



Monthly Editorial Consolidation



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Becoming Atmanirbhar in Climate Finance

This editorial is based on “Being atmanirbhar in climate finance” which was published in the Hindu BusinessLine on 27/02/2023. It discusses the Issue of Climate Financing and ways to address it.

Tag: Biodiversity & Environment, GS Paper-3, Environmental Pollution & Degradation

Climate finance refers to the **financial resources that are allocated to address climate change and its impacts**. It encompasses a wide range of financial instruments and mechanisms that support climate mitigation and adaptation measures. Climate finance is critical in enabling countries to transition towards low-carbon and climate-resilient economies and achieving the goals set out in the **Paris Agreement**.

The funding is **essential to support developing countries in reducing greenhouse gas emissions**, adapting to the impacts of climate change, and pursuing **sustainable development**.

According to the Climate Finance Working Group, 118 trillion rupees are required to address climate change, 64 trillion rupees are available, while 54 trillion rupees are unrestricted. This gap has to be **met by way of domestic and foreign debt**. Indian **Development Financial Institutions (DFIs)** and **commercial banks have to contribute by raising domestic funds** and channelling resources from abroad.

To address the challenges of Climate finance, India needs to develop its own framework and a variety of funding systems, rather than work on terms laid down by the Western countries.

What are the Challenges in Climate Financing?

- **Lack of Funds from the West:**
 - The developed countries are **historically responsible for the majority of greenhouse gas emissions** that have caused **climate change**.
 - However, many developed countries have failed to provide adequate financial support to developing countries for climate action.
 - This has led to a significant funding gap, making it difficult for developing countries to implement climate change mitigation and adaptation measures.
- **Lack of Access to Finance:**
 - Many developing countries and small island states have **limited access to financing** due to various factors such as weak financial systems, inadequate regulatory frameworks, and limited access to international markets.

- **High Cost of Financing:**
 - Climate-related projects often **require significant upfront costs and long-term financing**, which can be difficult to obtain at affordable rates. This can deter investors from financing such projects, particularly in developing countries.
- **Uncertainty and Risk:**
 - Climate-related investments can be **risky due to uncertainty around regulatory and policy frameworks**, changing technology, and natural disasters. This can **make it difficult for investors to accurately assess the potential returns** on their investments.
- **Lack of Capacity and Technical Expertise:**
 - Many developing countries lack the technical expertise and capacity to design and implement effective climate projects, which can lead to delays and inefficiencies in project implementation.
- **Political and Policy Barriers:**
 - Political and policy barriers such as political instability, corruption, and lack of political can hinder climate financing efforts.
- **Inadequate Private Sector Engagement:**
 - Private sector investment is crucial for scaling up climate financing, however, there is **still inadequate private sector engagement** due to various factors such as limited market incentives, lack of regulatory frameworks, and limited awareness of climate risks.

What are the Related Initiatives?

- **National Adaptation Fund for Climate Change (NAFCC):**
 - It was established in 2015 to meet the cost of adaptation to climate change for the State and Union Territories of India that are particularly vulnerable to the adverse effects of climate change.
- **National Clean Energy Fund:**
 - The Fund was created to promote clean energy, and funded through an initial **carbon tax** on the use of coal by industries.
 - It is governed by an Inter-Ministerial Group with the Finance Secretary as the Chairman.
 - Its mandate is to fund research and development of innovative **clean energy technology** in the fossil and non-fossil fuel-based sectors.
- **National Adaptation Fund:**
 - The fund was established in 2014 with a corpus of Rs. 100 crores with the aim of bridging the gap between the need and the available funds.
 - The fund is operated under the Ministry of Environment, Forests, and Climate Change (MoEF&CC).

What should be the Way Forward for Climate Financing?

- **Raising resources from DFIs:**
 - The banking system is **unlikely to finance climate mitigation and adaptation investments** due to lower commercial appeal, so it is important to sharply define the priority sector to include climate finance.
 - However, **long-term resources will need to be raised from Development Financial Institutions (DFIs)** as there is a large financing gap.
 - DFIs have previously avoided foreign currency loans due to competition from domestic funds and high hedging costs.
 - The **government may need to step in to manage hedging costs** in order to encourage DFIs to provide the necessary funding for climate investments.
- **Investments from the Private Sector:**
 - Private sector investments are **crucial for financing climate mitigation and adaptation projects**.
 - Some investments can be financed through access to bank credit, **but many others cannot meet the interest costs due to below-par returns**, long gestation periods, and higher financial risks.
- **Promoting Blended Financing:**
 - Blended finance can be used in **various ways to support climate financing**.
 - Blended finance is an innovative financing approach that combines public and private capital to achieve development objectives.
 - For example, it can be used to finance renewable energy projects, green infrastructure, and climate-smart agriculture. It can also be used to provide financing for climate adaptation projects, such as building sea walls or improving water management systems.
- **Catalytic or Start-up Funding:**
 - Catalytic funding should be **utilised for 're-purposing' key economic activities** into green activities — something that western finance and its frameworks may not recognise as per their taxonomy.
 - Re-purposing, supported by a simple and inviolable classification framework, oversight and capacity building mechanisms can transform existing economic activities to green activities, crucially with smaller amounts of investments.
- **Need for Innovative Financing Mechanisms:**
 - There is a need for **innovative financing mechanisms that can provide funding for climate-related projects**, particularly in developing countries.
 - Some of these mechanisms include **green bonds, climate funds, and carbon markets**. ■■■

Fixing the Government Schools Issue

This editorial is based on “Govt schools need urgent fixing” which was published in the Hindu BusinessLine on 27/02/2023. It discusses the issue of Governments schools and ways to address it.

Tag: Governance, GS Paper-2, Education, Government Policies & Interventions

According to the **Annual Status of Education Report 2022** report, government schools saw a sharp rise in enrolment for the first time in 16 years; basic literacy levels of children have taken a big hit, with their reading ability as compared to numeracy skills worsening much more sharply and dropping to pre-2012 levels.

Government schools in **many states are predominantly attended by children from vulnerable social groups**, where girls' education is often treated as a formality for marriage prospects. In addition to funding issues, **there is a need to improve governance in schools and renovate dilapidated facilities** due to **Covid-19** closures.

As ASER 2023 confirms, boys and girls of elementary school-going age have all come back to schools, but the current education system is failing them. However, it is possible to make learning attractive for children with little effort.

While a lot has been done to improve the schools on the supply side with **Sarva Shiksha Abhiyan** and subsequent efforts, there is a **need for rejuvenating and re-imagining learning in schools**.

What are the Issues with the Functioning of Government Schools?

- **Poor Infrastructure:**
 - Many government schools lack basic facilities such as proper classrooms, clean drinking water, toilets, libraries, and playgrounds. This affects the overall quality of education provided to the students.
- **Lack of Trained Teachers:**
 - A significant number of government schools do not have well-trained and qualified teachers. This results in poor quality of teaching and a lack of enthusiasm among students.
- **Outdated Curriculum:**
 - The curriculum followed by many government schools is outdated and does not provide relevant skills required in the current job market. This results in a lack of employability among students.
- **Inadequate Funding:**

- Many government schools suffer from inadequate funding, which affects their ability to provide basic facilities and attract well-qualified teachers.

➤ **Lack of Accountability:**

- There is often a lack of accountability among school administrators and teachers in government schools. This results in poor quality of education and a lack of motivation among students.

➤ **Poor Teacher-Student Ratio:**

- The teacher-student ratio in government schools is often low, resulting in inadequate attention given to individual students.
 - According to a report, **India has nearly 1.2 lakh schools** with just one teacher each.
 - The **Right of Children to Free and Compulsory Education (RTE) Act, 2009** in its Schedule lays down Pupil Teacher Ratio (PTR) for both primary and upper primary schools.
 - At primary level the PTR should be 30:1 and at the upper primary level it should be 35:1.

What are the Constitutional Provisions and Laws related to Education in India?

➤ **Constitutional Provisions:**

- Part IV of Indian Constitution, **Article 45 and Article 39 (f) of Directive Principles of State Policy (DPSP)**, has a provision for state-funded as well as equitable and accessible education.
- The **42nd Amendment to the Constitution in 1976** moved education from the State to the Concurrent List.
 - The education policies by the Central government provides a broad direction and state governments are expected to follow it. But it is not mandatory, for instance Tamil Nadu does not follow the three-language formula prescribed by the first education policy in 1968.
- The **86th Amendment in 2002** made education an enforceable right under Article 21-A.
 - **Article 21A** of the Constitution makes it obligatory on the State to provide free and compulsory education to children between the age of 6 and 14 years.

➤ **Related Laws:**

- **Right To Education (RTE) Act, 2009** aims to provide primary education to all children aged 6 to 14 years and enforces education as a Fundamental Right.
 - It also **mandates 25% reservation for disadvantaged sections** of the society.

➤ **Government Initiatives:**

- **Sarva Shiksha Abhiyan, Mid Day Meal Scheme, National Programme on Technology Enhanced Learning, PRAGYATA, Beti Bachao Beti Padhao, PM SHRI Schools**

What should be the Way Forward?

➤ **Making Local Government Responsible with Funds:**

- Local governments and women's collectives **should be given the responsibility for elementary schools with funds and functionaries.**
- They must be **authorised to fill any vacancy by rationalisation or recruiting a community volunteer** who has cleared the Teacher Eligibility Test.
- The devolved funds should be sufficient to meet the needs for basic learning and support. The school should become a community institution rather than be a government entity, which **can draw on voluntarism/donations and get the support of gadgets** to ensure healthy learning outcomes.

➤ **Training Teachers:**

- All teachers and teacher educators (block and cluster coordinators, State/District resource persons) **should be trained in the use of gadgets and course material** that can facilitate learning.
- Every classroom **must have a large TV and a good sound system to provide online lessons** that supplement what is taught in class.

➤ **Utilising SHGs:**

- The **Mid-Day Meal** responsibility must be handed over to the village level **Self-Help Group (SHG)** of women.
- The **Panchayat and School Management Committee** shall be the supervisors of the SHG.
- Teachers should not have any role in the Mid-Day Meal scheme, except teaching.

➤ **Developing Public Libraries:**

- Public libraries **should be developed where youths in the village can study and prepare for jobs and admissions** to good institutions.
- Such community institutions attract volunteers.
 - **Karnataka has done outstanding work on strengthening its public libraries** and this has gains for school learning outcomes as well.

➤ **Using Innovating Methods:**

- Sound boxes, video films, play-way learning items, indoor and outdoor sports, cultural activities for learning on a scale can be used.
- With support from **Integrated Child Development Services**, toys-based learning in early childhood can be started.

- The **New Education Policy 2022** mandates a continuum from ages 3 to 8 to ensure this important early beginning in life.

➤ **Healthcare Management:**

- The **school leadership should take responsibility for the nutrition challenge** as too many committees can weaken concerted efforts.
- It is important to assign accountability for the well-being of children to field functionaries such as Aanganwadi Sevikas, **Ashas**, **Auxiliary Nurse Midwives (ANMS)**, and Panchayat Secretaries.
- **Collaborating with the local government is crucial for effective healthcare management** and to make a positive impact.

➤ **Promoting Community Campaigns:**

- There **should be community campaigns and regular school level interactions with parents**.
- Teachers must build a relationship with every household to ensure children's care and learning.
- The **Nipun Bharat Mission** to ensure oral and written literacy and numeracy, should become a people's movement like the Total Literacy Campaign.

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Transforming the Ailing Cotton Sector

This editorial is based on "Cotton: Crying out for change" which was published in the Hindu BusinessLine on 01/03/2023. It discusses the issues with cotton sector in India and related issues.

Tag: Indian Economy, GS Paper-3, Employment, Growth & Development, Inclusive Growth

India is the world's second-largest producer of **cotton**, and the decline in production has the potential to affect global prices and trade dynamics. Cotton production has been a critical component of India's agricultural economy for centuries.

However, in recent years, the country has experienced a significant decline in cotton production, causing concerns about the sustainability of the industry and its impact on the economy. The reasons for this decline are complex, with factors ranging from weather conditions to government policies and market forces. **Climate change** induced weather aberration, widespread infestation of boll devouring pink bollworm, new tobacco streak virus disease and boll rot have recently threatened cotton farmers.

The cotton-based textile industry has been significantly affected by various factors, including the increase in domestic market prices, hoarding, and trade-related developments resulting from the US ban on importing fashion and textile products from China's Xinjiang region. This ban has had a major impact on the industry, as many manufacturers in the region rely on raw cotton sourced from India. Furthermore, the textile manufacturing industry in Turkey has also been hit by an earthquake, exacerbating the situation.

So, addressing the causes and implications of the decline in cotton production is crucial for policymakers, farmers, and consumers alike.

What are the Issues with the Cotton Sector in India?

➤ **Pest Infestation:**

- Cotton crops in India are prone to pest infestation, which can reduce the crop yield and quality.
- There are several reasons of pests infestation in cotton crops such as Lack of crop rotation, Monoculture, Weather conditions, Poor soil quality, Lack of pest management, etc.

➤ **Low Productivity:**

- India's cotton productivity per hectare is lower than that of other major cotton-producing countries. This is mainly due to the use of outdated farming practices, inadequate irrigation facilities, and poor seed quality.

➤ **Lack of Irrigation:**

- Irrigation is essential for cotton cultivation, but many cotton farmers in India lack access to adequate irrigation facilities.

➤ **High Input Costs:**

- The cost of inputs such as seeds, fertilizers, and pesticides is high in India, making it difficult for small-scale cotton farmers to afford them.

➤ **Dependence on Monsoon:**

- India's cotton crop is largely dependent on the monsoon rains, which can be unpredictable and erratic, leading to crop failure.

➤ **Farmer Debt:**

- Many cotton farmers in India are burdened with debt, which can lead to a cycle of poverty and indebtedness.
- Cotton sustains the **livelihood of an estimated 5.8 million farmers**, with another 40-50 million people engaged in related activities such as cotton processing and trade.
- Families, especially women and children, are often forced to engage in exploitative forms of work for survival.

- Farmer suicides triggered by the mounting debt burden in cotton growing areas have also been witnessed.

➤ **Lack of Market Access:**

- Many cotton farmers in India have limited access to markets and are forced to sell their produce at low prices to middlemen.

What are the Key Facts about Cotton Production?

- Kharif Crop which requires 6 to 8 months to mature.
- Drought – resistant crop ideal for arid climates.
- **Occupies 2.1% of the world's arable land**, meets 27% of the world's textiles needs.
- **Temperature:** Between 21-30°C.
- **Rainfall:** Around 50-100cm.
- **Soil Type:** Well-drained black cotton soil (Regur Soil) (E.g. Soil of Deccan Plateau)
- **Products:** fibre, oil and animal feed.
- **Top Cotton Producing Countries:** India > China > USA
- **Top Cotton Producing States in India:** Gujarat > Maharashtra > Telangana > Andhra Pradesh > Rajasthan.
- **Four cultivated species of cotton:** *Gossypium arboreum*, *G. herbaceum*, *G. hirsutum* and *G. barbadense*.
 - *Gossypium arboreum* and *G. herbaceum* are known as old-world cotton or Asiatic cotton.
 - *G. hirsutum* is also known as American cotton or upland cotton and *G. barbadense* as Egyptian cotton. These are both new world cotton species.
- **Hybrid Cotton:** Cotton made by crossing two parent strains that have different genetic characters. Hybrids are often spontaneously and randomly created in nature when open-pollinated plants naturally cross-pollinate with other related varieties.
- **Bt Cotton:** It is a genetically modified organism or genetically modified pest-resistant variety of cotton.

What should be the Way Forward?

➤ **Changing Cropping System:**

- The cropping system of cotton must gradually undergo a systematic change to **High Density Planting System (HDPS)**.
 - HDPS is a new cropping system of accommodating more plants per unit area supported by technological inputs for weed management, defoliation and mechanical picking.
- The new cropping system requires an **entirely new plant type, shifting from hybrid to varietal seeds coupled with new age technologies for machine sowing**, weed management, defoliation and mechanical picking.

- **Farmers currently sow bushy, long duration hybrid cotton seeds in dibbling patterns at a large spacing** accommodating fewer plants per acre and harvest seed cotton three to four times in a season spanning 180 to 280 days.

➤ **Implementing Evidence-based Policies:**

- The **government-led policy paradigm on cotton must give way to progressive evidence-based policies on pricing of seeds** and safeguarding intellectual property, not only for biotech traits under **Indian Patent Act** but also ensuring the rights of breeders and farmers under the **Protection of Plant Varieties and Farmers' Rights Act (PPVFR)**.
- Enforcement of IPR on new varieties suitable for HDPS while ensuring farmers' rights **must be strengthened to attract investment in R&D and breeding of high-density suitable genotypes**.

➤ **Strengthening Market Linkages:**

- Strengthening market linkages can **help farmers get a better price for their cotton**. The government can set up a robust procurement system for cotton, create price stabilization funds, and establish cotton grading and standardization mechanisms.

➤ **Increasing Value Addition:**

- **Encouraging value addition in the cotton sector can help increase income** and create employment opportunities. This can be done by promoting the production of cotton-based products such as textiles, clothing, and home furnishings.

➤ **Enhancing Research and Development:**

- **Investing in research and development can help develop new cotton varieties**, improve pest management practices, and develop innovative technologies to improve cotton farming.

➤ **Improving Infrastructure:**

- The government can **improve the infrastructure in cotton-growing areas by building roads, irrigation facilities**, and storage facilities. This can help farmers access markets, transport their produce, and store their cotton until prices are favorable.



Protecting Platform Workers

This editorial is based on "Protecting platform workers" which was published in the Hindu BusinessLine on 24/02/2023. It discusses the Issues with Platform workers and what can be done to address the issue.

Tag: Indian Economy, GS Paper-3, NITI Aayog, Issues Relating to Development, Government Policies & Interventions

There have been **significant changes in the world of work due to technological innovations and digital platforms**, including the rise of **gig workers**. The gig workforce is expected to expand to 2.35 crore workers by 2029-30.

The Indian G-20 presidency would **do well to foster greater international coordination and cooperation on the portability of benefits** (those connected to an individual, rather than an employer and can be carried from one job to another, without interruption), **thereby safeguarding worker wellbeing for platform work done across borders**.

Therefore, the decision of **India's G20 presidency** to identify '**Gig and Platform Economy and Social Protection**' as a priority area for consideration is pertinent. Indisputably, the platform economy generates new avenues of employment. However, it also has potentially disruptive effects on labour markets.

Note:

- Broadly, the platform economy operates through two **business models**, '**Crowdwork**' and '**Work-on-demand via apps**'.
 - Crowdworkers operate online through platforms that connect vast numbers of clients, organisations, and businesses across borders.
 - On the other hand, 'work-on demand via apps' refers to place-based and geographically limited work, facilitated by platforms.

What are the Issues faced by the Platforms Workers?

- **Classification as Employees:**
 - One of the main issues faced by platform workers is that they are **often classified as independent contractors instead of employees**. As a result, they are not entitled to certain benefits, such as minimum wage, overtime pay, and workers' compensation.
- **Accessibility Issues:**
 - Even though the **gig economy, with the wide variety of employment options it offers, is accessible to all those who are willing to engage in such employment**, access to internet services and digital technology can be a restrictive factor.
 - This has made the gig economy largely an urban phenomenon.
- **Occupational Safety and Health Risks:**
 - Workers engaged in employment with the digital platforms, particularly, women workers in the app-based taxi and delivery sectors, face various occupational safety and health risks.

