



Monthly Editorial Consolidation



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Content

● India and EFTA states	3
● India's Hunger Paradox	5
● India China Trade Ties	7
● Unseasonal Rain and Impacts.....	9
● Need for Digital Upskilling of Workforce.....	10
● Urban Expansion and Development.....	12
● Violence in Manipur	14
● Globalising the Indian Rupee.....	17
● Evolving India - Gulf Relations	19
● Indian Aviation Industry	21
● Indian Space Policy 2023: Provisions and Gaps	24
● ONDC and its Potential	26
● Weather-Proofing Food Security	27
● Right to Default Bail.....	29
● Making Agriculture Economically Viable	31
● Digitisation of Land Records	33
● Decarbonising Steel Sector.....	36
● India's Quantum Leap	37
● Preserving Tradition: The Landmark Ruling on Jallikattu	40
● Electric Vehicles: The Advantages and Challenges	41
● Economic Abuse: A Neglected Facet of Domestic Abuse	43
● Delay in Decennial Census.....	46
● India and Crises Hit Pakistan	48
● Phasing Out Coal	50
● Addressing the Menstrual Health & Hygiene	52
● Diversifying India's Rural Economy.....	54
● New Parliament Building For New India.....	57
Drishti Mains Questions	61-62

India and EFTA states

*This editorial is based on **Economic pact between India and EFTA states will further boost trade, investment** which was published in *The Indian Express* on 01/05/2023. It talks about potential benefits of concluding the Trade and Economic Partnership Agreement with European Free Trade Association states.*

Tag: Economy, GS Paper -3, GS Paper -2, Bilateral Groupings & Agreements, Groupings & Agreements Involving India and/or Affecting India's Interests.

The Secretary General of the **European Free Trade Association** (EFTA) emphasizes the potential benefits of a **Trade and Economic Partnership Agreement** (TEPA) between **India and Iceland, Liechtenstein, Norway, Switzerland (EFTA states)**.

The high-level delegates from Iceland, Liechtenstein, Norway, Switzerland, and India met in April 2023, in New Delhi to **discuss the prospects of resuming their negotiations towards a TEPA**. A joint statement issued at the end of the talks reflects the parties' common decision to "continue their efforts to resolve all outstanding issues and work towards deepening and strengthening the economic partnership".

They **aim to deepen and strengthen** their **economic partnership** and contribute to a more inclusive global trading system.

What is EFTA?

EFTA is an intergovernmental organization that was established in 1960 as an alternative trade bloc for those European states that were unable or unwilling to join the European Union (EU).

EFTA comprises Iceland, Liechtenstein, Norway, and Switzerland, which are not part of the EU but have access to its single market through various agreements.



What is the Economic Significance of EFTA States for India?

➤ Human Resource:

- Although the EFTA states have a small population of **just over 14 million**, their economies are among the **world's highest in innovation, competitiveness, wealth creation per inhabitant, life expectancy, and quality of life**.

➤ Trade:

- They are the **10th largest merchandise traders** and **8th largest services traders** worldwide, with imports and exports of goods and services close to **USD 1.3 trillion in 2021**.

➤ World Leaders:

- EFTA companies are **world leaders in pharmaceuticals, biotechnology, machinery manufacturing, R&D-driven technology products, geothermal-related technologies**, marine technology, energy-related services, **financial services, banking, and insurance**.

➤ Success History of EFTA's Trade Agreements:

- EFTA has a **track record of negotiating mutually beneficial trade agreements** with 40 partner countries, covering 29 **free trade agreements** (FTAs).
 - Nearly 22% of EFTA states' imports come from these FTA partners.
- Agreements are in place with Hong Kong, Indonesia, the Philippines, South Korea, and Singapore, and negotiations are ongoing with Malaysia, Thailand, and Vietnam.

What is TEPA?

- It is a type of **economic partnership agreement**.

➤ Comprehensive Scope:

- TEPA agreements cover a broad range of economic activities, including trade in goods, services, and investment, as well as other areas such as intellectual property, competition policy, and government procurement.

➤ Flexibility:

- TEPA agreements offer flexibility in terms of negotiating terms and conditions, as the parties involved can tailor the agreement to their specific needs and interests.

➤ Mutual Benefits:

- TEPA agreements are designed to promote mutual benefits for both parties, rather than being one-sided.
- This means that both parties should gain from the agreement, with increased trade and investment leading to increased economic growth and job creation.

➤ Stronger Provisions:

- TEPA agreements often include stronger provisions on labor and environmental standards, as well as provisions for dispute settlement and enforcement mechanisms.

What are the Potential Benefits of a TEPA?

➤ Increased Trade:

- A TEPA between India and EFTA states would **foster a strong partnership and increase trade** between trusted democratic partners that **share values such as promoting sustainable development and gender equality**.
- India's impressive economic growth and leadership in green technologies would benefit from EFTA states' complementary support by strengthening trade and investment ties.

➤ Market Access:

- Improved market access for goods would **boost India's export potential to EFTA markets**, where the EFTA's export products frequently serve as inputs in Indian export industries.

➤ Increased Investment:

- EFTA states have **contributed significant investments of over USD 35 billion** in India, spanning sectors such as machinery, electrical engineering and metals, pharmaceuticals, banking, financial services and insurance, construction, and fast-moving consumer goods (FMCG).
- The TEPA is estimated to increase investments in India significantly.

➤ Mutual Benefits:

- EFTA states **benefit from the highly skilled Indian workforce**, notably in the services sector.
- India benefits from **over 400 companies established by EFTA states**, generating more than 1,50,000 jobs.
- A trade agreement would increase predictability in the services sector, creating more business opportunities for skilled Indian service providers.

➤ Renewable Technologies:

- India aims to meet 50% of its energy needs with renewables by 2030, with potential for scaling up projects and cooperation in **solar, wind, hydro, and geothermal power**.
- EFTA states can contribute to India's green growth aspirations with their cutting-edge technologies.

What are the Challenges?

➤ Addressing Differences in Economic Structures:

- The EFTA states are highly developed economies with a focus on high-tech industries and services,

while India is a developing economy with a more diverse economic structure.

- Bridging the gap between these different economic structures may be a challenge in negotiating a TEPA.

➤ Market Access Challenges:

- The agreement must address market access issues and address concerns regarding tariffs, quotas, and non-tariff barriers, to ensure free and fair trade between the parties.

➤ Regulatory Challenges:

- Differences in regulations, standards, and legal frameworks can pose a challenge for establishing a smooth trading relationship.
- Addressing regulatory barriers and streamlining procedures can be time-consuming and require extensive cooperation between the parties.

➤ Competitive Challenges:

- EFTA states are small, but their economies are highly competitive, particularly in sectors such as pharmaceuticals, biotechnology, and machinery manufacturing.
- Addressing competitive challenges to ensure a level playing field and fair competition is essential.

➤ Environmental and Social Challenges:

- Addressing environmental and social challenges, such as promoting sustainable development and gender equality, is crucial in establishing a long-term, successful partnership between the parties.

➤ Negotiation Challenges:

- Negotiating a mutually beneficial agreement that meets the interests of all parties involved can be challenging.
- This includes addressing outstanding issues and achieving a balanced agreement with strong political involvement and guidance.

What Should be the Way Forward?

➤ Address Outstanding Issues:

- The high-level delegates from EFTA and India should work towards resolving any outstanding issues that may hinder the conclusion of a mutually beneficial TEPA.

➤ Identify Areas of Mutual Benefit:

- The parties should identify areas of mutual benefit, such as technology transfer, R&D and innovation, business collaboration, and market access for goods, to increase trade and investment ties.

➤ Collaborate on Skilled Labour:

- The TEPA should also focus on increasing predictability in the services sector, creating more

business opportunities for skilled Indian service providers and contributing to the economic growth and welfare of both countries.

➤ **Strong Political Involvement and Guidance:**

- India and EFTA should prioritize the TEPA negotiations and provide strong political involvement and guidance to ensure a swift process towards a balanced agreement.



India's Hunger Paradox

*This editorial is based on **India's hunger paradox** which was published in The Indian Express on 02/05/2023. It talks about issues of hunger in India despite having self-sufficiency in food production.*

Tag: Social Issues, GS Paper -2, Issues Relating to Poverty & Hunger

India has achieved self-sufficiency in food production spanning more than four decades, but this does not guarantee food security. It is painful to see that despite having surplus food, hunger still persists.

The **National Family Health Survey (NFHS)** conducted in 2019-21 shows that a considerable proportion of young children in India face food insecurity, which raises concerns about their development and future well-being. To achieve the **Sustainable Development Goal (SDG) 2** of zero hunger, India must take strategic initiatives to eliminate food insecurity and ensure affordable access to nutritious food for all.

What Statistics Reveal?

➤ **NFHS-5:**

- Among mothers with a child aged 6-23 months, 18% reported that their child had not eaten any food in the 24 hours before the survey, which is referred to as **"zero-food"** and raises serious concerns related to severe food insecurity.
- The zero-food prevalence was 30% for infants aged 6-11 months, 13% among 12-17 months old, and 8% among 18-23 months old children.
- Going without food for an entire day at this critical period of a child's development can have severe implications.

➤ **Global Hunger Index 2022:**

- India ranked 107 out of 121 countries.
- India's child wasting rate (low weight for height), at 19.3%, is worse than the levels recorded in 2014 (15.1%) and even 2000 (17.15%).

- Prevalence of undernourishment has also risen in the country from 14.6% in 2018-2020 to 16.3% in 2019-2021.

What are the Issues with Current Measures?

➤ **Limitations of Anthropometric Measures:**

- Measures of anthropometric failure, such as stunting and wasting, are inadequate for assessing the extent of nutritional deprivation among young children in India.
- These measures do not provide guidance on the specific nature of the deficiencies and are multifactorial, making it challenging for any single ministry or department to design, implement and monitor policies to reduce undernutrition among children.

➤ **Specific Deprivations in Food Groups:**

- The statistics on zero-food reveal substantial deprivations in specific food groups.
 - More than 80% of children had not consumed any protein-rich foods in an entire day, and close to 40% did not eat any grains.
 - Six out of ten children do not consume milk or dairy of any form every day.

➤ **The Role of Poshan 2.0:**

- **Mission Poshan 2.0** is a flagship program dedicated to maternal and child nutrition in India.
- However, appropriate food-based metrics are not developed to monitor and assess the program's performance effectively.

What are the Causes of Hunger?

➤ **Poverty:**

- Poverty restricts food choices and has been the causative factor of hunger related deaths.
- The persistent high prices of food items and the regional disparities in terms of development affects the people to afford balanced nutrition.

➤ **Associated Factors:**

- Hunger and the related malnutrition are the result of various associated factors ranging from water, sanitation, access to food items.
- A person's 'nutritional quotient' is also dependent on demographic factors like gender, caste, age, etc.
- For instance, the nutritional needs of girl child and elderly are not adequately addressed in our society.

➤ **Lack of Effective Implementation of Policies:**

- Another important reason behind the persistent hunger is the poor implementation of the schemes and policies.

- The **Integrated Child Development Services (ICDS)** and the **National Health Mission (NHM)** have not achieved adequate coverage.

➤ **Climate Change:**

- Erratic rainfall and increasing frequency of extreme events have impacted agricultural activities everywhere creating unfavourable conditions for food production.
- Climate variability affecting rainfall patterns and agricultural seasons, and climate extremes such as droughts and floods, are among the key drivers behind the rise in hunger, together with conflict and economic slowdowns.

➤ **Micronutrient Deficiency (Hidden Hunger):**

- India faces a severe crisis in micronutrient deficiency. Its causes include poor diet, disease, or increased micronutrient needs not met during pregnancy and lactation.

What is Needed to Address the Problem of Hunger?

➤ **Need Better Data on Food Consumption:**

- The deficiency in data related to food and dietary consumption in India highlights the need for a national effort to establish routine dietary and nutritional assessments for the entire population.
- Measuring the availability, accessibility, and affordability of nutritious food, especially for disadvantaged and vulnerable populations such as young children, is crucial for developing evidence-based policies to end hunger and improve nutritional security.

➤ **Primary Focus on Young Children:**

- Access to adequate and affordable nutritious food is essential for young children for healthy development. The government should focus on elevating food intake among young children to be of primary importance rather than just “complementary” in policies and guidelines related to maternal, infant, and young child nutrition.

What are Government Initiatives?

➤ **Eat Right India Movement:**

- An outreach activity organised by the **Food Safety and Standards Authority of India (FSSAI)** for citizens to nudge them towards eating right.

➤ **POSHAN Abhiyan:**

- Launched by the Ministry of Women and Child Development in 2018, it targets to reduce stunting, undernutrition, anemia (among young children, women and adolescent girls).

➤ **Mid-day Meal (MDM) scheme:**

- **MDM scheme** aims to improve nutritional levels among school children which also has a direct and positive impact on enrolment, retention and attendance in schools.

➤ **Pradhan Mantri Matru Vandana Yojana:**

- A centrally sponsored scheme executed by the Ministry of Women and Child Development, is a maternity benefit programme being implemented in all districts of the country with effect from January 2017.

➤ **Food Fortification:**

- **Food Fortification** or Food Enrichment is the addition of key vitamins and minerals such as iron, iodine, zinc, Vitamin A & D to staple foods such as rice, milk and salt to improve their nutritional content.

➤ **National Food Security Act, 2013:**

- It legally entitled up to 75% of the rural population and 50% of the urban population to receive subsidised food grains under the Targeted Public Distribution System.

➤ **Mission Indradhanush:**

- It targets children under 2 years of age and pregnant women for immunisation against 12 Vaccine-Preventable Diseases (VPD).

➤ **Integrated Child Development Services (ICDS) Scheme:**

- Launched in 1975, the ICDS Scheme offers a package of six services to children in the age group of 0-6 years, pregnant women and lactating mothers.

What Should be the Way Forward?

➤ **Top Level Initiative Required:**

- India needs a strategic initiative led by the PMO to eliminate food insecurity and ensure affordable access, with a special and immediate focus on young children.

➤ **Robust Monitoring:**

- Zero-food metric should be used to monitor and assess the performance of initiatives such as Mission Poshan 2.0.
- Developing appropriate food-based metrics to assess food security is essential to evaluate the effectiveness of programs and interventions.
- The NFHS should extend 24-hour recall questions on consumption of various food items to the population of children under five years and adults.

➤ Adoption of Global Practices:

- Household-level food insecurity modules developed by the **Food and Agriculture Organisation** can be adapted to measure the extent of food insecurity among Indian households.

➤ Assessment and Awareness:

- A national effort to establish routine dietary and nutritional assessments for the entire population is necessary to understand food and dietary consumption.
- Awareness campaign regarding malnutrition at pan India level is the need of the hour.



India China Trade Ties

*This editorial is based on **India's intriguing trade ties with China** which was published in The Hindu Businessline on 03/05/2023. It talks about despite slowdown in China, trade deficit between India and China remains high.*

Tag: Internal Relation, GS Paper -2, India and its Neighbourhood, GS Paper-3, Fiscal Policy.

Despite the ongoing trade war between China and the US and the **COVID-19 pandemic**, China's role in global merchandise trade has not been affected. China is India's biggest source of imports, and its share in total Indian imports is more than double. India's dependence on China for non-oil imports can be as high as 25% or more.

India's trade relations with China are significant as China has been India's largest source of imports for the past 15 years. Despite India's efforts to reduce its dependency on China through import substitution and **free trade agreements (FTAs)** with Asian countries, China's share in India's imports has increased over the years. Due to increasing trade deficit with China India needs to look closely its trade relations with China.

How is India-China Trade Relations?

➤ Import from China:

- The slowdown in China and supply disruptions have not reduced China's share in India's total imports, and in absolute terms, India's imports from China in 2021-22 are significantly higher than its pre-Covid level of imports.
- In 2020-21 and 2021-22, China's share in India's imports reached a record high of 16.53% and 15.43%, respectively, while the UAE was the second-largest source of imports for India with an import share of 6.7% and 7.31% in 2020-21 and 2021-22, respectively.

- China's dominance in total non-oil merchandise imports is even more pronounced as India's dependence on China for non-oil imports can be as high as 25% or more.

➤ Items of Import:

- India primarily imports electrical and electronic goods, organic chemicals including pharmaceuticals, and plastic items from China.
- These items account for more than 70% of India's imports from China.

➤ India's Exports to China:

- According to data from the Ministry of Commerce and Industry, India's exports to China have been growing steadily in recent years.
 - In the financial year 2020-21, India's exports to China were worth \$21.2 billion, up from \$16.7 billion in 2019-20.

➤ Items of Export:

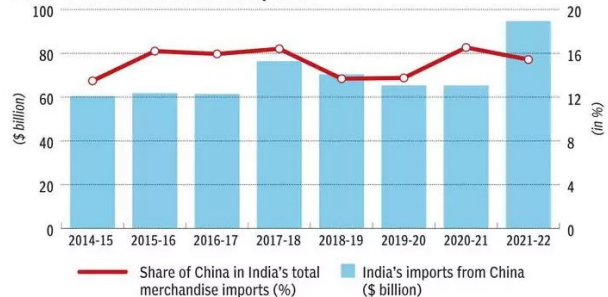
- The major items that India exports to China include organic chemicals, cotton yarn, copper, and ores.
- However, India's exports to China are still much lower than its imports from China, resulting in a large trade deficit.

➤ Bilateral Trade Deficit:

- India's bilateral trade deficit with China is large and growing. In 2021-22, India's trade deficit with China was around \$73.3 billion, and it is expected to cross \$100 billion in FY23.
- India's trade deficit with China accounts for 38-40% of India's total merchandise trade deficit in the post-Covid era.

Dissecting India-China trade

Imports from China and share of China in India's total merchandise imports



Merchandise trade with China and India's total merchandise trade

	Imports from China	Exports to China	Trade deficit with China	India's total trade deficit
2014-15	60.41	11.93	-48.48	-137.69
2015-16	61.71	9.01	-52.7	-118.72
2016-17	61.28	10.17	-51.11	-108.5
2017-18	76.38	13.33	-63.05	-162.05
2018-19	70.32	16.75	-53.57	-184
2019-20	65.26	16.61	-48.65	-161.35
2020-21	65.21	21.19	-44.03	-102.63
2021-22	94.57	21.26	-73.31	-191.05

Source: Ministry of Commerce

What are the Reasons for Intriguing Trade Relations?

- **China's Domestic Consumption Policy:**
 - India's increasing trade imbalance with China is intriguing for some special policy reasons.
 - China's **GDP** growth rate has slowed down since the Covid crisis, and the country has shifted its policies more towards domestic consumption.
 - However, this policy shift has not affected Chinese exports to India.
- **India's Withdrawal from RCEP:**
 - India has signed FTAs with several East and Southeast Asian nations, which should have taken some market share away from China, but this has not happened.
 - India withdrew from the **Regional Comprehensive Economic Partnership** (RCEP), which puts India at a disadvantage compared to other FTA partners of China.

What Does Heavy Import Reliance on China Imply?

- From the perspective of the government, the political and security challenges are deepened when the state is dependent on importing products and services from an unfriendly country.
- India imports most of the **Active Pharmaceutical Ingredients (APIs)** it uses in its pharmaceutical industry from China. The cost of Chinese APIs is cheaper than the Indian ones even on the Indian market.
 - The depth of the problem was revealed during the Covid-19 pandemic when due to travel restrictions, exports of Chinese APIs to India were temporarily restricted and consequently India had to cut its exports of APIs too.
- Approximately 24% of coal energy generated in India may be coming from plants that are using critical equipment imported from China. This, therefore, may not necessarily be considered a strategic dependence, but is certainly a form of a security challenge.
 - While there are demands to limit or even block such imports from China, this would simply mean forcing private Indian power companies to suffer higher costs.

What are Factors Responsible for the Trade Imbalance between India and China?

- **China's manufacturing dominance:**
 - China has become a manufacturing hub for the world, with a vast industrial base that enables it to produce goods at a lower cost than India.

- This has led to China exporting a wide range of products to India, from electronic goods to textiles.
- **India's dependence on Chinese goods:**
 - India is heavily dependent on Chinese goods, as it imports a significant amount of raw materials and finished products from China.
 - This includes items such as machinery, electronics, and chemicals.
- **Non-tariff barriers:**
 - There are several non-tariff barriers to trade between India and China, including complex regulatory requirements, intellectual property rights violations, and lack of transparency in business dealings.
 - These barriers can make it difficult for Indian businesses to access the Chinese market and compete with Chinese firms.
- **Infrastructure and Logistics:**
 - India's inadequate infrastructure and logistics facilities result in higher transaction costs for exporters, making Indian goods less competitive in the Chinese market.
- **Currency exchange rates:**
 - The exchange rate between the Indian rupee and the Chinese yuan also plays a role in the trade imbalance.
 - The Indian rupee has been weaker than the Chinese yuan, which makes Indian exports more expensive for Chinese buyers and Chinese imports cheaper for Indian buyers.
 - This further exacerbates the trade imbalance between the two countries.

What Should be the Way Forward?

- **Diversify Imports:**
 - India needs to **reduce its dependence on Chinese imports by diversifying its imports** from other countries such as **Vietnam, South Korea, Japan, Taiwan, and Indonesia**.
- **Boost Exports:**
 - India can focus on increasing its exports to China.
 - India should focus on exporting high-value products like **engineering goods, electronics, pharmaceuticals, and chemicals**.
 - These products have a **higher profit margin** and will help to increase India's **foreign exchange earnings**.
- **Develop Domestic Industries:**
 - India needs to **develop its domestic industries** to reduce its reliance on imports. The government can **provide incentives to domestic companies** to manufacture goods that are currently imported.

