence to ramp up their office space; Adjustable lights, thermostats, and other office equipment, is helping companies run their buildings more efficiently and securely.
 - Artificial Intelligence operates 24x7 without interruption or breaks and has no downtime.
- **Execution of hitherto complex and prohibitive tasks**
 - Artificial Intelligence is enabling development of robots which can aid in Remote and Minimally-Invasive Surgery; Disaster management; Underwater Exploration; Working in hazardous environments etc.

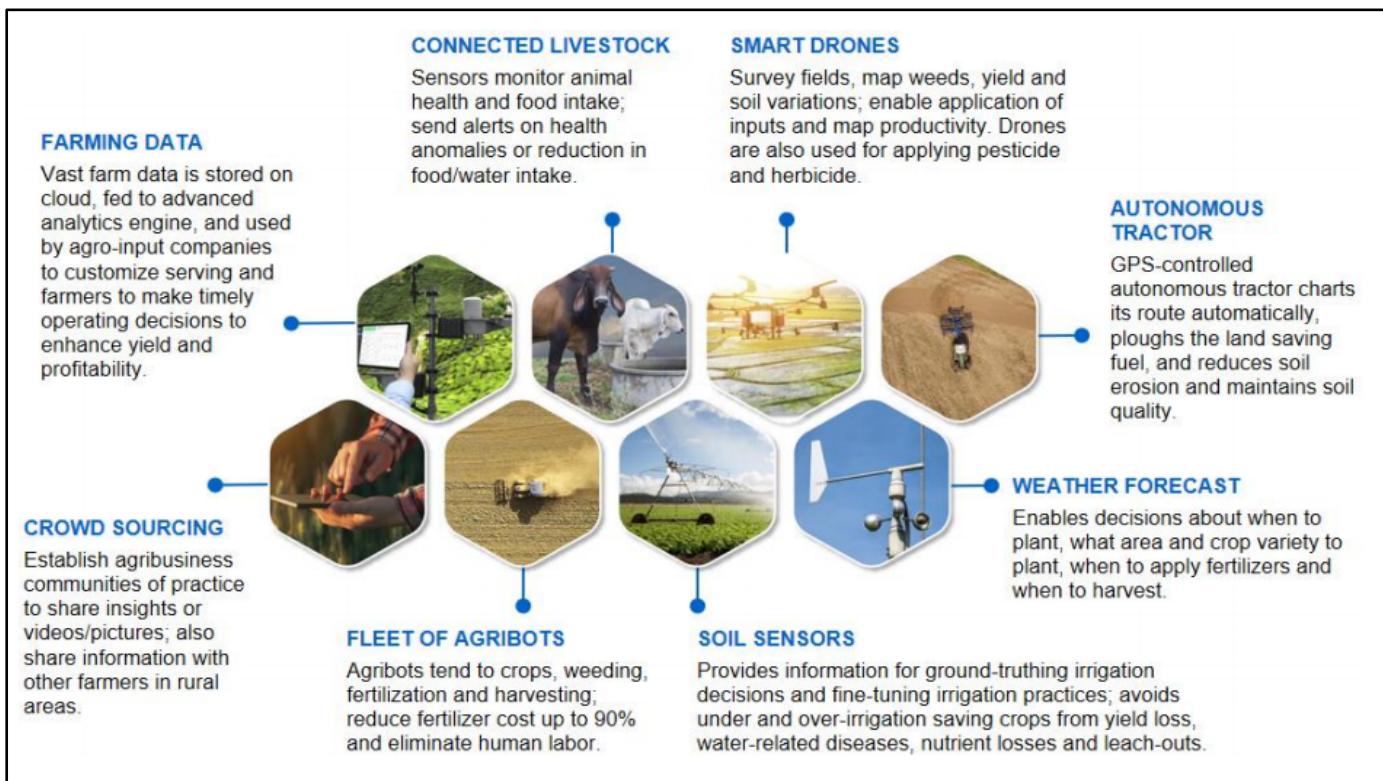


Applications of Artificial Intelligence

- **AI in Healthcare.**
 - Artificial intelligence (AI) is being used or trialed for a variety of healthcare and research purposes, including detection of disease, management of chronic conditions, delivery of health services, and drug discovery.
- **AI in Business.**
 - Robotic process automation based on artificial intelligence is being applied for highly repetitive tasks;
 - Artificial intelligence is also helping corporations to serve customers better;
 - Chatbots have been incorporated into websites to provide immediate service to customers
- **AI in Education.**
 - Artificial intelligence can automate Grading; Can assess students and adapt to their needs; Helping them work at their own pace
 - It could change where and how students learn, perhaps even replacing some teachers.
 - For e.g. Most of the online grading examinations like GRE, GMAT etc. have inbuilt AI systems.
- **AI in Finance and Banking**
 - Helps in providing financial advice; Decision making; Algo-trading
 - Artificial intelligence is being used in Banking Sector in India for Customer support; Fraud detection; Customer support and Helpdesk; Risk management; Security; Digitization and automation in back-office processing; Wealth management for masses; Management of ATMs
 - For e.g. State Bank of India conducted “Code for Bank” to explore futuristic technologies such as AI and Blockchain into the banking sector; HDFC Bank and ICICI Bank have already introduced chat-bots for customers service; Canara Bank installed Mitra and Candi robots at some of its offices.
- **AI in Law.**
 - The discovery process, sifting through of documents, in law is often overwhelming for humans. Automating this process is a better use of time and a more efficient process.
 - Startups are also building question-and-answer computer assistants that can sift programmed-to-answer questions by examining the taxonomy and ontology associated with a database.
- **AI in Manufacturing.**
 - This is an area that has been at the forefront of incorporating robots into the workflow. Industrial robots used to perform single tasks and were separated from human workers, but as the technology advanced that changed.
- **AI in Security**
 - AI can be a major game-changer in the space of Cyber security by automating complex processes for detecting attacks and reacting to breaches.
 - Data deception technology products can automatically detect, analyze, and defend against advanced attacks by proactively detecting and tricking attackers.