➤ **Low Wages:**

- Many platform workers in India **earn low wages, often less than the minimum wage**. This is partly due to the fact that platform companies compete on price and there is a large pool of workers willing to accept low-paying jobs.

➤ **Long Working Hours:**

- Platform workers often have to **work long hours to make enough money to support themselves and their families**. This can lead to fatigue and burnout.

➤ **Lack of Social Protections:**

- Platform workers are **not entitled to social security benefits such as pensions or insurance**. This puts them at risk in case of accidents or illnesses.

➤ **Lack of Bargaining Power:**

- Platform workers usually work alone and don't have the bargaining power that comes with being part of a union or collective bargaining agreement. This means that they can't negotiate for better pay or working conditions.

➤ **Discrimination:**

- Some platform companies have been **accused of discriminating against certain groups of workers**, such as women or workers from lower castes.
 - Dalit gig workers, who belong to the lowest caste, face discrimination in terms of limited work opportunities, low wages, and social exclusion.
 - Some customers may refuse to use the services of Muslim delivery drivers or cancel their orders upon learning their religion.

➤ **Lack of Regulation:**

- There is currently no regulatory framework for platform work in India. This means that platform companies can operate without adhering to labor laws or standards.

How can Platform Workers' Rights be Protected?

➤ **Creating a New Legal Category:**

- A new legal category called "**independent workers**," **can be created for those who occupy the gray area** between employees and independent contractors merits careful deliberation.
- In some respects, independent workers are like independent businesses as they have the freedom to choose when and where to work as well as the choice to work with multiple intermediaries simultaneously.
- However, they are similar to traditional workers too, as the intermediary retains some control over the way independent workers, such as by setting their fees or fee caps.

➤ Extending Social Security Coverage:

- Gig economy technology can be used to extend social security coverage to platform workers.
- **Most transactions on the gig economy are done via the internet** and can thus be tracked.
 - For instance, **Indonesia has introduced a digital mechanism to securitise digital platforms** commonly used for motorcycle taxi rides in the country.
 - When using the application, **a small amount of the tariff is automatically deducted for accident insurance** of both the driver and the passenger for the length of the trip.

➤ Collective Bargaining:

- Platform workers **should be allowed to collectively bargain with the platform owners to negotiate better pay**, benefits, and working conditions. Collective bargaining can help platform workers to have more leverage in negotiations and ensure that their voices are heard.

➤ Access to Benefits:

- Platform workers **should have access to benefits such as health insurance, paid sick leave, and retirement plans**. This can be achieved through a combination of government regulations and private sector initiatives.

➤ Fair Wages:

- Platform workers **should be paid fairly for the work they do**. Platforms should be required to disclose their payment structures and ensure that they are transparent and fair.

➤ Protection against Discrimination:

- Platform workers **should be protected against discrimination based on their gender, race, ethnicity, religion, sexual orientation**, or disability. Platforms should have policies in place to prevent discrimination and provide a way for workers to report incidents of discrimination.

➤ Right to Organize:

- Platform workers **should have the right to organize and form unions to protect their interests**. This can help them to negotiate better pay, benefits, and working conditions.

➤ Regulation and Enforcement:

- Governments should **regulate the platform economy and enforce labor laws to protect platform workers' rights**. This can include monitoring platforms to ensure that they comply with labor laws and imposing penalties for violations.



R&D Inadequacies in India

*This editorial is based on “**Fixing India’s R&D inadequacies**” which was published in the **Hindu BusinessLine** on 26/02/2023. It discusses the issue of inadequate private sector involvement in research and development in India and needs to address it.*

Tag: Governance, GS Paper-3, Government Policies & Interventions, Growth & Development

Kodak was a renowned company in the world of photography and videography, founded in 1888 by George Eastman as ‘The Eastman Kodak Company’. However, the **company’s downfall serves as a warning of the risks of neglecting innovation**, even for the most powerful companies.

Innovation and technical progress are prerequisites for economic growth. The central concept of growth in the Schumpeterian Paradigm of creative destruction is that previous innovations become obsolete as new innovations emerge.

Therefore, innovation is essential for an economy to grow. In India, **the government undertakes 60% of R&D expenditures**, unlike other nations where **private enterprise is the primary driver**. Despite efforts to boost R&D, the country spends around **0.7% of GDP on R&D**.

The latest Research and Development Statistics, published by the **Department of Science and Technology (DST)** in 2020, has provided an estimate of **Rs. 60.9 billion R&D spending in 2017-18 by foreign MNCs**, which is only about 10% of what U.S. firms have reported to have spent in India on R&D.

It is crucial to tackle the **issue of inadequate private sector involvement in research and development**, as it may have negative implications for the country’s progress.

Why Participation of Private Players limited in R & D?

➤ Weak Patent System:

- Historically, **India’s patent system has been weak and unreliable in safeguarding commercial innovations**, which has created a sense of unease among firms, as they fear that their intellectual property may not be adequately protected, leaving their potential profits vulnerable.

➤ Risk of Imitation:

- Private firms are **hesitant to invest in R&D in India because of the risk of imitation by local competitors**, which further disincentivizes investment in R&D.

➤ Lack of Talent:

- Private firms **invest more heavily in R&D than the government in the US and China due to the calibre of talent** that their higher education institutions attract. India needs to develop its higher education institutions to attract top talent and drive innovation.
- **Lack of High-Quality Research:**
 - Out of the approximately 40,000 higher education institutions in India, less than 1% actively participate in high-quality research, spanning both scientific and social science research.
 - This implies that 99% of HEIs are not contributing to the country's high-quality knowledge creation.
- **Suffocating Research Ecosystem:**
 - The **government's effort to impose fiscal discipline on States and educational institutions has suffocated the research ecosystem** at institutions like IISc, IITs and IISERs.
- **Challenges in Procuring Laboratory Equipment:**
 - Procuring laboratory equipment can be a nightmare for researchers due to bureaucratic red tape and delays in the system.
- **Capacity Issue:**
 - The **Indian Patent Office had only 860 patent examiners and controllers as of March 2022**, which is substantially lower than China's 13,704 and the US's 8,132 examiners and controllers, leaving the Indian Patent Office grappling to handle the demand.

What are the Other

Reasons for the Low Private Players in R & D?

- **Lack of Funding:**
 - One of the main reasons for R&D inadequacies in India is the **lack of adequate funding for research and development**.
 - The government invests very little in research, and private companies are also not willing to invest a significant amount in R&D due to the high risks and uncertainties involved.
- **Lack of Infrastructure:**
 - India lacks **adequate infrastructure for research and development**. There are few well-equipped laboratories and research facilities in the country, which limits the ability of researchers to carry out advanced research.
- **Limited Collaboration between Academia and Industry:**
 - In India, **there is limited collaboration between academia and industry**, which hinders innovation and the commercialization of research. There is also a **lack of focus on applied research**, which is

critical for the development of new products and technologies.

- **Brain Drain:**
 - **Many of India's brightest minds emigrate to other countries for better opportunities**, resulting in a brain drain that weakens the country's research and development capabilities.
- **Inadequate Education and Training:**
 - India's education system **does not adequately prepare students for research and development careers**. There is also a lack of training opportunities for researchers to improve their skills and keep up with the latest advances in their fields.
- **Bureaucratic Hurdles:**
 - There are **many bureaucratic hurdles that researchers must navigate to obtain funding and carry out research projects in India**. This bureaucratic red tape slows down the research process and discourages many researchers from pursuing projects in India.

What should be the Way Forward ?

- **Creating an Enabling Regulatory Environment:**
 - The government can **create a conducive regulatory environment that encourages private sector participation**.
 - This could **include measures such as simplifying regulatory procedures, providing incentives for private sector investment**, and ensuring a level playing field for all players.
- **Public-Private Partnerships (PPPs):**
 - The government can **work with private sector players through Public Private Partnerships (PPPs)**, where the private sector invests in and operates public infrastructure projects, such as roads, airports, and power plants.
 - This can **help leverage private sector expertise and resources**, while also ensuring that the public interest is protected.
- **Encouraging Foreign Direct Investment (FDI):**
 - The Indian government can encourage **Foreign Direct Investment (FDI)** by liberalizing investment rules, simplifying procedures, and providing incentives for foreign investors.
 - This can help bring in much-needed foreign capital and expertise to help spur economic growth.
- **Skill Development and Education:**
 - The government **can invest in skill development and education initiatives to help build a pool of skilled workers** that can help support private sector growth. This can help address the skills gap

that many private sector players face when trying to expand their operations.

➤ **Infrastructure Development:**

- The government can **invest in infrastructure development, such as building new roads, airports, and ports, which can help attract private sector investment.** Improved infrastructure can also help improve productivity and reduce costs for businesses.



Preserving Cultural Heritage

This editorial is based on “A thumbs down for the ‘Adopt a Heritage’ scheme” which was published in the Hindu BusinessLine on 01/03/2023. It discusses the issue with the Adopt a Heritage’ scheme and what can be done to preserve the Cultural Heritage of India.

Tag: Indian Heritage & Culture, GS Paper - 1, Government Policies & Interventions, Indian Heritage Sites

In Feb 2023, the government announced that it will hand over around 1,000 monuments to the private sector for their upkeep under the control of the **Archaeological Survey of India.**

The Indian government has **launched a revamped version of the ‘Adopt a Heritage’ scheme.** It aimed at **encouraging private companies, public sector units, and other firms to adopt and maintain State-owned archaeological sites** and monuments. The businesses that enter such agreements will be known as “Monument Mitras.”

The government aims to **adopt 500 protected sites by 15th August 2023,** and another 500 sites shortly thereafter, which would be a tenfold increase in the number of sites brought under the ambit of the **original ‘Adopt a Heritage’ scheme launched in 2017.**

However, the **‘revamped’ scheme, however, has some serious flaws,** and the nation’s valuable pluralistic heritage is at risk of extinction.

There are a number of concerns raised about the Adopt a Heritage Scheme including historical preservation, community, traffic, tourism, and corporate interests which needs to be addressed.

What are the Issues with the Adopt a Heritage Scheme?

➤ **Lack of Expertise:**

- Allowing businesses without expertise in heritage preservation to construct and maintain heritage sites can lead to the risk of losing historical significance and misrepresenting India’s past.

- **Example:** Permitting a watch company without expertise in bridge engineering to maintain a **colonial-era bridge in Morbi, Gujarat,** possibly contributed to a heart-wrenching tragedy.

➤ **Undermining the Mandate of ASI:**

- The scheme sidelines the **Archaeological Survey of India (ASI) and disregards the Sarnath Initiative,** which provides guidelines for safekeeping excavated objects and presenting them to visitors in an engaging manner.

➤ **Duplication of Infrastructure:**

- Some monuments selected for the scheme already have tourist infrastructure, which raises questions about the need for new ticket offices and gift shops.

➤ **Diminishing Public Space:**

- The scheme allows **businesses to occupy prime public land and build their brands, which may further diminish the grounds** around iconic monuments.

➤ **Undermining Local Communities:**

- The scheme may **undermine local communities’ relationships with historical sites, endangering livelihoods of those who have lived near the site** and made a living by regaling visitors with stories of its colourful past.

➤ **Alteration of Historical Character:**

- Some monuments selected for the scheme are not protected by the ASI, and businesses may be able to alter their historical character without much opposition.

➤ **Risk of Monuments Being Converted into Hotels:**

- If monuments are not adopted by Monument Mitras in the predetermined time frame, they may be converted into hotels, prioritizing tourism and corporate interests over historical preservation.
 - According to media reports, the Uttar Pradesh government has started turning over such monuments to the Tourism Department to convert them into hotels. They include **Chunar Fort,** a citadel overlooking Barwasagar Lake, and several residences built by Awadh’s Nawabs.

What are the Other Issues with the Heritage Protection in India?

➤ **Limited Trained Manpower:**

- Government agencies may have **limited resources, particularly experimental and numerical facilities,** which prevent them from undertaking structural safety research and development.
- The lack of efforts to mainstream heritage preservation as a career and provide skills remains a formidable challenge at the institutional level.

➤ **Infrastructural Shortcomings:**

- There is a **lack of convergence between modern-day engineering education and traditional knowledge of construction materials** and practices; this is a serious hindrance to preservation of heritage.

➤ **Informalisation of Systems:**

- Formal systems are absent in India, which recognise the need for use of scientific tools for diagnosis and quantitative assessment of residual capacity before choosing repair or strengthening strategy.
- India has a large stock of heritage structures, which has to be addressed through a formal platform focussing on their structural safety.

➤ **Lack of Awareness:**

- There is **widespread lack of civic sense among domestic visitors** who tend to deface historical monuments e.g. by inscribing their names on historical monuments.

➤ **Environmental Pollution:**

- There are **several types of environmental pollution** which are killing the heritage properties e.g. Taj Mahal was badly affected by **Sulphur dioxide** etc. emitted by the oil refinery at Mathura.

➤ **Lack of Funding:**

- Finances continue to be crucial challenges for preservation of cultural heritage. The conservation and preservation of heritage has not received due attention from public authorities.

➤ **Outdated Mechanism of Excavation and Exploration:**

- Due to the prevalence of outdated mechanisms, **Geographic Information System and Remote Sensing** are rarely used in exploration.
 - Also, local bodies involved in urban heritage projects are often not equipped enough to handle heritage conservation.

What should be the Way Forward?➤ **Making Citizens Aware:**

- **Corporate Social Responsibility (CSR)** funds can be **earmarked for researching, writing, and publishing high-quality textbooks** on history and monuments, as well as developing innovative teaching methods.
- This approach can be **effective in educating citizens about the value of monuments and promoting their preservation.**
 - Corporates might also **follow the lead taken by Sudha Murthy and N.R. Narayana Murthy in giving gifts to organisations** such as the Bhandarkar Oriental Research Institute in Pune to continue their missions of writing history by rationally coordinating the textual record and the archaeological evidence.

➤ **Encourage Traders to Donate Funds:**

- **Encourage traders and shopkeepers to donate funds to school libraries** to collect archival materials such as books, maps, and old photographs relevant to local monuments.
- This approach can be a **cost-effective way to provide students with access to historical resources and help them appreciate the value of monuments** in their community.

➤ **Use CSR Funds to Purchase Equipment:**

- **Use CSR funds to purchase equipment that reduces pollution** and protects heritage buildings.
- This approach can be an effective way to preserve heritage buildings and prevent their decay.
 - In the past, **Tata Sons, Oil and Natural Gas Corporation (ONGC), and other companies have regularly contributed funds to organisations training individuals** in much needed restoration skills and creating jobs for them.

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Doubling India's Farmers Income

This editorial is based on "How to double India's farmers' income" which was published in the Indian Express on 06/03/2023. It discusses the issues with India's doubling farmers' income and ways to address the same.

Tag: Indian Economy, GS Paper - 3, Agricultural Pricing, Agricultural Resources, Government Policies & Interventions

In 2016, India's Prime Minister **shared his dream of doubling farmers' incomes in the year when India completes 75 years of Independence** and enters Amrit Kaal. Now that we have entered Amrit Kaal, it is a good time to revisit that dream and see if it has been fulfilled, and if not, how best it can be done.

Unless the incomes of farmers go up, we cannot have sustained high growth of overall **GDP**. This is because the manufacturing sector starts facing a demand constraint soon after meeting the demand of well-off urban consumers.

Agriculture engages the **largest share of the workforce (45.5% in 2021-22 as per Periodic Labour Force Survey)**. So, **focusing on agriculture, even if it was in a dream**, is the right way to ensure long-term high growth of the overall economy.

Agriculture also has to **provide food and nutritional security to the largest population on this planet**. However, **if this objective has to be achieved in today's context**,

it must encompass policies that also protect the basic resources of this planet, say soil, water, air, and biodiversity.

What are the Issues with Doubling Farmers Income?

- **Issues with Agricultural Policies:**
 - Trade and marketing policies adopted by the government are suppressing farmers' incomes.
 - **For Example:** The ban on exports, the suspension of several commodities from the futures markets, and the imposition of stocking limits on certain commodities.
 - These are **hidden policy instruments of "implicit taxation" of farmers' incomes.**
 - The **policy of heavy subsidisation along with assured and open-ended procurement of paddy and wheat** is creating challenges for the environment.
- **Fragmentation of Land:**
 - Land fragmentation is a **significant issue in India.** Small and marginal farmers who own less than two hectares of land constitute around 85% of the total number of farmers in India.
 - This fragmentation of land limits the scale of agricultural operations, making it difficult to achieve economies of scale.
- **Poor Infrastructure:**
 - India has a **weak agricultural infrastructure, including inadequate irrigation facilities, poor storage facilities,** and weak transportation networks. This results in poor-quality produce, wastage, and low returns to farmers.
- **Low Productivity:**
 - The **productivity of Indian agriculture is low compared to other countries.** The yield per hectare of major crops in India is lower than that of China, Brazil, and the United States.
- **Climate Change:**
 - **Climate change** has a significant impact on Indian agriculture. Erratic rainfall, rising temperatures, and extreme weather events such as **droughts** and **floods** affect crop production and reduce farmers' income.
- **Price Volatility:**
 - The agriculture sector in India is **characterized by price volatility due to the lack of a stable pricing policy.**
 - Fluctuations in prices of agricultural commodities, coupled with high input costs, make it difficult for farmers to plan their production and marketing strategies.

➤ **Inadequate Institutional Support:**

- The **lack of institutional support in the form of credit, insurance, and marketing facilities for farmers** is a significant challenge.
- Access to credit and insurance remains low for small and marginal farmers.

➤ **Dependence on Monsoon:**

- A **large proportion of Indian agriculture is dependent on monsoon rains.**
- Delayed or inadequate rainfall affects crop production and farmers' income.

What are the Steps taken by Government for Supporting Farmers?

- The government has implemented various schemes and policies to achieve this goal, including increasing the **Minimum Support Price** for crops, promoting **organic farming**, and creating a national agricultural market.
- Government **provides a fertiliser subsidy whose budget crosses Rs 2 lakh crore.** It provides income support to farmers through **PM-Kisan.**
- Many small and marginal farmers also get free ration of at least 5 kg/person/month through the **PM Garib Kalyan Anna Yojana.**
- There are also **subsidies for crop insurance, credit and irrigation.**
- **States also give out power subsidies in abundance, especially for irrigation.** Even farm machinery for custom hiring centres is being subsidised by many states.

What should be the Way Forward?

➤ **Realignment of Support Policies:**

- The government **should incentivize the cultivation of crops that are environmentally friendly** and consume fewer resources such as water and fertilizers.
- **Millets, pulses, oilseeds, and horticulture crops** could be given carbon credits to encourage their cultivation.
- The subsidies/support should be crop-neutral or skewed in favor of the crops that are beneficial for the planet's resources.

➤ **Promotion of High-Value Crops:**

- Farmers **should diversify their crops to include high-value crops** that have better market demand and can fetch higher prices.
- This can be **done by introducing better seeds, irrigation techniques,** and training on sustainable farming practices.

➤ **Collaboration with Corporations:**

- The government can **collaborate with corporations to provide farmers with better market access and an assured buyback arrangement** to reduce their market risk.
- Corporations can **also offer farmers better prices for their produce by using them for making value-added products** such as tofu, soya milk powder, soya ice cream, and frozen soya yoghurt.

➤ **Technological Innovation:**

- The government **should invest in research and development to come up with new technologies** that can help farmers increase their productivity and profitability. This can include the use of solar panels on farmers' fields as a third crop.