- This will not only help reduce the trade imbalance but **also create employment** opportunities in India.

➤ **Review FTAs:**

- India needs to review its free trade agreements with other countries to ensure that they are not hurting domestic industries.
- India should also **consider signing an FTA with China** to increase exports and reduce the trade deficit.



Unseasonal Rain and Impacts

*This editorial is based on **Tackling unseasonal rain** which was published in The Hindu Businessline on 04/05/2023. It talks about impact of unseasonal rain and measures to minimize the impact of unseasonal rain in India.*

Tag: Geography, GS Paper -1, Physical Geography, Food security, GS Paper-3, Irrigation

Unseasonal rains in India have once again highlighted the vulnerabilities of our agricultural sector. While rain is generally seen as a blessing, unseasonal rains can be a curse for farmers already reeling under the impact of low crop prices, rising input costs, and changing weather patterns.

Unseasonal rains can have a cascading effect on the overall inflationary trend. The impact of unseasonal rain is not just limited to the agricultural sector but also extends to other sectors of the economy.

What are the Causes of Unseasonal Rains?

➤ **Climate Change:**

- Climate change can result in unpredictable weather patterns, including unseasonal rain.
- Global warming, weak western disturbances and strong subtropical jet stream are the causes of recent unseasonal rains.

➤ **El Nino:**

- **El Nino** is a weather phenomenon that occurs when warm water from the western Pacific Ocean flows eastward.
- This can result in drought conditions in some regions and unseasonal rain in others.

➤ **La Nina:**

- **La Nina** is a weather phenomenon that occurs when cool water from the eastern Pacific Ocean flows westward.
- This can result in excess rainfall in some regions, including unseasonal rain.

➤ **Atmospheric Instability:**

- Atmospheric instability can also result in unseasonal rain. When there is a sudden change in atmospheric pressure, it can result in precipitation, even during non-monsoon seasons.

➤ **Human Activities:**

- Human activities such as deforestation, urbanization, and pollution can also contribute to unseasonal rain.
- Deforestation can disrupt the water cycle, while urbanization and pollution can affect the microclimate, resulting in unseasonal rain.

What is the Impact of Unseasonal Rains?

➤ **Agricultural Sector:**

- Unseasonal rains can lead to crop loss and impact post-harvest crops, leading to a rise in prices of perishable commodities such as vegetables and fruits.
- Farmers already reeling under the impact of low crop prices, rising input costs, and changing weather patterns are adversely affected.

➤ **Construction Sector:**

- Disruption caused by unseasonal rains can lead to a rise in prices of key raw materials such as cement and steel.

➤ **Consumption Patterns:**

- The rise in prices of essential commodities can lead to a fall in the overall demand for non-essential goods and services.

➤ **Social Impact:**

- Unseasonal rain can have a social impact, especially on the vulnerable sections of society such as small farmers, daily wage laborers, and migrant workers.

➤ **Political Impact:**

- Unseasonal rain has a significant political impact as well, especially in the context of the upcoming state and national elections.
- The ruling political party often faces criticism from the opposition for not doing enough to address the concerns of farmers.
- Political blame game happens, with each party trying to score points over the other.

What are

Government Measures to Protect Farmers?

- The government has launched several initiatives such as the **Pradhan Mantri Fasal Bima Yojana**(PMFBY), **Pradhan Mantri Krishi Sinchai Yojana**(PMKSY), and **Soil Health Card Scheme**(SHC) to address the concerns of farmers.

- **PMFBY:** It is a crop insurance scheme launched by the Government of India in 2016 to provide financial support to farmers in case of crop failure or damage due to natural calamities, pests, or diseases. Under this scheme, farmers have to pay a nominal premium, and the remaining amount is paid by the government. The premium rates are fixed based on the type of crop, location, and the level of coverage chosen by the farmer. The scheme covers all food and oilseed crops and commercial and horticultural crops.
- **PMKSY:**
 - It is a flagship scheme of the Government of India that aims to provide water to every field and improve water use efficiency in the country.
 - The Pradhan Mantri Krishi Sinchai Yojana aims to boost irrigation infrastructure and promote water-use efficiency.
- **The scheme has four components:**
 - **Accelerated Irrigation Benefit Programme:** This component aims to provide financial assistance to states for completing their incomplete irrigation projects
 - **Har Khet Ko Pani:** This component aims to provide water to every field by ensuring water conservation and efficient use through micro-irrigation, water harvesting, and other such techniques.
 - **Per Drop More Crop:** This component aims to enhance water use efficiency by promoting micro-irrigation techniques like drip and sprinkler irrigation.
 - **Watershed Development:** This component aims to conserve rainwater by promoting watershed development activities like afforestation, horticulture, and pasture development.
- **SHC Scheme:**
 - Under the Soil Health Card scheme, soil samples are collected from farmers' fields and analyzed in laboratories to assess the soil's nutrient status.
 - Based on the analysis, a soil health card is generated for each farmer, which provides information about the soil's nutrient status, as well as recommendations for the application of fertilizers and other soil amendments

What is the Multi-Pronged Approach to Address the Issue?

- **Short-term Measures:**
 - Centre and States can provide compensation for crop loss, supply seeds and fertilizers at subsidized rates.

- **Minimum Support Price** could be increased.
- **Long-term Measures:**
 - Structural reforms in the agricultural sector can make it more resilient to changing weather patterns.
 - Promote crop diversification, encourage the use of modern technologies and farming practices, and strengthen the supply chain infrastructure to reduce wastage and post-harvest losses.
- **Mitigating Climate Change:**
 - India needs to take a proactive approach towards mitigating its impact. This requires a coordinated effort between the Centre and States, civil society organizations, and the private sector.

Conclusion:

The impact of unseasonal rain is not just limited to the agricultural sector but also extends to other sectors of the economy. A multi-pronged approach involving both short- and long-term measures is needed to address the issue. Mitigating climate change is crucial to ensure the resilience of the agricultural sector. The government has launched several initiatives to address the concerns of farmers, but greater coordination between the central and state governments is needed.

■■■

Need for Digital Upskilling of Workforce

This editorial is based on "A Digitally Unprepared Workforce" which was published in The Hindu BusinessLine on 02/05/2023. It talks about the World Economic Forum that projects the creation of jobs mainly on the basis of tech-advancements and how India will be a laggard in the same if digital skilling, upskilling and reskilling is not given sufficient impetus.

Tag: Economy , GS Paper 2, Government Policies and Interventions, Human Resource, GS Paper 3, Growth & Development, Employment, IT & Computers

With the acceleration in the pace of technological change and the demands for such skills exceeding their supply, **digital literacy and upskilling is not anymore optional and rather a necessity.** The **National Sample Survey (NSS) (2020-21)** and **LFPs 2020-21** indicate the need to broaden the coverage of IT or computer-based training across various sectors.

So does the **Future of Jobs 2023 report** (4th edition; first launched in 2016) released recently by the **World Economic Forum (WEF)** which highlights the **creation of 97 million new jobs by 2025** on account of **technological**

advancements in artificial intelligence (AI) and other fields.

Notwithstanding the **initiatives for digital literacy**, India still has a long way to go before it **comes at par with the countries with highly skilled workforce**.

There is an urgent need for the Indian government, businesses, and educational institutions to **invest in digital upskilling initiatives to bridge the existing digital gap** and **remain competitive and relevant in the global marketplace**.

What does the WEF Report say about Tech-Advancement and Job Creation?

- **Optimistic yet Cautionary Projection:** The WEF predicts that while **85 million jobs will become obsolete by 2025**, technological advancements in AI and other fields will lead to the **creation of 97 million new jobs**.
 - However, the **role of machines in the division of labour will continue to increase**, especially for repetitive and routine tasks.
 - The jobs of the future are expected to **rely more on data-driven and machine-powered processes**.
- **Tech-driven Shift in India:** The WEF has also projected a **slightly lower churn in jobs for the labour markets in India** over the next 5 years compared to the **global average of 23%**. The churn in India will largely be technology-driven, via sectors such as **AI & ML (machine learning) (38%)**, followed by **data analysts and scientists (33%)** and **data entry clerks (32%)**.
 - The **smallest churn, predictably, will be in labour-intensive segments** of the economy.
 - However, the report also shows employers in **India and China to remain the most upbeat in terms of future talent availability**.

What Factors Indicate that India's Workforce is Digitally Unprepared?

- **Huge Demand-Supply Gap:** As per a report by **Nasscom, Draup, and Salesforce**, even when taking into account the current talent base of 420,000, there exists a **51% gap between AI & ML and big data analytics' (BDA) talent demand and supply**.
 - This gap is **significantly worse for ML engineers, data scientists, DevOps engineers and data architects** where the demand-supply gap is **60-73%**.
- **Shortcomings in Upskilling:** The problem is exacerbated by the quality of talent available; an **overwhelming number of engineering graduates are unemployable** with their current level of skills.
 - Approximately **30% of the trained workforce in different fields have IT training**, yet **29% of**

individuals with such training are unemployed, pointing towards either inadequate training content or poor training quality that results in low employability.

- Apart from the IT sector, the overall skilling effort, across segments of the economy, falls far short of what is required.
 - For instance, just **22% of those certified under the Pradhan Mantri Kaushal Vikas Yojana** have found placement.
- **Lack of Basic Understanding of Computers:** The NSS 2020-21 reveals **about 42% of the country's youth** has a basic understanding of **copying or moving files or using copy and paste tools on a computer**.
 - Additionally, only **10% and 8.6%** of youth have knowledge of **basic arithmetic formulae in a spreadsheet** and **creating an electronic presentation using presentation software**, respectively. Only **2.4%** of youth have programming skills.
- **Low Investments:** India's **investment in mid-career upskilling also remains quite average** which has been reflected in the high unemployment rate among those with advanced education.

What are the Initiatives of the Government of India in this Context?

- **National Digital Literacy Mission**
- **PM Kaushal Vikas Yojana (4.0)**
- **Digital India Mission**
- **National Education Policy 2020**
- **DigiSaksham initiative**
- **YuWaah Platform**
- **IndiaSkills 2021**
- **Recognition of Prior Learning**
- **Scheme for Higher Education Youth in Apprenticeship and Skills (SHREYAS)**
- **National Educational Alliance for Technology (NEAT 3.0)**

How can India Make its Workforce Digitally Prepared?

- **Revamping Skills and Investments:** To adapt to the changing job market, it is crucial to **restructure the entire skill development system** and focus on upskilling the workforce with an **eye on emerging technologies and the future of work**.
 - India has an advantage over other countries due to its **sizable working-age population** and a significant youth demographic.
 - However, full benefits of demography can't be reaped if sufficient attention is not given to **strategic**

investment, particularly in the reskilling of the workforce to keep up with the digital transformation.

- **Special Focus on IT Skills:** To remain competitive in the global market, it has become increasingly imperative for individuals from all sectors to possess specialised IT or computer skills.
 - The government, recognising this, has implemented several skilling programmes, such as the **Skill India Mission** and **Pradhan Mantri Kaushal Vikas Yojana (PMKVY) 4.0**.
 - These initiatives aim to **train and certify millions of individuals in various vocational skills, including IT and digital skills**, with a focus on emerging technologies like artificial intelligence, mechatronics and robotics.
- **Alternate Talent Pools:** We need to build **digital capabilities in smaller towns**, get **more women to join the work-stream** with hybrid work norms, **revamp vocational education** from industrial training institutes and polytechnics.
 - **Corporate-Social-Responsibility (CSR) funding** from industries can be leveraged for these programmes.
 - The governments should **work together with employers, training providers, and workers** to meet the growing digital learning needs.

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Urban Expansion and Development

*This editorial is based on **urban governance model of Maharashtra** which was published in **The Indian Express** on 05/05/2023. It talks about urbanization and associated issues.*

Tag: Social Issues, GS Paper -2, Issues relating to Development.

Urbanization is one of the most common characteristics of economic development. As the economy grows gradually, the process of urbanization depends on the shift of the surplus population from rural to urban areas along with the growth of some industrial urban centres.

Urbanization is closely linked to modernization and industrialization. Urbanization is not just a modern phenomenon, but a rapid and historic transformation of human social roots on a global scale, whereby, rural culture is rapidly replaced by predominantly urban culture.

For reasons of wealth and social mobility, many rural people come to the city. But the picture of urbanization is not as glorious as it seems. Modern cities have grown in a haphazard and unplanned way due to rapid industrialization.

According to the **2011 Census**, the urbanization rate in India was 31.2%, up from 27.8% in 2001. Around 590 million people would live in the cities by 2030. India is experiencing rapid urbanization. Therefore, it is important to understand the pattern of this growth and its effect on the population.

What are the Causes of Rapid Urbanization?

The growing trend of urbanization is reflected in the increasing concentration of the majority of the urban population in some major cities.

➤ Natural Population Increase:

- Rapid urbanization is taking place due to the high rate of natural population growth.
- The natural growth rate of the urban population is higher than that of the rural population due to the higher net survival rate resulting from improved health and medical facilities.
- Death rates in urban areas have decreased considerably due to improved availability of medical and health services, safe drinking water supply and improved sanitation facilities.

➤ Migrations:

- Rural-urban migration is considered to be another important factor responsible for rapid urbanization in India.
- The creation of many manufacturing and trading activities as a result of industrial development has led to the migration of rural people to urban areas in search of jobs and higher incomes.
- As a result of heavy public investment in industry and mining, large-scale industrial development and sustainable agricultural development are taking place.
 - Due to pull factors, a large number of rural people are migrating to urban areas.
- There are certain push factors in which a number of rural people are driven out of villages due to economic constraints, lack of facilities, political violence.

➤ Expansion of Trade and Industry:

- Urbanization has taken place with a growing expansion of industry and trade in a particular state of the region.
- Growth of an industry with its ancillaries, together with the localization of industry, would always create a favourable situation for the growth of an urban establishment.
 - Similarly, the growth of business and trade, together with the establishment of an active market, always provides adequate support for growing urbanization in those places linked to the development of industry and trade.

What are the Consequences of Rapid Urbanization?

➤ **Positive Aspect:**

○ **Economic Growth:**

- Rapid industrialization results in the development and establishment of many industrial cities.
- Together with manufacturing units, ancillaries and the service sector have begun to grow in these urban areas.

○ **Employment:**

- New and additional employment opportunities are being created in urban areas in the newly expanding manufacturing and service sector.
- This would result in rural-urban migration and the industrialization urbanization process to be established.

➤ **Modernization and Change in Attitude:**

- Urbanization results in changes in the attitudes and minds of urban people resulting in the modernization of behaviour and a proper motivation that indirectly helps the country to achieve faster economic development.

➤ **Negative Aspect**

○ **Congestion:**

- Growing urbanization is largely responsible for increasing congestion in urban areas.
- Too much congestion has resulted in problems such as traffic jams, too much concentration of the population, the management of which is gradually becoming very difficult and costly.

○ **Low Quality of Life:**

- Too much of the population creates urban chaos related to housing, education, medical facilities, slum growth, unemployment, violence, overcrowding, etc.
- All of these would lead to deterioration in the quality of human life.

○ **Loss of Productivity in Rural Areas:**

- Large-scale migration from rural to urban areas takes place.
- Such large-scale migration of the active population from rural areas would result in a loss of productivity in rural areas, leading to poor conditions in the village economy.
- As a result, urbanization beyond a certain point would have unhealthful consequences.

What is the Significance of Urban Living?

➤ **Easier Access to Facilities:**

- Urban living is linked with higher levels of literacy and education, better health, longer life expectancy, greater access to social services and enhanced opportunities for cultural and political participation.
- Urbanization is associated with easier access to hospitals, clinics and health services in general.
- Living in proximity to these services results in improved emergency care and general health.

➤ **Access to Information:**

- There are also benefits from easier access to sources of information such as radio and television which may be used to communicate information about health to the general public.
 - For instance, women living in towns and cities are more likely to be informed about family planning which results in reduction in family size and less frequent childbirth.

➤ **Individualism:**

- The multiplicity of opportunities, social diversity, and lack of familial and social control over decision making leads to more self-interest and facilitates decision-making by an individual and choosing one's career and actions by oneself.

What are the Issues Associated with Urbanization?

➤ **Excessive Population Pressure:**

- On the one hand, rural-urban migration accelerates the pace of urbanisation, on the other, it creates excessive population pressure on the existing public utilities.
- Consequently, the cities suffer from the problems of slums, crime, unemployment, urban poverty, pollution, congestion, ill-health and several deviant social activities.

➤ **Overflowing Slums:**

- There are about 13.7 million slum households in the country sheltering a population of 65.49 million people across the country.
- As much as 65% of Indian cities have adjoining slums where people live in small houses adjacent to each other.

➤ **Inadequate Housing:**

- Among the numerous social problems of urbanization, the problem of housing is the most distressing.
- A vast majority of the urban population live under conditions of poor shelter and in highly congested spaces.
- In India, more than half of the urban households occupy a single room, with an average occupancy per room of 4.4 persons.

➤ **Unplanned Development:**

- The model of building a developed city comprises unplanned development, which only bolsters the dichotomy prevailing in urban cities between the rich and the poor.

➤ **Pandemic-Induced Problems:**

- The Covid-19 pandemic has exacerbated the misery of urban poor or slum dwellers.
- The sudden implementation of complete Covid lockdown severely affected the ability of slum dwellers to earn their living.

➤ **Non-Inclusive Welfare Schemes:**

- The benefits of welfare schemes for urban poor often reach only a small part of the intended beneficiaries.
- Most relief funds and benefits do not reach slum dwellers, mainly because of inclusion and exclusion errors.

What are the India's Initiatives for Urbanization?➤ **Schemes/Programmes Related to Urban Development:**

- **Smart Cities**
- **AMRUT Mission**
- **Swachh Bharat Mission-Urban**
- **HRIDAY**
- **Pradhan Mantri Awas Yojana-Urban**
- **Aspirational district programm.**

What Should be the Way Forward?➤ **Integration of Inclusive Urban Development:**

- Adopting an integrated approach to urban programming by involving all development sectors, and prioritizing inclusivity in urban development.

➤ **Use of Scientific Data Methods:**

- Use of scientific data methods for assessing and monitoring outcomes of both state and central schemes to ensure evidence-based decision-making.

➤ **Citizen Participation:**

- Enhancing the voice and participation of citizens in civic affairs through physical and digital means to ensure that their needs and priorities are reflected in urban governance.

➤ **Strategic Thinking and Investment:**

- Investing in strategic thinking and investment, including private sector participation, and integrated and coordinated actions across agencies to address the challenges faced by cities.



Violence in Manipur

*This editorial is based on **What is behind Manipur's widespread unrest?** which was published in *The Hindu* on 05/05/2023. It talks about what triggered the conflict between the non-tribal Meitei people and other tribal groups and other related issues.*

Tag: Governance, GS Paper-2, GS Paper-3, Poverty and Developmental Issues, Communalism, Issues Related to SCs & STs, Issues Related to Minorities, Government Policies & Interventions, Pressure Groups and North-East Insurgency.

There have been violent communal clashes in Manipur due to the Manipur High Court (HC) directing the State to pursue a 10-year-old recommendation to grant **Scheduled Tribe (ST) status to the non-tribal Meitei community.**

The violence escalated after the All-Tribal Student Union Manipur (ATSUM) organized a "tribal solidarity rally" against the alleged **move to include the Meiteis on the ST list.**

What is Manipur's ethnic composition?

- The State is like a football stadium with the Imphal Valley representing the playfield at the centre and the surrounding hills the galleries. **The valley, which comprises about 10% of Manipur's landmass, is dominated by the non-tribal Meitei who account for more than 64% of the population of the State and yields 40 of the State's 60 MLAs.**
- **The hills comprising 90% of the geographical area are inhabited by more than 35% recognised tribes but send only 20 MLAs to the Assembly.**
- While a **majority of the Meiteis are Hindus** followed by Muslims, the **33 recognised tribes, broadly classified into 'Any Naga tribes' and 'Any Kuki tribes' are largely Christians.**

What is the Meitei**argument to support demand of ST status?**

- The Scheduled Tribe Demand Committee of Manipur (STDCM) began demanding ST status for the Meiteis in 2012.
 - The **Meiteis were recognised as a tribe before the merger of the State with the Union of India in 1949.** The ST status is needed to **"preserve" the community and "save the ancestral land, tradition, culture, and language"** of the Meiteis.
 - In 1972, the union territory of Manipur became 19th state of India.
 - The **Meiteis need constitutional safeguards against outsiders**, stating that the **community has been kept away from the hills while the tribal people**

can buy land in the “shrinking” Imphal Valley (Apprehension of Meities that creation of **Greater Nagalim** would lead to shrinking of Manipur’s geographical area).

- The Meitei/Meitei have been gradually marginalised in their ancestral land.
 - Their population was 59% of the total population of Manipur in 1951 and has now been reduced to 44% as per 2011 Census data.
- The Naga and Kuki movements fuelled Meitei nationalism. Concerns over demographic change and shrinking of traditional Meitei areas started to surface in the 1970s.
- During the period 2006-12 came the demand for an **Inner Line Permit (ILP)** in Manipur, to bar outsiders. The free movement of the Kuki-Zomi across Manipur’s porous border with Myanmar fanned fears of demographic change.
 - The growth rate of Manipur’s population had jumped from 12.8% in the 1941-51 period to 35.04% during 1951-61 and to 37.56% in 1961-71 after the permit system was abolished.
- In Manipur, the government is the largest employer and the reservation for STs in jobs amounts to an unfair advantage.
 - Infrastructure development (like railways that would open Manipur further) has made insecurities worse.