 - In addition, artificial intelligence is being increasingly used in conventional weapon. Recently, there have been emergence of autonomous weapons which range all the way from missiles capable of selective targeting to learning machines with the cognitive skills to decide whom, when and how to fight.
- **AI and Sports**
 - Artificial intelligence in sports is taking the following format :-
 - ✓ Sports teams are using virtual assistants to respond to fan inquiries across a wide range of topics including live game information, team stats and arena logistics.
 - ✓ Artificial intelligence is being used to achieve accuracy beyond humans in the ability to arrive at decisions in sports. For e.g. Use of DRS in Cricket.
 - ✓ Companies are using AI in conjunction with IoT devices to gather data to attempt to optimize training and performance.
- **AI in Disaster Management** – Drones, sensors and robots can provide accurate information about damaged buildings and landscapes, thus making rescue efforts safer and less time consuming.
- **AI in Governance**
 - AI systems can also be used in monitoring of developmental projects. For e.g. National Informatics Centre (NIC) has developed a pilot project to monitor the implementation of the toilet construction programme under the Swachh Bharat Abhiyan by analysing photographs taken with GPS-enabled smartphones. The AI

software is able to detect the location, the identity of the beneficiary through face-recognition technology, and the physical state of the toilet using an algorithm that infers its condition from the pictures.

- Other governance tasks AI can find uses for range from predictive maintenance of public infrastructure and disaster response, to preventive healthcare and financial fraud prevention.
- AI tools like face recognition can be used to track known criminals using the data from ever-growing number of CCTV cameras.
- **AI and Agriculture**



Some interesting Snippets

- **AlphaGo**
 - Based on Artificial Intelligence, it is the first computer program to defeat a world champion at the ancient Chinese game of Go.
 - Recently a new version of the computer has been released called AlphaGo Zero. It is even more powerful and is arguably the strongest Go player in history.
- **Driverless Cars**
 - Driverless Cars are being developed by a large number of automobile and other companies where artificial intelligence plays a major role. For e.g. Tesla and Google are developing driverless cars.
- **Prime Air**
 - It is a delivery system from Amazon designed to safely get packages to customers in 30 minutes or less using unmanned aerial vehicles, also called drones.
 - It uses artificial intelligence for prediction and decision-making.
- **Google Duplex**
 - Google Duplex can conduct natural conversations and perform practical and realistic tasks over the phone.
 - It has become one of the most-talked about application of AI.
- **'Spyce'**
 - It is a robot built by Massachusetts Institute of Technology that can prepare hot and delicious food by adding all the ingredients in the right amount.
 - It can cook in relatively less time have taken over the kitchens in many restaurants in countries like America, Britain and China.