Challenges of Ayurvedic Practitioners

*This editorial is based on “**The hardships of a career in Ayurvedic practice**” which was published in the Hindu Business Line on 06/03/2023. It discusses the Issues faced by Ayurvedic Practitioners in India and ways to address the same.*

Tag: Governance, GS Paper-2, Health, Government Policies & Interventions

Ayurveda, the **traditional system of medicine that originated in India thousands of years ago, is gaining popularity worldwide**. While this ancient healing system has been embraced by many, those who choose to pursue a career in Ayurvedic practice in India face a number of challenges and hardships.

Despite its rich history and cultural significance, **the Ayurvedic profession in India is fraught with difficulties ranging from lack of proper recognition** and support from the government to limited employment opportunities and low salaries.

Additionally, the industry is largely unregulated, **leading to concerns about the quality and authenticity of Ayurvedic treatments being offered**. In this context, aspiring Ayurvedic practitioners in India must navigate a complex landscape and overcome numerous obstacles to achieve success and make a meaningful contribution to the field.

What are some of the Challenges faced by an Ayurvedic Practitioner?

➤ **Diminished Evidence-based Quality:**

- There is a **trust deficit in Ayurveda because of the diminished evidence-based quality of treatments**. Archaic theories are often peddled as sophisticated dogmas, and treatments are not subjected to straightforward experimental scrutiny.

➤ **Perception of Slow Healing:**

- There is a common perception that Ayurvedic treatments are slow to heal.
- However, this view is a half-truth since Ayurveda emphasizes sustainable patient benefit, which requires a gradual transition from illness to wellness.

➤ **Limited usable Knowledge:**

- Ayurveda is a vast corpus of ancient medical wisdom, and only a part is practically usable. Practitioners have to depend on themselves to discover treatments and approaches that work, leading to a lot of trial and error.

➤ **Limited Scope of Practice:**

- Ayurveda can be used safely and efficaciously only in about 60%-70% of primary-care illnesses.
- For the rest, patient interest necessitates complementing Ayurveda with modern medicine. However, most states prohibit the practice of modern medicine by Ayurveda graduates, limiting the scope of their practice.

➤ **Lack of Research and Science Ecosystem:**

- Ayurveda does not have a vibrant ecosystem of science and research, which makes it difficult for practitioners to keep pace with intellectual and scientific advances.

➤ **Gimmickry and Publicity:**

- Some Ayurvedic practitioners resort to gimmickry and publicity to entrap gullible patients. This makes it difficult for conscientious practitioners to be heard and creates a negative image of Ayurveda.

Why is it Important to Address the Challenges Faced by Ayurvedic Practitioners in India?

➤ **Health Care Needs:**

- India has a large population with diverse health care needs. Addressing the challenges faced by Ayurvedic practitioners can help meet the primary health care needs of both urban and rural areas.

➤ **Traditional Medicine:**

- Ayurveda is a traditional system of medicine that has been practiced in India for centuries. Preserving and promoting this system can **help preserve India's cultural heritage and provide alternative options for medical treatment**.

➤ **Evidence-based Practice:**

- **Addressing challenges such as a lack of evidence-based practice can improve the quality of Ayurvedic treatment** and enhance public trust in this system of medicine.
- **Primary Care:**
 - Ayurvedic practitioners can **play a crucial role in providing primary care services in India**. Addressing the challenges faced by these practitioners can help rejuvenate primary care and address the shortage of primary care doctors in India.
- **Empowerment of Practitioners:**
 - Addressing the challenges faced by Ayurvedic practitioners can **help empower them to provide safe and effective care**, enhance their reputation and practice, and improve their financial stability.
- **Combating Scams:**
 - Addressing the challenges **faced by Ayurvedic practitioners can help combat the proliferation of scams and unethical practices in the field of Ayurveda**, which can harm patients and damage the reputation of this system of medicine.

What Initiatives has the Government taken for Development of Ayurveda?

- **National Ayush Mission**
- **Aahaar Kranti Mission**
- **New Portals on Ayush Sector**
- **ACCR Portal and Ayush Sanjivani App**

What are the Key Challenges faced by Ayurveda in the Modern World?

- **Ineffective Treatment in Emergency Cases:**
 - The inadequacies of Ayurveda in treating acute infections and other emergencies including surgery, and lack of meaningful research in therapeutics continue to limit the universal acceptance of Ayurveda.
 - Ayurveda therapeutics are complex and there are too many dos and don'ts.
 - Ayurvedic medicines are slow to act and heal. It is difficult if not impossible to predict a response or prognosis.
- **Lack of Standardization:**
 - One of the biggest challenges faced by Ayurveda is the lack of standardization in the preparation and use of medicines. Unlike modern medicine, where drugs are synthesized in a laboratory under strict regulations, Ayurvedic medicines are prepared using natural substances, which can vary in quality and potency. This can lead to inconsistency in the effectiveness of the medicine.

- **Lack of Research:**
 - While Ayurveda has been practiced for centuries, there is a lack of scientific research to back up its claims. The lack of evidence-based research makes it difficult for Ayurveda to be accepted as a mainstream medical system.
- **Integration with Modern Medicine:**
 - Ayurveda and modern medicine are often seen as two separate systems of healthcare. Integrating Ayurveda with modern medicine can be a challenge, as it requires changes to the way healthcare is delivered.

What should be the Way Forward?

- **Evidence-based Appraisal:**
 - The Ayurvedic system **needs to undergo a rigorous evidence-based appraisal to identify what works and what doesn't**. This will help in sifting the usable parts from the obsolete ones, and will help practitioners in making informed decisions about treatment.
- **Modernization:**
 - Ayurveda **needs to be modernized to keep pace with the intellectual and scientific advances of the times**. Archaic theories need to be replaced with modern scientific principles and practices, and Ayurveda needs to be made more evidence-based.
- **Policy-Making:**
 - Appropriate policy-making can solve a lot of the problems faced by Ayurveda practitioners.
 - This includes allowing Ayurveda graduates to practice modern medicine in stipulated primary care areas, which can help create a workforce that can function effectively to meet the primary health-care needs of India.
- **Public Awareness:**
 - There **needs to be greater public awareness about the benefits and limitations of Ayurveda**. This can be achieved through education campaigns and other initiatives that aim to promote a better understanding of the Ayurvedic system.
- **Research and Development:**
 - Ayurveda has a lot of potential in treating many diseases, but there is still a lack of scientific research to back up its claims. The government and private organizations should invest in research and development of Ayurvedic medicines and practices to validate their effectiveness and safety.
- **Training and Education:**
 - There is a shortage of trained and qualified Ayurvedic practitioners in India. The government

and private organizations should focus on training and education programs to increase the number of practitioners and improve their quality of training.



Transforming India's Logistics System

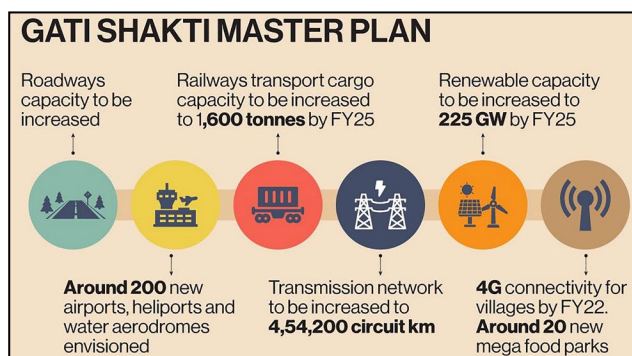
This editorial is based on "The ideal track to run India's logistics system" which was published in the Hindu Business Line on 06/03/2023. It discusses issues with India's Logistics System and ways to address it.

Tag: Indian Economy, GS Paper-3, Infrastructure, Inclusive Growth, Industrial Growth, Industrial Policy, GS Paper-2, Government Policies & Interventions

The **Union Budget 2023** has doubled the **PM Gati Shakti National Master Plan** to States from Rs. 5,000 crore to Rs. 10,000 crore, and has announced an outlay of Rs. 2.4 lakh crore for the Indian Railways.

The plan is a "transformative approach for economic growth and sustainable development dependent on the engines of roads, railways, airports, ports, mass transport, waterways and logistics infrastructure".

Providing the right platform to address the infrastructure challenges that have hindered the movement of freight by rail, **PM Gati Shakti sets the goal of increasing rail freight movement from 27% to 45% by 2030** and freight movement from 1.2 billion tonnes to 3.3 billion tonnes by 2030.



So, improving the logistics system is essential for enhancing a country's competitiveness in logistics.

What are the Issues with India's Logistics System?

➤ Skewed Modal Mix:

- The modal mix in **India's freight movement is heavily skewed towards road transport**, with 65% of freight being moved by road. This has led to increased congestion, pollution, and logistics cost escalation on roads.

➤ Loss of Rail Freight Share:

- Despite being a more cost-effective mode of transportation, **railways have been losing freight share to more flexible modes**, due to the convenience of road transport.
- The **Indian Railways face infrastructural challenges such as the lack of necessary terminal infrastructure**, maintenance of good sheds and warehouses, and uncertain supply of wagons, absence of all-weather roads as a substantial part of the country is out of reach for railways.
 - This results in **high network congestion, lower service levels, and increased transit time.**

➤ Dominance of Bulk Commodities:

- **Coal, iron ore, cement, food grains, and fertilizers account for a significant share of India's freight movement**, while non-bulk commodities have a very small share in rail freight movement.
 - In 2020-21, **coal constituted 44% of the total freight movement of 1.2 billion tonnes, followed by iron ore (13%)**, cement (10%), food grains (5%), fertilizers (4%), iron and steel (4%), etc.
 - Transportation of non-bulk commodities accounts for a very small share in the rail freight movement.

➤ Operational and Connectivity Challenges:

- Increased **transit time by rail, pre-movement and post-movement procedural delays, multi-modal handling**, and the absence of integrated first and last-mile connectivity by rail are some of the operational and connectivity challenges faced by India's logistics system.

➤ Lack of Skilled & Specialist Personnel:

- It has emerged as **one of the most prominent concerns, especially in the face of increasing volumes**, complex operations, and increasing work pressure with multi-tasking.
- Availability of experienced human resources for mostly labor-intensive processes, demanding higher skills and expertise is a challenge for logistics companies.

➤ Warehousing & Taxation Discrepancies:

- Logistics companies generally opt for warehousing because it enables them to store goods and move them closer to the customer when demand occurs. It helps to reduce the transit time.
- However, warehousing is not free of cost and needs proper planning for optimum use.

➤ Fragmentation:

- The logistics industry in India is highly fragmented, with many small and medium-sized players operating

independently, leading to suboptimal utilization of resources and higher costs.

➤ **Inefficient Supply Chain Management:**

- The lack of coordination between various players in the supply chain, including manufacturers, distributors, and retailers, leads to inefficiencies, delays, and increased costs.

What are the Initiatives Related to Logistics?

- **National Logistics Policy (NLP)**
- **Multimodal Transportation of Goods Act, 1993.**
- **PM Gati Shakti Scheme**
- **Multi Modal Logistics Parks**
- **LEADS Report**
- **Dedicated Freight Corridor**
- **Sagarmala Projects**
- **Bharatmala Project**

What should be the Way Forward?

➤ **Need for Investment:**

- **India needs to heavily invest in advanced rail infrastructure** for quick and low-cost container movement, like China, to improve its logistics competitiveness.
- **Continuous monitoring of existing projects along with identification of new priority areas** will also help in achieving the targets of rail freight movement.
- India needs to **focus on developing dedicated freight corridors** to ease the oversaturated line capacity constraints and improve the timing of trains.
 - The **upcoming Dedicated Freight Corridors along India's eastern and western corridors** and multimodal logistics parks will ease the oversaturated line capacity constraints and improve the timing of trains.

➤ **Encouraging Private Participation:**

- Indian Railways should **encourage private participation in the operation and management of terminals, containers, and warehouses** to enhance the efficiency of the logistics system.

➤ **Establishment of a Special Entity:**

- Indian Railways should **establish a special entity in partnership with the private sector to handle intermodal logistics**, which could function as a single window for customers for cargo movement and payment transactions.

➤ **Integrated Logistics Infrastructure:**

- An **integrated logistics infrastructure with first and last-mile connectivity is essential to make rail**

movement competitive with roads and facilitate exports by rail to neighbouring countries such as Nepal and Bangladesh.

➤ **Collaboration with Neighbouring Countries:**

- India should **collaborate with neighbouring countries to develop a seamless logistics network** that facilitates the efficient movement of goods across borders.
- **Examples:**
 - Bangladesh-India can collaborate in the **Petrapole-Benapole integrated check post (ICP)** which has already improved trade facilitation between the two countries.
 - The **Kaladan Multi-Modal Transit Transport Project** between India-Myanmar aims to connect the Indian ports of Kolkata and Haldia with the Sittwe port in Myanmar, is a good example of such collaboration.

➤ **Adoption of Digital Technologies:**

- Adoption of digital technologies such as **blockchain, Internet of Things (IoT), and Artificial Intelligence** can help in enhancing the efficiency of the logistics system and reducing operational costs.

➤ **Skilling and Training:**

- **Skilling and training of the workforce in the logistics industry is crucial** to ensure the smooth functioning of the logistics system.

➤ **Regulatory Reforms:**

- India needs to **undertake regulatory reforms to simplify the regulatory framework** and remove barriers to the growth of the logistics sector.

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Safeguarding the Rights of Consumers

This editorial is based on "Strengthening consumer trust" which was published in the Financial Express on 11/02/2023. It discusses the challenge of ensuring consumer protection and the possible solutions to improve the efficiency of consumer dispute resolution mechanisms.

Tag: Governance, GS Paper-2, Government Policies & Interventions, Transparency & Accountability, Issues Relating to Development, GS Paper-3, IT & Computers

Consumer protection is a crucial aspect of modern economies, with the objective of safeguarding the rights of consumers against unfair trade practices and ensuring fair and efficient dispute resolution mechanisms.

India, one of the world's fastest-growing economies, **has made significant strides in consumer protection, with the Consumer Protection Act 2019** strengthening the legal framework for consumer rights.

However, **despite these policy efforts and grievance redressal mechanisms**, the overall time consumed in addressing consumer grievances in India remains a challenge, with a significant backlog of pending cases.

The pendency in the dispute redressal system causes mental, financial, and emotional hardships for consumers and requires reimagining or redesigning the current dispute resolution framework. There is an **urgent need to lessen the mediation of the procedural, proper, and process brokers in the system.**

Why is Consumer Protection Necessary?

- **Empowering Consumers:**
 - Consumer protection measures **help to empower consumers by giving them the necessary information to make informed decisions** about their purchases. When consumers are protected, they can exercise their rights to demand quality products and services, and also demand compensation if they receive substandard products or services.
- **Preventing Fraudulent Activities:**
 - Consumer protection laws **help to prevent fraudulent activities**, such as false advertising, misleading labeling, and price manipulation. This not only protects consumers but also promotes fair competition in the market.
- **Reducing Health and Safety Risks:**
 - Consumer protection **measures help to reduce the health and safety risks associated with using products and services**. For example, regulations on food products, pharmaceuticals, and medical devices help to ensure that they meet minimum safety standards.
- **Promoting Economic Growth:**
 - Ensuring consumer protection can **promote economic growth by creating a level playing field for businesses to compete fairly**. This can increase consumer confidence in the market, leading to increased spending, investment, and job creation.
- **Upholding Consumer Rights:**
 - Consumer protection measures **help to uphold the basic rights of consumers, such as the right to be informed**, the right to choose, the right to safety, and the right to be heard. These rights are essential for building a fair and just society.

What are the Roadblocks in Consumer Protection in India?

- **Pendency of Cases:**
 - The **pendency of consumer cases in India is quite high**, with a backlog of cases at both state and national levels.
 - This results in long waiting periods and delays in dispute resolution, which frustrates consumers.
 - As of December 2022, the **state commissions had 1,12,000 pending cases, while district commissions had 4,29,000.**
 - The national commission had a pendency rate of 20.5% for the 1,06,088 cases filed with it, while the pendency rate for the 35 state and 637 district commissions stood at 22%.
- **Lack of Infrastructure:**
 - Many consumer forums and commissions **lack the necessary infrastructure and manpower** to handle a large number of cases effectively.
 - This results in delays in the resolution of cases, which could have been resolved quickly.
- **Inefficient Grievance Redressal Mechanisms:**
 - Although there are **several grievance redressal mechanisms in place**, they are often inefficient and do not address the consumer's grievances effectively.
 - Consumers often do not know how to use these mechanisms or are not aware of them.
 - In a study conducted by the National Council of Applied Economic Research, it was found that only 18% of consumers who filed a complaint with a company received a satisfactory resolution, while the rest either did not receive any response or were not satisfied with the response.
- **Lack of Awareness among Consumers:**
 - Many consumers in India are **not aware of their rights and the legal procedures involved in seeking redressal**. This makes it difficult for them to approach the consumer forums and seek justice.
- **Limited Participation of Businesses:**
 - Businesses in India have been slow to adopt consumer-centric policies and participate in dispute resolution mechanisms.
 - This limits the effectiveness of consumer protection laws and slows down the resolution of consumer grievances.

What are the Related Initiatives taken?

- Integrated Grievance Address Mechanism (INGRAM) Portal

- Organisation of national **Lok Adalats** in partnership with the National Legal Services Authority.
- **Consumer Protection Act, 2019**

What should be the Way Forward?

- **Consumer Awareness:**
 - Consumer awareness plays a crucial role in protecting consumer rights.
 - Consumers should be aware of their rights and responsibilities, and the government should conduct regular awareness campaigns to educate consumers about their rights.
- **Product Quality Standards:**
 - The government should establish and enforce strict quality standards for products and services to protect consumers from substandard and hazardous products.
- **Redressal Mechanisms:**
 - The government should establish effective redressal mechanisms to resolve consumer complaints quickly and efficiently.
 - The government can leverage the infrastructure and platforms already established by **Alternative Dispute Resolution (ADR)** and **Online Dispute Resolution (ODR)** institutions through a **Public-Private Partnership (PPP)** model and treat them as digital public goods.
 - Establishing a tech-capabilities-led National Consumer Lok Adalat helpline can **help synchronise efforts between complainants, companies, commissions, legal services authorities, private ADR and ODR agencies, and Non-governmental Organizations (NGOs)** during the process of Lok Adalats.
- **E-commerce Regulations:**
 - With the rise of e-commerce, the **government has also introduced regulations to protect consumers who shop online.**
 - E-commerce platforms are required to provide accurate information about products, pricing, and delivery times, and they must have a robust system for handling consumer complaints.
- **Improving Data Governance:**
 - **By making it mandatory to collect all KYC details of the parties** involved in disputes, communication time can be saved.
 - Institutional parties like **banks, e-commerce entities, and large corporations can appoint nodal officers for speedier communication**, negotiations, and settlements, which will translate into faster complaint disposals.



Women's Underrepresentation in Politics

This editorial is based on "In politics and bureaucracy, women are severely under-represented" which was published in the Indian Express on 13/02/2023. It discusses the Issue of Representation of Women in Politics and ways to address the same.

Tag: Social Justice, GS Paper-1, GS Paper-2, Issues Related to Women, Women's Issues, Inclusive Growth, Human Resource, Government Policies & Interventions, Parliament

India is expected to be the third-largest economy in the world by 2030, after the US and China. According to the **International Monetary Fund (IMF)**, India's economy will grow by 6.8% compared to the US's 1.6%. Despite its economic growth, **women's participation in the country's economy, polity and society has not kept pace.**

Elections in India have witnessed a striking contrast in recent times. The female voter turnout has increased in the country as the seven out of eight states that went to the polls in 2022 saw a jump in female voter turnout.