Why are tribal groups against ST status for Meiteis?

- The Meiteis have a demographic and political advantage and are also more academically advanced.
 - ST status to the Meiteis would **lead to loss of job opportunities** and allow them to acquire land in the hills and push the tribals out.
- The language of the Meitei people is included in the **Eighth Schedule of the Constitution** and many of them have access to benefits associated with the SC, OBC or EWS status.
- Kukis and Nagas point out that tribal areas are 90% of state’s geographical area, but the bulk of its budget and development work is focused on the Meitei-dominated Imphal valley.

The Process of Inclusion in the ST List

- State governments start recommendation for inclusion of the tribes in the list of ST.
- After the recommendation of the state govt, Tribal Affairs Ministry reviews and sends them to the Registrar General of India, Under the Home Ministry for approval.

- After approval, it is sent to the National Commission for Scheduled Tribes and then sent to the Cabinet for a final decision.
- Once the cabinet finalizes it, then it introduces a bill in the parliament to amend the Constitution (Scheduled Castes) Order, 1950, and the Constitution (Scheduled Tribes) Order, 1950.
- After the amendment bill is passed by both the Lok Sabha and Rajya Sabha, the President’s office takes the final decision under Articles 341 and 342 of the Constitution.

What led to the recent Unrest?

While the forest eviction and demand for ST status for Meiteis have been the most prominent recent triggers, the divide between the Meiteis and tribals on several issues has widened over the past decade.


- Issues in Delimitation Process: In 2020, as the Centre began the first delimitation process in the state since 1973, the Meitei community alleged that the Census figures used in the exercise did not accurately reflect the population break-up.
 - **Tribal groups (Kuki and Nagas)** on the other hand said they had grown to 40% of the state’s population and were **underrepresented in the Assembly**.
- **Intrusion of Migrants from Neighbour Area:** The **February 2021 coup in Myanmar** has led to a refugee crisis in India’s Northeast. Meitei leaders have alleged that there has been a **sudden mushrooming of villages in Churachandpur district**.
- **The Drugs Problem:** Some tribal groups with vested interests are trying to scuttle govt’s crusade against drugs.
 - The anti-drug drive was started by destroying poppy fields. **“Illegal settlers” related to the Kuki-Zomi of Manipur, growing drugs on cleared lands.**
- Recent Unrest: The first violent protest erupted over the eviction of the residents of a Kuki village.
 - **38 villages in the Churachandpur-Khoupum Protected Forest area (in Churachandpur and Noney districts) are “illegal settlements”** and its residents are “encroachers (encroaching reserved and protected forests and wildlife sanctuaries for poppy plantation and drugs business”).
 - Kuki groups have claimed that the survey and eviction is a violation of Article 371C, as kukis are residents of Hill Area.
 - **Article 371C provides for the creation of a committee of the Manipur Legislative Assembly consisting of the members elected from the Hill Areas of the state and Governor shall have responsibility for proper functioning of that committee.**

- At the State level there is Hill Area Committee constituted under the Manipur Legislative Assembly (Hill Areas Committee) order, 1972. The Hill areas Committee comprises of all MLAs elected

- from the hill areas of the State as its members.
- The state government withdrew from the suspension of operations agreements with two Kuki extremist groups accused of inciting the protesters.

Geography of Manipur and History of Violence in Manipur

CHEQUERED HISTORY



NSCN-IM
Integration of Naga-inhabited areas of Northeast is the core demand of NSCN-IM which has been holding peace parleys with the Centre. There was violent protest in Manipur in 2001 when the cease fire agreement signed between the Government of India and NSCN-IM was extended.

Manipur, which has over 35 communities inhabiting the valleys and hills of the state, has a chequered history of violent and deadly clashes.

Naga-Kuki Fight
The Kukis are hill tribes spread across the Northeast besides Myanmar and the Chittagong Hill Tracts in Bangladesh. On September 13, 1993, militants of National Socialist Council of Nagaland (Isak Muivah) massacred around 115 Kuki civilians in the hills of Manipur. However, NSCN-IM refuted the allegation.

The rivalry between Nagas and Kukis started in the colonial era. In 1990 there were clashes over land. Kukis often claimed 350 of their villages were uprooted, over 1,000 killed and 10,000 were people displaced. Chins are called Kukis on the Indian side.

Meitei Pangal and Meiteis
In 1993 there were clashes between Meitei Pangal (Muslim) and Meitei. A bus carrying Muslim passengers was set on fire. Over 100 people were killed.


Insurgency
Manipur had scores of militant outfits and violence was largely triggered by insurgents.

The NSCN-IM entered a ceasefire agreement with the Government of India in 1997.

Valley-based militant outfits (Meitei groups) such as the UNLF, PLA, KYKL etc. are yet to come to the negotiating table.

The Kuki outfits under two umbrella groups, the Kuki National Organisation (KNO) and United People's Front (UPF), also signed the tripartite Suspension of Operation (SoO) pacts with the Centre and Manipur on August 22, 2008.

Hill and Valley



The current conflict between Meiteis and Kukis is the extension of hills versus plains conflict. Meiteis account for 93% of the population, while tribal communities account for around 40% of the population. Naga tribes make up for (24%) and Kuki/Zomi tribes (16%).

- There are 16 districts in Manipur, but the state is commonly thought of as divided into 'valley' and 'hill' districts. **Today's valley districts of Imphal East, Imphal West, Thoubal, Bishnupur, and Kakching were part of the erstwhile kingdom of Kangleipak**, ruled by the Ningthouja dynasty.
- **The Manipur valley is encircled by skirts of low hills** (hill areas comprise the bulk of Manipur's geographical area), live 15 Naga tribes and the Chin-Kuki-Mizo-Zomi group, which includes the Kuki, Thadou, Hmar, Paite, Vaiphei and Zou peoples.
- **The Kangleipak kingdom**, then a British protectorate, was repeatedly **raided by Naga tribes who came down from the northern hills**. The British political agent in Manipur brought the Kuki-Zomi from the Kuki-Chin hills of Burma to protect the valley from plunder by acting as a buffer between the Meiteis and the Nagas.
 - The Kukis, like the Nagas, were fierce headhunting warriors — and the Maharaja gave them land along the ridges, where they could act as a shield for the Imphal valley below.
- Kuki-Meitei divide: The hill communities (Naga & Kuki) and the Meiteis have had ethnic tensions since the kingdom era. The Naga movement for independence in the 1950s triggered insurgencies among the Meiteis and Kuki-Zomi. The Kuki-Zomi groups militarised in the 1990s to demand a state within India called 'Kukiland' (a state within India). This alienated them from the Meiteis, whom they had earlier defended.
 - In 1993, **Hindu Meiteis** clashed with Pangals (Muslims), and also there was horrific violence between the **tribal Nagas and Kukis**, which saw more than a **hundred Kukis massacred in a single day by Nagas**, and thousands driven from their homes.
- District of Churachandpur: Kuki-Zomi-dominated Churachandpur (a Myanmar bordered District) has mostly Christian population. It is the country's poorest district (as per the Panchayati Raj Ministry in 2006) and it remains abjectly poor.
 - **In 2015, as the Meiteis of the valley protested demanding ILP** in Imphal city, equally intense **protests were seen in Churachandpur countering the demand** and protesting the introduction of laws.

Way Forward

- Need to evaluate the criteria for ST status (to Meities) in line with recommendations given by several Committees, like:
 - **The Lokur Committee (1965)** recommended 5 criteria for identification, namely, primitive traits, distinct culture, geographical isolation, shyness

- of contact with the community at large, and backwardness.
- **Bhuria Commission (2002-2004)** focused on a wide range of issues from the **5th Schedule** to tribal land and forests, health and education, the working of Panchayats and the status of tribal women.

- **A High-Level Committee (HLC) in 2013**, under chairmanship of **Prof. Virginius Xaxa** was constituted to study the 5 critical issues related to tribal communities: (1) livelihood and employment, (2) education, (3) health, (4) involuntary displacement and migration, (5) and legal and constitutional matters.
- Bring more surveillance along the border areas to prevent the incursion of the migrants from Myanmar. Strengthening economic and diplomatic ties with neighboring countries can help enhance regional stability and security.
- Need to maintain the identity of the people along the border areas to identify the local residence. Signing Peace settlement agreements with the local insurgent group to maintain the peace in the region.
- The repeal of AFSPA, the controversial **Armed Forces Special Powers Act** 1958, is necessary to improve the human rights situation in the region. The government should ensure that the legal system is fair and transparent to prevent the misuse of power by security forces.
- The government should foster the participation of the people of the region in the decision-making process to instill a sense of ownership and belonging.

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Globalising the Indian Rupee

This editorial is based on “Perils of Trading Globally in Re” which was published in The Hindu Business Line on 07/05/2023. It talks about the Government of India’s efforts to internationalise Indian rupee and the corresponding challenges.

Tag: Economy , GS Paper 2, Government Policies and Interventions, Effect of Policies & Politics of Countries on India’s Interests, GS Paper 3, Growth & Development, Inclusive Growth, Role of External State & Non-State Actors

Currently, global trade and the economy are going through difficult times, especially after the **Covid-19 inflicted recession** and the **renewed geopolitical tensions in Eastern Europe**. Many developing countries in Asia, Africa and Latin America are on the verge of currency crises with **severe foreign exchange shortages and volatility**.

Even if not for all the crisis, the **US often weaponising the US Dollar against its adversaries** by imposing sanctions on them (Iran, Russia etc.) has led to **countries across the globe look for alternate means of trade and payment settlements**.

At this juncture, an alternative arrangement to the USD-based settlement system with one using **INR could be a win-win to both India and the countries facing sanctions** by the US. **RBI’s decision to promote Indian rupee for cross-border trade** is undoubtedly a step in the right direction, however, such internationalisation requires a number of short-term and long-term actions.

What is Understood by Internationalisation of Rupee?

- International Currency:
 - An international currency is one that is **used instead of the national currencies of the parties directly involved** in an international transaction, whether the transaction in question involves a purchase of goods, services or financial assets.
 - As of July 2022, **USD accounts for about 88% of global foreign exchange market turnover, followed by the Euro, Japanese Yen and Pound Sterling. The Indian rupee accounts for a mere 1.7%.**
- Internationalisation of Indian Rupee:
 - It refers to the **process of increased cross-border transactions** of Indian currency, **especially in import-export trades** followed by other **current account transactions** and then **capital account transactions**.
 - This would enable the international settlement of trade in Indian rupees in foreign trades, as opposed to other currencies including USD.

Note: Current account is used to deal in export and import of goods and services, whereas, capital account is made up of capital through cross-border transactions in the form of investment and loans.

- Driving Factor:
 - The **removal of seven Russian banks from SWIFT arrangement** as part of the **Ukraine-induced economic sanctions against Russia** was the trigger.
 - This payment arrangement assumed greater importance in 2022-23 as **India increased its dependence on discounted Russian oil**, making it the **second largest source of crude oil**.
- India’s Efforts:
 - In July 2022, the RBI issued a circular on **“International Trade Settlement in Indian Rupees”**, which underlined the terms not only for trade settlement but also for **cross-border transactions in Rupees**.
 - An important component of this arrangement is that Rupee surplus balance can be used for capital and current account transactions in accordance with mutual agreement.

- Thus, **foreign entities holding Rupee balances are allowed to invest** in assets in India.
- More recently in March 2023, the RBI put in place the mechanism for **rupee trade settlement with as many as 18 countries**.
 - Banks from these countries have been allowed to open **Special Vostro Rupee Accounts (SVRAs)** for settling payments in Indian Rupees.
 - In April 2023, **India and Malaysia agreed to settle trade in Indian rupees**.
- As part of its **Foreign Trade Policy 2023**, the government intends to **encourage the use of the Indian currency in cross-border trade**, aided by a new payment settlement framework that RBI introduced in July 2022.
- **Significance:**
 - The most important advantage of internationalising Rupee is to **reduce dependency on the USD for foreign trade**.
 - It would further **increase the bargaining power of India** in international business.
 - Expanding the use of rupee for international trade will **reduce currency risk for Indian businesses by eliminating their exposure to currency volatility**.
 - This can **reduce the cost of doing business** and can hence help in **making exports more competitive in the global market**.
 - Additionally, the **need to maintain forex reserves can drastically reduce** if a sizable share of India's trade can be settled in terms of the domestic currency.

Is the US Dollar Still the International Currency?

- The **International Monetary Fund's (IMF)** data on holdings of forex reserves shows that after the Ukraine conflict, the **USD's share has not really changed and remains close to 60%, followed by the euro, at 20%**.
 - The yen and British pound come next. The renminbi has a lower share than the Swiss franc and Australian dollar.
- Along with general acceptability as a medium of exchange for international trade, the **US dollar is also in demand because of demand for dollar-denominated assets** worldwide.
 - The debt issued by the US government is bought by many countries across the world as a **hedge against currency fluctuations** affecting valuation of reserves.
- **Thus, the run of the US dollar as an international reserve currency is far from over.**

What are the Major

Roadblocks to Internationalisation of Rupee?

- **Rupee-Trade Arrangements Not Easy to Implement:**
 - This was also the **main reason why India and Russia have suspended efforts to settle bilateral trade in rupees**, after months of negotiations failed to convince the latter to keep rupees in its coffers.
 - The **rupee is not fully convertible**; India's share of **global exports of goods is just about 2%** and these factors reduce the necessity for other countries to hold rupees.
 - Consequently, **Russia wanted the trade to be done in Chinese Yuan, UAE Dirham or other currencies**.
- **India's Trade Deficit with Major Trade Partners:**
 - India has a trade deficit with its major trading partners including China, UAE, Saudi and Russia.
 - Infact, **India's large trade deficit vis-a-vis Russia**, which implies that the latter would be saddled with **large Rupee balances**, was also why it has been **reluctant for Rupee-Rouble trade**.
- **Balancing Exchange Rate Stability & Domestic Monetary Policy:**
 - As the Rupee becomes more internationalised, it is **likely to become more vulnerable to external economic shocks**, such as changes in global interest rates or fluctuations in commodity prices.
 - This could make it **more difficult for the central bank (RBI) to maintain both exchange rate stability and a domestically oriented monetary policy**.
- **Lesser Control on Money Supply:**
 - When a currency is internationalised, **both residents and non-residents can buy and sell domestic currency-denominated financial instruments** such as stocks, bonds, and other securities.
 - This means that the demand and supply of the country's **currency can be influenced not just by domestic but also external factors** (outside the country).
 - If so happens in the case of Rupee, the **RBI will have limited control over the money supply** within its own borders, which could make it **difficult to maintain stable interest rates** that are in line with the requirements of the domestic economy.
- **Risks from Full Convertibility of Rupee:**
 - For rupee to be effectively internationalised, the government will have to **remove restrictions on any entity** (domestic/foreign) from buying/selling rupee; this implies **no restrictions on the flow of**

capital in and out of the country, which would require full convertibility on the capital account.

- However, **successive Indian governments have avoided full convertibility** on the capital account to prevent the Indian economy from being exposed to the risks of external financial shocks.

What Measures can be Taken to Facilitate Rupee Internationalisation?

➤ **Emulating China:**

- Among the emerging economies, China is the only country that has been able to steadily internationalise its currency, while maintaining controls on its capital account. It has done so by:
 - **Finalising currency swap agreements** between central banks of China and 43 such countries, which **assure the markets that there would not be oversupply of the renminbi**.
 - Creating an offshore market for its domestic currency that allows **foreign entities to sell renminbi for dollars**.
- However, it must not be forgotten that **China also has its trade surplus with most of the other countries**.
 - This is one of the areas that India is currently working on via the **Atma-Nirbhar Bharat initiative** and also needs to give it further impetus by means of **funding and research & development** so that it can reduce its reliance on imports.

➤ **Better Planning:**

- It would require India to have considerable thinking and planning to make rupee-internationalisation function in a manner that **does not adversely affect the economy's fundamentals**.

➤ **The government must carefully balance the benefits with the potential risks and take appropriate measures to ensure the stability of the economy.**

- It also requires India to have a **large and deep domestic financial market to be better equipped to handle external shocks** and make it easier for the RBI to manage its monetary policy.

➤ **Focussing of Enhancing Exports:**

- India has made a modest attempt at facilitating rupee trade, the idea will take time to gain acceptance. For the time being, the rupee's acceptance will potentially be limited to **countries that have a deficit with India**.
 - India will **need to enrol other trade partners** that would be able to use their rupees to buy goods from India.

- The US and European Union are the major export destinations for India and the others would be **oil exporting nations**. Getting the latter into our fold sounds plausible.

➤ **Other Concerted Steps that Government can Take:**

- **Removal of restrictions** on buying and selling of domestic currency in both the spot and forward markets.
- **Domestic firms being able to invoice exports and imports** in their own currency.
- Foreign firms, financial institutions, govt institutions and individuals being able to **hold the country's currency and financial instruments**.

■■■

Evolving India - Gulf Relations

*This editorial is based on **How strategic convergence between US, UAE, Saudi Arabia and India can help Delhi?** which was published in Indian Express on 10/05/2023. It talks about India's developing relations with Gulf Nations.*

Tag: International Relations, GS Paper -2, Groupings & Agreements Involving India and/or Affecting India's Interests, Effect of Policies & Politics of Countries on India's Interests

The new India-US relations on the Gulf is a major departure from the traditional approaches to the Middle East in both India and the US. In India, one of the entrenched principles of the earlier foreign policy was the proposition that India must either oppose US or keep its distance from it in the Middle East.

The Recent meeting in Riyadh between Saudi Crown Prince and the national security advisers of the US, UAE, and India underlines the growing strategic convergence between India and US in the Gulf. It also highlights India's new possibilities in the Arabian Peninsula.

What are the Gulf Nations?

The term "**Gulf Nations**" refers to a group of countries located in the Persian Gulf region of the Middle East. The Gulf Nations include the following countries:

- Bahrain
- Kuwait
- Oman
- Qatar
- Saudi Arabia
- The United Arab Emirates.

They all are the members of **Gulf Cooperation Council (GCC)**.



What was the Ideological Taboo in India's Foreign Policy?

Any proposition that India would sit down with the US, Israel and the Gulf countries were considered as a fantasy just a few years ago. Some of the reasons behind this ideological taboo are:

- Traditionally, India pursued a policy of non-alignment, aiming to maintain neutrality and independence in its foreign relations.
- India historically prioritized its relationships with neighbouring countries in South Asia. It concentrated on building regional alliances, resolving conflicts, and promoting economic integration within its immediate neighbourhood.
- In the past, India had limited resources to invest in projecting influence in regions beyond its immediate neighbourhood, including the Gulf. India focused on its own domestic development and addressing internal economic issues, which somewhat constrained its engagement with the Gulf nations.
- Also, seeing India's deep ties with Russia, India increasing its ties with US was also seen as a taboo in the past.
- Because of Arab-Israeli conflict of Palestine issue, there was a notion among the policy framers that India can't be visibly friendly to Israel.

How has India Shifted its Foreign Policy?

- After recognizing the significance of Middle East in India's Foreign Policy, it started increasing its ties with Gulf. The landmark shift towards this was seen with

the formation of a four-nation grouping — unveiled in October 2021 — called **I2U2** that brought the US, India, Israel, and the UAE together.

- India shifted its policy by rejecting the notion that India can't be visibly friendly to Israel and maintained a fine balance of ties with both Israel and Arab.
- India's uneasy relations were also transformed with the two Arabian kingdoms, Saudi Arabia and the UAE, into solid strategic partnerships.

Significance of India's Increasing Ties with the Gulf?

- **Countering Terrorism and Pakistan:** If India sheds its "anti-Western" lens in the Middle East, the US would lead the West to discard its pro-Pakistan bias in thinking about the relationship between the Subcontinent and the Gulf. They can help India in countering terrorism as well.
 - Pakistan's continuing strategic decline makes it a lot less relevant to the changing geopolitics of the Gulf.
 - Gulf Nations have seen an ideological shift from religion to Nationalism. The engagement with them would also help India overcome the dangerous forces of violent religious extremism within the Subcontinent.
- **Energy Security:** The Gulf countries, including Saudi Arabia, the United Arab Emirates (UAE), Qatar, and Kuwait, are major oil and gas producers. India is heavily dependent on Gulf nations for its energy needs, as they account for a significant portion of its oil and gas imports. Strengthening ties ensures a stable and reliable energy supply, which is crucial for India's growing economy.
 - They are also thriving to reduce dependence on oil in the long run which could be beneficial for India as well.
 - Between 2014-18, the total renewable electricity installed in the GCC states increased by over 300 percent.
 - UAE, Saudi Arabia, Oman and Bahrain are the members of **International Solar Alliance** initiated by India.
- **Economic Cooperation:** The Gulf countries have robust economies with substantial investment potential. India seeks to enhance trade and economic cooperation with these nations, exploring opportunities for investment, infrastructure development, and bilateral trade. It opens avenues for Indian businesses to tap into the Gulf's lucrative markets and benefit from their diverse sectors such as construction, real estate, finance, and tourism.