- **Henn-na**
 - It is said to be the world's first hotel run by robots based in Japan.
- **Hotel 'Robot', Chennai**
 - It is first-of-its-kind restaurant in India where Robots serve food in style.

Challenges

- **Organisation Restructuring and threat to employment**
 - Conventionally, IT has been viewed as a standalone department and around provisions of computers, applications and networks.
However, artificial intelligence requires a greater convergence among different skills and the teams of the organisation.
 - In addition, automation will lead to redundancy of humans in decision making consequently leading to huge loss of employment. This is especially problematic for a country like India which is already confronting with the problem of joblessness.
 - For e.g. According to World Bank, automation threatens 69 % of the jobs in India.
- **Security**
 - Deeper penetration of Information technology has also raised concerns about cyber security.
 - Artificial Intelligence creates a situation where every gadget carries a potential entry point for cyber criminals with irreversible and massive potential for damage.
 - For example, Health Care or Electricity Grid may be disrupted by hacking by a single equipment.
- **Lack of Standards**
 - Given, the current stage of Artificial intelligence, there is the serious lacunae regarding standards and security.
- **Artificial Intelligence Competencies and Skills**
 - Artificial Intelligence has huge disruptive and transformative potential, thus requiring a complete overhaul human skills and capabilities, knowledge of artificial intelligence operations and security-specific knowledge.
 - For e.g. In a Smart Traffic Management, a developer can't be content with only IT and Computer, but also needs knowledge about Roads, Vehicles, Laws and regulations etc.
- **Privacy**
 - Artificial Intelligence depends on data, it acts as a fuel.
 - With increasing usage of Artificial Intelligence, there is a greater requirement for data leading to mounting concern regarding privacy.
 - With each and every move and aspect of a person being monitored and recorded, privacy comes under extreme threat in an Artificial Intelligence dominated paradigm.
- **Ethical Issues**
 - Owing to increasing autonomy of machines because of Artificial Intelligence, there is a growing concern over ethical/legal responsibility for behaviour of machines - Machine designers, Engineers, Manufacturers, Sellers or Users themselves.
 - Artificial Intelligence also enables machines to act autonomously thus enabling machines to emerge as an agency.
This has implications for understanding of moral agency.
For e.g. Will machines be guided by values of compassion, respect for human rights, integrity etc. while taking decisions.
 - Finally, Artificial Intelligence also has an impact on the moral framework. The moot question is - Do we need a new moral/ethical framework for evaluating our action.
For e.g. Care robots might change what humans value in care, while teaching machines might affect our criteria for good education and sex robots could have an impact on what we value in love and intimate relations.
 - The potential adverse consequences of artificial intelligence have also been supported by **Stephen Hawking** and **Elon Musk**.

- **Partnership on AI**

- ✓ It has been established to develop best practices for artificial intelligence systems and to educate the public about AI.
- ✓ Its founding members are Amazon, Facebook, Google, DeepMind, Microsoft, and IBM, with interim co-chairs Eric Horvitz of Microsoft Research and Mustafa Suleyman of DeepMind.

Conclusion

- Artificial Intelligence might just be the single largest technology revolution of our live times, with the potential to disrupt almost all aspects of human existence. Its transformation impact has often been compared to that of electricity 100 years back.
- While, the revolutionary potential of Artificial Intelligence is well known and discussed, there is also need to debate over the adverse consequences of artificial intelligence especially ethical dimensions.
- The truly transformative nature of the technology, yet the nascent stage of its adoption worldwide, provides countries like India with an opportunity to define its own brand of AI leadership.
- #AIforAll has been the brand proposed for India implying inclusive technology leadership, where the full potential of AI is realised in pursuance of the country's unique needs and aspirations.
- The strategy should strive to leverage AI for economic growth, social development and inclusive growth, and finally as a "Garage" for emerging and developing Economies.
- In the Budget 2018, the government has announced that NITI Aayog will spearhead a National programme on AI focusing on research. In 2017, a task Force on Artificial Intelligence for India's Economic Transformation was launched by the Commerce and Industry Department.
- In time, regulation will establish a framework to manage the ethical application of AI technology. But for now, companies' desire to press on with ambitious AI-based plans places the onus on them to proactively identify and manage any potential ethical risks. As AI becomes more commonplace in routine business and social interactions, building trust is paramount.

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