Though this sounds promising, **the increasing proportion of women voters seen in local, state and general elections** has not translated into more women contesting elections.

So, the need of the hour is to **address the roadblocks in the representation of women** in politics. In order to achieve gender equality and ensure that women have equal opportunities to participate in politics, policymakers, civil society organizations, and the general public will have to work together.

What is the State of Women in Politics and Bureaucracy?

- **In Politics:**
 - As per data compiled by the **Inter-Parliamentary Union (IPU)**, in India, women make up 14.44% of the **17th Lok Sabha**.
 - As per the latest available report of the **Election Commission of India (ECI)**, **women represent 10.5% of all Members of Parliament as of October 2021.**
 - For all the state assemblies, female MLAs' representation stands at an average of 9%.
 - India's ranking in this regard has fallen over the last few years. It is currently behind Pakistan, Bangladesh and Nepal.
- **In Bureaucracy:**
 - Women's participation is **low enough for several public services jobs** at the Centre and states to facilitate free applications for women candidates.

- Despite this, as per Indian Administrative Services (IAS) data and the central government's employment census of 2011, **less than 11% of its total employees were women**, which reached 13% in 2020.
- Further, **only 14% of Secretaries in the IAS were women in 2022**.
 - There are only three women chief secretaries across Indian states and union territories.
- India has never had a woman cabinet secretary. There have been no women Secretaries of Home, Finance, Defence and Personnel, either.
- **Other Sectors:**
 - **Only 20.37% of Micro, Small and Medium Enterprises (MSMEs) owners are women**, 10% of **start-ups** are founded by females, and 23.3% of women are in the labour force.

Why are Women

Underrepresented in Politics and Bureaucracy?

- **Patriarchal Mindset:**
 - India is a **deeply patriarchal society**, and women are often considered inferior to men.
 - This **mindset is deeply ingrained in society and affects the way people perceive women's abilities** to lead and participate in politics.
- **Social Norms and Stereotypes:**
 - Women in India are **often expected to conform to traditional gender roles and are discouraged from pursuing careers in politics**. Social norms and stereotypes dictate that women should prioritize their roles as wives and mothers, and politics is often considered a man's domain.
- **Lack of Access to Education:**
 - Women in India have **historically had limited access to education**, which has hindered their ability to participate in politics. Even though there have been improvements in recent years, many women still lack the necessary education and skills to run for political office.
 - According to the **Annual Status of Education Report (ASER) 2020**, 5.5% of children between the ages of 6-10 were not enrolled in school, and 15.9% of children between the ages of 11-14 were not enrolled in school.
- **Limited Representation in Political Parties:**
 - Women are **often underrepresented in political parties**, making it difficult for them to rise through the ranks and secure party nominations for elections.
 - This lack of representation can be attributed to gender bias within political parties and the perception that women are not as electable as men.

➤ **Violence and Harassment:**

- Women in **politics are often subjected to violence and harassment, both physical and online**, which can deter them from entering politics or speaking out on issues. The lack of safe and inclusive spaces in politics is a significant barrier to women's participation.

➤ **Unequal Opportunities:**

- Women in politics often **face unequal opportunities, such as lower salaries, less access to resources**, and limited networking opportunities. This inequality can make it challenging for women to compete with male candidates and succeed in politics.

➤ **Structural Impediments:**

- **Structural impediments to women's empowerment, in general, are the primary issues** that make it difficult for them to be a part of the services.
- Service conditions involving postings in distant cadres, patriarchal conditioning and balancing family commitments along with the requirements of this job are some of the social factors that lead women to opt out of the civil services.
- Furthermore, there is a general perception that women should be preferred for "soft" ministries like Social Welfare, Culture, Women and Child Development.

How can Women be more Effectively Represented in Politics?

➤ **Reservation of Seats:**

- One of the most effective ways to increase women's representation in politics is to reserve seats for women in legislative bodies.
- This has been implemented in some states like Bihar, Odisha, and West Bengal, where a certain percentage of seats are reserved for women in local bodies.

➤ **Political Parties should ensure Women Representation:**

- Political parties **should ensure that women are given adequate representation in candidate selection for elections**.
- They should make an effort to recruit women candidates and give them priority in winnable seats.

➤ **Education and Training:**

- **Education and training programs can be conducted to empower women** to participate in politics.
- This will help women to build their confidence and skill set, and understand the complexities of politics.

➤ **Encourage Participation from Local Women Leaders:**

- Women's representation in politics **can be increased by encouraging and supporting local women leaders**. This can be achieved through **mentorship programs** and other support initiatives.
- **Address Violence against Women in Politics:**
 - Violence against women in politics is **a significant barrier to their effective representation**. Steps such as raising awareness, creating safe environment etc, should be taken to address this issue and ensure the safety and security of women in politics.
- **Address Social and Cultural Barriers:**
 - Women's effective representation in politics can be **hindered by social and cultural barriers such as patriarchy and gender norms**. These issues should be addressed through campaigns, education and awareness programs, and social reform initiatives like **Beti Bachao Beti Padhao Scheme, Sukanya Samridhi Yojana**.
- **Provide Support for Work-Life Balance:**
 - Many women face **challenges in balancing their political responsibilities with their family and personal lives**. Providing support for work-life balance, such as flexible schedules, childcare, and parental leave, can help to address this issue.
 - Recently, Kerala government announced to grant menstrual leave for female students in all state universities under the Department of Higher Education.
- **Increase Visibility and Recognition:**
 - Women in politics **should be given greater visibility and recognition for their accomplishments**.
 - This can help to inspire other women to get involved in politics and to create a culture of greater gender equality in politics.



Shaping the Data Governance Regime

This editorial is based on "A chance for India to shape a data governance regime" which was published in the Hindu on 14/02/2023. It discusses the issue with Governance of Data and ways to address the same.

Tag: Governance, GS Paper-3, IT & Computers, GS Paper-2, Government Policies & Interventions

In recent years, **India has made great strides in its digital strategies and data governance**. India has **embraced technology and digitalisation to drive economic growth** and to improve the lives of its citizens.

India's **G-20 presidency** has provided an opportunity for the country to showcase its advancements in the **digital arena**, particularly with regards to data infrastructures and data governance. As the world becomes increasingly digital, **the G-20 has recognised the need for international cooperation and collaboration in addressing the challenges**, opportunities and risks posed by the rapid growth of data and digital technologies.

The government has been trying to pass a data protection law with multiple attempts in 2019 and another attempt in 2022. The **2022 bill (the Digital Personal Data Protection Bill)** differs in many ways from its 2019 counterpart (the Personal Data Protection Bill) such as its classifications of personal data, its consent frameworks and data localisation requirements. However, there are **still some challenges that need to be addressed**.

What are the Seven Principles of the 2022 Bill?

- Firstly, usage of personal data by organisations must be done in a manner that is lawful, fair to the individuals concerned and transparent to individuals.
- Secondly, personal data must only be used for the purposes for which it was collected.
- The third principle talks of data minimisation.
- The fourth principle puts an emphasis on data accuracy when it comes to collection.
- The fifth principle talks of how personal data that is collected cannot be "stored perpetually by default" and storage should be limited to a fixed duration.
- The sixth principle says that there should be reasonable safeguards to ensure there is "no unauthorized collection or processing of personal data".
- Seventh principle states that "the person who decides the purpose and means of the processing of personal data should be accountable for such processing".

What are the Key Challenges with Data Protection in India?

- **Lack of Awareness:**
 - One of the biggest challenges with data protection in India is the lack of awareness among individuals and organizations about the importance of data protection and the risks associated with data breaches.
 - This makes it difficult for individuals to take necessary precautions to protect their personal data.
- **Weak Enforcement Mechanisms:**
 - The existing legal framework for data protection in India lacks strong enforcement mechanisms, making it difficult to hold organizations accountable for data breaches and non-compliance.

- **Limited Scope:**
 - The **Personal Data Protection Bill, 2019** applies **only to the processing of personal data by entities within India.**
 - It does not cover data processing by entities located outside India, which can make it difficult to protect the personal data of Indian citizens in such cases.
- **Lack of Standardization:**
 - There is a **lack of standardization in data protection practices among organizations in India**, which makes it difficult to implement and enforce data protection regulations.
- **Inadequate Safeguards for Sensitive Data:**
 - The current data protection framework in India **does not provide adequate safeguards for sensitive data such as health data and biometric data**, which are increasingly being collected by organizations.

What Steps has India taken to Strengthen its Data Protection Regime?

- **Justice K. S. Puttaswamy (Retd) vs Union of India 2017:**
 - In August 2017, a nine-judge bench of the Supreme Court in **Justice K. S. Puttaswamy (Retd) Vs Union of India** unanimously held that Indians have a constitutionally protected **fundamental right to privacy** that is an intrinsic part of life and liberty under **Article 21**.
- **B.N. Srikrishna Committee 2017:**
 - Government appointed a committee of experts for Data protection under the chairmanship of Justice B N Srikrishna in August 2017, that submitted its report in July 2018 along with a draft Data Protection Bill.
 - The Report has a wide range of recommendations to strengthen privacy law in India including restrictions on processing and collection of data, Data Protection Authority, **right to be forgotten, data localisation** etc.
- **Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules 2021:**
 - **IT Rules (2021)** mandate social media platforms to exercise greater diligence with respect to the content on their platforms.
- **Other Initiatives taken:**
 - **India's Data Empowerment and Protection Architecture (DEPA)**

What should be the Way Forward?

- **Develop a Comprehensive Data Protection Law:**
 - India needs a **robust data protection law that protects citizens' privacy rights** while also facilitating the use of data for legitimate purposes. The law

should be in line with global best practices and should provide for strong enforcement mechanisms.

- **Build Digital Infrastructure and Skills:**
 - India needs to invest in **building digital infrastructure and developing digital skills to ensure that data is collected**, stored, and used in a responsible and accountable manner.
- **Develop Clear and Accountable Data Governance Policies and Regulations:**
 - India needs to **establish clear policies and regulations that govern the collection, storage, and use of data by governments**, businesses, and citizens. These policies and regulations should be transparent, accountable, and enforceable.
- **Balance the Interests of all Stakeholders:**
 - India needs to **balance the interests of governments, businesses, and citizens to ensure that data governance supports sustainable development** and benefits all stakeholders.
- **Promote Open-Source Solutions:**
 - India can **promote the development and implementation of open-source solutions** to ensure that underlying data architectures are a social public good, and to promote digital technologies to become accessible and affordable for all.
- **Ensure Alignment with Broader Development Strategies:**
 - India needs to **ensure that its data governance regime is aligned with its broader development strategies** and values, and that it supports the development of a secure, more egalitarian, and trustworthy digital future for all.
 - **India Stack** can be **designed and implemented in a way that is consistent with India's broader development strategies.**
 - India Stack is a **unified software platform that provides digital public goods**, application interfaces and facilitates digital inclusion.

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India and the AUKUS Grouping

This editorial is based on "India and the Anglosphere" which was published in the Indian Express on 15/02/2023. It discusses the Issue with the AUKUS Grouping and related implications for Asia and India.

Tag: International Relations, GS Paper-2, Global Groupings, Important International Institutions, Bilateral Groupings & Agreements, Effect of Policies & Politics of Countries on India's Interests

Recently, the **US, UK and Australia** have unveiled details of their plan to create a new fleet of nuclear-powered submarines, aimed at countering China's influence in the **Indo-Pacific region**. Under the AUKUS pact Australia is to get at least three nuclear-powered submarines from the US.

The **AUKUS agreement**, which involves Australia acquiring nuclear-powered submarines with the help of the US and the UK, is being praised and criticized simultaneously. It is viewed as a means of strengthening deterrence and stability in the Indo-Pacific. However, **China sees it as a dangerous alliance that the US is building in the area**, along with the **Quadrilateral forum or the Quad**.

This pact will **trigger multiple strategic consequences for Asia, including India**. However, it is also an opportunity for India to develop a unique set of arrangements with the US and its allies.

What is AUKUS Grouping?

- It is a trilateral security partnership for the **Indo-Pacific**, between Australia, the UK and the US (AUKUS) which was signed in 2021.
- The major highlight of this arrangement is the sharing of US nuclear submarine technology to Australia.
- Its Indo-Pacific orientation makes it an alliance against China's assertive actions in the **South China Sea**.
- It involves a new architecture of meetings and engagements between the three countries, as well as cooperation across emerging technologies (**applied AI, quantum technologies and undersea capabilities**).

What are the Concerns related to AUKUS Grouping for Asia?

- **Regional Security:**
 - The AUKUS partnership has been **perceived as a challenge to the security and stability of the region**, particularly by China. The **agreement includes the sharing of sensitive defense technologies and intelligence**, which has raised concerns about its impact on the strategic balance in the region.
- **Diplomatic Implications:**
 - The AUKUS partnership has **also been viewed as a diplomatic setback for countries** such as India, Japan, and South Korea, which have traditionally been seen as key allies of the United States in the region.
 - These countries fear that the **new partnership will sideline them and reduce their influence in the region**.
- **Impact on Non-Proliferation:**

- The AUKUS partnership **involves the transfer of nuclear-powered submarine technology to Australia**, which has raised concerns about its **impact on global non-proliferation efforts**. Some experts have expressed concern that this move could set a dangerous precedent and encourage other countries to pursue nuclear capabilities.

➤ **Economic Consequences:**

- The AUKUS partnership has also **raised concerns about its economic implications, particularly for countries such as India that have significant defense industries**. The agreement is expected to lead to increased competition and could potentially impact the ability of these countries to sell defense equipment to Australia.

What will be the Strategic Consequences for India?

➤ **Strengthening ties with Australia:**

- With Australia's upgraded scientific and technical capabilities, **there is an opportunity for India to deepen its S&T cooperation with Australia**, which could eventually expand to sensitive strategic areas.
- This **would enhance India's own technological capabilities** and contribute to regional peace and security.

➤ **Recognizing the Continuing Global Strategic Salience of Britain:**

- India tends to neglect the strategic importance of Britain, but the AUKUS deal may boost UK's profile in Asia.
- **India could explore opportunities for closer cooperation with Britain** on Indo-Pacific security issues.

➤ **Embracing the idea of an "Anglosphere":**

- Despite India's difficult past relations with the Anglosphere, the **AUKUS deal has brought enduring geopolitical bonds** between the US, UK, Australia, Canada, and New Zealand back to life.
 - An Anglosphere is also called the world of English-speaking people bound by common political beliefs, similar legal traditions, and shared geopolitical interests.
- India could **explore opportunities to expand its ties with the English-speaking world**, particularly in the areas of technology and defense.

➤ **Developing a Unique Set of Arrangements:**

- With the US seeking to boost the strategic capabilities of its allies and partners in the Indo-Pacific, **India has a rare opportunity to develop its own set of arrangements with the US and its allies**.

- This could involve closer military cooperation, joint exercises, and intelligence sharing, among other things.

How can India Safeguard its Strategic Interests?

- **Exploring Opportunities for Collaboration:**
 - India can explore opportunities for collaboration and technology transfer with the AUKUS countries, while also ensuring that its own national security interests are not compromised.
 - India can seek collaborations with AUKUS countries in areas such as maritime security, cybersecurity, and intelligence sharing.
- **Maintaining Balance:**
 - India should maintain a balance between its engagement with AUKUS and other key partners, such as Russia, France, and Japan.
 - India should avoid being drawn into a zero-sum game and strive to maintain strong ties with all relevant countries.
 - This is particularly important given the complex geopolitical landscape of the Indo-Pacific region.
- **Strengthening Quad:**
 - India should work towards strengthening the Quad, which could provide a counterbalance to AUKUS and help promote a rules-based regional order.
 - India should leverage the Quad to promote regional stability and balance of power.
- **Ensuring the Interest of Smaller Countries:**
 - India needs to ensure that the interests of smaller countries in the region are not overlooked in any engagements with AUKUS. India should take a leadership role in promoting a cooperative and inclusive approach to regional security issues.
 - This could involve initiatives such as capacity building for smaller countries in the region and promoting greater regional integration and connectivity.



Fragmented Globalisation

*This editorial is based on “**Fragmented Globalisation**” which was published in Financial Express on 11/03/2023. It talks about how the globalisation is taking a new form amid the recent changes in global economic growth and rising geopolitical tensions.*

Tag: International Relations, GS Paper 2, Deglobalisation & Protectionism, Effects of Globalization on Indian Society, GS Paper 3, Growth & Development

For decades, the benefits of **globalisation** have appeared to be obvious and unassailable; however, as the international order has come under strain in recent years, the **delinking of global trade and investment by companies and governments** has witnessed an increase in the pace.

The countries are increasingly turning to **regional or bilateral trade agreements** to pursue their interests, rather than relying on global frameworks. This shift in the trend can be attributed to factors like **rising economic nationalism, increasing geopolitical tensions**, and the **failure of various multilateral institutions** to deliver on their promises.

This fragmented form of globalisation has profound implications for the future of international trade and cooperation, with both opportunities and challenges for countries around the world.

What is Meant by Globalisation?

- **Emergence:** What today is referred to as globalisation, gained recognition in India with the **end of the Cold war and the disintegration of the Soviet Union in 1991**.
 - An offshoot of two systems — **democracy and capitalism**, globalisation rooted for **free trade** and increased **inter-country movement of capital and labour**.
 - In a political sense, it refers to increasing global governance via international institutions or growing alignment of national policies.
- **Motivating Factors for Globalisation:** Broadly, economic, financial, political, technological and social factors paved the way to globalisation.
 - Economic factors such as **lower trade & investment barriers** and expansion of financial sector;
 - Political factors include the **reforms in the govt policies worldwide** to facilitate trade and commerce;
 - Social factors include **cultural convergence** along with significant **ease in transportation and communication**; and
 - Technology factors such as **ease in transmitting information worldwide**, and more recently, the **accelerating shift towards remote work** - made national borders seem largely irrelevant.

How is Globalisation becoming Fragmented?

- **Advent of Fragmented Globalisation:** While globalisation made markets work better, policymakers lost sight of its **adverse distributional consequences**.
 - Many communities, countries were left behind contributing to a **widespread sense of marginalisation and alienation**.

- **Recent Upheavals in Globalisation:** The most recent example is the **invasion of Ukraine** which led to imposition of sanctions on Russia (a **G20** country) and the **weaponisation of the international payments system**.
 - The **United Kingdom's vote to leave the European Union** was one of the most visible political manifestations against globalisation.
 - Moreover, the **US entering a tariff war with China** has also deepened the divide between the two economic powers.
 - With climate change/environmental protection policies gaining recognition, there is a global race for cleantech innovations and **circular economy approaches**.
 - The mass rollout of green technologies from solar PV to electric vehicles is bringing **shifts to global supply chains and transferring manufacturing hubs to more 'suitable' countries**.
- **Is De-Globalisation the Final Consequence:** Despite all these ongoing turmoils, the available data suggest that globalisation is not ending so much as it is changing.
 - Fragmentation of the global economy is now **resulting in the strengthening of regional economic areas, or globalisation of like-minded countries**, and not to a de-globalisation. Global trade will essentially remain an important pillar in global growth.
- **Main Characteristics of Fragmented Globalisation:** This era of fragmented globalisation that has emerged, is **characterised by substitution** rather than negation.
 - In simpler words, the **countries, instead of not participating in global trade, are substituting their existing trade partners** with some other country.
 - For instance, the EU-US-led restrictions have not materially reduced **Russia's oil exports, rather redirected them to China and India**.
 - Additionally, the world is witnessing a **wave of de-dollarisation** with countries looking for ways to create a **parallel cross-border payments and settlement system**.
- India has advocated for regional economic integration, such as through the **South Asian Free Trade Agreement (SAFTA)** and **BIMSTEC** initiatives and must continue to do so.
- India's progress in making this forum a success will largely depend on factors like its own economic policies, geopolitical developments, and global economic trends.
- **Cooperation between Public/Private Sectors:** Companies in India must work with the Central/ State governments to facilitate the **inherently tricky process of rewiring supply chains and to accelerate the green transition**.
 - Policymakers need to thoroughly revise how they think and operate, and long-term investors absolutely should incorporate **more sophisticated geopolitical, sociopolitical, and environmental analyses** into their allocation strategies going forward.
- **India as a Voice of Global South:** While India has **also been a strong advocate for free trade** and globalisation, pushing for the removal of barriers to trade and investment, **it has also been critical of some aspects** of globalisation, particularly regarding the **unequal distribution of benefits and the negative impacts on local industries and workers**.
 - India has also **argued for a more balanced and equitable approach** to globalisation that ensures the benefits are shared more widely and that there are adequate social and environmental protections.
 - As one of the emerging global powers, India can become **"voice of the Global South"**, that is **otherwise under-represented** in global forums.