- Investment from Gulf to India has increased significantly during past few years. India can utilise its relations to attract more investments from the Gulf.
- Also, there is a **Free Trade Agreement (FTA)** being negotiated between India and Gulf Cooperation Council.
- **Remittances and Diaspora:** The Gulf nations house millions of Indian people who play a vital role in India's economy through remittances. Strengthening ties with these nations benefits Indian workers by providing better welfare and protection, enhancing labor migration, and creating more employment opportunities.
 - During FY 2021-22, India received highest ever remittances. UAE contributed the most after USA.
- **Geostrategic Importance:** The Gulf holds geostrategic significance due to its location connecting Europe, Asia, and Africa. India's enhanced engagement in the region provides it with a platform to expand its influence and shape regional dynamics. It allows India to participate in dialogues, initiatives, and organizations such as the Gulf Cooperation Council (GCC), **Arab League**, and **Indian Ocean Rim Association (IORA)**, strengthening its diplomatic ties and strategic partnerships.
- **Cultural and People-to-People Exchanges:** India shares historical, cultural, and social ties with the Gulf countries, dating back centuries. Strengthening bilateral relations promotes cultural exchanges, tourism, and people-to-people interactions, fostering mutual understanding and goodwill between the nations. It helps preserve and promote the shared heritage, traditions, and values of the Indian diaspora in the Gulf.

What are the Challenges in India-Gulf ties?

- **Geopolitical Dynamics:** The Gulf region is strategically important due to its energy resources and its location at the crossroads of major international trade routes. Geopolitical rivalries and conflicts in the region, such as the Iran-Saudi Arabia rivalry, the Yemeni civil war, and the Qatar diplomatic crisis, can impact India's relations with Gulf countries.
- **Regional Instability:** The Gulf region has witnessed political instability and security threats in recent years. Ongoing conflicts, such as the Syrian civil war and the rise of extremist groups such as ISIS have created challenges for regional stability. These issues can have spill-over effects on India's relations with Gulf countries and pose security concerns for Indian citizens residing in the region.
- **China Factor:** China has emerged as an important player in the geopolitics and its diplomatic and political influence in the region will continue to rise. Yet, China is nowhere near displacing US as the principal

external actor in the Gulf. Thus, it also makes India heavily dependent on US for fostering its relations with gulf nations.

What should be the Way Forward?

- **Economic Cooperation Frameworks:** Establishing bilateral economic cooperation frameworks, such as free trade agreements or preferential trade agreements, can facilitate smoother trade and investment flows. India must thrive to finalize negotiations on India-GCC free trade agreement.
- **Cultural Exchanges and People-to-People Contacts:** Strengthening cultural exchanges, promoting tourism, and facilitating people-to-people contacts will foster greater mutual understanding and strengthen the bonds between India and the Gulf nations. Encouraging cultural festivals, educational exchanges, and promoting tourism initiatives can contribute to building stronger ties at the grassroots level.
 - Sister city relationships can play a significant role in enhancing cultural relations.
- **Diversification of Trade:** While India and the Gulf countries have a significant trade relationship, there is room for diversification. Both sides can explore new sectors and expand the scope of trade beyond oil and gas. Encouraging investments in sectors like renewable energy, technology, healthcare, and agriculture can enhance bilateral trade and reduce dependence on a single commodity.
 - India has signed **CEPA with UAE**, signing such agreements with other gulf countries would help India diversify its trade.

Conclusion

India needs to update its approach to the Gulf region in order to take advantage of new opportunities. This would involve modernizing the way India thinks about its strategic interests in the Gulf and changing the outdated ways in which people talk about the Arabian Peninsula



Indian Aviation Industry

*This editorial is based on **The troubles of India's aviation industry** which was published in The Hindu on 11/05/2023. It talks about what does GoFirst's distress call mean for the aviation sector? Why do airlines struggle to survive? What contributes to the high operating costs? What are the policy and regulatory factors affecting the industry?*

Tag: Indian Economy, GS Paper -3, Liberalization, Investment Models, Space Technology, Infrastructure.

After low-cost carrier GoFirst's insolvency filing, the aviation safety regulator Directorate General of Civil Aviation (DGCA), directed the airline to stop selling air tickets immediately.

The DGCA issued GoFirst (rebranded itself two years ago) a showcause notice for its "failure to continue the operation of the service in a safe, efficient and reliable manner". The Fleet of GoFirst was grounded due to slowed engine manufacturing and high operational costs.

How Big is the Indian Aviation Sector?

- In March 2023, **Domestic carriers flew 13 million passengers**. As per the Civil Aviation Ministry, **India will have more than 140 million passengers in FY2024 alone**.
- India to handle over 1.3 billion passengers annually in the next 20 years. There are **currently 148 airports in the country, and it is the third-largest domestic market in the world in terms of seat capacity**. As of March 2023, **IndiGo (domestic market leader)** with **56.8% of the market share**, followed by Vistara (8.9%) and Air India (8.8%).

Is the Indian Aviation Sector Financially Viable?

- **High Competition:** Despite being touted as the 'fastest growing aviation sector' in the world, **airlines in the country have struggled to survive in the highly competitive and unforgiving aviation industry**.
- **Loss due to Pandemic:** In the year 2020-2021, they lost a lot of money (₹15,000 crore) because of the pandemic. In 2019-20, IndiGo was the only airline to make a profit, while all other players posted losses led by then state-run Air India at ₹4,600 crore.
- **Financial Difficulties:** Seventeen airlines, both domestic and regional, have gone out of business due to financial difficulties. It is mainly led by the liquidity Crunch and low-ticket price.
- **Uneven Market Share:** The consolidation of four carriers including Air India and Vistara by the Tatas.
 - Consolidated Air India and Indigo will capture 75-80% of the market, leaving just about 20% for players like SpiceJet, and the newest entrant Akasa.

What Challenges do Indian Airlines Sector Face?

- **Aviation Turbine Fuel (ATF) Cost:** India's **airfares are 15% below the break-even point, heavily taxed ATF** contributes to the single biggest expenses of carriers, amounting to 40-50% of operational expenses.
 - **Tax on ATF:** Some **Indian states charge up to 30% taxes on jet fuel**, which makes **shorter flight routes unprofitable** for smaller airlines. Large airlines like IndiGo offer low fares on these routes and use their size to recoup costs.

- **Issue in National Civil Aviation Policy:** The policy has not been fair to all players. Until 2016, new airlines had to be in operation for at least five years and have 20 aircraft to fly internationally.
 - This changed with the National Civil Aviation Policy in 2016, but still mandated domestic airlines to have **at least 20 aircraft for domestic operations**.
- **High Lease coast:** Nearly 80% of India's commercial fleet is leased, and airlines pay annual lease rents of about ₹10,000 crore, making up almost 15% of their revenues.
 - **Dollar-Rupee Volatility:** This adds high costs to operations as the leases are in US dollars, and the Indian rupee's depreciation raises costs further.
 - The government's **plan to establish leasing companies in India may help reduce costs**.
- **High Service charge and Low-ticket Price:** Airlines have to pay for using airport facilities like runways and terminals and low-ticket prices for the competitive edge in business works against the economic viability. Privatization of airports has raised concerns about fee increases.
- **High Training cost of Crew:** Training airline crew is expensive and there is a shortage of pilots due to a lack of Flight Training Organizations.

What Steps Government has Taken for the Aviation Sector?

- **Goods and Services Tax (GST)** rate reduced to 5% from 18% for domestic **Maintenance, Repair and Overhaul (MRO) services**.
- Benefits under **Emergency Credit Line Guarantee Scheme (ECLGS) 3.0** have been extended to the civil aviation sector.
- **Operation of Regional Connectivity Scheme (RCS) - UDAN** (UdeDeshKaAamNagrik) flights Promoted private investments in existing and new Airports through the PPP route.
- Route rationalisation in the Indian airspace in coordination with Indian Air Force for efficient airspace management, shorter routes and reduced fuel burn.
- **RCS-UDAN** was launched to Promote air connectivity to unserved and underserved airports in Tier-II and Tier-III cities to stimulate regional growth and provide affordable air travel to the citizens.

What are Opportunities in Indian Aviation Sector?

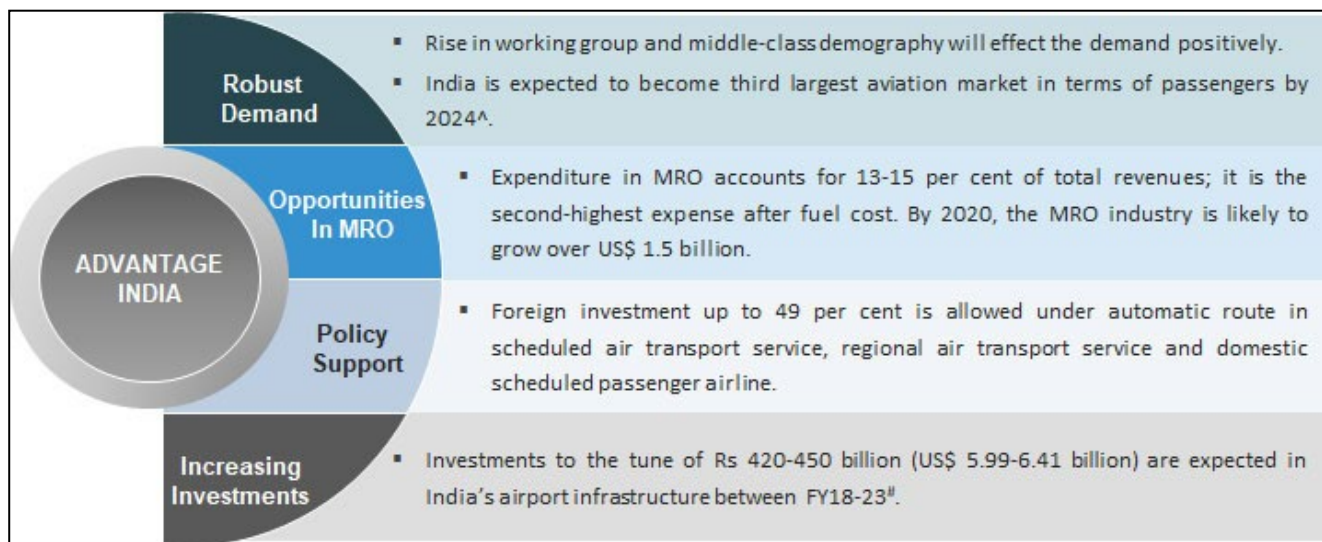
- Indian carriers are projected to increase their fleet size to 1,100 aircraft by 2027.

- Demand for Maintenance, Repair and Overhaul (MRO) services (MRO) facilities are increasing in India due to consistent double-digit growth in the aviation sector.
- For the development of the aviation industry in the North-East States, AAI plans to develop Guwahati as an inter-regional hub.
- Indian airports are emulating the **Special Economic Zone (SEZ)** Aerotropolis model to enhance revenues. The model focuses on revenues from retail, advertising, vehicle parking, security equipment and services.
- Three **Public Private Partnership (PPP)** airports at Delhi, Hyderabad and Bengaluru have undertaken developmental projects to the tune of INR. 30,000 Crores by 2025.
- GOI's vision is to make India one of the top air sports nations by 2030. The mission is to provide a safe, affordable, accessible, enjoyable and sustainable air sports ecosystem in India.
- Noida International Greenfield Airport at Jewar, Uttar Pradesh will bring about all-around development of the industrial infrastructure in the region, increase employment opportunities and encourage manufacturing and export.

What could be the Way forward?

- **Enhance Aviation Infrastructure**
 - There is a need to complete the ongoing projects under the **UDAN initiative** in a time-bound manner. In addition, the existing capacity of international airports should be augmented under the **International UDAN initiative**.
 - Government intention to make India a global hub for Aircraft Maintenance, Repair and Overhaul (MRO) services will result in saving costs and creating liquidity for airline companies.

- Also, convergence between civil MROs and the defence sector should create economies of scale and long-term benefits.
- Formulation of long-term plans for advanced research in aviation technologies will help in creating a manufacturing ecosystem in the country.
- **Address Shortage of Skilled Manpower**
 - There is a need for promotion of collaboration between original equipment manufacturers (OEMs), industry and educational institutes to assimilate the latest technology and management practices in the aviation industry.
- **Augmenting Finances**
 - Taxation and pricing structure of aviation turbine fuel (ATF) should be aligned to global benchmarks by considering bringing under the ambit of GST.
 - Vacant real estate near **Airports Authority of India (AAI) airports** in all major centres can be monetised to increase non-aeronautical revenues.
- **Making India a Transshipment Hub**
 - India can reap multiple benefits by establishing itself as a transshipment hub in the region. This will augment India's trading capacity as a service provider, emerging as a foreign exchange earner and enabler for better connectivity in the region.
 - This may be done by the development of digital business enablers such as e-contracting, e-transportation multimodality, e-compliances and an e-grievance redressal module.
- In this context, the National Civil Aviation Policy 2016 and National Civil Aviation programme 2018 can help India to become a major civil aviation market in the world.



Indian Space Policy 2023: Provisions and Gaps

This editorial is based on **A ground view of the Indian Space Policy 2023** which was published in The Hindu on 11/05/2023. It talks about ISRO's New Space Policy and the gaps in it.

Tag: Science & Technology, GS Paper -3, Space Technology, Achievements of Indians in Science & Technology

This year, the **Indian Space Research Organisation (ISRO)** released the **Indian Space Policy 2023** that had been in the works for some years.

The policy has been welcomed as a progression towards India's entry in a New Space age. However, it needs to be followed up with suitable legislation, accompanied by clear rules and regulations.

Until the early 1990s, India's space industry and space economy were defined by ISRO. Private sector involvement was limited to building to ISRO designs and specifications.

The **Indian Space Policy 2023** unveils the government's plan to let private enterprises carry out end-to-end activities - from launching satellites and rockets into space to operating Earth stations.

What were India's

Past Quests to Reform in its Space Sector?

- **The First Satellite Communication Policy:** It was introduced in 1997, with guidelines for foreign direct investment (FDI) in the satellite industry that were further liberalised but never generated much enthusiasm.
- **Remote Sensing Data Policy:** It was introduced in 2001, which was amended in 2011; in 2016, it was replaced by a National Geospatial Policy that has been further liberalised in 2022.
- **Draft Space Activities Bill:** It was brought out in 2017, which went through a long consultative process and lapsed in 2019 with the outgoing Lok Sabha.
 - The government was expected to introduce a new Bill by 2021, but it appears to have contented itself with the new policy statement released by ISRO.

Why there is a Need to

Introduce Private Players into Space Sector?

- **India Lags far behind in Space Economy:** The global space economy is currently valued at about USD 360 billion. Despite being one among a few spacefaring nations in the world, **India accounts for only about 2% of the space economy.**

- **Harnessing the Full Potential of India's Space Sector:** Today, while ISRO's budget is approximately USD1.6 billion, India's space economy is over USD9.6 billion. Broadband, OTT and 5G promise a double-digit annual growth in satellite-based services.

- It is estimated that with an enabling environment, **the Indian space industry could grow to USD 60 billion by 2030**, directly creating more than two lakh jobs.

- **Private Sector has revolutionised the Space Sector:** Companies like **SpaceX**, Blue Origin, Virgin Galactic have revolutionized the space sector by reducing costs and turnaround time while In India however, players within the private space industry have been limited to being vendors or suppliers to the government's space program.

- **Enhancing Security:** The security and defence agencies spend nearly a billion dollars annually to procure earth observation data and imagery from foreign sources. This much reliance on foreign entities can put India's security at stakes.

- **Bringing Aatmanirbharta in Space Sector:** Today, more than half the transponders beaming TV signals into Indian homes are hosted on foreign satellites, resulting in an annual outflow of over half a billion dollars.

- **Promoting Entrepreneurship in Space Sector:** There is a need to promote private sector activity in all high technology areas including space, to fully unlock the potential of India's youth and entrepreneurs.

- To realize this vision, it is necessary to enable private entities within the Indian space sector to establish themselves as independent players capable of end-to-end space activities.

- **Making Space Industry at par with Global Industry:** Promoting the private sector will enable the Indian space program to remain cost competitive within the global space market, and thus create several jobs in the space and other related sectors.

What is in Indian Space Policy 2023?

- **Vision:** The 'Vision' is to "enable, encourage and develop a flourishing commercial presence in space" that suggests an acceptance that the private sector is a critical stakeholder in the entire value chain of the space economy.

Key Highlights:

- The policy **creates four distinct, but related entities, that will facilitate greater private sector participation** in activities that have usually been the traditional domain of the ISRO.

- **InSPACE (Indian National Space Promotion and Authorisation Centre):** It will be a single window clearance and authorisation agency for space launches, establishing launch pads, buying and selling satellites, and disseminating high-resolution data among other things.
 - It will also **share technologies, products, processes and best practices with NGEs** (non-government entities and this will include private companies) and government companies.
 - IN-SPACE will create a “stable and predictable regulatory framework” that will ensure a level playing field for the NGEs.
 - It will act as a promoter by setting up industry clusters and as the regulator, issue guidelines on liability issues.
- **New Space India Limited (NSIL):** It will be responsible for commercialising space technologies and platforms created through public expenditure, as well as, manufacturing, leasing, or procuring space components, technologies, platforms and other assets from the private or public sector.
- **Department of Space:** It will provide overall policy guidelines and be the nodal department for implementing space technologies and, among other things, co-ordinate international cooperation and coordination in the area of global space governance and programmes in consultation with the Ministry of External Affairs.
 - It will also create **an appropriate mechanism to resolve disputes arising out of space activity.**
- **Rationalising the role of ISRO:** It states that ISRO will “transition out of the existing practice of being present in the manufacturing of operational space systems.
 - Hereafter, mature systems shall be transferred to industries for commercial usage. ISRO shall focus on R&D in advanced technology, proving newer systems and realisation of space objects for meeting national prerogatives”.
 - **ISRO will share technologies, products, processes and best practices** with other government and non-government companies.
 - This will **make ISRO use its all its strength on cutting edge research and development and long-term projects** such as **Chandrayaan** and **Gaganyaan**.
- **Private Sector’s Role:**
 - The NGEs (this includes the private sector) are “allowed to undertake end-to-end activities in the

space sector through establishment and operation of space objects, ground-based assets and related services, such as communication, remote sensing, navigation, etc.”.

- Satellites could be self-owned, procured or leased; communication services could be over India or outside; and remote sensing data could be disseminated in India or abroad.
- NGEs can design and operate launch vehicles for space transportation and establish their own infrastructure.
- **NGEs can now make filings with the International Telecommunication Union (ITU)** and engage in commercial recovery of asteroid resources.
- In short, the entire gamut of space activities is now open to the private sector. Security agencies can task NGEs for procuring tailor-made solutions to address specific requirements.

What are the Gaps in the Policy?

- The policy sets out an ambitious role for IN-SPACE but provides no time frame for the necessary steps ahead.
- Neither is there an indicative timeline for ISRO’s transitioning out of its current practices nor is there a schedule for IN-SPACE to create the regulatory framework.
- The policy framework envisaged will need clear **rules and regulations** pertaining to FDI and licensing, government procurement to sustain the new space start-ups, liability in case of violations and an appellate framework for dispute settlement.
- IN-SPACE is a regulatory body but doesn’t have legislative authority.
- IN-SPACE is expected to authorise space activities for all, both government and non-government entities. Currently, its position is ambiguous as it functions under the purview of the Department of Space.

What Should be Done to Fill these Gaps?

- The Space Policy 2023 is a forward-looking document reflecting good intentions and a vision. But it is not enough. What is urgently needed is a time frame to provide the necessary legal framework to translate this vision into reality, to successfully launch India into the Second Space Age
- The government should bring a bill that grants statutory status to IN SPACE and also sets out time limits for both ISRO and IN SPACE. The bill should also address the ambiguity related to Foreign Investment, government support for new space startups.



ONDC and its Potential

This editorial is based on **ONDC has potential to dilute market concentration** which was published in *The Economic Times* on 11/05/2023. It discusses India's government-backed e-commerce platform, the Open Network for Digital Commerce (ONDC), and explores its potential and challenges.

Tag: Indian Economy, GS Paper -2, Government policies & interventions, GS Paper -3

The government's efforts to use technology to make e-commerce more competitive are beginning to show up in food delivery services. Customers are reporting noticeable price differences in orders placed on online apps using the **Open Network for Digital Commerce (ONDC)**, which creates a network of interconnected e-marketplaces that makes it easier for small store-owners to tap demand online.

It could be a game-changer on the lines of the **Unified Payments Interface (UPI)**, the infrastructure on which digital transactions are growing in this country exponentially.

What is ONDC?

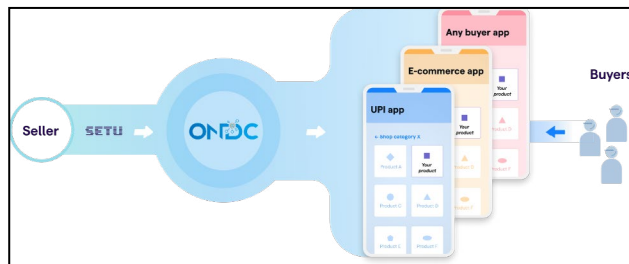
➤ About:

- It was launched in late 2021 under the **Department for Promotion of Industry and Internal Trade (DPIIT)** by the Ministry of Commerce as part of the **Digital India** push.
- **ONDC** works as a network of interconnected e-marketplaces through which sellers, including brands, can list and sell their products directly to customers bypassing any middlemen or intermediaries.
- Along with food delivery, ONDC also offers delivery services for groceries, home decor, cleaning essentials, and other products.

➤ Objectives:

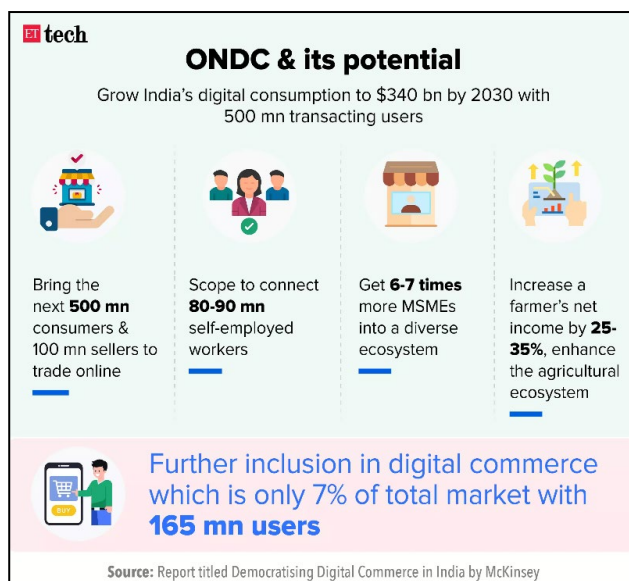
- Democratisation and decentralization of e-Commerce
- Inclusivity and access for sellers, especially small and medium enterprises as well as local businesses
- Increased choices and independency for consumers
- Making goods and services cheaper

- **Working Mechanism:** ONDC functions on the basis of an open network where it will not be a single platform similar to Amazon or Flipkart but rather in the form of a gateway where buyers and sellers across different platforms will be able to connect.



What are the Potential Advantages of ONDC?

- **Increased Transparency:** ONDC can provide greater transparency by making government data more accessible to the public. This can help increase trust and accountability.
- **Increased Customer Choice:** ONDC has the potential to dilute market concentration by increased consumer choice and lower entry barriers.
- **Innovation:** ONDC can spur innovation by providing entrepreneurs and researchers with access to government data. This can lead to the development of new products and services that benefit society.
- **Cost Savings:** ONDC can save money by reducing duplication of effort and enabling more efficient use of resources.
 - Platform fees for food delivery using ONDC are being reported at a fifth of those charged by the market leaders. This is a considerable reduction in the cost of intermediation.
- **Protecting the Consumers' Interest:** By breaking the hegemony of existing e-commerce, ONDC can bring huge benefits to consumers.
- **Level Playing Field:** ONDC is keen to level the playing field for e-commerce operators and widen the digital market access for **Micro, Small and Medium Enterprises (MSMEs)** and small traders in the country.



- **Neutral and Regulated Platform:** ONDC aims at fostering open networks developed on **open-sourced methodology**, using open specifications and network protocols, and independent of any specific platform.

What are the challenges ahead?

- **Complexity:** ONDC is a complex mechanism as compared to other systems like UPI. People found UPI's convenience appealing, which made them adopt it. The same may not be true for ONDC.
 - People have already become accustomed to the user interface of existing companies.
- **Increase in Disputes:** In ONDC, only the buying and selling process happens online, while the delivery and use of the product happens offline. This can lead to more disputes as ONDC is not an intermediary platform.
- **Lack of a Robust Grievance Addressal Mechanism:** The lack of clarity on responsibility for customer service and handling complaints may deter people from joining the platform.
- **Not an Easy-Peasy Task:** The existing e-Commerce companies have deepened up ties with the consumers through their lucrative and interoperable services. Like Amazon provides its streaming platform along with its prime membership.
 - So, it'll not be easy for the ONDC to attract the customers.
- **Goods & Services may not be Really Cheaper:** Since ONDC is a facilitator of trade among buyers and sellers, **it may not be able to provide offers the products like existing players.** For Example, Amazon has tied up ICICI bank to provide 5% cashback on goods purchases through Amazon ICICI Credit Card.

What should be the Way Forward?

- A **better digital space for e-commerce must be built by the government** in order to compete with the dominant e-commerce platforms.
 - Along with this, **it's important to create a proper digital education policy** that takes into account various languages and user-friendly interface for the benefit of the consumers as well as sellers.
- A massive, well-funded adoption campaign will be needed to bring over small sellers like kirana stores to the platform.
- The **demand and supply sides should be able to access a secured single window** to resolve issues such as information asymmetry, opaque pricing, quality concerns, and buyer-seller disputes.
- **Proper Grievance Redressal Mechanism:** There should be a secured single window to navigate both the

demand and supply-side problems like information asymmetry, opaque pricing, quality and product concerns and buyer-seller conflict.



Weather-Proofing Food Security

*This editorial is based on **How to weather-proof food security** which was published in *The Indian Express* on 15/05/2023. It discusses Food Security and the impact of weather on it and suggests some way forward for weather proofing of food security.*

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

Weather patterns, including temperature, precipitation, and extreme weather events, are critical factors in determining agricultural productivity and food security.

Changes in weather patterns can lead to crop failures, food shortages, and price hikes, which can have far-reaching impacts on the livelihoods of millions of people around the world.

For example, droughts and floods can destroy crops, leading to food shortages and price spikes, while extreme temperatures can reduce crop yields and quality. These impacts are particularly acute in developing countries, where many people depend on agriculture for their livelihoods and may lack access to alternative sources of food or income.

What is Food Security?

- Food security, as defined by the United Nations' Committee on World Food Security, means that all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their food preferences and dietary needs for an active and healthy life.
- Food security is the combination of the following three elements:
 - **Food availability** i.e., food must be available in sufficient quantities and on a consistent basis. It considers stock and production in a given area and the capacity to bring in food from elsewhere, through trade or aid.
 - **Food access** i.e., people must be able to regularly acquire adequate quantities of food, through purchase, home production, barter, gifts, borrowing or food aid.

- **Food utilization** i.e., Consumed food must have a positive nutritional impact on people. It entails cooking, storage and hygiene practices, individuals' health, water and sanitations, feeding and sharing practices within the household.
- Food security is closely related to household resources, disposable income and socioeconomic status. It is also strongly interlinked with other issues, such as food prices, global environment change, water, energy and agriculture growth.
- **Importance of Food Security for a Nation:**
 - For boosting the agricultural sector.
 - For having control on food prices.
 - For economic growth and job creation leading to poverty reduction
 - For trade opportunities
 - For increased global security and stability
 - For improved health and healthcare

Why there is a Need of weather proofing Food Security?

- **Climate Change** is a crisis aggravator and threat multiplier for the most vulnerable amongst us. Its impact on food production, livelihoods and health is expected to push an additional 600 million people into food insecurity by 2080 and increase child malnutrition.
- About 80% of the global population most at risk from crop failures and hunger from climate change are in Sub-Saharan Africa, South Asia, and Southeast Asia, where farming families are disproportionately poor and vulnerable.
- A severe drought caused by an **El Nino** weather pattern or climate change can push millions more people into poverty.

What are the impacts of Weather on Food Security?

- **Crop Yield and Production:**
 - Rising temperatures, changing precipitation patterns, and extreme weather events such as **droughts, floods**, and storms can have detrimental effects on crop yields.
 - **Heatwaves** and **droughts** can reduce productivity and lead to crop failures, while excessive rainfall and floods can destroy crops and infrastructure.
 - These disruptions in agricultural production can result in decreased food availability and increased prices.
- **Changing Growing Conditions:**
 - **Climate Change** alters the suitability of certain regions for specific crops.

- Shifts in temperature and rainfall patterns may require farmers to adapt their practices or even switch to different crops.
- This can lead to disruptions in food production and regional food imbalances.
- **Livestock and Fisheries:**
 - Rising temperatures, changing precipitation patterns, and **ocean acidification** affect livestock and fish production.
 - Heat stress can reduce livestock productivity and increase mortality rates, while changes in water temperature and acidity can impact marine ecosystems and reduce fish populations.
- **Food Distribution and Access:**
 - Climate change can disrupt transportation and infrastructure, making it challenging to transport food from production areas to markets.
 - Extreme weather events can damage roads, bridges, and ports, leading to delays and higher transportation costs.
 - These disruptions can limit people's access to food, particularly in vulnerable regions or those heavily dependent on imported food.
- **Price Volatility:**
 - Climate change-related disruptions in agricultural production can lead to increased price volatility for food commodities.
 - Crop failures, reduced yields, and decreased supply can cause food prices to spike, making it difficult for vulnerable populations to afford an adequate diet.
- **Land Degradation and Water Scarcity:**
 - Climate change contributes to soil erosion, **desertification**, and degradation of arable land.
 - Extreme weather events, such as heavy rainfall and floods, can wash away topsoil, essential for agriculture, and degrade soil fertility.

Why is containing Food Inflation Crucial?

- **Significance:**
 - The food and beverages component in the Indian CPI has a weightage of 45.86 %, the highest amongst **G20** countries.
 - Managing this component to around 4 % is critical to taming overall inflation.
- **Challenges:**
 - **Monetary and Fiscal Policy Challenges:** This component of inflation cannot be managed only through monetary policy, nor even by fiscal policy.
 - The simple reason is that it is often triggered by external shocks, such as droughts and breakdown

of supply chains — for instance, during the Covid pandemic and the Russia-Ukraine conflict.

- **El Nino:** The brewing El Nino is a looming danger and it's feared that it could cause below normal rainfall, even a drought.
- **Cereal Inflation:** The overall cereal and products inflation is still at a very uncomfortable level, 13.7 %.
 - **Rice Inflation:** The biggest crop of the kharif season is rice. And rice inflation (non-PDS) for April was 11.4%.
 - **Wheat inflation:** Wheat is the most important rabi crop — is still very high at 15.5%.
- **Milk Inflation:** Inflation in this category in April was more than 8%. But since it has the highest weight amongst 299 commodities that comprise the **CPI** basket, its contribution to CPI inflation in April was almost 12%, the highest amongst all commodities.
- **Fodder Price Inflation:** The fodder price inflation has been very high, between 20 and 30 %, in recent months. It has further exaggerated the Milk Inflation.

El Nino

- El Nino is a naturally occurring climate pattern associated with warming of the ocean surface temperatures in the central and eastern tropical Pacific Ocean. It occurs on average every two to seven years, and episodes usually last nine to 12 months.
- El Nino affects the sea surface temperature in the Pacific Ocean, which can weaken the monsoon or trade winds, and decrease rainfall over India. But a positive **Indian Ocean Dipole (IOD)** can offset this effect.

What should be the Way forward?

- **Use the Buffer Stocking Policy (unloading excess stocks in open market operations) more proactively:**
 - The rice stocks with the **Food Corporation of India (FCI)** are more than three times the buffer stock norms for rice. If the government wants to tame rice price inflation, it can unload rice from the Central Pool in open market operations, and easily bring down the rice inflation to around 4%.
 - The wheat procurement has been sufficiently good to meet the requirements of the **public distribution system (PDS)** and give some room for open market operations.
- **Lower Import duties on Fat:** The policy instrument to use is to lower import duties on fat, which are currently at 40% and skimmed milk powder (SMP), which is at 60%.

- Indian prices of SMP and fat (butter) are much higher than the global prices, and therefore, by reducing import duties to say 10 to 15%, there would be some imports of fat and SMP.
- That could help in reining milk and milk product prices.

- **Address the Challenge of Fodder Price Inflation:** Cultivation of Fodder crops must be promoted through subsidy or incentive programs. It can also be addressed through initiatives like adopting suitable crop combinations and developing fodder banks.
- **Be Prepared for Drought:** Though IMD is yet to forecast about the Impact of El Nino, but prevention is always better than cure. Policy interventions like introducing drought-tolerant crop varieties, expanding irrigation, restricting rice exports, storing and distributing grains, expanding social protection coverage can help reduce the impact of climate.

Right to Default Bail

*This editorial is based on **A Court recall that impacts the rights of the accused which was published in The Hindu on 16/05/2023. It talks about the Supreme Court's recent decision on default bail and issues associated with it.***

Tag: Indian Polity, GS Paper -2, Fundamental Rights, Judiciary

The bail refers to the temporary release of a person who has been arrested or charged with a crime, pending their trial or court appearance.

The Supreme Court, in a recent decision upon the insistence that central investigation agencies were 'facing difficulties' on filing chargesheets, directed lower courts to decide pending default bail applications without relying on its own judgment in *Ritu Chhabaria versus Union of India* case.

The decision is alarming because:

- It may compromise the right to default bail.
- The concerns of investigative authorities may be prioritized over the constitutional rights of the accused.
- The judgment may have serious implications for the constitutional rights of the accused.
- Procedural legitimacy should not be sacrificed for administrative convenience.

What is Default Bail?

- This is a right to bail that **accrues when the police fail to complete investigation within a specified period** in respect of a person in judicial custody.
 - It is also known as Statutory Bail.

- This is **enshrined in Section 167(2) of the Code of Criminal Procedure (CrPC)**
- Sec 167 (1) requires the police to produce the suspect to the nearest Judicial Magistrate and seek orders for either police or judicial custody if they are unable to complete an investigation in 24 hours.
- Under Section 167(2) of the Code, a **Magistrate can order an accused person to be detained in the custody of the police for 15 days. Beyond the police custody period of 15 days, the Magistrate can authorize the detention of the accused person in judicial custody where the accused cannot be detained for more than:**
 - **ninety days**, when an authority is investigating an **offense punishable with death, life imprisonment or imprisonment for at least ten years; or**
 - **sixty days**, when the authority is **investigating any other offense.**
 - In **some other special laws** like Narcotic Drugs and Psychotropic Substances Act, **this period may vary.**
 - In Narcotic Drugs and Psychotropic Substances Act, the period is 180 days.
- **In case the investigation is not completed by the end of this period, the court shall release the person "if he is prepared to and does furnish bail". This is known as default bail.**

What is the Ritu Chhabaria Case?

- The Ritu Chhabaria judgment, the court held that **"the right of default bail under Section 167(2) of the Criminal Procedure Code (CrPC) is not merely a statutory right, but a fundamental right that flows from Article 21 of the Constitution"** to protect accused persons from the "unfettered and arbitrary power of the State".
- In Ritu Chhabaria, the court held that an incomplete chargesheet filed by the investigating agency without completing the investigation will not defeat the right of the accused for default bail.
 - As investigating authorities routinely filed incomplete or supplementary charge sheets within the 60/90-day period, to prevent the accused from seeking default bail.

What are the Other Cases related to Default Bail?

- **CBI vs Anupam J. Kulkarni (1992):**
 - The SC Held that a magistrate can authorize **police custody for a maximum of 15 days** after the arrest of the accused. After this period, any further detention must be in judicial custody, except in cases where the same accused is implicated in a different case **arising from a separate incident or transaction.** In such situations, the magistrate may consider authorizing police custody again.

➤ **Uday Mohanlal Acharya vs. State of Maharashtra (2001):**

- The SC while relying upon the judgment of Sanjay Dutt vs State, held that the **accused shall be said to avail of his right to default bail** when he files an application for the same and not when he is released on default bail.
- If an order of default bail is passed in favour of the accused, but he/she fails to furnish bail and a charge sheet is filed in the meantime, then the right to default bail shall stand extinguished.

➤ **Achpal vs State of Rajasthan (2018):**

- The Supreme Court held that an investigation report, albeit complete, if filed by an unauthorized investigating officer, would not bar the accused from availing default bail.

➤ **Jasbir Singh vs National Investigating Agency (2023):**

- The Supreme Court in this case held that an accused is not entitled to seek default bail on the grounds that the chargesheet, though filed within the requisite period, remains "incomplete" for lack of sanction under Section 167(2) of the Code of Criminal Procedure.

What are the Arguments in favour?

- **Presumption of Innocence:** Default bail upholds the fundamental principle of "innocent until proven guilty." It ensures that individuals who are accused of a crime but have not been convicted are not subjected to indefinite pre-trial detention.
- **Protecting Civil Liberties:** Default bail protects the civil liberties and rights of individuals. It ensures that people are not deprived of their liberty without sufficient evidence and a formal trial, promoting the principles of fairness and justice.
- **Promoting Rehabilitation and Integration:** Default bail helps accused individuals stay in their communities for rehabilitation and integration, while still working and supporting their families, increasing their chances of successful reintegration if found not guilty.
- **Preventing Abuse of Power:** Default bail acts as a safeguard against potential abuse of power by the investigating agencies. It prevents authorities from unjustly keeping individuals in custody without presenting evidence and framing charges within a reasonable period.
- **Balancing Detention and Liberty:** Default bail strikes a balance between the need to prevent potential flight risks and the preservation of an individual's right to liberty. It allows the court to assess the necessity of continued detention based on the prosecution's ability to present evidence within the prescribed time frame.

- **Reducing Overcrowding in Prisons:** Default bail helps in mitigating **prison overcrowding** by ensuring that individuals who are not promptly charged or have weak cases are not unnecessarily detained. This contributes to more efficient utilization of prison resources.

What are the Arguments Against Default Bail?

- **Risk of Granting Bail to Potentially Dangerous Individuals:** Default bail is granted when the prosecution fails to file charges within the stipulated time period. Granting automatic bail in such cases may pose a risk if the accused is potentially dangerous or a threat to society. It could compromise public safety and hinder effective law enforcement.
- **Undermining the Investigation Process:** Automatic bail provisions can potentially undermine the investigation process. If the accused is released on default bail without charges being filed, it may impede further gathering of evidence or hamper the prosecution's ability to build a strong case. This could lead to a lack of justice and hinder the fair resolution of cases.
- **Accountability and Public Perception:** It may give the impression that accused individuals are getting away without facing due process or being held accountable for their alleged crimes.
- **Undermine the rights of the Victims:** Granting automatic bail may impede the rights of victims to see timely justice and could lead to a sense of injustice or inequality in the treatment of different parties involved in the case.

What should be the Way Forward?

- **Review and Refine Time Limits:** Review and revise existing time limits for filing charges based on case complexity to ensure thorough investigation and avoid unnecessary delays.
- **Involve Judicial Discretion:** Granting judiciary the discretion to deny default bail in cases that pose a risk to public safety or hinder investigation process may allow judges to make informed decisions based on individual circumstances.
- **Enhanced Scrutiny and Conditions:** Implement stricter scrutiny and impose appropriate conditions for granting default bail, such as stringent reporting requirements.
- **Expedite Legal Proceedings:** Expedite legal process by investing in infrastructure, enhancing investigative capabilities, increasing judges and court staff, and implementing case management techniques.

- **Follow Victim-Centered Approach:** Recognize victims' rights and interests by providing timely information about case progress and involving them in bail decision-making process, where appropriate, to ensure a balanced approach.



Making Agriculture Economically Viable

*This editorial is based on **Agriculture needs a 'natural' boost** which was published in *The Hindu Business line* on 17/05/2023. It talks about importance of economically viable agriculture and suggests some possible policy measures to achieve it.*

Tag: Agriculture, GS Paper -3, E-Technology in the Aid of Farmers, Agricultural Marketing

The Indian government has been aware of the need to make farming more economically viable and sustainable. The government has been taking various measures to address the problems faced by the farmers, such as low productivity, high input costs, market fluctuations, climate change, indebtedness, and lack of institutional support. The agricultural sector is very crucial for the overall economy and society of India, as it provides employment to a large segment of the workforce and ensures food security for the country's population. Improving the condition of Indian agriculture has been a priority and a challenge for the policymakers in India.

Why is it Important to make Agriculture Economically Viable?

- **To Ensure Food Security:** India is a country with a large population and a growing demand for food. In order to ensure that everyone has access to enough food, it is important to make agriculture economically viable so that farmers can produce enough food to meet the demand.
- **To Promote Rural Development:** Agriculture is a major contributor to the rural economy. By making agriculture economically viable, it is possible to promote rural development and improve the lives of people living in rural areas.
- **To Support the Livelihoods of a Majority of Indians:** Making agriculture economically viable can help improve the living standards and well-being of millions of Indians who depend on farming for their survival. Agriculture is the main source of income and employment for more than 50% of the Indian population directly.

- **To Enhance the Growth and Stability of The Economy:** Agriculture contributes around 17-18% to the GDP of India. Making agriculture economically viable can help boost the overall economic growth and stability of India by increasing farm productivity, reducing wastage, diversifying crops, enhancing value addition and ensuring food security.
- **To Adopt Sustainable and Natural Farming Practices:** Agriculture causes environmental degradation, water scarcity, soil erosion, and greenhouse gas emissions. Current farming practices rely on harmful chemicals, irrigation, and subsidies. Making agriculture economically viable can encourage sustainable and natural farming practices that reduce environmental impact and enhance adaptation to climate change.

What are the challenges?