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Curbing Fake News

This editorial is based on "Stronger laws to curb fake news" which was published in the Indian Express on 18/02/2023. It discusses the Issue of Fake News and ways to curb it.

Tag: Governance, GS Paper - 2, Government Policies & Interventions, GS Paper - 3, Role of Media & Social Networking Sites in Internal Security Challenges

In the age of the internet, fake news has become the new social evil that is haunting us.

Recently, a fake video was spread in which a migrant worker in Tamil Nadu was being attacked.

Concerned about the ongoing situation, the Tamil Nadu government said that those who spread rumours

How can India Use this New Globalisation to its Advantage?

- **Advocating Regional Integration:** India can potentially play a significant role in shaping the future of globalisation, with its stance on issues related to trade, investment, and economic integration.
 - In recent times, India has benefited from globalisation and has **become a hub for outsourcing**, particularly in the IT and services sectors.

that migrant workers are being attacked in Tamil Nadu are against the Indian nation and they cause harm to the integrity of the country.

In 2020, the number of cases filed against people 'circulating fake/false news/rumours' under Section 505 of the **Indian Penal Code (IPC)** has **increased by 214%**, according to the **National Crime Records Bureau**.

There is **also a need for stronger laws against fake news in India** and media organisations need to make fact-checking a routine practice and create greater public awareness.

What are the Challenges in Curbing Fake News in India?

➤ **Low Digital Literacy:**

- India's digital literacy rate is still low, which makes it easy for fake news to spread, as people often do not have the skills to verify the authenticity of news sources.
 - According to the **India Inequality Report 2022: Digital Divide**, approximately 70% of the population has poor or no connectivity to digital services.
 - Among the poorest 20% households, only 2.7% have access to a computer and 8.9% to internet facilities.

➤ **Political Use:**

- **Fake news is often used for political purposes in India**, especially during elections. Political parties use fake news to manipulate public opinion, which makes it challenging to control the spread of fake news.

➤ **Limited Fact-Checking Infrastructure:**

- India has limited fact-checking infrastructure, and many of the available fact-checking organizations (PIB fact check units) are small and poorly funded.

➤ **Lack of Penalties:**

- There are **currently no strict penalties for the spread of fake news in India**, which makes it difficult to deter people from creating and disseminating fake news.

➤ **Opacity of Social Media Platforms:**

- Social media platforms are increasingly becoming the primary ground for public discourse over which a handful of individuals have inordinate control.
 - One of the biggest hurdles in being able to curb misinformation is the lack of transparency by social media platforms.
 - Even when platforms have disclosed certain kinds of information, the data is often not presented in a manner that facilitates easy analysis.

➤ **Anonymity:**

- The most famous reason for anonymity is to **be able to speak the truth against vindictive governments or to not let the views be tagged to the real person** being spoken about, in the offline world.
 - Despite helping people share their views without any insecurity, it does more harm in the sense that they may spread false information without any repercussions.

What are the Initiatives taken in this Regard?

➤ **Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021:**

- The Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 **proposes that social media platforms are required to remove content that has been fact-checked** by the Press Information Bureau's fact check unit and deemed false.
- This rule aims to curb the spread of fake news and misinformation on social media platforms.

➤ **IT Act 2008:**

- Section 66 D of the **IT Act 2008** regulates offences related to electronic communication.
- This includes **punishing individuals who send offensive messages through communication services** or social media platforms. This act can be used to penalize those who spread fake news through electronic communication.

➤ **Disaster Management Act 2005:**

- The **Disaster Management Act 2005** and the **Epidemic Diseases Act 1897** (especially during Covid-19) regulate the circulation of fake news or rumours that can cause panic among citizens.

➤ **Indian Penal Code of 1860:**

- It **regulates fake news that causes riots and information** that causes defamation. This act can be used to hold individuals accountable for spreading fake news that incites violence or defames someone's character.

What should be the Way Forward?

➤ **Promote Media Literacy:**

- Education and awareness are **critical tools in combating fake news**. People need to be taught how to verify sources, fact-check claims, and understand the difference between reliable and unreliable news sources.

➤ **Strengthen Laws:**

- India has some laws against fake news, but they need to be more robustly enforced. Laws need to

be updated to address the rapidly evolving online media landscape.

➤ **Encourage Responsible Journalism:**

- Journalists need to adhere to ethical standards and be accountable for their reporting. Media organizations can play a role in promoting responsible journalism and fact-checking.

➤ **Encourage Social Media Companies to Act:**

- **Social media platforms need to be more proactive in identifying and removing fake news.** They can use artificial intelligence tools to identify fake news and work with fact-checking organizations to verify news stories.

➤ **Encourage Fact-Checking Organizations:**

- **Fact-checking organizations can play a critical role in verifying news stories** and educating people about fake news. These organizations need to be encouraged and supported by the government and media.
 - The fact checks unit of the **Press Information Bureau (PIB)** busted 1,160 cases of false information since its inception in November 2019.

➤ **Encourage Responsible Social Media Use:**

- **Individuals need to take responsibility for their social media use.** They need to avoid sharing unverified news stories and be more critical of what they see online.

➤ **Foster a Culture of Critical Thinking:**

- **Critical thinking skills need to be fostered in schools** and in society in general.
- People need to be encouraged to question what they read and hear and to seek out reliable sources of information.



Protecting World Oceans

*This editorial is based on “**A treaty to protect world oceans will serve everyone well**” which was published in Livemint on 12/03/2023. It discusses the needs to protect the world’s oceans and steps that should be taken.*

Tag: Biodiversity & Environment GS Paper-1, Water Resources, GS Paper-2, International Treaties & Agreements, GS Paper-3, Conservation

Recently, the **UN (United Nations)** members agreed on a **High Seas Treaty** to ensure the protection and sustainable use of marine biodiversity of areas beyond national jurisdiction.

It was agreed during talks led by the UN during the Intergovernmental Conference (IGC) on Marine **Biodiversity of Areas Beyond National Jurisdiction (BBNJ)** in New York, the US.

The treaty is yet to be formally adopted as members are yet to ratify it. Once adopted, the treaty will be legally binding.

The ocean is a huge carbon sink, but that status is increasingly threatened. A healthy ocean ecosystem plays an important role in the carbon cycle. It is therefore time to provide the ocean with the protection it deserves.

What is the Need to Protect Oceans?

➤ **Supports the Livelihoods:**

- The ocean is a **crucial ecosystem that supports the livelihoods of three billion people** and provides economic security.
 - 3 billion people depend on its ecosystems for food and economic security.

➤ **Mitigates Climate Change:**

- It also mitigates **climate change**, having absorbed **93% of the heat trapped by greenhouse gases** and about 30% of the CO₂ emitted by burning **fossil fuels** so far.

➤ **Maintaining Carbon Cycle:**

- A healthy ocean ecosystem, with abundant marine biodiversity, **plays an important role in the carbon cycle and helps maintain critical ecosystem services** such as carbon sequestration and oxygen production.

➤ **Economic Importance:**

- Oceans are **important for the global economy, providing food, energy, and other resources.**
 - According to the **United Nations**, the global fishing industry employs over 50 million people and provides food for billions more.
 - Additionally, ocean-based industries such as shipping, tourism, and renewable energy are growing rapidly.

What are the Challenges in Ocean Protection?

➤ **IUU (Illegal, Unreported and Unregular) Fishing:**

- Overfishing is one of the biggest threats to the health of the world’s oceans. It can lead to the depletion of fish stocks and disrupt entire marine ecosystems.
 - According to the **Food and Agriculture Organization (FAO)**, approximately **33% of global fish stocks are overfished**, and another 60% are fully exploited. Additionally, **Illegal, Unreported, and Unregulated (IUU) fishing**

is estimated to cost the global economy up to USD23.5 billion annually.

➤ **Climate Change:**

- **Climate change is causing ocean temperatures to rise and ocean acidity to increase**, which can harm marine life and coral reefs. It can also lead to the loss of habitats and changes in ocean currents.
 - The **Intergovernmental Panel on Climate Change (IPCC)** reports that the oceans have absorbed over 90% of the excess heat trapped by greenhouse gases since the 1970s, leading to a rise in ocean temperatures.
 - Additionally, the oceans have absorbed approximately 30% of the carbon dioxide released into the atmosphere, leading to increased ocean acidity.

➤ **Pollution:**

- **Pollution is a significant threat to the health of world oceans.** It can include plastic waste, oil spills, agricultural runoff, and chemicals. Polluted water can harm marine life and create **dead zones** where nothing can survive.

➤ **Unsustainable Tourism:**

- Tourism can have a significant impact on the health of world oceans, especially in areas where there is high demand for activities such as snorkeling, diving, and beach visits. If not managed properly, tourism can lead to habitat destruction, pollution, and overfishing.
 - According to the **World Tourism Organization (UNWTO)**, international tourist arrivals reached 1.4 billion in 2018, with coastal and marine tourism being a significant contributor. However, unsustainable tourism practices can lead to environmental degradation, including habitat destruction, pollution, and overfishing.

➤ **Invasive Species:**

- Invasive species can **disrupt the balance of marine ecosystems and harm native species**. They can be introduced through ballast water from ships, or accidental release from aquaculture or aquariums.
 - The **International Union for Conservation of Nature (IUCN)** estimates that **invasive species are responsible for 18% of global fish extinctions**.

➤ **Lack of Governance:**

- The **management and protection of world oceans can be challenging due to the lack of governance and cooperation between countries**. Many areas of the ocean are considered international waters, which makes it difficult to enforce regulations and protect marine ecosystems.

- According to the United Nations, **only 16%** of the world's oceans are covered by marine protected areas (MPAs), and only a fraction of these is fully protected from fishing and other extractive activities.
- Additionally, there is a lack of international cooperation and coordination in the management and protection of the high seas, which cover 64% of the world's oceans.

What should be done to Protect World Oceans?

➤ **Establish and Enforce Marine Protected Areas (MPAs):**

- MPAs can **help protect marine ecosystems by limiting fishing and other extractive activities**. They can also provide a sanctuary for endangered species and promote biodiversity. Governments and international organizations should work together to establish and enforce more MPAs, especially in areas of high biodiversity and vulnerability.
 - A 2017 study showed that **marine reserves in national waters have on average 670% more fish**, as measured by biomass, than adjacent unprotected areas.

➤ **Reduce Plastic Pollution:**

- Governments can implement policies that encourage the use of reusable or biodegradable alternatives, and the private sector can take steps to reduce the use of **single-use plastics**.

➤ **Combat Climate Change:**

- Governments can implement policies that encourage renewable energy and low-carbon transportation. The private sector can also invest in green technologies and practices. Individuals can reduce their carbon footprint by using energy-efficient appliances and reducing their reliance on fossil fuels.

➤ **Regulate Fishing:**

- To combat overfishing, governments should implement policies that limit fishing quotas and establish sustainable fishing practices. The private sector can also take steps to promote sustainable fishing practices, such as using selective fishing gear and avoiding bycatch.

➤ **Combat Illegal Fishing:**

- Governments **should implement measures to combat illegal, unreported, and unregulated fishing**, such as monitoring and surveillance of fishing activities, and imposing stricter penalties for violations.

➤ **Increase International Cooperation:**

- Protecting world oceans requires international cooperation and coordination. Governments should work together to establish and enforce international agreements and regulations, such as the **United Nations Convention on the Law of the Sea**.
- The private sector and civil society can also play a role in promoting international cooperation and advocating for stronger protection measures.



Achieving Universal Health Care

This editorial is based on “Moving forward with a newer concept of Universal Health Care” which was published in the Hindu on 20/03/2023. It discusses the issues with Universal Health Care/Coverage and ways to achieve it.

Tag: Social Justice, GS Paper-2, Health, Government Policies & Interventions

Universal Health Coverage (UHC) is widely discussed worldwide as an essential component of the development agenda. The **outbreak of Covid-19** has necessitated the need for universal health coverage as the health systems failed miserably across the globe during those times. Considering the importance of UHC, the **United Nations declared 12th December as International Universal Health Coverage Day (UHC Day)** in 2017.

The United Nations defines UHC as “everyone, everywhere should have access to the health services they need without risk of financial hardship.” **Sustainable Development Goals target 3.8** (“Achieve universal health coverage, including financial risk protection, access to quality essential healthcare services and access to safe, effective, quality and affordable essential medicines and vaccines for all”) also focuses on achieving universal health coverage.

A big push in the health sector is the need of the hour, in the absence of which the health and wellness centres will end up in deplorable conditions similar to the current primary health centres and sub-centres.

What are the Challenges in Implementing UHC in India?

- **Inequitable Access to Health Insurance:**
 - The lowest coverage of health insurance is among households with the lowest wealth quintile and underprivileged sections, indicating a lack of equitable access to health insurance.

- The **NFHS-5** results paint a different picture for India, where insurance coverage is lowest (36.1%) among households with the lowest wealth quintile.

➤ Lack of Financial Protection:

- Despite the existence of schemes like **Janani Shishu Suraksha Karyakram**, the **average out-of-pocket expenditure per delivery in public health facilities is still high**, particularly in urban areas.
- There are significant disparities in out-of-pocket expenditure and access to healthcare services among different states in India. Many north eastern states and larger states have seen a rise in out-of-pocket expenditure between NFHS-4 and NFHS-5.
- The latest report of NFHS revealed that the average out-of-pocket expenditure per delivery in a public health facility is Rs. 2,916, which in the case of urban and rural stands at Rs. 3,385 and Rs. 2,770. simultaneously.

➤ Inclusion and Exclusion Errors in Health Insurance Policies:

- Recent studies have shown that like earlier health insurance policies, the **Pradhan Mantri Jan Arogya Yojana (PMJAY)** is also not free from inclusion and exclusion errors, which could lead to the inclusion of ineligible households and exclusion of eligible households.

➤ Availability of Services:

- **Although 56% of empanelled hospitals under the PMJAY are in the public sector**, 40% are in the private for-profit sector, indicating that the availability of services may be concentrated in areas with previous experience implementing publicly funded health insurance schemes.

➤ Inadequate Infrastructure:

- In many low- and middle-income countries, the lack of proper infrastructure is a significant challenge to achieving UHC. This includes inadequate health facilities, inadequate equipment, and inadequate medical supplies.
- There is a **shortfall of 79.5% of specialists at the Community Health Centers (CHCs)** as compared to the requirement.

➤ Poor Health Education:

- Lack of education and awareness regarding healthy lifestyles and preventive health measures can lead to an increase in preventable illnesses and conditions.

What should be the Way Forward?

➤ Enhancement of Health Expenditure:

- The need of the hour is to **enhance health expenditure as a percentage of GDP**, which currently stands lower than most of the developing nations.
 - India currently spends about **3.2% of its GDP on health**. This is **much lower than the average health spending share of the GDP (at around 5.2%)** of the Lower and Middle Income Countries (LMIC).
- Strengthening the primary healthcare sector is another area of development that needs special attention.
 - In this direction, the establishment of the health and wellness centres under the **Ayushman Bharat scheme** was proposed in 2018, but the growth in this regard is questionable.
- **Increase Public Investment in Healthcare:**
 - The government should increase its spending on healthcare and allocate more resources to build a strong healthcare infrastructure. This includes building more healthcare facilities, increasing the number of healthcare professionals, and ensuring adequate supplies of medicines and medical equipment.
- **Expand Health Insurance Coverage:**
 - The government should work towards expanding health insurance coverage to all citizens. This would help reduce out-of-pocket expenses and make healthcare more affordable.
- **Prioritize Primary Healthcare:**
 - Strengthening primary healthcare is crucial for achieving UHC. This includes increasing access to primary healthcare facilities, improving the quality of care, and strengthening the primary healthcare workforce.
- **Improve Healthcare Quality:**
 - Quality of care is an important aspect of UHC. The government should invest in improving the quality of care by developing quality standards, ensuring adherence to these standards, and providing training to healthcare providers.
- **Invest in Health Information Systems:**
 - Health information systems play a crucial role in UHC by providing data for planning and monitoring healthcare services. The government should invest in developing robust health information systems that can provide timely and accurate data.
- **Promote Preventive Healthcare:**
 - Investing in preventive healthcare can help reduce the burden of disease and the cost of healthcare. The government should promote preventive healthcare measures, such as vaccination programs, health education campaigns, and lifestyle interventions.

➤ **Foster Partnerships:**

- Achieving UHC requires a collaborative effort between the government, healthcare providers, and civil society. The government should foster partnerships with healthcare providers and civil society organizations to achieve UHC.

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Rejuvenating the Insurance Industry

*This editorial is based on “**Modernising insurance fraud detection tools**” which was published in the Hindu on 19/03/2023. It discusses the Issues of rising fraud in the insurance sector and ways to modernise insurance fraud detection tools.*

Tag: Indian Economy, GS Paper-3, Mobilization of Resources, Capital Market

The insurance sector has undergone unprecedented changes in response to the pandemic, necessitating rapid operational adjustments to minimise business disruptions. Insurers responded quickly to this crisis by increasing the digitalisation of sales, customer service, and claims management and enabling their staff to operate in a hybrid working model.

India is on its way to become the sixth largest insurance market in the world, over the next decade with the insurance premiums growing at an average of 14% per annum in nominal local currency terms. However, the Insurance Sector is facing several challenges which need to be addressed.

What is the Current Status of Insurance Sector in India?

- According to the **Economic Survey 2022-23**, India's insurance market is poised to emerge as one of the fastest-growing markets globally in the coming decade.
- As per the insurance regulatory body, IRDAI, insurance penetration in India increased from 3.76% in 2019-20 to 4.20% in 2020-21, registering a growth of 11.70%.
 - Also, the insurance density increased from USD 78 in 2020-21 to USD 91 in 2021-22.
- The life insurance penetration in 2021 was 3.2%, almost twice more than the emerging markets and slightly above the global average.

What are the Challenges with the Insurance Sector in India?