- **Lack of Digital Literacy:** Many farmers in rural areas may not have access to smartphones or reliable internet connectivity, which can limit their ability to access digitalized agri-services. Another challenge is the need for education and training to help farmers understand how to use these new technologies effectively.
- **Small land holdings:** Many farmers in India have small land holdings, which can limit their ability to achieve economies of scale and reduce their profitability.
- **Lack of Access to Credit:** Many farmers in India lack access to formal credit, which can limit their ability to invest in their farms and improve their productivity.
- **Lack of Access to Markets:** Many farmers in India lack access to markets where they can sell their produce at a fair price. This can result in farmers receiving low prices for their produce and reduce their profitability.
- **Climate change:** Climate change is resulting in more frequent and severe weather events such as droughts and floods, which can have a devastating impact on farmers' livelihoods.
- **Lack of infrastructure:** Many rural areas in India lack basic infrastructure such as roads, electricity, and irrigation systems, which can limit farmers' ability to improve their productivity and profitability.
- **Natural calamities:** India is prone to natural calamities such as floods, droughts, and pests. These calamities can damage crops and livestock, leading to losses for farmers.
- **Inefficient marketing:** The marketing system for agricultural produce in India is inefficient. This leads to low prices for farmers and high prices for consumers.

What are the Initiatives Taken by the Government?

- **Soil Health Card Scheme:** It aims to assess and improve the health of soils in agricultural areas across the country to provide farmers with detailed information about the nutrient content and fertility status of their soil. This helps farmers make informed decisions, leading to improved productivity and reduced costs.
- **Pradhan Mantri Fasal Bima Yojana (PMFBY):** It is a crop insurance scheme launched by the Government to provide financial support to farmers in the event of crop loss or damage due to various natural calamities.
- **Pradhan Mantri Krishi Sinchai Yojana (PMKSY):** It aims to improve farm productivity and water resource utilization in agriculture by increasing irrigation investments, expanding cultivable areas, improving water use efficiency, adopting precision irrigation and other water-saving technologies, and promoting sustainable water conservation practices.
- **National Agriculture Market (e-NAM):** A pan-India electronic trading portal which networks the existing APMC mandis to create a unified national market for agricultural commodities.
- **Rashtriya Krishi Vikas Yojana (RKVY):** Initiated in 2007, the Rashtriya Vikas Yojana (RKVY) is an umbrella scheme that ensures overall agricultural and allied services development. This scheme encourages States to increase public investment in agricultural and allied services.
- **Micro Irrigation Fund (MIF):** MIF was operationalized in NABARD in 2019-20 to facilitate State Govts. efforts in mobilizing additional resources for expanding coverage under micro irrigation and incentivizing its adoption beyond provisions of Pradhan Mantri Krishi Sinchayee Yojana-Per Drop More Crop.
- **National Mission for Sustainable Agriculture (NMSA):** This mission has been formulated for enhancing agricultural productivity especially in rainfed areas focusing on integrated farming, water use efficiency, soil health management and synergizing resource conservation.
 - **Rainfed Area Development (RAD):** It focuses on Integrated Farming System (IFS) for enhancing productivity and minimizing risks associated with climatic variabilities.
 - **Soil Health Management (SHM):** It aims at promoting location as well as crop specific sustainable soil health management including residue management, organic farming practices by way of creating and linking soil fertility maps with macro-micro nutrient management.

What are some Policy Options for making Agriculture Economically Viable?

- **Digitalisation of Agriculture:** The new age technology based Agri start-ups offer full-stack solutions for farmers from seed to market. They prioritize the farmer by providing direct access to supplies, loans, insurance, and selling their produce at the best price.
 - For Example, Gurugram-based DeHaat caters to 15 lakh farmers covering over 35 crops, through artificial intelligence, machine learning, and data analytics.
 - Typically, the farmers with smart phone can access digitalized agri-services for agri-inputs, farm advisory, and marketing of agri-produce.
- **Integrated/Natural Farming:** Integrated farming can be profitable for farmers with small land holdings. By having a few animals, fishponds, and vermi-culture for natural manure, farmers can become self-reliant and financially empowered. Family labor is important for this type of farming, and it is both commercially viable and environmentally sustainable.
 - Natural farming offers a solution to various problems such as food insecurity, farmers' distress, health issues and natural calamities by using locally available resources and minimizing external inputs.
- **Climate Smart Agriculture:** Climate smart agriculture can make agriculture economically viable by shifting towards eco-friendly agri-inputs such as **Nano Urea**. This can reduce the indiscriminate use of fertilizers, which can lead to irreparable ecological damage, soil infertility, and a toxic food chain. By using cost-effective and sustainable farming practices, farmers can increase crop yields while reducing input costs. This can help farmers become more profitable and sustainable in the long run.
 - The government spends heavily on fertiliser subsidy. This led to indiscriminate use of fertilisers resulting in irreparable ecological damage, soil infertility, and a toxic food chain.
 - Soil position in Punjab is unhealthy as 246 kg of fertilisers are used per hectare compared to the national average of 135 kg.
- **Adopting Best Farm-practices:** Adopting best farm-practices such as co-operative principles can make agriculture economically viable. For instance, Israel, despite its unfavourable climate and limited resources, has become a major exporter of farm-produce and a global leader in agricultural technologies. By following social equality, co-operation and mutual aid in generating agricultural output in the most productive manner, farmers can increase their efficiency and productivity. This can lead to increased profitability and sustainability in the long run.

- **Say 'NO' to Informal Credit:** Besides easing access to formal credit, farmers need to be counselled on financial prudence. Formal credit facilities can increase agricultural productivity and profitability by providing farmers with funds to invest in their farms.
 - Despite the availability of formal sources of finance, a recent survey shows that money lenders/traders/landlords still exist in rural India, making farmers financially unstable and dependent on informal credit sources.
- **Development of Agri-Value Chains:** Key drivers of agri-value chains are customer focus, infrastructure, technology, training & capacity building.
 - VAPCOL, a multi-state farmer producer company based in Maharashtra, is a case in point. It has a membership of 55 FPOs covering over 40,000 tribal farmers spread across seven States.
- **Leveraging Collectives:** Convergence of SHGs, Farmers Producer Organisations (FPOs) and Co-operatives will lead to better bargaining power of farmers in terms of bulk procurement of inputs at a discounted price, economies of scale in transportation and warehousing, access to low-cost institutional finance, farm mechanisation (drones for monitoring of crops and spraying of fertilisers and plant protection chemicals, etc.).

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Digitisation of Land Records

*This editorial is based on **Digitisation of land records is hugely beneficial** which was published in **The Hindu Business line** on 17/05/2023. It talks about importance of digitization of land records and their potential benefits.*

Tag: Indian Economy, GS Paper -3, Land Reforms, Mobilization of resources, GS Paper -2, Government Policies & interventions

Land is a precious asset for any country, and more so for India where more than 50% of the working population is engaged in agriculture. It is, therefore, all the more important to develop a modern, comprehensive and transparent land record management system.

Keeping this in view, the government revamped the existing National Land Record Modernization Programme (NLRMP) by bringing into force, the Digital India Land Records Modernization Programme (DILRMP) in 2016.

What is the Significance of Land?

- **Source of Livelihood:** Land provides habitation and sustenance to a wide variety of flora and fauna, including human beings. More than 50% of the working population in India is engaged in agriculture, which depends on land as a primary resource.

- Land is also used for forestry, mining, and other activities that generate income and employment.
- **Economy:** Land is a valuable asset that can attract investment, promote industrialization, and boost growth. **Special Economic Zones (SEZs)** are examples of land-based initiatives that aim to create hyper-liberalized enclaves for export-oriented production.
- Land can also generate long-term capital gains when transferred, subject to certain conditions and exemptions.
- **Natural Resources:** Land contains a variety of natural resources, including minerals, water, and forests. These resources are essential for human industry and commerce.
- **Culture and Identity:** Land can be a source of identity and belonging for people. It can be associated with a particular culture or community, and it can play a role in religious and spiritual practices.

Why is a Digitization of Land

Record Management System needed in India?

- **Reduce Litigation:** Land-related disputes account for a large proportion of pending court cases in India, which take a long time and cost to resolve. A comprehensive and transparent land record management system can reduce the scope and frequency of such disputes by providing clear and secure ownership rights that are backed by the government.
- **Improve Transparency:** Land records in India are often inaccurate, outdated, and fragmented across different departments and levels of government. A comprehensive and transparent land record management system can improve the quality and accessibility of land records by digitizing them and linking them to spatial data and other databases such as Aadhaar, tax records, etc.
- **Promote Development:** Land is a valuable asset that can attract investment, promote industrialization, and boost growth. A comprehensive and transparent land record management system can create a conducive environment for land markets and transactions by reducing transaction costs, risks, and uncertainties. It can also enable landowners to access credit, insurance, and markets by using their land titles as collateral.
- **Ensure Equity:** A comprehensive and transparent land record management system can support the implementation of land reforms that aim to redistribute land among the landless and marginalized sections of society. It can also empower women and other vulnerable groups by recognizing their land rights and enhancing their access to land-related services.

What is National Land

Record Modernization Programme (NLRMP)?

The **National Land Record Modernization Programme (NLRMP)** was a **centrally sponsored scheme** that was launched by the Government of India in 2008 with the aim to modernize the land records system in the country and implement the conclusive land-titling system with title guarantee. The **NLRMP was later revamped and renamed as the Digital India Land Records Modernization Programme (DILRMP) in 2016 as a central sector scheme with 100% funding by the Centre.**

Salient features of DILRMP:

- A **Unique Land Parcel Identification Number (ULPIN)** or Bhu-Aadhaar number has been assigned for a land parcel, which is a 14 digit alphanumeric unique ID based on geo-coordinates which will serve as a pan-India number for obtaining ownership details of a plot along with its size and geolocation.
- A uniform system called **National Generic Document Registration System (NGDRS)** has been developed for addressing the diversity prevailing across States with regards to registration of deeds/documents.
- The Records of Rights have been transliterated in all the 22 **scheduled languages** mentioned in the Constitution to address the problem of linguistic barriers in land governance in the country.
- The DILRMP scheme will also facilitate various services such as providing caste, income and domicile certificates, and online information on crop profile, crop insurance and e-linkages to credit facilities/banks.
- A comprehensive land record management system will also help resolve long pending arbitration cases and boundary-related disputes amicably, thus reducing the burden on the judiciary and the administration.

How can DILRMP

(Digitisation of Land Records) be beneficial?

- **Improve the Quality and Accessibility of Land Records:**
 - The DILRMP aims to digitize and update the textual and spatial records of land ownership and transactions, such as sale deeds, inheritance records, mortgage and lease documents, cadastral maps, etc.
 - These records are made available online to the public and are updated regularly. This helps to reduce errors, inconsistencies, and gaps in land data, and make them more reliable and transparent.

➤ **Reduce Litigation and Frauds:**

- The DILRMP aims to implement the conclusive land-titling system with title guarantee, which means that the land records provide a conclusive proof of ownership of land and are backed by the government.
- The title holder is protected from any challenge or dispute by other claimants and is indemnified by the government in case of any loss arising from any defect in the title.
- This helps to reduce the scope and frequency of land-related disputes and frauds, which account for a large proportion of pending court cases in India.

➤ **Promote Development and Growth:**

- The DILRMP aims to create a conducive environment for land markets and transactions by reducing transaction costs, risks, and uncertainties.
- It also enables landowners to access credit, insurance, and markets by using their land titles as collateral.
- This helps to attract investment, promote industrialization, and boost growth in various sectors such as agriculture, infrastructure, housing, etc.

➤ **Ensure Equity and Empowerment:**

- The DILRMP aims to support the implementation of land reforms that aim to redistribute land among the landless and marginalized sections of society.
- It also empowers women and other vulnerable groups by recognizing their land rights and enhancing their access to land-related services.
- This helps to improve their livelihoods, dignity, and social status.

What are the Challenges associated with Land Record Digitisation?

➤ **Lack of Coordination and Cooperation among States:**

- Land is a state subject and the implementation of DILRMP depends on the willingness and cooperation of the state governments.
- However, some states are reluctant or slow to adopt the DILRMP due to various reasons such as political, administrative, legal, or technical constraints.
- There is also a lack of coordination and standardization among states in terms of land laws, policies, procedures, and systems.

➤ **Inadequate resources and capacity:**

- The DILRMP requires adequate financial, human, and technical resources and capacity to carry out the massive task of modernizing the land records system in the country.

- However, there is a shortage of funds, staff, equipment, and infrastructure at various levels of implementation.
- There is also a need for training and capacity building of the concerned officials and functionaries on the use of modern technology and tools for land record management.

➤ **Lack of awareness and participation among stakeholders:**

- The DILRMP requires the active involvement and participation of various stakeholders such as landowners, buyers, sellers, tenants, intermediaries, etc., who are directly affected by the changes in the land records system.
- However, there is a lack of awareness and sensitization among them about the benefits and procedures of DILRMP.

What should be the Way Forward?

➤ **Enhancing the Coordination and Cooperation Among States:**

- The central and state governments need to work together to overcome the challenges and issues faced by the DILRMP.
- They need to harmonize and streamline the land laws, policies, procedures, and systems across the states. They also need to share the best practices and experiences of the DILRMP among themselves.

➤ **Maintaining Transparency:**

- The central and state governments need to take strict action against any sabotage or manipulation of the DILRMP.
- They need to ensure transparency and accountability in the process of land survey, digitization, verification, and titling.
- They also need to create a grievance redressal mechanism for resolving any disputes or complaints arising from the DILRMP.

➤ **Mobilizing Adequate Resources and Capacity:**

- The central and state governments need to allocate sufficient funds, staff, equipment, and infrastructure for the implementation of DILRMP.
- They also need to provide training and capacity building to the concerned officials and functionaries on the use of modern technology and tools for land record management.
- They may also leverage the public-private partnership (PPP) mode of service delivery for enhancing efficiency and convenience.

➤ **Creating awareness and participation among stakeholders:**

- The central and state governments need to create awareness and sensitization among the various stakeholders about the benefits and procedures of DILRMP.
- They need to address their apprehensions or misconceptions about the DILRMP by providing clear and accurate information.
- They also need to encourage their involvement and participation in the process of land record management.



Decarbonising Steel Sector

*This editorial is based on “**Decarbonising the steel sector will pay off**” which was published in The Hindu BusinessLine on 15/05/2023. It talks about the greenhouse gas emissions from the steel sector and the significance of decarbonising the steel sector - related challenges and efforts.*

Tag: Biodiversity and Environment , GS Paper 2, Government Policies & Interventions, GS Paper 3, Environmental Pollution & Degradation, Growth & Development, Conservation

Steel is one of the core pillars of today's society and one of the most important engineering and construction materials. However, the **steel industry is among the three biggest producers of carbon dioxide**. Consequently, steel players across the globe are increasingly facing a **decarbonisation challenge to reduce its carbon footprint** from both environmental and economic perspectives.

India is currently the world's 2nd largest steel producer after China. Various analyses show potential for a **multi-fold increase in steel consumption by 2050**. Production of steel in India is set to increase significantly over the next few decades, to meet the increasing domestic and international demand.

Decarbonisation of the steel sector has a big role to play in emission of low-carbon India as an essential ingredient for the country's green future.

What is the Current Scenario of India's Steel Sector?

- **Production Scenario:**
 - Steel is a key sector for the Indian economy (responsible for 2% of the country's GDP in FY 21-22).
 - India is the world's 2nd largest producer of crude steel and 2nd largest consumer of finished steel.
 - The **National Steel Policy 2017** has set a target to reach **300 million tonnes (MT) of annual production by 2030** from the existing level of 120 MT.

- As the economy grows, **India's crude steel production is expected to increase to about 435 million tonnes (mt) by 2050**.

- **Emission Scenario: Direct emissions** (excluding emissions from purchased electricity use) from **iron and steel production** stood at approximately **270 million tonnes of CO₂ equivalent (MTCO₂e) in 2018**, comprising approximately **9% of total national greenhouse gas emissions**.
 - Steel contributes almost **1/3rd of direct industrial CO₂ emissions**, or **10% of India's total energy infrastructure CO₂ emissions** and about **11% of the country's total emissions**.

What is the Significance of Decarbonising Steel Sector?

- In the accelerated transition, **forex savings of approximately \$500 billion** would accrue by 2050 from **reduced spending on coking coal alone**.
- A **greener steel industry** can enable **India to be a global green steel manufacturing hub**.
- Decarbonisation of steel making will also lead to **decarbonisation of allied industries** such as cars, infrastructure and buildings.
- the steel sector is also **important from the perspective of the emerging regulatory landscape internationally**; due to the **EU's upcoming Carbon Border Adjustment Mechanism (CBAM)**, Indian steel exports to the EU could fall by as much as 58% without any additional effort to decarbonize steel sectors.

What are the Initiatives to Decarbonise India's Steel Sector?

- The **National Green Hydrogen Mission** identifies a significant role for **green hydrogen in decarbonising the steel sector** to meet India's climate goals.
- The Ministry of Steel seeks to reduce CO₂ in the steel industry through **promotion of Green Steel** (manufacturing steel without using fossil fuels).
 - This can be done by using low-carbon energy sources such as hydrogen, coal gasification, or electricity instead of the traditional carbon-intensive manufacturing route of coal-fired plants.
- **Steel Scrap Recycling Policy, 2019** enhances the availability of domestically generated scrap to reduce the consumption of coal in steel making.
- India also joined the UK to co-lead the **Industrial Deep Decarbonisation Initiative** under the banner of the **Clean Energy Ministerial**. It is expected to stimulate global demand for low-carbon industrial materials, including steel.

- **National Solar Mission** launched by MNRE in January 2010 **promotes the use of solar energy and also helps reduce the emission of steel industry.**
- Recently government launched Kalyani Group's first green steel brand '**Kalyani FeRRESTA**'.

What are the Challenges to Decarbonising the Steel Sector?

- **Challenges in Hydrogen replacing Conventional Ways:**
 - There are two basic steel production routes: - **Blast Furnace (BF) route**, where **coke is the primary fuel**, and **Direct Reduced Iron (DRI) route**, where the **fuel can be coal or natural gas**.
 - India presently produces around 90% of crude steel through the BF and coal based DRI routes. While hydrogen has the potential to fully replace coal or gas in the DRI process, it is seen to have a limited role in being able to substitute coke in the BF route.
 - **Hydrogen-based steel-making remains uncompetitive for hydrogen prices above \$1/kg**, especially in **absence of a carbon cost for emissions**.
- **Challenges in Scaling up Net-Zero Technologies:**
 - **Cost:** Global estimates suggest that the investment for setting up DRI steel plants with upstream green hydrogen generation could reach Rs 3.2 Lakhs/tonne.
 - Additionally, the **cost of green hydrogen at Rs 300-400/kg is higher** than the cost of grey hydrogen at Rs 160-220/kg.
 - Similarly, **Carbon Capture and Storage (CCS) plants** also have a **high capital cost**.
 - **Supporting Infra:** There is an **inadequate support network for the storage**, production, and transportation of hydrogen.
 - For CCS, there is a **lack of data on the availability of potential geological storage sites** and their capacities.
 - Limited use cases also pose a **challenge in scaling up CCS technology**.

What Steps can be Taken to Decarbonise the Steel Sector?

- **Introducing CO₂ Pricing and Rapid Development of Hydrogen:**
 - Introduction and calibration of CO₂ pricing in the next few years will **encourage investments in low carbon technologies** and **accelerate adoption of hydrogen-based steel-making**.
 - It will also accelerate investment in other green technologies in the steel value chain such as green hydrogen and renewables-based electricity.

- A **carbon price of \$50 per tonne of emissions can make green steel competitive by 2030**, even at a hydrogen price of \$2/kg, and can catalyse the shift from coal-based to hydrogen-based steel-making.
- **Policies for Material Efficiency:**
 - **Scrap-based steel-making has the lowest carbon emissions** of all current commercial steel-making technologies, but is dependent on price and availability of quality scrap to be economic and to achieve scale.
 - India relies on scrap imports, which will become a challenge in the future as quality scrap demand increases globally for steel-making.
 - To **scale up domestic scrap-based steel-making**, **policies incentivising scrap collection and recycling** would need to be implemented, to set up dismantling, collection and processing centres.
- **Encourage Green Steel Consumption in End-Use:**
 - The government is **encouraging the use of green steel**, it shall **set up targets for embodied carbon in public and private construction**, and in automotive uses.
 - This will **support creation of a domestic green steel market for domestic steel-makers**, who can initially tap export markets where green steel commands a premium.
 - International regulations, such as the **CBAM**, can **provide further impetus to the private sector to accelerate the transition to green steel**.
- **Investing in Carbon Capture, Utilisation and Storage (CCUS):**
 - CCUS is currently an expensive but an important lever for reducing emissions.
 - To make it a viable decarbonisation solution for the steel industry, **more R&D efforts are required to reduce capture costs**, besides **creating hubs in steel producing centres like in Odisha and Jharkhand**.

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India's Quantum Leap

This editorial is based on "Our Quantum Leap" which was published in The Indian Express on 19/05/2023. It talks about the significance of Quantum Materials and technology and talks about the Significance of National Quantum Mission.

Tag: Science & Technology, GS Paper - 3, Science & Technology, IT & Computers, Indigenization of Technology.

India is getting serious about building her own technology base and **National Quantum Mission** could be a game changer in multiple sectors, from defence, energy, and environment to healthcare and civil applications. Any technology is first devised and then thrives on material innovation, and quantum technology is no exception.

For India, investments in quantum materials and devices promise far more dividends than meets the eye. The process can generate a cadre of highly skilled workforce. As India gears to become the world's third-largest economy by 2027, a strongly networked material infrastructure in the country will be crucial. It will cater to not just quantum technologies but also other major scientific megaprojects ranging from the semiconductor mission to neutrino observatory and gravitational wave detection. The infrastructure will play a key role in building self-reliance in energy and electronics industries.

What are Quantum Materials?