- **Low Penetration:**

- The **insurance penetration rate in India is low as compared to other countries**. This is due to low awareness and a lack of trust among people towards insurance.
 - Around **65% of India's population, amounting to over 90 crores, inhabits rural parts of the country**. However, only 8%-10% of rural India has life insurance coverage.
 - According to the **Insurance Regulatory and Development Authority of India (IRDAI)**, the penetration of the Indian insurance industry is less than 5% of the GDP. In terms of penetration, **India is far behind the global average of 7% of the GDP**.
- **Lack of Product Innovation:**
 - The insurance sector in India has been slow in product innovation. Many insurance companies offer similar products, which leads to a lack of differentiation in the market.
- **Fraud:**
 - Fraud is a **major challenge in the insurance sector in India**. Insurance fraud includes false claims, misrepresentations, and other illegal activities.
 - **Fraud can often be facilitated by weaknesses in an organization's systems and controls**, which can create opportunities for those intent on committing fraud.
 - Moreover, **digitisation and customer-centric policies may have inadvertently provided opportunities for fraudsters to commit identity theft**, misrepresentation, and fraudulent claims.
 - **More than 70% of Indian insurers indicated a marginal to a significant increase in frauds in the past two years.**
- **Talent Management:**
 - The insurance sector in **India faces a talent shortage**. **The industry needs skilled professionals in areas** such as actuarial science, underwriting, claims, and risk management.
 - Attracting and retaining talented professionals is a challenge for the industry.
- **Slow Rate of Digitalization by Incumbents:**
 - The insurance sector in India has been slow to adopt digitalization compared to other industries, which has resulted in several challenges such as inefficient processes, lack of transparency, and poor customer experience.
- **Lack of Automation:**
 - Many **insurance companies in India still rely on manual processes for tasks such as underwriting, policy servicing, and claims management**, which can be time-consuming and error prone.

- This can result in delays, higher costs, and dissatisfied customers.

➤ **Claims Management:**

- The **claims process in India is often seen as complicated, slow, and opaque, which can lead to customer dissatisfaction** and loss of trust in the insurance industry.
- This can be due to a lack of transparency, inefficient processes, and poor communication with customers.

What should be the Way Forward?

➤ **Leveraging Technology:**

- Digitalization **should be made a target to achieve across the value chain**, with an order of priority - to reduce cost, improve efficiencies & support further ecosystem developments.
- **Technology would need to be leveraged to create and maintain higher employee efficiency**. Upskilling programs can be established that develops a mix of soft, technical and digital skills.

➤ **Aligning with Dynamic Changes in Customer Behaviour:**

- Players **would need to be aligned with dynamic changes in customer behaviour & preferences** and manage perceptions by showcasing fiduciary responsibility, like offering quick personalized products that can be prioritized over mass-product offerings to give customers more flexibility.

➤ **Optimising Usage of Data & Analytics:**

- There's an **urgent need to optimise usage of Data & analytics across functions for maximum efficiency**, especially in the case of underwriting & claims.

➤ **Simplifying Claims Management:**

- The **claims management process would need to be simplified for the insurer and insured**. Strategic partnerships can be considered to manage scale and gain access to a further set of partners.

➤ **Adopting Hybrid Distribution Models:**

- A new approach to distribution is necessary, one that integrates technology and prioritizes high-potential markets. To achieve this, **hybrid distribution models that combine human expertise and technology** can be employed, with a particular emphasis on serving rural markets.

➤ **Tackling Fraud:**

- The key objectives of an **effective, business driven Fraud Risk Management (FRM) approach should encompass controls that prevent the occurrence of fraud**, detect fraud, and provide an effective response mechanism to limit the consequences.
- An **effective way to counter fraud is through effective data management**.

- The first step for insurers is to organise their data effectively by identifying the relevant data sources and integrating them on a common platform or a data lake wherein accurate, complete, and appropriate information is stored.



Tackling Disparities in Human Development

This editorial is based on "The wide disparities in human development" which was published in the Hindu on 21/03/2023. It discusses the issues of rising disparities in human development and ways to address the same.

Tag: Governance, GS Paper – 3, Inclusive Growth, GS Paper – 2, Human Resource, Gender

Human development is **not solely focused on the pursuit of economic growth and maximizing wealth in the economy**. Instead, it is **centered around the idea of humanity, which involves expanding freedom, improving capabilities, promoting equal opportunities, and ensuring a prosperous, healthy, and lengthy life**.

India is now one of the fastest-growing economies globally. However, this growth has not resulted in a corresponding increase in its **Human Development Index (HDI)**. According to the **Human Development Report of 2021-22**, India ranks 132 out of 191 countries, behind Bangladesh and Sri Lanka.

Given India's size and large population, it is **critical to address the subnational or State-wise disparities in human development**, which will help India realise its demographic dividend.

What is HDI?

- The HDI is a **composite statistical measure created by the United Nations Development Programme** to evaluate and compare the level of human development in different regions around the world.
- It was **introduced in 1990 as an alternative to conventional economic measures such as Gross Domestic Product (GDP)**, which do not consider the broader aspects of human development.
- The **HDI assesses a country's average accomplishment in three aspects**: a long and healthy life, knowledge, and a decent standard of living.
- The **subnational HDI shows that while some States have made considerable progress**, others continue to struggle.
- **Delhi occupies the top spot and Bihar occupies the bottom spot.**

- Nonetheless, it is worth noting that Bihar, unlike the previous HDI reports, is no longer considered a low human development State.

What are the Obstacles that India Faces in Attaining Human Development?

- **Unevenly Distribution of Economic Growth:**
 - One of the main reasons in achieving human development is that **economic growth has been unevenly distributed**.
 - The **top 10% of the Indian population holds over 77% of the wealth**.
 - This has resulted in significant disparities in access to basic amenities, healthcare and education.
- **Low Quality of Services:**
 - While India has made significant progress in reducing poverty and increasing access to healthcare and education, the **quality of such services remains a concern**.
 - For example, **while the country has achieved near-universal enrolment in primary education**, the quality of education remains low.
- **Lack of Effective Educational Infrastructure:**
 - India also **faces challenges in providing quality education to its citizens**. Many schools lack basic facilities such as adequate classrooms, clean water, and trained teachers.
- **Lack of Proper Nutrition:**
 - **Malnutrition and undernourishment are major problems in India**, particularly among children. This can have long-term impacts on health, cognitive development, and overall well-being.
 - Over **70% of India's population cannot afford a healthy diet as of 2020** despite the fact that the cost of food remains relatively low by comparison to other countries.
 - Among all women aged 15-49, the prevalence of **anaemia** has risen to 57% in 2019-21 (**NFHS-5**) from 53% in 2015-16 (NFHS-4).
- **Lack of Social Security:**
 - India also **struggles with providing social security to its citizens**, particularly those in the informal sector. Many workers lack access to basic benefits such as health care, retirement pensions, and job security.
- **Gender Inequality:**
 - Despite progress in recent years, **gender inequality remains a significant obstacle to human development in India**. Women and girls face discrimination in areas such as education,

employment, and access to health care, and are often subject to violence and abuse.

- Male-female ratio for Expected Years of Schooling (EYS) declined from 1.43 in 1990 to 0.989 in 2021 and for Mean Years of Schooling (MYS), it declined from 1.26 to 1.06.
- As per the **World Economic Forum's Global Gender Gap Report 2022**, women make up only 22% of the AI workforce.

What should be the Way Forward?

- **Addressing Income Inequality and gender inequality:**
 - Addressing income inequality and gender inequality requires a multifaceted approach that involves both policy changes and cultural shifts. Here are some potential ways forward:
 - Equal Pay, Education and Skill Development, Affordable Childcare, Empowerment programmes for women etc can be helpful.
 - **Government can focus on promoting these schemes: Beti Bachao Beti Padhao, National Skill Development Mission, Integrated Child Development Services (ICDS), Mahila E-Haat.**
- **Invest in Education:**
 - Education is a fundamental aspect of human development. Governments can invest in education by building schools, hiring teachers, providing scholarships and improving access to education for disadvantaged communities.
- **Providing Healthcare:**
 - Access to healthcare is another critical component of human development. Governments can ensure that all citizens have access to affordable healthcare services, including preventative care, treatment for illnesses, and mental health support.
 - **Government needs to focus on these schemes: Pradhan Mantri Jan Arogya Yojana (AB-PMJAY), Pradhan Mantri Swasthya Suraksha Yojana (PMSSY), National Urban Health Mission (NUHM), Mission Indradhanush.**
- **Addressing Poverty:**
 - Poverty is a significant barrier to human development. Governments can address poverty by implementing social welfare programs, such as unemployment benefits, food assistance, and housing subsidies.
- **Promoting Gender Equality:**
 - Gender equality is essential for human development. Governments can promote gender equality by implementing policies that ensure equal opportunities for women and girls, such as laws against gender discrimination in employment and education.

➤ **Protecting Human Rights:**

- Human rights are fundamental to human development. Governments can protect human rights by ensuring that citizens have the right to free speech, freedom of religion, and freedom from discrimination.

➤ **Building Infrastructure:**

- Infrastructure, such as roads, bridges, and electricity, is crucial for economic development and human development. Governments can invest in infrastructure projects that improve access to basic services, such as **clean water and electricity, and create job opportunities.**

➤ **Fostering Innovation and Entrepreneurship:**

- Innovation and entrepreneurship can drive economic growth and improve human development. Governments can create policies that support innovation and entrepreneurship, such as **tax incentives for small businesses and research grants for scientists and inventors.**

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Rejuvenating Small Water Bodies

This editorial is based on "Rejuvenate small water bodies" which was published in the Hindu on 22/03/2023. It discusses the issues Small Water Bodies facing and ways to address it.

Tag: Governance, GS Paper-2, GS Paper-3, Water Resources, Conservation of Resources, GS Paper-1

According to the **United Nations**, in the early to mid-2010s, **1.9 billion people of the global population lived in severely water-scarce areas.** But this number will increase to 2.7- 3.2 billion people by 2050.

The **Water and Related Statistics (2021)** published by the **Central Water Commission (CWC)** of India, mentions that **one out of three people will live in a water-stressed area by 2025.**

But unfortunately, the **small water bodies (tanks and others) which have been supporting the agriculture and domestic requirement of water for many years in India are fast vanishing now. So, there is an urgent need to augment the water supply** wherever possible to avert the looming water crisis.

What are the Benefits Derived from Small Water Bodies?

- **Easy Access to Water:**

- SWBs can **provide easy access to water for domestic needs, animal husbandry**, drinking water and agriculture particularly in rural areas. This can **help improve water security and reduce the burden of water collection for households**.
- SWBs are located in every village, reducing the distance women have to walk to fetch water for their drinking needs.
- **Low Maintenance Cost:**
 - Compared to large dams and reservoirs, SWBs are relatively low-cost to construct and maintain. This makes them an attractive option for small-scale water storage and management.
- **Helpful for Farmers:**
 - SWBs can be **used for irrigation and aquaculture**, providing a reliable source of water for farming activities. This can **help increase crop yields and support livelihoods for farmers**.
 - **Effective distribution of water without conflicts helps reduce poverty** among small and marginal farmers.
- **Helps in Groundwater Recharge:**
 - SWBs can also **help recharge groundwater resources, particularly in areas where groundwater depletion is a concern**. By capturing and storing rainwater, SWBs can help replenish groundwater aquifers and improve overall water availability.
- **Biodiversity:**
 - Small water bodies **support a diverse range of plant and animal species**, including many rare and endangered species. They **provide important habitat and breeding grounds for aquatic and semi-aquatic organisms**, such as fish, amphibians, reptiles, and birds.
- **Water Quality:**
 - Small water bodies **can help to improve water quality by acting as natural filters, removing pollutants and sediment from runoff water** before it enters larger bodies of water. They can also help to recharge groundwater and maintain water levels during droughts.
- **Flood Control:**
 - Small water bodies **can help to reduce the risk of flooding by capturing and storing excess water** during heavy rain events, and slowly releasing it over time.

What are the Issues

Facing the Small Water Bodies today?

- **Continuous Encroachment on Catchment Areas:**

- Small water bodies such as **lakes, ponds, and streams are under constant threat due to encroachment on their catchment areas**.
- As **urbanization expands**, people are **building houses, commercial buildings**, and other infrastructure in and around the catchment areas of these water bodies.
- This can **lead to the destruction of natural vegetation**, soil erosion, and pollution of the water body itself.
 - The **urban agglomeration witnessed from the 1990s has severely impacted SWBs**, turning many of them into dumping grounds.
 - The Standing Committee on Water Resources (2012-13) underlined in its 16th report that **most of the water bodies in the country were encroached upon by State agencies themselves**.
 - According to the **Standing Committee on Water Resources (2012-13)**, about **one million hectares of irrigation potential was lost due to encroachment** and other reasons.
- **Lack of Annual Maintenance:**
 - Small water bodies **require regular maintenance to keep them healthy and functional**. However, due to limited resources, **these bodies are often neglected and left to deteriorate**.
 - The **lack of maintenance can result in a build-up of sediment, debris, and pollutants**, leading to poor water quality and even the complete drying up of the water body.
- **Pollution:**
 - **Small water bodies are often exposed to pollution** from various sources, such as agricultural runoff, sewage, industrial waste, and urban development.
 - Pollution can lead to a **range of ecological problems, including eutrophication**, algal blooms, and fish kills.
- **Habitat Loss:**
 - Small water bodies are **often threatened by habitat loss and fragmentation due to land use changes**, such as **urbanization, deforestation**, and agricultural intensification. This can **lead to declines in biodiversity** and ecological functioning.
- **Invasive Species:**
 - Small water bodies can be **vulnerable to invasion by non-native species, which can outcompete native species** and disrupt ecological processes.
 - Invasive species can also lead to declines in water quality and habitat quality.
- **Climate Change:**

- Small water bodies are also **affected by climate change, which can lead to changes in water availability**, temperature, and quality. Climate change can also exacerbate the impacts of other stressors, such as pollution and habitat loss.

➤ **Overuse and Exploitation:**

- Small water bodies can be **overused and exploited for a variety of purposes, such as irrigation, drinking water, recreation, and fisheries.**
- **Overuse can lead to depletion of water resources**, degradation of water quality, and declines in biodiversity.

What Should be the Way Forward?

➤ **Strong Legislation is Needed:**

- Considering the ever-increasing encroachments, **strong legislation should urgently be enacted to make encroachment on water bodies a cognisable offence.**
 - In 2014, the Madras High Court ruled that **no approval should be granted for building plans or layouts on lands** situated along SWBs (Streams, Water Bodies, and Wetlands).

➤ **Creating a Separate Ministry for Small Water Bodies:**

- Understanding the dying state of SWBs, a **separate Ministry for Small Water Bodies should be created with adequate funding** to conduct periodic repair and rehabilitation works.
- Without the participation of farmers who are the main beneficiaries of SWBs, it is **difficult to improve the performance of these age-old oases.**

➤ **Setting up a Tank Users Organisation:**

- **Farmers must voluntarily come forward to set up a tank users' organisation and undertake the repairing of SWBs**, as followed earlier under the age-old Kudimaramathu system.
- Since corporates are increasingly using water for various purposes, **they should be asked to repair and renovate SWBs under the ambit of Corporate Social Responsibility.**

➤ **Avoid Contamination:**

- Small water bodies are **vulnerable to pollution from runoff from agricultural fields**, industrial activities, and residential areas.
- To protect them, **it is important to avoid the contamination of water bodies** by preventing the discharge of harmful chemicals and wastes into them.

➤ **Preserving the Surrounding Land:**

- **The health of small water bodies is closely linked to the health of the surrounding land.** Protecting the surrounding land from development, deforestation, and other activities that lead to soil erosion can help prevent sedimentation and nutrient pollution in the water.

➤ **Control Invasive Species:**

- Invasive species such as non-native plants and animals can disrupt the ecological balance of small water bodies. **Control measures should be implemented to prevent their introduction and spread.**

➤ **Raising Awareness:**

- Raising public awareness about the **importance of small water bodies can help to generate support for their protection.** This can include activities such as organizing community events, distributing educational materials, and engaging with local stakeholders.



Media Bias and Democracy

This editorial is based on “Press must remain free if a country is to remain a democracy...” which was published in the Indian Express on 24/03/2023. It discusses the issue of freedom of press in India and ways to address the same.

Tag: Governance, GS Paper – 2, Fundamental Rights, Quasi-Judicial Bodies

The media is the fourth pillar in the conception of the State, and thus an integral component of democracy. A functional and healthy democracy must encourage the development of journalism as an institution that can ask difficult questions to the establishment — or as it is commonly known, “speak truth to power”.

Article 19 of the Constitution of India guarantees the right to freedom of speech and expression and is typically invoked against the state. However, despite the constitutional protection, journalists and media outlets in India have faced a range of challenges, including threats, attacks, and intimidation from government officials, politicians, and non-state actors.

Media is the engine that drives democracy forward, based on the quest for truth, justice, and equality. In today's digital age, the need for journalists to uphold standards of accuracy, impartiality, and responsibility in their reporting is paramount to successfully overcome the challenges posed by the rapidly changing media landscape.

What Role does**Media Play in Promoting Democracy?**➤ **Providing Information:**

- The media informs citizens about political issues, policies, and events, allowing them to make informed decisions about their leaders and government.

➤ **Holding Leaders Accountable:**

- The media acts as a watchdog, scrutinizing the actions of government officials and holding them accountable for their actions.

➤ **Encouraging Public Debate:**

- The media provides a platform for public debate and discussion about political issues, which is essential for a healthy democracy.

➤ **Representing Diverse Perspectives:**

- The media should represent a range of perspectives and viewpoints, giving citizens access to a variety of opinions and ideas.

➤ **Educating Citizens:**

- The media should educate citizens about the democratic process, helping them understand how government works and how to participate in it effectively.

What are the Challenges with the Role of Media in Democracy?➤ **Media Bias:**

- Media bias can distort the information that is presented to the public, leading to a lack of objectivity and an imbalance in the information that is available. This can result in a polarized public opinion and a lack of trust in the media.
- The mainstream media in India is often indulged in either being pro-government or totally against them they are choosing extreme point of views and are not trying balancing out, rather ignoring issues related to common folks.

➤ **Fake News:**

- The rise of social media has made it easier for fake news to spread rapidly, often leading to confusion and misinformation among the public.
- This can undermine the credibility of the media and lead to a lack of trust in the information that is presented.
 - Recently, **two men in Haryana were killed on suspicion** of illegal transportation, smuggling or slaughtering of cows by cow vigilantes highlight the issue of **Mob Lynching**.

➤ **Corporate Influence:**

- Media outlets are often owned by large corporations, which can influence the editorial policies and reporting of the media. This can lead to a lack of diversity of perspectives and a focus on profit over public interest.

➤ **Government Censorship:**

- Governments may use censorship to control the flow of information and suppress dissent. This can lead to a lack of transparency and accountability in the government and limit the ability of the media to act as a watchdog.

➤ **Issue of Legitimacy:**

- A diverse and representative newsroom is essential for media institutions to provide well-researched and complex stories that explore a multiplicity of perspectives and voices.
- The issue of legitimacy with media refers to the concern that media outlets may not always provide accurate, unbiased, or truthful information.
 - This can arise due to various factors such as political biases, commercial interests, sensationalism, and lack of journalistic standards.

➤ **Gender Diversity:**

- The lack of gender diversity in the media is another important issue to consider. Women are underrepresented in both the ownership and workforce of media organizations, which limits the diversity of perspectives and voices in the media. It also perpetuates gender stereotypes and reinforces patriarchal norms.

➤ **Media Trial:**

- There have been instances when the media has carried narratives that make a person guilty in the eyes of the public, even before the court finds them guilty.
- **Example:**
 - One example of a media trial in India was the 2008 Aarushi Talwar-Hemraj double murder case. The case received extensive media coverage and the media played a significant role in shaping public opinion and influencing the investigation and subsequent court proceedings.
- This can have long-lasting repercussions on the life of the affected individuals, as well as on due process.
 - According to the **Madrid Principles on the Relationship Between the Media and Judicial Independence**, it is the job of the media to "convey information to the public and to comment on the administration of justice, including cases before, during and after trial, without violating the presumption of innocence."

What Should be the Way Forward?

- **Promote Accuracy and Fact-Checking:**
 - It is the **collective responsibility of journalists as well as other stakeholders to weed out any element of bias or prejudice** from the process of reporting events.
 - A **comprehensive fact-checking mechanism should be in place to verify all news items before reporting**. Media houses are expected to act cautiously while publishing news.
- **Provide Diverse Perspectives:**
 - The media **should strive to represent diverse voices and perspectives to ensure that all viewpoints are heard** and considered. This can help to promote a more informed and engaged citizenry.
- **Hold those in Power Accountable:**
 - One of the key roles of the media is to **hold those in power accountable by reporting on their actions and decisions**. This includes investigating corruption and abuse of power.
- **Foster Public Discourse:**
 - The media can **play a key role in fostering public discourse by providing a platform for debate and discussion**. This can help to promote understanding and dialogue between different groups, leading to more informed and inclusive decision-making.
- **Avoid Bias:**
 - The media **should strive to avoid bias in its reporting to ensure that it is perceived as fair and objective by all parties**. This can help to build trust in the media and promote its role in democracy.
- **Addressing Online Harassment of Journalists:**
 - Journalists are facing online harassment due to the rise of social media. This affects their safety and freedom of expression. India needs to take measures to address this issue and ensure the safety of journalists.
- **Encouraging Media Literacy:**
 - While the media has an important role in promoting democracy, citizens also have a responsibility to consume news critically and discerningly. **Media literacy programs can help citizens to better understand how the media works**, how to distinguish between reliable and unreliable sources, and how to engage in informed public discourse.
- **Promoting Independent Journalism:**
 - In addition to large mainstream media outlets, **there is a need to support and promote independent journalism in India**. This can include funding for

investigative reporting, support for community-based media, and protection for freelance journalists and stringers who often face greater risks than staff journalists.

➤ **Strengthening Legal Protection for Journalists:**

- Often journalists and media outlets are subjected to threats, attacks, and intimidation from various sources. Therefore, the government could consider enacting a law that specifically protects journalists and media outlets from harassment and violence.
 - While **Article 19 of the Indian Constitution guarantees freedom of speech and expression**, there are no specific provisions for the protection of journalists.

➤ **Adherence to Media Ethics:**

- It is important that the media stick to the core principles like truth and accuracy, transparency, independence, fairness and impartiality, responsibility and fair play.

■■■

Tackling the Issue of Gender Pay Gap

*This editorial is based on “**It pays to fix gender wage disparity**” which was published in the Economic Times on 19/03/2023. It discusses the issue of gender parity in India and ways to address the same.*

Tag: Social Justice, GS Paper - 2, Poverty, Issues Related to Women, Issues Related to Minorities, Human Resource, Inclusive Growth

Gender Pay Gap in India refers to the difference in average wages or earnings between men and women in the country. Despite constitutional provisions and various efforts to promote gender equality, the gender pay gap remains a significant issue in India.

According to the Report “**Women and Men in India 2022**” released by the National Statistical, **wage disparity between men and women has widened over the past decade**, with the gap opening up further at higher wage levels.

Men in India capture 82% of labour income, while women earn just 18%, according to the first-ever estimates of the gender inequality in global earnings presented in the **World Inequality Report 2022** released.

To address the gender pay gap, **there is a need for greater awareness and advocacy around the issue**, as well as policy measures that promote gender equality and economic empowerment of women.

What are the Reasons for the Gender Pay Gap?

- **Occupational Segregation:**
 - Women tend to be **concentrated in lower-paying occupations, such as caregiving and administrative work**, while men are overrepresented in higher-paying industries like technology, engineering, and finance.
- **Discrimination:**
 - Women may **face bias in hiring, promotions, and pay, even when their qualifications and experience are equal** to those of their male colleagues.
- **Workforce Participation:**
 - Women are **more likely to take time off or work part-time to care for children or elderly relatives**, which can lead to interruptions in their career paths and lower overall earnings.
- **Negotiation:**
 - Women are **less likely to negotiate for higher pay or benefits because the opportunities for them are less**, which can result in lower compensation packages.
- **Limited Access to Education and Training:**
 - Women may have **less access to educational and training opportunities, due to patriarchal beliefs that girls and women must be the ones doing household labour**.
 - It can limit their ability to acquire the skills and credentials necessary for higher-paying jobs.
- **Inability to Work Irregular Hours:**
 - Many jobs **require employees to work irregular hours, such as overtime or night shifts** and due to security reasons women are unable to work irregular hours.
 - This can result in women being passed over for promotions or being paid less than men who can work more flexible schedules.
- **Lack of Mobility to Reach Job Sites:**
 - Women are **also more likely to have transportation challenges**, such as lack of access to reliable transportation, which can limit their ability to reach job sites. This can **result in women being excluded from certain jobs** or industries, which can limit their earning potential.
- **Discontinuity of Experience owing to Family Responsibilities:**
 - Women are **more likely than men to take time off work to care for children or other family members**. This can result in a discontinuity of experience, making it harder for women to advance in their careers and earn higher salaries.

What are the Related Initiatives/Constitutional Provisions?

- **Constitutional Provisions:**
 - The Constitution of India guarantees equal pay for equal work for both men and women under Article 39(d) and Article 42. It also prohibits discrimination on the basis of gender under Article 15(1) and Article 15(2).
- **The Equal Remuneration Act:**
 - This act was passed in 1976 to ensure that men and women receive equal pay for equal work. The act applies to all organizations, whether public or private, and covers both regular and casual employees.
- **The Maternity Benefit Act:**
 - This act provides for maternity leave and other benefits to women employees. It was amended in 2017 to increase the duration of maternity leave from 12 weeks to 26 weeks.
- **The Sexual Harassment of Women at Workplace (Prevention, Prohibition, and Redressal) Act:**
 - This act was passed in 2013 to provide protection against sexual harassment at the workplace. It requires all employers to establish a mechanism for redressal of complaints and to ensure that women are not discriminated against in terms of pay and conditions of work.
- **Others:**
 - In 2022, the Board of Control for Cricket in India (BCCI) announced a "pay equity policy", saying that its centrally-contracted men and women players would get the same match fees.

What Should be the Way Forward?

- **Strengthening Legislation:**
 - Existing laws can be strengthened and new legislation can be introduced to prevent gender discrimination in the workplace. For instance, the **Equal Remuneration Act, 1976** can be enforced more rigorously to ensure equal pay for equal work.
- **Providing Training and Development:**
 - Women employees can be provided with training and development opportunities to enhance their skills and knowledge, which can help them to advance in their careers and negotiate better salaries.
- **Empowering Women:**
 - Women can be encouraged to negotiate for better pay and benefits by providing them better opportunities, and to take up leadership positions in their organizations. This can help break the cycle of gender discrimination and lead to more women in leadership roles.

➤ **Ensure Equal Distribution of Work:**

- The burden of household work and childcare often falls disproportionately on women, which can limit their ability to work outside the home or to advance in their careers.
- To address this, it is important to promote a more equitable distribution of household work and childcare duties between women and men.
- This can be achieved through policies such as parental leave, flexible work arrangements, and affordable childcare services.



Remote Work in the Digital Era

This editorial is based on "To Work, Or Not To Work, From Home" which was published in the business world on 25/03/2023. It explores the difficulties associated with remote work in the modern digital age and suggests solutions to overcome them.

Tag: Governance , GS Paper – 2, GS Paper – 3, Employment, Growth & Development, Government Policies & Interventions

A report by ADP Research Institute (Global thought leader for Labor Market and People and Performance Research) reveals that over three-fourth of Indian employees would be ready to take a pay cut to have flexibility of working remotely or hybrid and to have control over their work timings.

Over the past few months, numerous companies have been recalling their employees to return to physical workspaces, leading to discussions on the effectiveness of hybrid work arrangements and their impact on career prospects. This has transformed the act of returning to a traditional workplace into a matter of mindset.

So, the need of the hour is to evolve the new model and companies that embrace this change and use it to create more flexibility and autonomy for their employees will be better positioned to attract and retain top talent.

What are the Benefits of the Remote Work?

➤ **Flexibility:**

- Remote work allows employees to have more control over their work schedule and environment. This can lead to increased job satisfaction and a better work-life balance.

➤ **Access to a Wider Pool of Talent:**

- Remote work allows companies to hire employees from anywhere in the world, increasing the pool

of available talent and potentially leading to a more diverse workforce.

➤ **Reduced Commuting Time and Costs:**

- By eliminating the need for employees to commute to and from the office, **remote work can save time and money on transportation.**

➤ **Environmental Benefits:**

- With fewer people commuting to the office, remote work can reduce carbon emissions and have a positive impact on the environment.

➤ **Increased Autonomy:**

- Remote work often **requires employees to take more responsibility for their work and manage their time effectively.** This can lead to increased autonomy and a greater sense of ownership over one's work.

➤ **Reduced Stress and Burnout:**

- By eliminating the need for a daily commute and allowing employees to work in a comfortable environment, **remote work can reduce stress and burnout.**

What are the Challenges with the Remote Work?

➤ **Interpersonal Skills and Communication:**

- Working remotely can be **challenging when it comes to integrated and acceptable interpersonal skills and communication.**

➤ **Misunderstandings:**

- In a remote work setting, **it is crucial to address any team miscommunications promptly** to prevent them from escalating into significant issues.

➤ **Self-Discipline and Self-Starting:**

- Remote work **requires employees to be self-disciplined and self-starters**, which can be difficult in a cluttered living context.

➤ **Productivity:**

- Productivity **challenges can arise in a remote work world**, especially in the absence of a proper workplace environment.
 - A study by Standford of 16,000 workers over 9 months found that **working from home increase productivity by 13%.**
 - This **increase in performance was due to more calls per minute attributed to a quieter more convenient working environment** and working more minutes per shift because of fewer breaks and sick days.
 - In this same study **workers also reported improved work satisfaction, and attrition rates were cut by 50%.**

➤ **Confidentiality:**

- Not all jobs can be done remotely, and some companies may still prefer to have their employees work in a physical office to maintain confidentiality of the work being handled.

➤ **Collaboration:**

- Collaboration can be harder when everyone is working from different locations. It can be challenging to brainstorm ideas, work on projects together, and provide feedback.

➤ **Isolation:**

- Remote workers may feel isolated or disconnected from their colleagues and the company culture, which can impact morale and productivity.

➤ **Technology Issues:**

- **Technical difficulties can be more challenging** to resolve when everyone is working remotely. IT support may not be readily available, and remote workers may not have the same equipment and software as they would in the office.

➤ **Time Management:**

- Remote workers **must be self-motivated and able to manage their time effectively** to ensure that they meet deadlines and achieve their goals.

What Should be the Way Forward?➤ **Establish Clear Policies and Guidelines:**

- Remote work requires clear policies and guidelines to ensure that employees know what is expected of them. This includes guidelines on work hours, communication, productivity, and other relevant areas.

➤ **Invest in Technology:**

- To support remote work, **organizations need to invest in technology that enables remote collaboration, communication, and productivity.** This includes **video conferencing tools, project management software,** and other relevant tools.

➤ **Focus on Employee Well-Being:**

- Remote work can be isolating and lead to burnout. Therefore, **it's important for organizations to focus on employee well-being by promoting work-life balance,** providing mental health resources, and encouraging regular breaks.

➤ **Emphasize Communication and Collaboration:**

- Remote work **requires a different approach to communication and collaboration.** Organizations **need to emphasize communication and collaboration by establishing regular check-ins,** providing opportunities for social interaction, and encouraging knowledge sharing.

➤ **Consider Hybrid Work Models:**

- A hybrid work model combines remote work and in-person work. This allows **employees to work from home some days and come into the office on others.**
- A **hybrid work model can provide the best of both worlds** and may be a good option for many organizations.

➤ **Assess and Adjust:**

- **Organizations need to assess their remote work policies** and make adjustments as necessary.
- **This includes evaluating productivity, employee satisfaction,** and other relevant factors to ensure that remote work is working effectively for everyone involved.



Green Hydrogen- Substitute to Fossil Fuel

*This editorial is based on “**Hydrogen Mission needs solid implementation**” which was published in The Hindu Business Line. It discusses Green Hydrogen and how green hydrogen can substitute fossil fuels.*

Tag: Science & Technology, GS Paper - 2, Government Policies & Interventions, GS Paper - 3, Environmental Pollution & Degradation, Growth & Development, conservation.

Under the highly ambitious **National Green Hydrogen Mission**, India intends to be “**the Global Hub for the Production, Use, and Export of Green Hydrogen**” and “**to assume technology and market leadership.**” The mission’s goal is to **generate 5 million tonnes of green hydrogen for domestic use.**

Green hydrogen is a **clean energy source produced through the electrolysis of water using renewable energy sources such as wind, solar, and hydro power.** It has the potential to become a key player in the transition to a **carbon-free economy** and can help mitigate climate change. The hydrogen produced can be stored and used as a fuel for transportation, industry, and agriculture.

What are the Reasons to Develop Green Hydrogen?

➤ **Reducing Greenhouse Gas Emissions:**

- The primary reason for developing green hydrogen is to **reduce greenhouse gas emissions** and mitigate climate change. The use of **fossil fuels for transportation and electricity generation is a major contributor to global emissions.**

- Green hydrogen, produced from renewable sources, emits zero greenhouse gases, making it a sustainable and environmentally friendly energy source.
- **Energy Security and Independence:**
 - **Fossil fuels are a finite resource**, and their **prices can fluctuate** due to global supply and demand. By developing renewable energy sources like green hydrogen, **countries can become more energy-independent and less vulnerable to price shocks** and supply disruptions.
- **Creating New Industries and Jobs:**
 - The development of green hydrogen can create new industries and jobs, particularly in the renewable energy sector. The production, storage, and distribution of green hydrogen require specialized expertise and infrastructure, which can generate employment opportunities.
 - According to the **International Renewable Energy Agency (IRENA)**, the **renewable energy sector employed 11 million people worldwide in 2018** and is expected to create more than 42 million jobs by 2050.
- **Decarbonizing in Sectors which are Difficult-to-Decarbonize:**
 - The potential to substitute fossil fuels with green hydrogen is significant, especially in sectors that are difficult to decarbonize, such as heavy industry and aviation. These sectors contribute significantly to global emissions, and the use of green hydrogen can help reduce their **carbon footprint**.
- **Technological Advancements:**
 - The development of green hydrogen can drive technological advancements and innovations in various sectors. The production, storage, and distribution of green hydrogen require new technologies and infrastructure, which can spur the development of new materials, processes, and systems.

What are the Applications of Green Hydrogen?

- **Agriculture Sector:**
 - **Green Hydrogen as Replacement to Fossil Fuel in Agriculture:**
 - Green hydrogen has the potential to replace traditional fertilizers in agriculture through the **production of ammonia using renewable energy sources**.
 - **Ammonia is a key ingredient in the production of fertilizers**, and the current production process relies on natural gas, which is a fossil fuel and contributes to greenhouse gas emissions.

- **Green ammonia** produced with help of green hydrogen is carbon-free, green ammonia has other benefits over traditional fertilizers, including improved efficiency and reduced soil acidity.
 - However, the production of green ammonia at scale will require significant investment in infrastructure and the development of new technologies. Currently, the production of green ammonia is more expensive than traditional ammonia production, which may limit its adoption in the short term.
- **Green Hydrogen-Powered Farm Machinery:**
 - Farm machinery like tractors, harvesters, and irrigation systems require a lot of energy to operate. **Green hydrogen-powered farm machinery can significantly reduce greenhouse gas emissions** while still delivering the power required to carry out essential farm tasks.
- **Green Hydrogen for Water Management:**
 - Water is a precious resource, and managing it efficiently is critical for sustainable agriculture. Green hydrogen can be used to power desalination plants that convert saltwater into freshwater, reducing our reliance on scarce freshwater resources.
- **Transport Sector:**
 - **Hydrogen Fuel Cell:**
 - A hydrogen fuel cell is a device that converts the **chemical energy of hydrogen and oxygen into electricity, water and heat**.
 - **Hydrogen fuel cell vehicles produce zero emissions**, making them an attractive **alternative to gasoline and diesel-powered vehicles**. They have a longer range than battery electric vehicles and can be refuelled in minutes, making them more convenient for long-distance travel.
- **Industrial Sector:**
 - **Cost Savings:**
 - The production of green hydrogen can be done using excess renewable energy that is produced during off-peak hours. This excess energy can be used to produce **green hydrogen, which can then be stored and used when the energy demand is high**. This can help to **reduce the cost of energy and promote sustainable development**.
 - **Reliable:**
 - Green hydrogen can be **produced and stored on-site, making it a reliable and consistent source of energy for industrial processes**. This can help

to reduce the dependence on the electricity grid and promote energy independence.

○ **Reduction in Waste:**

- Green hydrogen production can be done using waste materials like **municipal solid waste and agricultural waste**. This can help to **reduce waste and promote sustainable development**.

○ **Increase in Energy Efficiency:**

- Green hydrogen can be used to power fuel cells, which are more energy-efficient than traditional combustion engines. This can help to reduce energy consumption.

What are the Difficulties in Green Hydrogen Implementation?

➤ **Cost:**

- The cost of green hydrogen is **currently high compared to traditional fossil fuels**. The production, storage, and distribution of green hydrogen require specialized equipment and infrastructure, making it more expensive than conventional fuels.
- However, with **advancements in technology and scaling up of production**, the cost of green hydrogen is **expected to decrease over time**.

➤ **Infrastructure:**

- The widespread adoption of green hydrogen requires the **development of a robust infrastructure for its production, storage, and distribution**.
- The infrastructure must be developed in a way that is **compatible with existing energy infrastructure to facilitate the transition to green hydrogen**.

➤ **Energy Storage:**

- Green hydrogen production is dependent on renewable energy sources like wind, solar, and hydro power. However, these sources are intermittent, **meaning that their output can fluctuate over time**. The **development of effective energy storage solutions** is critical to enable the widespread adoption of green hydrogen.
 - Energy storage solutions like **batteries and hydrogen storage can store excess energy produced by renewable sources and provide a constant supply of green hydrogen**.

➤ **Safety:**

- Green hydrogen is a **highly flammable gas that requires special handling and storage**.
- The development of proper safety protocols and regulations is crucial to ensure the safe handling and storage of green hydrogen.

➤ **Public Acceptance:**

- The public acceptance of green hydrogen is crucial to its adoption. **The public must be educated about the benefits of green hydrogen and its role in mitigating climate change.**

What are India's

Initiatives to Promote Green Hydrogen?

- India has recognized the potential of green hydrogen to decarbonize its economy and achieve its climate goals. The country has launched several initiatives and policies to promote the production, utilization and export of green hydrogen.

➤ **Some of the key initiatives are:**

○ **National Hydrogen Mission:**

- The mission was announced in the Union Budget 2021-22 and aims to make India a global hub for green hydrogen and its derivatives.
- The mission will also facilitate demand creation, pilot projects, R&D, skill development, standards and regulations, and policy framework for green hydrogen.

○ **Green Hydrogen Consumption Obligations:**

- The **Ministry of New and Renewable Energy (MNRE)** has proposed to introduce **green hydrogen consumption obligations** for fertilizer and the petroleum refining industry, like the renewable purchase obligations for electricity distribution companies.
- The obligations will require these industries to consume a certain percentage of green hydrogen in their total hydrogen consumption.