- Quantum materials are a class of matter or systems that allow us to exploit some of the unique properties of quantum physics and accomplish tasks that classical technology is incapable of.
- The concept of "quantum materials" was originally introduced to identify some of the exotic quantum systems, including unconventional superconductors, heavy-fermion systems, and multifunctional oxides.
- It has now morphed into a powerful unifying concept across diverse fields of science and engineering, including solid state physics, cold atoms (atoms cooled to close to absolute zero whereby their quantum mechanical properties are unveiled), materials science and quantum computing.

What are the applications of Quantum Materials?

- **Energy:** Quantum materials can be used to create **new types of batteries, solar cells, and other energy-efficient devices**. For example, graphene, a two-dimensional material made of carbon atoms, has been shown to have excellent electrical conductivity, which could make it a promising material for use in batteries.
 - Graphene is a one-atom-thick layer of carbon atoms arranged in a hexagonal lattice. The electrons in graphene behave as massless particles, which gives graphene its unique properties, such as high electrical conductivity and transparency.
- **Biomedical:** Quantum materials can be used to **create new types of medical devices, such as sensors and imaging devices**. For example, quantum dots can

be used as fluorescent probes for bioimaging and biosensing of cells and tissues.

- **Information Technology:** Quantum materials can be used to create new types of computers and other information technology devices. For example, **quantum computers**, which are based on the principles of quantum mechanics, could be used to solve problems that are currently impossible for traditional computers to solve.
- **Defence:** Quantum materials can be used to create new types of weapons and defence systems. For example, quantum sensors could be used to detect and track enemy missiles, and quantum computers could be used for enhanced security.
- **Agricultural:** Quantum materials can also enhance agricultural productivity, quality, and security by exploiting quantum effects such as biosensing, bioimaging, and nano delivery. For example, quantum dots can be used as biosensors for detecting pathogens and toxins in crops and livestock.

What is National Quantum Mission?

- **About:**
 - It'll be implemented by the **Department of Science & Technology (DST)** under the Ministry of Science & Technology.
 - The mission **planned for 2023-2031** aims to seed, nurture, and scale up scientific and industrial R&D and create a vibrant & innovative ecosystem in **Quantum Technology (QT)**.
 - With the launch of this mission, **India will be the seventh country to have a dedicated quantum mission** after the US, Austria, Finland, France, Canada and China.
- **Salient features of NQM:**
 - It will target developing **intermediate scale quantum computers with 50-100 physical qubits in 5 years and 50-1000 physical qubits in 8 years**.
 - Just like bits (1 and 0) are the basic units by which computers process information, **'qubits' or 'quantum bits' are the units of process by quantum computers**.
 - The mission **will help develop magnetometers** with high sensitivity for precision timing (atomic clocks), communications, and navigation.
 - It will also support design and synthesis of quantum materials such as **superconductors, novel semiconductor structures** and topological materials for **fabrication of quantum devices**.

- **The mission will also help developing:**
 - **Satellite based secure quantum communications** between ground stations over a range of 2000 km within India.
 - **Long distance secure quantum communications** with other countries
 - **Inter-city quantum key distribution** over 2000 km
 - **Multi-node Quantum network** with quantum memories
- **Significance:**
 - This will **accelerate QT led economic growth** and make India one of the leading nations in the development of Quantum Technologies & Applications (QTA) ranging from healthcare and diagnostics, defence, energy and data security.
 - It will work towards **indigenously building quantum-based computers which are far more powerful** and are able to solve the most complex problems in a highly secure manner.

What are the Challenges associated with Quantum Materials?

- **Bioaccumulation:** Quantum materials may pose health and environmental risks due to their potential toxicity and bioaccumulation. For example, quantum dots made of heavy metals such as cadmium or lead may cause oxidative stress, inflammation, and DNA damage in living cells and organisms.
- **Complex & Expensive:** Quantum materials **may also be expensive and difficult to synthesize, purify, and characterize due to their complex structure and composition.** They require high-temperature and high-pressure reactions, multiple purification steps, and sophisticated analytical techniques.
- **Security:** Quantum materials may also pose security and ethical challenges due to their potential applications in cryptography, surveillance, and warfare. For example, quantum computers may be able to break existing encryption schemes, quantum sensors may be able to detect stealth aircraft, and quantum weapons may be able to cause mass destruction.
- **Societal:** Quantum materials may also have societal implications due to their impact on human cognition, communication, and culture. For example, quantum-powered artificial intelligence may be able to surpass human intelligence.
- **Quantum Decoherence:** This can be a major challenge for quantum computing and other applications that

rely on quantum mechanics. For example, quantum dots may lose their fluorescence or change their color due to oxidation, aggregation, or photobleaching.

- **Quantum decoherence** is the process by which quantum information is lost due to interactions with the environment.

What should be the Way Forward?

- **Enhance the Investment:** Quantum technology requires substantial investment in research and development, infrastructure, and human resources to achieve its full potential.
 - India has taken a step in this direction by launching the **National Quantum Mission** with a budget of Rs. 6000 crores.
 - However, more public and private funding is needed to support the growth of quantum start-ups, service providers, and academic institutions.
- **A Regulatory Framework is a must:** Quantum technology also poses ethical, legal, and social challenges that need to be addressed before it becomes widely available. For example, quantum sensing may infringe on privacy rights, and quantum weapons may cause mass destruction.
 - Therefore, it would be prudent to develop a regulatory framework for quantum technology that balances innovation and security.
- **Promote Quantum Education:** Quantum technology also requires skilled and trained professionals who can understand and apply its principles and methods. Therefore, it is essential to promote quantum education and awareness among students and researchers across various disciplines.
 - This can be done by introducing quantum courses in schools and colleges, organizing workshops and seminars, and creating online platforms and resources.
- **Collaboration among Various Stakeholders:** For better understanding of Quantum technology, it is required to have a proper collaboration and cooperation among various stakeholders, such as government agencies, industry players and institutions.
 - This can foster knowledge sharing, innovation, and standardization across different domains and applications of quantum technology.
 - It can also enable India to participate in global initiatives and networks on quantum technology.

Preserving Tradition: The Landmark Ruling on Jallikattu

*This editorial is based on **Supreme Court upholds Tamil Nadu law allowing jallikattu: What is this decade-old case?** which was published in *The Hindu Business line* on 19/05/2023. It talks about the case concerning animal rights and cultural traditions with reference to Jallikattu and similar sports.*

Tag: Governance, GS Paper – 1, GS Paper – 2, Government Policies & Interventions, Indian Society, Judgements & Cases.

For centuries, the southern Indian state of Tamil Nadu has been steeped in rich cultural traditions, with one event in particular captivating the imagination of both locals and visitors alike: Jallikattu. This ancient bull taming sport, which dates back over 2,000 years, has long been a **symbol of pride and heritage for the people of Tamil Nadu**.

Recently, A **five-judge constitution Bench of the Supreme Court** upheld the amendments made by the legislatures of Tamil Nadu, Maharashtra, and Karnataka to the Prevention of Cruelty to Animals (PCA) Act, 1960, **allowing bull-taming sports like jallikattu, kambala, and bullock-cart races**.

What is Jallikattu?

- Jallikattu, also known as eruthazhuvuthal, is a bull taming sport in which contestants attempt to tame a bull for a prize, if they fail, the bull owner wins the prize.
- The term “Jallikattu” combines the words “Calli” (coins) and “Kattu” (tie), representing the practice of attaching a bundle of coins to the bull’s horns.
- It is celebrated in the second week of January at the time of the **Pongal (harvest) festival**, and also represents a celebration of nature, and thanksgiving for a bountiful harvest, of which cattle-worship is a part.
- It is revered across Madurai, Tiruchirappalli, Theni, Pudukkottai and Dindigul districts of Tamil Nadu, known as the Jallikattu belt.

What is Historical Significance of Jallikattu?

- Jallikattu has been a longstanding tradition spanning centuries, with its origins traced back to an ancient seal found at Mohenjodaro, estimated to be between 2,500 BC and 1,800 BC.
- References to Jallikattu can also be found in Silappadikaram, an influential Tamil epic from the Sangam age.

What is there in the Verdict?

- The judgment holds that the 2017 Amendment Act and **Rules on Jallikattu are in line with Entry 17 (prevention of cruelty to animals) of the Concurrent List, Article 51A(g) (compassion to loving creatures) of the Constitution**.
- The court said the **Amendment Act “substantially reduced pain and cruelty”** to the participating animals.
 - The court said **any violation of the statutory law**, in this case, the 2017 law, in the name of “cultural tradition”, **would attract the penal law**.
- Further, the State law does not violate Articles 14 and 21 of the Constitution. Petitioners had even argued that animals to have the right to live with dignity,”.
- Highlighting that Jallikattu has been going on in Tamil Nadu for the last few centuries and forms a part of its cultural heritage, as found by the “legislative exercise” conducted by the legislature, the court clarified that it did not want to disrupt the legislature’s view.
- **Timeline of Events:**
 - **Animal welfare Board of India** submitted a report to Supreme court stating that Jallikattu is **antithetical to a compassionate treatment for animals** as per provisions of the Prevention of Cruelty to Animals Act, 1960.
 - In 2006, **the Madras High Court instituted a state-wide ban** on Jallikattu. Soon, **The Tamil Nadu Regulation of Jallikattu Act of 2009** was introduced by the state government **to bypass the ban**.
 - The central government in 2011 moved to include **bulls in the list of animals whose training and exhibition was prohibited**, thereby shutting the door on the practice.
 - **In 2014, the Supreme Court** upheld that Jallikattu amounted to cruelty to bulls and **banned all similar bull taming and bull racing sports** in the country.
 - **In 2016**, the Union **Environment ministry revoked its 2011 notification**, based on which the top court had ordered the ban.
 - The Tamil Nadu state government passed the **Prevention of Cruelty to Animals (Tamil Nadu Amendment) Act of 2017** and **Prevention of Cruelty to Animals (Conduct of Jallikattu) Rules of 2017**, once again opening the gates for the **conduct of the sport**.
 - In February 2018, **the Animal Welfare Board of India (AWBI) and PETA** approached the **Supreme Court**, challenging the 2017 legislations passed by the Tamil Nadu government.

What was the Conflict About?

➤ About:

- The battle has been contested by Animal rights activists to press for a state-wide ban on Jallikattu since the early 2000s.
- Parties in the current case are the Animal Welfare Board, People for the Ethical Treatment of Animals (PETA), Compassion Unlimited Plus Action (CUPA), Federation of Indian Animal Protection Organisations and Animal Equality, Union of India and the State of Tamil Nadu.
 - They filed some petitions, challenging the amendment to the Prevention of Cruelty to Animal Act passed by the TN Assembly in 2017.

➤ Arguments in favour of Jallikattu:

- The Tamil Nadu government has argued that jallikattu, a centuries-old practice, is an important religious and cultural event that should not be banned outright.
- Rather, the practice can be regulated and reformed as society evolves. Its cultural significance is being taught in high school curriculum to ensure that it is preserved for future generations.
- The practice is protected under Article 29 (1) of the Constitution.
- Describing Jallikattu as “a tool for conserving this precious indigenous breed of livestock,” the government argued that the traditional event did not violate principles of compassion and humanity.
- A ban on Jallikattu would be seen as hostile to Tamil Nadu’s culture and community.

➤ Arguments in Opposition:

- Opponents of Jallikattu argue that animal life is connected to human life, and every living being has inherent liberty that should be respected.
- They claim that the Tamil Nadu law was created to bypass the Supreme Court’s ban on Jallikattu, and that the practice has resulted in deaths and injuries to both humans and bulls.
- Critics contend that tamers have been seen pouncing on bulls, causing ‘extreme cruelty to the animals.’
- They argue that there is no justification for Jallikattu as part of culture and equate it with practices such as sati and dowry, which were also once recognized as part of culture but have since been abolished through legislation.

Conclusion:

- The recent verdict by the Supreme Court allowing bull-taming sports like Jallikattu, Kambala, and

bullock-cart races, is a significant milestone in this ongoing debate.

- While the court’s decision recognizes the cultural significance of Jallikattu, it also emphasizes the importance of preventing cruelty to animals and upholding statutory law.
- Striking a balance between the cultural practice and animal welfare is the right approach in this case, as also implied by Supreme court.



Electric Vehicles: The Advantages and Challenges

This editorial is based on EVs are crucial for decongesting our cities which was published in The Hindu Business line on 21/05/2023. It talks about importance of Electric Vehicles and their potential benefits.

Tag: Science & Technology, GS Paper - 3, Science & Technology, Mobilization of Resources, GS Paper- 2, Government Policies & interventions.

There can be no denying that the era of electric vehicles (EVs) is well and truly upon us. With zero tailpipe emissions, EVs are a direct cure for air pollution and will also help reduce oil imports.

There has been a significant rise in the production and sales of electric vehicles in recent years. Many major automobile manufacturers have invested heavily in EV technology, launching a wide range of electric models to cater to the growing demand. This increased availability and diversity of electric vehicles contribute to the notion that the era of EVs is indeed underway.

Advancements in battery technology and infrastructure have played a crucial role in accelerating the adoption of EVs. The development of more efficient and affordable batteries has extended the driving range of electric vehicles, reducing range anxiety for consumers. Additionally, the expansion of charging infrastructure, including public charging stations and home charging solutions, has improved the convenience and accessibility of EVs for drivers.

Furthermore, governments and policymakers around the world have shown a strong commitment to promoting electric vehicles as a means to address climate change and reduce emissions.

Why are EVs crucial?

- **Environmental Benefits:** EVs have the potential to significantly reduce greenhouse gas emissions and combat climate change.

- Unlike **fossil fuel** engine vehicles, EVs produce zero tailpipe emissions.
- EVs help reduce carbon dioxide (CO₂) and other pollutants that contribute to air pollution, smog, and global warming.
- Electric vehicles help reduce harmful pollutants such as **nitrogen oxides (NOx)**, **particulate matter (PM)**, and **volatile organic compounds (VOCs)**.
 - This has a direct positive impact on public health, as cleaner air reduces the risk of respiratory and cardiovascular diseases.
- **Energy Diversity and Security:** EVs contribute to energy diversity by reducing dependence on oil imports.
 - As the electricity grid can be powered by a mix of energy sources, including renewables like solar and wind, EVs offer the opportunity to shift transportation towards cleaner and more sustainable energy options.
 - This reduces vulnerability to fluctuations in oil prices and enhances energy security by reducing reliance on fossil fuel imports.
- **Technological Advancements and Job Creation:** The development and adoption of EVs have spurred technological advancements in battery technology, electric drivetrains, and charging infrastructure.
 - These advancements not only benefit the automotive sector but also have broader applications, such as energy storage for **renewable energy** sources and grid stability.
 - Electric mobility creates jobs and innovation in battery manufacturing, **renewable energy**, and charging infrastructure.
- **Long-Term Cost Savings:** Electric vehicles have lower operating costs, as electricity is generally cheaper than gasoline or diesel.
 - Moreover, EVs have fewer moving parts and require less maintenance, resulting in reduced servicing and repair expenses over time.
- **Decongesting Cities:** Electric vehicles can help decongesting cities by promoting **shared mobility** and **compact design**.
 - Shared mobility refers to the use of vehicles as a service rather than as a personal asset. This can reduce the number of vehicles on the road and the need for parking space.
 - Compact design refers to the use of smaller and lighter vehicles that can fit more easily in urban spaces. This can also reduce congestion and emissions.
 - Innovative and futuristic smart EVs for shorter intra-city distances, day- trips, and the like would

not need a bigger battery. That means less time to recharge and lower cost.

What are the challenges for EVs?

- **High Initial Cost:** The upfront cost of purchasing an electric vehicle is relatively higher compared to conventional vehicles. The high initial cost makes it less affordable for many potential buyers, limiting the demand for EVs.
 - This cost difference is primarily due to the expensive battery technology used in EVs.
- **Limited Charging Infrastructure:** In India, the charging infrastructure is still in the early stages of development and is concentrated in major cities.
 - The lack of a robust and widespread charging network makes it inconvenient for EV owners, especially for those living in apartments or without dedicated parking spaces.
- **Range Anxiety:** Range anxiety refers to the fear or concern of running out of battery charge while driving. Limited driving range is a significant challenge for EV adoption.
 - Although EV ranges have been improving, there is still a perception that EVs may not offer sufficient range for long-distance travel, particularly in a country with vast distances like India.
 - The batteries in EVs degrade over time, which can lead to a decrease in range.
- **Battery Technology and Supply Chain:** The production of lithium-ion batteries, which are a key component of EVs, requires specific minerals and rare earth elements.
 - India currently relies heavily on imports for battery manufacturing, leading to supply chain challenges.
 - The charging time of EVs is longer than the refuelling time of conventional vehicles, which affects their convenience and usability.
- **Limited Model Options:** Currently, the availability of electric vehicle models in India is relatively limited compared to conventional vehicles. The market needs more options in various segments, including affordable EVs, to cater to diverse consumer preferences and requirements.

What are some government initiatives to promote EV adoption?

- The **Faster Adoption and Manufacturing of Electric Vehicles (FAME)scheme II**, which provides incentives for EV manufacturers and buyers. These incentives include subsidies, tax rebates, preferential financing, and exemptions from road tax and registration fees.

- The **National Electric Mobility Mission Plan (NEMMP)**, which sets out the target to achieve 6-7 million sales of hybrid and electric vehicles year on year from 2020 onwards by providing fiscal incentives.
- The **National Mission on Transformative Mobility and Battery Storage**, which seeks to create a comprehensive ecosystem for the adoption of EVs and support the establishment of giga-scale battery manufacturing plants in India.
- The **Production Linked Incentive (PLI) scheme**, which provides incentives for the manufacturing of electric vehicles and components.
- The **Vehicle Scrappage Policy**, which provides incentives for the scrapping of old vehicles and the purchase of new electric vehicles.
- The **Go Electric campaign** aims to create awareness on the benefits of EVs and EV charging infrastructure.
- India is among a handful of countries that support the global **EV30@30 campaign**, which aims for at least 30% new vehicle sales to be electric by 2030.
- The Ministry of Power, in its revised guidelines on charging infrastructure (MoP Guidelines), has prescribed that at least one charging station should be present in a grid of 3 km and at every 25 kms on both sides of the highways.
- The Ministry of Housing and Urban Affairs has also amended the **Model Building Bye-laws, 2016 (MBBL)** to mandate setting aside 20% of the parking space for EV charging facilities in residential and commercial buildings.

What should be the

Way Forward for India to adopt EVs?

- Reduce the initial cost of owning an EV by providing subsidies, tax incentives, and financing schemes for both consumers and manufacturers.
- Increase the choice of EVs by encouraging innovation, competition, and collaboration among Original Equipment Manufacturers (**OEMs**), start-ups, and other stakeholders.
- Encourage domestic manufacturing of EVs and related components through incentives and supportive policies.
- Raise the awareness among the public by launching campaigns, portals, and platforms to educate them about the benefits and incentives of EVs.
- Improve the electricity distribution and supply by investing in renewable energy sources, smart grids, and energy storage systems.
- Reduce the charging time of EVs by developing fast-charging and battery-swapping technologies and standards.

- Expand the EV charging infrastructure by creating a network of public and private charging stations across the country with adequate quality and accessibility.
- Enhance the service centre and repair options for EVs by training and certifying technicians, mechanics, and dealers for EV maintenance and servicing.
- Encourage government institutions, including public transport authorities, to adopt EVs in their fleets. This would create a significant demand for EVs, stimulate the market, and demonstrate the viability of electric mobility.
- Developing a domestic battery manufacturing ecosystem and reducing reliance on imports is crucial to address this challenge.
 - Recent, lithium discovery in Rajasthan could be crucial for this.

Conclusion

India has set a very ambitious target to achieve net zero by 2070 at UNFCCC COP26. To achieve this goal, EVs have a crucial role to play. While EVs themselves produce zero tailpipe emissions, the overall environmental impact of electric vehicles depends on the source of the electricity used to charge them. If the electricity is generated from renewable sources like solar or wind, the environmental benefits are maximized.

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Economic Abuse: A Neglected Facet of Domestic Abuse

This editorial is based on **No Way Out** which was published in The Indian Express on 23/05/2023. It talks about the very less discussed form of domestic violence against women i.e., **Economic Violence or Abuse**.

Tag: Society, GS Paper - 1, GS Paper - 2, Issues Related to Women, Government Policies & interventions.

When asked about **domestic violence**, an average person typically thinks of violence of a physical and sexual nature, especially in the context of intimate partner violence. However, the same amount of interest is not conferred on economic abuse, a significantly more insidious manner of abuse that is usually invisible in the way it operates.

Economic abuse is significantly associated with physical abuse, sexual abuse, and emotional abuse. The most common forms of economic abuse are not being trusted with money, not being allowed to work outside home, and not being given money for household expenses.

This is not unduly surprising, given that the most common images of violence against women, children, and queer persons in mainstream society are in the physical and/or sexual context. While Indian law recognises what is termed as “economic abuse” in the special legislation against domestic violence — the **Protection of Women from Domestic Violence Act, 2005 (PWDV Act)** — violence or abuse in the economic context does not form part of the public consciousness in the same manner as intimate partner violence of a sexual and physical nature does.

What is Economic Abuse?