○ **Green Hydrogen Hubs:**

- The **MNRE** has identified regions that can support large scale production and/or utilization of green hydrogen and develop them as green hydrogen hubs.

What Should be the Way Forward?

➤ **High Cost of Production and Utilization:**

- Green hydrogen is currently more expensive than conventional hydrogen produced from fossil fuels or other low-carbon sources, **such as nuclear or blue hydrogen**. So, to address this issue, there is a need to develop efficient technologies that can reduce the production cost of green hydrogen.
 - One promising approach is to use **more efficient electrolysis systems that require less energy to produce the same amount of hydrogen**. This can be achieved using advanced materials for the electrodes or the use of more efficient catalysts.

- Another approach is to **integrate green hydrogen production with other renewable energy technologies** such as wind or solar farms. This can **reduce the cost of electricity used in the electrolysis process**, making green hydrogen more competitive with conventional hydrogen.

➤ **Implement Regulatory Incentives:**

- The government can play a key role in promoting the adoption of green hydrogen by implementing **regulatory incentives, such as tax credits and subsidies**, to encourage the production and use of this technology.

➤ **Lack of Adequate Infrastructure and Supply Chain:**

- Green hydrogen requires dedicated infrastructure and supply chain for its production, storage, transport and distribution.
 - The existing infrastructure and supply chain for conventional hydrogen are not sufficient or compatible for green hydrogen, efficient and cost-effective supply chain must be developed.

➤ **Coordination Among Various Stakeholders and Sectors:**

- Green hydrogen involves multiple stakeholders and sectors across the value chain, such as renewable energy producers, electrolyser manufacturers, hydrogen producers, transporters, distributors and end-users.
 - There is a need for coordination among these stakeholders and sectors to ensure alignment of policies, standards, regulations, incentives and markets for green hydrogen.

➤ **Awareness and Capacity Building among Potential Users and Producers:**

- Green hydrogen is still a developing technology that requires awareness and capacity building among potential users and producers.
- There is a need to demonstrate the benefits, safety and feasibility of green hydrogen in various applications and sectors.
- There is also a need to develop skills and competencies for green hydrogen production and utilization.



Food Security & National Security

This editorial is based on "Food security and national security of India" which was published in the Financial Express on 27/03/2023. It discusses the issue of Food Security in India and ways to address it.

Tag: GS Paper - 3, Food Security, GS Paper - 2, Government Policies & Interventions

Food security has been a long-standing concern for India, given its large population and limited resources. **Access to safe and nutritious food has been considered a fundamental right for all citizens**, and successive governments have implemented policies to ensure food availability and affordability.

However, **the link between food security and national security has become increasingly evident in recent years**. India's vulnerability to **climate change**, its dependence on food imports, and the growing threat of food-related conflicts have raised alarm bells about the country's food security.

The connection between national security and access to food **was emphasized when the Norwegian Nobel Committee granted the World Food Program the Nobel Peace Prize in 2020**, acknowledging its endeavors to address hunger. The committee specifically acknowledged the correlation between hunger, peace, and conflict.

A lack of food security can contribute to a variety of threats to national security, including civil unrest, political instability, and conflict. In this context, **it becomes crucial to explore the connection between food security and national security in India** and the measures required to strengthen the country's food system.

Why Ensuring Food Security is Important for India?

➤ **Meeting the Nutritional Needs of the Population:**

- India is home to a significant population that is **malnourished or undernourished**, which affects their physical and mental growth. Ensuring food security means that people have access to nutritious food to meet their dietary needs.
 - According to the **Global Food Security Index 2022**, India has a prevalence of undernutrition of 16.3%. Further, 30.9% of children in India are stunted, 33.4% are underweight, and 3.8% are obese.
 - According to the **Human Development Report 2021-22**, India's rank on the **Human Development Index (HDI)** has slipped from 130 in 2020 to 132 in 2022.

➤ **Supporting Economic Growth:**

- **Agriculture is a crucial sector that contributes significantly** to India's economy. By ensuring food security, the government can support farmers and increase their income, which can help drive economic growth.
 - Agriculture is essential in ensuring that India achieves its national food security goal.

- With over **70% of the population engaged in agriculture-related activities**, it is the backbone of India's economy.

➤ **Reducing Poverty:**

- **Food security can play a vital role in reducing poverty levels.** By providing access to affordable and nutritious food, people can better manage their expenses, reduce their healthcare costs, and improve their overall quality of life.
- According to **Global Multidimensional Poverty Index MPI 2022**, India has by far the largest number of poor people worldwide at **22.8 crore**, followed by Nigeria at 9.6 crore.

➤ **Ensuring National Security:**

- **Food security is also essential for India's national security.** A stable food supply can prevent social unrest and political instability, which can threaten national security.

➤ **Combating Climate Change:**

- Climate change poses a significant threat to India's food security. By adopting sustainable farming practices and investing in climate-resilient crops, **India can better adapt to the changing climate and ensure food security** for its population.
- The International Food Security Assessment for 2022-2032 conducted by GFA-33 USDA, Economic Research Service indicates that **India's large population has a significant impact on food insecurity trends**. It is projected that around 333.5 million people will be affected in India during 2022-23.
- By the next decade, **the number of food-insecure people in India is projected to decrease to 24.7 million**.

What are the Related Initiatives taken?

➤ **National Food Security Act (NFSA) 2013:**

- It ensures access to affordable and good-quality food by subsidizing food grains to those below the poverty line.

➤ **National Food Security Mission:**

- It was launched in 2007, as a **Central Sector Scheme (CSS)** to increase food production and productivity through area expansion and productivity enhancement interventions in rice, wheat, pulses, **oilseeds**, etc.

➤ **National Agriculture Market (e-NAM) Platform:**

- It is an online marketplace for farmers to trade their products without geographical boundaries.

➤ **National Food Processing Mission:**

- The Government introduced the National Food Processing Mission to promote agri-based industries for efficient use of farm produce and reduce post-harvest losses.

➤ **Other Policies:**

- **Minimum Support Prices (MSP) for Agricultural products**
- **Pradhan Mantri Fasal Bima Yojana (PMFBY)**
- **National Horticulture Mission**

What are the Challenges of Food Security in India?

➤ **Inadequate Infrastructure:**

- Inadequate infrastructure such as **inaccessible roads, lack of modern storage technologies, and limited access to credit** make it difficult for farmers to transport their produce to the market and store them properly. This leads to high wastage and lower profits for farmers.

➤ **Poor Agricultural Practices:**

- Poor agricultural practices like **over-cultivation, excessive use of pesticides, and improper irrigation techniques** have led to decreased soil fertility and reduced crop yields. This, in turn, affects food production and availability.

➤ **Extreme Weather Conditions:**

- The **extreme weather conditions due to climate change** have also caused crop failures and food shortages. **Floods, droughts, and heatwaves** are becoming more frequent and intense, which affects food production and increases food prices.

➤ **Inefficient Supply Chain Networks:**

- **Inefficient supply chain networks, including inadequate transportation, storage, and distribution facilities, also contribute** to food insecurity in India. This leads to higher prices for consumers and lower profits for farmers.

➤ **Poor Market Infrastructure:**

- Poor market infrastructure, including a **lack of market information, low market transparency, and limited access to markets**, also contributes to food insecurity in India.

➤ **Fragmented Landholdings:**

- Fragmented landholdings, **where farmers own small and scattered plots of land, make it difficult to adopt modern farming practices** and technologies. This, in turn, affects food production and availability.

What Should be the Way Forward?

- **Investing in Agriculture Production Systems and Research:**
 - The government **should invest in modern irrigation systems, agricultural research, and development of high-yielding crop varieties** to increase agriculture production.
- **Improving Storage Facilities for Perishable Commodities:**
 - The government **should develop adequate storage facilities to prevent post-harvest losses** and ensure the availability of food throughout the year.
- **Providing Efficient Transportation Networks:**
 - The government **should invest in transportation networks for distributing food products across the country** to ensure the timely distribution of food products across the country.
- **Practicing Modern Agriculture Techniques:**
 - The government **should conduct awareness campaigns to educate farmers about modern agriculture techniques** that can increase crop yields and improve their income.
- **Prioritizing Agricultural Development:**
 - The government should prioritize agricultural development by investing in improved market infrastructure, efficient transportation networks, and better storage facilities for food products.
- **Promoting Public-Private Partnerships:**
 - The government **should promote partnerships between the public and private sectors** to improve agricultural productivity and ensure the availability of food products.
- **Creating an Early Warning System:**
 - The government **should develop an early warning system to detect and respond to food shortages** before they become widespread.
- **Encouraging Sustainable Agriculture Practices:**
 - The government **should promote sustainable agriculture practices that preserve soil health and reduce the use of harmful pesticides and fertilizers.**



India's Digital Public Infrastructure

This editorial is based on "India's DPIs, catching the next wave" which was published in the Hindu on 30/03/2023. It discusses India's digital public infrastructure.

Tag: Governance, GS Paper-2, Government Policies & Interventions, E-Governance, GS Paper-3, Cyber Security, Inclusive Growth

Over the last few years, the world has been troubled by many challenges, like the pandemic, the **war in Ukraine** and its aftermath, the climate crisis, the sovereign debt crisis, and the recent cost of living crisis. Through this, our societies have been challenged to the core. However, there has been one silver lining on the horizon: The power of carefully designed **Digital Public Infrastructure (DPI) to provide transformational solutions**. The potential for DPI to contribute to positive change in the world has now become a major focus of India's G20 leadership.

The DPI initiative, also known as the **India Stack**, is a collection of digital platforms such as **Aadhaar, Digital Locker, DigiYatra, UPI**, and technologies that have been developed through collaboration between different entities, including governments, regulators, the private sector, volunteers, startups, and academic institutions. The goal of DPI is to provide a seamless and efficient way for citizens to access government services and promote inclusive development.

What are the Related Initiatives?

- **Initiatives for Development of Digital Public Infrastructure in India:**
 - **Aadhaar:**
 - The **Aadhaar program** is a unique identification system that provides a 12-digit identification number to Indian residents. It serves as a digital identity and is used to authenticate individuals for various services, including financial services.
 - **DigiLocker:**
 - The **DigiLocker** program is a digital locker that enables Indian citizens to store and share their documents online. It provides a secure and convenient way to store and access important documents such as Aadhaar, PAN, and driving license.
 - The platform provides a secure and cloud-based repository for these documents, which can be accessed from anywhere and shared with government agencies or other entities when required.
 - **DigiYatra:**
 - It is a digital initiative launched by the Indian government to **provide a seamless and hassle-free travel experience to air passengers**. The initiative aims to leverage digital technologies to **minimize physical contact and provide a contactless travel experience to passengers**.
 - Under **DigiYatra**, passengers can pre-register themselves using their Aadhaar or passport and avail a range of digital services such as **self-bag drop, e-boarding pass, biometric**

verification, and self-identification at check-in and security points.

○ **Unified Payments Interface (UPI):**

- The **UPI** is a mobile payment system that enables instant fund transfer between bank accounts using a mobile device. It has transformed the digital payment landscape in India and has facilitated the adoption of digital payments across the country.

○ **BharatNet:**

- The **BharatNet program** aims to **connect all villages in India with high-speed internet connectivity**. It is a crucial initiative that aims to bridge the digital divide and bring the benefits of digital infrastructure to rural India.

○ **AarogyaSetu:**

- It is a mobile application launched by the Government of India in April 2020 as a part of its **efforts to contain the spread of COVID-19**. The app is designed to **help users assess their risk of contracting COVID-19 based on their interaction with other individuals and provide information on COVID-19 related health services**.
- It also provides users with **real-time updates on the number of COVID-19 cases in their area and alerts them if they have been in close proximity to someone who has tested positive**.

○ **CoWIN :**

- It is an online platform developed by the Government of India to facilitate the registration and scheduling of **COVID-19 vaccination appointments for Indian citizens**. The platform was launched in January 2021 as a part of India's vaccination drive against COVID-19.
- Through the **CoWIN** portal, Indian citizens can register themselves for the COVID-19 vaccine and **schedule an appointment at a vaccination centre near their location**.
- The **platform allows citizens to search for vaccination centres based on their location and availability of the vaccine**. CoWIN also provides information on the types of vaccines available at each centre.

➤ **Data Protection Initiatives for Digital Public Infrastructure:**

○ **Aadhaar Act, 2016:**

- The Aadhaar Act provides a legal framework for the Aadhaar program and sets out provisions for the collection, storage, and use of personal data. It also establishes the Unique Identification Authority of India (UIDAI) as the central authority responsible for managing the Aadhaar program.

○ **Personal Data Protection Bill, 2019:**

- The **Personal Data Protection Bill** aims to protect the privacy of personal data and establish a framework for its processing and transfer. It seeks to establish a Data Protection Authority of India to oversee and enforce data protection regulations.

○ **National Cyber Security Policy, 2013:**

- The National Cyber Security Policy provides a framework for the protection of critical information infrastructure and the prevention of cyber-attacks.

○ **Cyber Swachhta Kendra:**

- The **Cyber Swachhta Kendra** is a project launched by the government to secure digital devices and networks by providing free tools and security solutions.

What are the Challenges

Related to Digital Public Infrastructure India?

➤ **Political challenges:**

- The development and implementation of digital public infrastructure require **significant political will and support**, as it often involves **substantial investments of public funds**. Governments may face challenges in securing the necessary resources and gaining public buy-in for such initiatives.

➤ **Funding challenges:**

- The **creation and maintenance of a robust digital public infrastructure require significant investment**, and governments may face budget constraints in funding these projects. Additionally, financing models that support the long-term sustainability of the infrastructure may be difficult to establish.

➤ **Privacy and security challenges:**

- Digital public infrastructure involves the **collection, storage, and use of large amounts of sensitive data, which increases the risk of privacy and security breaches**. Governments must ensure that the infrastructure is designed and implemented with strong privacy and security measures to protect citizens' information.

➤ **Digital divide challenges:**

- There is a risk that digital public infrastructure could widen the digital divide, as those who do not have access to digital technologies will not be able to benefit from the services provided. Governments must ensure that the **infrastructure is accessible to all citizens, including those in rural or remote areas and those with disabilities**.

➤ **Legal challenges:**

- The creation of digital public infrastructure may require changes to existing legal frameworks to enable the sharing of data and the provision of digital services. Governments must navigate complex legal issues such as data protection, intellectual property rights, and liability for data breaches.

What Should be the Way Forward?

➤ **Strengthen Cybersecurity:**

- The Government needs to invest in **cybersecurity** measures to protect digital systems from cyber threats. This includes developing robust security protocols and implementing regular audits to identify vulnerabilities.
- Cyber security can be strengthened by building a comprehensive legal and regulatory framework to combat cyber threats, including laws on data protection, **cybercrime**, and information security.

➤ **Expand Digital Infrastructure:**

- To reach the maximum population, there is a need for the government to expand the digital infrastructure across the country. This includes improving internet connectivity, building data centres, and providing digital access points.
- Investing in emerging technologies, such as **5G**, **artificial intelligence**, **the Internet of Things (IoT)** and, **Blockchain Technology** can be very much helpful for expanding digital infrastructure.

➤ **Increase Access to Digital Services:**

- The government must ensure that digital services are accessible to all citizens, regardless of their socio-economic status or geographic location.

- **Expanding internet connectivity to rural and remote areas** using innovative technologies such as **satellite broadband**, **Gigamesh networks**.

- Creating **user-friendly digital interfaces and supporting the creation of local language applications** and content will **increase the accessibility of digital services to non-English speaking populations** so that even those with low levels of digital literacy can use them.
- Establishing community centres and digital literacy programs to educate and train people on how to use digital services.

➤ **Promote Data Protection:**

- The government must enforce strict data protection regulations to protect personal information from misuse. This includes establishing clear guidelines on data usage, storage, and sharing.
- Implementation of **Data protection bill** to regulate the collection, storage, processing, and sharing of personal data of individuals can be very much helpful in data protection.

➤ **Encourage Digital Skills:**

- The digital economy requires a workforce with the necessary digital skills. The government must promote digital literacy and provide training and upskilling opportunities to create a skilled workforce.

➤ **Improve Interoperability:**

- The government must ensure that digital systems are interoperable with each other, enabling seamless integration between different digital platforms.

➤ **Foster Public-Private Partnerships:**

- The government must collaborate with the private sector to drive innovation, investment, and knowledge-sharing, to develop more effective and sustainable digital public infrastructure.



Drishti Mains Questions

1. What are the major challenges faced in mobilizing and effectively deploying climate finance to address the global climate crisis?
2. Analyse the challenges faced by government schools in providing quality education to students and suggest measures to improve the effectiveness of the public education system in India.
3. Discuss the challenges and strategies for transforming the ailing cotton sector in India and suggest measures to address the issues faced by cotton farmers and ensure their welfare.
4. What are the challenges and opportunities for gig workers in India's emerging gig economy, and what policy changes are needed to ensure their fair treatment and protection?
5. What are the key factors contributing to the inadequacies of research and development (R&D) in India, and how can they be addressed to enhance the country's innovation capabilities?
6. What measures can India take to effectively preserve and protect cultural heritage sites and artifacts, while balancing the need for access and tourism with conservation efforts?
7. What are the major obstacles in doubling the income of farmers in India, and what approaches are necessary to achieve this ambitious target?
8. Despite its rich history and cultural significance, the Ayurvedic profession in India is fraught with difficulties. Discuss. Also suggest some measures to bridge the gap between Ayurveda and modern system of medicine.
9. What are the major challenges and bottlenecks hindering the competitiveness of India's logistics system? Suggest measures that can be taken to address them in order to boost the country's economic growth and competitiveness.
10. What are the major challenges in ensuring effective protection of consumer rights in India, and how can these be addressed through policy interventions and institutional reforms?
11. What are the major challenges hindering women's representation in politics in India and what measures can be taken to overcome them?
12. What measures has the Indian government implemented to ensure effective data governance and protection of personal data in the country?
13. How does the AUKUS grouping impact India's strategic interests in the Indo-Pacific region and what should be India's approach towards this new development?
14. "The present form of Globalisation can be best described as a fragmented Globalisation." Comment.
15. What are the major challenges in effectively curbing the spread of fake news and disinformation, and what strategies and solutions can be employed to address these challenges?
16. What are the key challenges in conserving the world's oceans and how can they be effectively addressed to ensure the sustainable use and protection of this vital global resource?
17. What are the key strategies and challenges involved in achieving universal health care/coverage, and how can they be effectively addressed to ensure equitable access to quality health services for all individuals?

Drishti Mains Questions

18. What are the key obstacles hindering India's progress towards achieving human development, and how can these obstacles be overcome?
19. What are the major challenges facing small water bodies and what steps need to be taken to address the issue?
20. What is the role of the press in promoting democracy, and what are the key challenges that the press faces in fulfilling this role effectively?
21. Despite constitutional provisions and various efforts, the gender pay gap continues to persist in India. Analyse the factors responsible for the gender pay gap and critically evaluate the measures needed to address this issue in the country.
22. What are the main challenges faced by organizations and employees in adapting to remote work in the digital era, and how can these challenges be effectively addressed?
23. Green Hydrogen is emerging as a promising source of clean energy. Analyze the potential of Green Hydrogen to mitigate climate change and its prospects in India.
24. What is the relationship between food security and national security, and how can ensuring access to adequate and nutritious food contribute to a nation's overall security?
25. Discuss the significance of Digital Public Infrastructure (DPI) in India for achieving the goal of inclusive growth and digital transformation. Highlight the challenges faced by India in the development and implementation of DPI.