➤ **About:**

- Under the **PWDV Act**, economic abuse is defined as the deprivation of all or any economic or financial resources to which the aggrieved person is entitled under any law.
 - The law recognises that prohibition or restriction to continued access to resources or facilities which the aggrieved woman is entitled to use is economic abuse as well.
 - Further, the disposal of household effects, any alienation of assets whether movable or immovable, valuables or other property in which the aggrieved woman has an interest is also included under the meaning of economic abuse.
 - Specific to the Indian context, economic abuse also brings up related issues such as dowry and exploitation of stridhan.
 - **Stridhan is whatever a woman receives during her lifetime.** Women have an absolute right over their Stridhan.
 - Moreover, the Courts have held that deprivation of economic or financial resources or stridhan amounts to domestic violence under the PWDV Act.
 - Further, Act provides, a protection order can be passed in favour of the aggrieved woman prohibiting the alienation of any assets, operating bank lockers or bank accounts, regardless of single or joint ownership, without the leave of the Magistrate.
 - This also includes the aggrieved woman’s stridhan or any other property held either jointly or separately by both parties.
- **Impact:** Economic violence holds back women from being truly independent, obstructs their ability to take decisions regarding their lives, and is frequently a major contributing factor in their inability to leave abusive situations, or separate themselves from their abuser.
- A cross-sectional survey in informal settlements in Mumbai, found that 23% of ever-married women reported at least one form of economic abuse.

Economic abuse was independently associated with positive screens for moderate-severe depression, anxiety, and suicidal ideation.

➤ **Status of the Economic Abuse in India:**

- In 2022, a survey conducted by Tata AIA, a leading Indian insurance company, revealed that 59 per cent of working women do not make their own financial decisions, indicating the extent of financial dependency of Indian women.
- The NFHS 5 finds that 32% of married women (18-49 years) have experienced physical, sexual, or emotional spousal violence. The most common type of spousal violence is physical violence (28%), followed by emotional violence and sexual violence.
- A 2017 study by the All-India Democratic Women’s Association found that 72% of women had experienced some form of economic abuse in their lifetime.

What are the Common Examples of Economic Abuse?

- Preventing from getting or keeping a job, obtaining education, or acquiring assets.
- Controlling access to money, bank accounts, credit cards, or financial autonomy.
- Exploiting their salary and other economic resources, such as spending their money without their consent, creating debt, or taking their belongings.
- Denying the victim’s right to property, inheritance, or dowry.
- Withholding necessities such as food, clothing, shelter, medication, or personal hygiene products.

What are the Factors that Contribute to the High Prevalence of Economic Abuse?

- **Patriarchal Attitudes:** Economic abuse is often rooted in the patriarchal norms that give men more preference over women in the household and society. Women may face discrimination and barriers in accessing education, employment, and property rights, which make them more dependent on their male partners.
- **Lack of Economic Opportunities for Women:** Women in India are often denied access to education and employment opportunities. This makes them more financially dependent on their husbands, which can make them more vulnerable to economic abuse.
- **Lack of Awareness:** Many victims of economic abuse may not recognize it as a form of domestic violence or may not know their rights and options to seek help.
- **Social Stigma:** Economic abuse may also be normalized or justified by cultural or religious beliefs that assign

different roles and responsibilities to men and women. This can discourage victims from seeking help or reporting abuse.

What are the safeguards available against Economic Abuse?

- The **Protection of Women from Domestic Violence Act (PWDVA) of 2005**, which defines economic violence broadly and provides for monetary relief, compensation, and protection orders for the aggrieved women.
- The **Code of Criminal Procedure of 1973**, which empowers courts to order maintenance for wives, children, and parents who are neglected by their husbands or sons.
- The **Hindu Succession Act of 1956 (amended in 2005)**, which grants equal inheritance rights to daughters and sons in joint family property.
- The **National Commission for Women**, which is the apex national level organization of India with the mandate of protecting and promoting the interests of women.
- The **Ministry of Women and Child Development (MoW&CD)** in collaboration with the Ministry of Home Affairs has envisaged engagement of **Mahila Police Volunteers (MPVs)** in the States/UTs who act as a link between police and community and help women in distress.
- The **MoW&CD** has launched **Sakhi dashboard** is an online platform for the functionaries of One Stop Centres (OSCs) and Women Help Lines (WHLs) to populate and view various important information about the cases of violence affected women coming to them, as well as about their establishments.
- The **Department of Telecommunication** has allocated the number 181 to all States/UTs for Women Helpline.
- The **Rail Ministry** has launched **Integrated Emergency Response Management System** that aims to provide round the clock security to women passengers in all Railway Stations by strengthening of Security Control Rooms of Railways with Security Helpline, Medical Facilities, RPF and police, installation of CCTV cameras, etc.
- The **Ministry of Home Affairs** has created **Central Victim Compensation Scheme (CVCF)** under section 357A CrPC It will support States/UTs in providing fund towards compensation to the victim or her dependents who have suffered loss or injury as a result of the crimes (including survivors of rape and acid attack).

What more can be

Done to Reduce Economic Abuses?

- **Raising Awareness:** Increasing public awareness about economic domestic abuse is crucial. Educational campaigns, community programs, and media initiatives can help promote understanding, recognize warning signs, and encourage reporting of such abuse.
 - The safeguards options - available to women – need to be promoted and mainstreamed amongst the women.
- **Strengthening Legal Protections:** Though the govt has enacted the PWDV Act to provide safeguard to the women but it has remained more or less a toothless act. The Government must incorporate stringent punishment provisions to the act so that it could act as a deterrent to the abusers.
- **Providing Support Services:** Victims of economic domestic abuse need access to specialized support services. This can include counselling, legal aid, financial advice, and assistance with finding safe housing or employment.
 - NGOs like Naari Foundation, Shakti Vahini Foundation who are doing exceptional work in this field should be collaborated to fight this menace.
- **Empowering Victims:** Empowering victims to become financially independent and self-sufficient is crucial. Providing vocational training, educational opportunities, and access to job placement programs can help survivors rebuild their lives and gain the skills needed to secure stable employment.
 - The **DBT transfer** to female's account has been a crucial part of addressing this issue, more schemes on this line are a welcome.
- **Collaborating with Financial Institutions:** Though there are schemes to provide low-cost loans to women, but the loan disbursed are very less in number. Banks and other financial institutions can play a role in preventing economic abuse. Implementing training programs for employees to recognize signs of economic abuse, developing protocols for reporting suspicious transactions, and offering financial literacy resources to customers can all contribute to reducing economic domestic abuse.
- **Research and Data Collection:** Investing in research and data collection is essential to understand the prevalence, causes, and consequences of economic abuse. This information can help inform policies, interventions, and resource allocation.
- **Promoting Gender Equality and Social Norms Change:** Addressing the underlying gender inequalities and challenging harmful social norms is fundamental to

reducing economic domestic abuse. Promoting gender equality through education, awareness campaigns, and community engagement can contribute to long-term prevention efforts.



Delay in Decennial Census

This editorial is based on **Don't delay the census further which was published in The Hindustan Times on 24/05/2023. It talks about the delay in Census and how new census will be different from the older one.**

Tag: Governance, GS Paper – 1, Population and Associated Issues, GS Paper – 2, Government Policies & Interventions

While inaugurating the new office of the Registrar General of India (RGI), the Home Minister said that the government will make sure that India's next census (whenever it happens) is smarter and more dynamic. Such objectives are laudable, but it is a matter of concern that the 2021 decadal census has seen such an unprecedented delay.

Some of the praiseworthy forthcoming changes include linking birth and death registration data to the national population register in real time. Not only will this give us a better idea of the state of the population, but it will also make existing databases, such as list of welfare programme beneficiaries and voter lists more accurate.

The census is a count of people in a certain area, but in India, it gives more information than just the number of people. A lot of the information in the census is meant to capture the dynamics within the population: The share of rural and urban population, their occupational status in farm and non-farm and main and marginal work, migration and its longevity, mother tongue and other languages spoken, quality of household dwellings and assets are some such statistics.

What is Census?

- The **census** is the process of collecting, compiling, analyzing, and publishing demographic, economic, and social data about a specific population.
- A census provides a detailed picture of the population and its characteristics, including age, gender, education, employment, income, housing, and more.
- The decennial census is conducted by the **Office of the Registrar General and Census Commissioner**, Ministry of Home Affairs under the provisions of the Census Act, 1948.
- The census is carried out in two phases viz.

- **First Phase** is the housing Census, where data on housing conditions, household amenities and assets possessed by households are collected.
- **Second Phase** is where data on population, education, religion, economic activity, Scheduled Castes and Tribes, language, literacy, migration, and fertility are collected.

What is the History of Census in India?

- The first census in India was conducted in 1872.
- India's first proper or synchronous Census, one which begins on the same day or year across regions of the country, was carried out in 1881 by the colonial administration and has since happened every 10 years.
- The latest census in India was conducted in 2011, and the next census was scheduled for 2021 which has been postponed due to the Covid-19 pandemic and other reasons.

What is Socio Economic Caste Census (SECC)?

- SECC was conducted for the first time since 1931.
- SECC is meant to canvass every Indian family, both in rural and urban India, and ask about their:
 - **Economic status**, so as to allow Central and State authorities to come up with a range of indicators of deprivation, permutations, and combinations of which could be used by each authority to define a poor or deprived person.
 - **Specific caste name** to allow the government to re-evaluate which caste groups were economically worst off and which were better off.
- SECC has the potential to allow for a mapping of inequalities at a broader level.

What is the Difference between Census and SECC?

- The Census provides a portrait of the Indian population, while the SECC is a tool to identify beneficiaries of state support.
- Since the Census falls under the Census Act of 1948, all data are considered confidential, whereas according to the SECC website, "all the personal information given in the SECC is open for use by Government departments to grant and/or restrict benefits to households."

What is the Significance of Census?

- **Determining Population Size and Demographics:** The primary purpose of a census is to provide an accurate count of the population residing in a particular area. It helps governments understand the size, distribution, and composition of their population. This information is essential for effective governance, policymaking, and resource allocation.

- **Planning and Development:** Census data helps governments make informed decisions about investing in urban planning, infrastructure, and public services by analyzing population trends and characteristics. It identifies areas that require specific attention, such as regions with high poverty rates or inadequate access to healthcare.
- **Electoral Representation:** Census data influences the redrawing of political boundaries and the allocation of seats in legislative bodies. It helps ensure fair representation by accurately reflecting population shifts and changes over time.
- **Resource Allocation and Funding:** Census data helps allocate government funding and resources to meet community needs for education, healthcare, social welfare, transportation, and infrastructure. Accurate data prevents underfunding or neglect of certain areas.
 - The **Finance Commission** provides grants to the states on the basis of population figures available from the Census data.
- **Economic Planning and Business Decisions:** Census data helps businesses identify consumer trends, target demographics, assess market demand, and identify opportunities for growth and investment.
- **Social Research and Policy Analysis:** Census data aids researchers, academics, and policymakers in studying trends, understanding societal changes, and evaluating policies. It contributes to evidence-based decision-making and informed public discourse.

What are the Implications of the delay in Census?

- **Targeting the Right Beneficiaries:**
 - Outdated Census information (available from the last Census in 2011) often becomes unreliable and affects those who do and do not receive the benefits of welfare schemes.
 - For Instance, **National Food Security Act, 2013** which provides subsidised foodgrains to poor & vulnerable uses the census data to identify the beneficiaries.
 - According to 2011 census, India's population was about 121 crore and **PDS** beneficiaries were approximately 80 crores. However, the world bank has estimated India's population to be 141 crore, PDS coverage should have increased to around 97 crore people.
 - Moreover, the **Finance Commission** uses census data while granting finances to the states. In absence of exact data allocation of funds to the states would be disproportionate.

- **Challenges for Research and Analysis:**
 - Researchers and policymakers may have to rely on outdated information or alternative data sources, which may not provide the same level of accuracy or granularity.
 - Census data are critical for other sample surveys conducted in the country as they use the Census data as reference. For instance, the latest **National Family Health Survey (NFHS-5)** released last year used 2011 census data.
- **Impacts the Political Representation:**
 - The Census data is also used to demarcate constituencies and allocate seats in Parliament and State Assemblies. The delay in the Census means that the data from the 2011 Census would continue to be used. This may not reflect the rapid changes in the composition of the population over the last decade.
 - Census data is used for delimitation of constituencies and for determining the quantum of reservation for **Scheduled Castes** and **Scheduled Tribes**. The delay means that either too many or too few seats are being reserved for SC/STs and women in different regions.
- **Compromises the Migration Data:** The Census data is also important to understand migration and migration patterns and its economic impact. The delay in the Census means that the latest information on internal and international migration is not available for policy making and planning.
 - The Covid pandemic has exposed the need for Migration Data. During lockdowns, the govt – in the absence of adequate data – was unable to target migrant laborers stranded in cities far from their homes.
- **Missed Opportunities and Delayed Decision-making:** Timely census data is essential for identifying emerging trends, assessing needs, and seizing opportunities. A delay in the census can result in missed opportunities for targeted interventions, economic planning, and business decisions.

How will the 2021 Census be Different from Previous ones?

- For the first time the data is **collected digitally via mobile applications** (installed on enumerator's phone) with a provision of working in offline mode.
- The 2021 census will have Other Backward Class (OBC) data, for the first time since the 1931 census.
- The 2021 census will be conducted in 18 languages out of the 22 **scheduled languages** and English, while Census 2011 was in 16 of the 22 scheduled languages declared at that time.

- The 2021 census will have a dynamic approach having 31 questions in the house-listing schedule, which include new questions on access to internet, laptop/computer, and LPG/PNG connection.
- First time that information of a person from the **Transgender Community and members living in the family will be collected.**

Conclusion:

A delay in the census can have wide-ranging implications, including inaccuracies in population data, hindered planning and development, challenges in resource allocation, impacts on electoral representation, limitations in research and analysis, and missed opportunities for decision-making. It highlights the importance of conducting the census in a timely manner to ensure accurate and up-to-date information for effective governance and development.



India and Crises Hit Pakistan

*This editorial is based on **Pakistan Spring vs Army's shadow** which was published in The Indian Express on 25/05/2023. It talks about the ongoing political crisis in Pakistan and its impact on India.*

Tag: International Relations, GS Paper – 2, India and its Neighborhood, Effect of Policies and Politics of Countries on India's interest

The recent arrest of former Pakistani Prime Minister led to massive protests across the country. For the first time, violent mobs, including the supporter of former PM, attacked army and paramilitary installations across Khyber Pakhtunkhwa (KPK), Punjab, Balochistan and major cities of Pakistan. The army was not targeted even in the wake of 1971 liberation of Bangladesh, military coups or even post the assassination of popular leaders such as Benazir Bhutto.

The **instability in Afghanistan** has further added fuel to the fire and the instability in Pakistan could in turn further destabilise Afghanistan. The growing instability in the Pakistan could spill over in no time and can affect the stability of the region.

What is the Current Situation in Pakistan?

- **Political Rollercoaster:**
 - Pakistan is facing a political crisis since April 2022, when the former prime minister Imran Khan was ousted from his position in a vote of no confidence. He refused to accept the result and launched a

series of protests and rallies, demanding an early election. He also faced many legal charges, including terrorism, corruption and **contempt of court.**

- The current Pakistani government has accused him of destabilizing the country and undermining democracy.
- They've accused Imran Khan of becoming opportunistic and destructive by tapping into the anti-army sentiment among the public.
- The turmoil in Pakistan's political discourse could result into a Pakistan Spring (Like **Arab Spring**). There are many similarities between the situations in Pakistan and those in the Arab Spring countries. Some of the similarities include political instability, economic grievances, corruption, youth bulge, civil society activism and media freedom.
- **Rise of Taliban:**
 - Since the withdrawal of US troops from Afghanistan, the Pakistani army has been under siege and the Taliban supported Tehreek-e-Taliban Pakistan (TTP) is expanding its footprint across Balochistan and Punjab.
 - The emboldened TTP and Baloch groups mounted several attacks against the armed forces.
 - The Pakistani army is practically fighting a two-front war (internally with TTP & externally with Taliban) and keeping a tight watch on the Iran border.
 - The Pakistani army used to be seen as a strong and capable force that could play a smart game of proxy wars has been exposed to be invincible by Taliban.
 - The Taliban is now a major threat to Pakistan, and the army is struggling to contain it. This has led to a loss of confidence in the army, and its aura of invincibility has faded.
- **Army under Seize:**
 - Street mobilisations after the ouster of Imran Khan have made the army vulnerable. The army today is politically much weaker which may provide a fostering ground for non-state actors like TTP.
 - The army's diminished stature became visible, when protesters could access even General Headquarters with some persuasion. Violent mobs targeted the Corp Commander's house in Lahore, the Pakistan Military Academy, the air force base, and army patrols in cities.
- **Economic Crisis:**
 - The inflation rate in Pakistan is currently over 30%, which is the highest it has been in years. This is making it difficult for people to afford basic necessities, such as food and fuel. The Pakistani

rupee has lost over 30% of its value against the US dollar in the past year.

- Recently, a video circulated over social media showed that Pakistanis in some regions are stockpiling LPG in plastic bags as dealers are curtailing supplies due to a lack of cooking gas cylinders.



- The country's public debt has grown to a staggering USD 250 billion, and the government has failed to secure a bailout from the **International Monetary Fund (IMF)** due to its inability to implement the required reforms.
- The country is facing a severe shortage of foreign exchange reserves, which have fallen to a 9-year low of less than USD 3 billion meaning that the country does not have enough foreign currency to import essential goods and services.
- The recent climate disasters have added the fuel to the fire, making their economy more vulnerable.

➤ **Resentment against China:**

- The two provinces (KPK and Balochistan) crucial for **CPEC**, have become battle grounds for security forces. The army's steadfast backing of CPEC has brought it to the centre of rising public resentment against Chinese investments.
- The sentiment is so perceptible that following his recent visit to Pakistan, the Chinese foreign minister stressed that some forces had fabricated the rumour that China created a "**debt trap**" in Pakistan.

What are the Threats to India?

- **Escalation of Cross-Border Tensions:** Pakistan's political crisis may lead to a rise in cross-border tensions, particularly along the **Line of Control (LoC)** in Kashmir. Pakistan may resort to provoking India by supporting militant groups or violating the ceasefire agreement to divert attention from its domestic problems or to rally public support behind the government or the military.

- **Refugee Crisis:** The economic crisis in Pakistan could lead to a refugee crisis, with millions of Pakistanis fleeing the country. This could put a strain on India's resources and could also lead to an increase in crime and social unrest.
- **Compromised Regional Security:** The current crisis in Pakistan could lead to regional instability, as Pakistan becomes more dependent on its neighbours for support. This could lead to increased tensions between Pakistan and its neighbours, including India.
- **Nuclear Proliferation:** Any political or economic instability in Pakistan that weakens its control over its nuclear arsenal could potentially lead to concerns about the security and safety of those weapons. This could raise tensions and pose a threat to regional stability.

What are the Opportunities for India?

➤ **Counterterrorism Cooperation:**

- Pakistan's political and economic situation can provide an opportunity for India to engage with the international community in addressing the issue of cross-border terrorism.
- By highlighting Pakistan's support for terrorism, India can strengthen its case for global cooperation in combating terrorism and isolating state-sponsored terror networks.

➤ **Regional Power Projection:**

- India can demonstrate its ability to maintain stability and handle regional challenges effectively, contrasting with the internal strife faced by Pakistan.
- Strengthening **regional alliances and partnerships**, particularly with countries in South Asia and the **Middle East**, could enhance India's position as a responsible regional power.

➤ **Strengthening Regional Connectivity:**

- India can capitalize on Pakistan's current challenges by promoting regional connectivity initiatives, such as the **Chabahar port** in Iran or the **International North-South Transport Corridor (INSTC)**.
- These projects can bolster India's access to Central Asia, Afghanistan, and beyond, enabling trade diversification and enhancing India's regional influence.

➤ **Economic Cooperation with Other Countries:**

- India can position itself as a **stable and attractive investment destination** in the region.
- With Pakistan facing economic challenges, **India can leverage its economic growth and stability to attract foreign direct investment (FDI)** and foster closer economic ties with other nations.

- This can lead to increased trade partnerships and collaborations, further enhancing India's economic standing.

What can India do in such a situation?

- "Victims of terrorism do not sit together with perpetrators of terrorism to discuss terrorism". But India can give a chance to desperate Pakistan of formal talks of it agrees to stop terrorism, resolve Kashmir issue Pakistan needs the talks desperately.
- India can use its diplomatic leverage to isolate Pakistan internationally and expose its alleged support for terrorism and human rights violations.
- The crises in Pakistan have shown that the country is unable to effectively govern itself. India can use this to its advantage by pressuring Pakistan to change its behaviour on issues such as terrorism and nuclear proliferation.
- Amidst such a crisis, India must prioritize its border security and enhance its military preparedness to contain insurgencies, cross-border aggression, or provocation from Pakistan.
- India could strengthen its economic and strategic ties with Iran, and other Central Asian countries to counter Pakistan's influence in the region.

Conclusion:

Dealing with Pakistan's establishment that has supported anti-India terrorist groups is unpleasant. Nonetheless, permitting Pakistan to come under the influence of extremist Islamists would present an even graver situation. India must make efforts to stabilize the conditions in Pakistan, as the repercussions such as border tensions and insurgencies will directly impact India.



Phasing Out Coal

*This editorial is based on **A Way Out of the Coal Trap** which was published in **The Indian Express** on 26/05/2023. It talks about reducing dependence on Coal and the role of New Electricity Code in phasing out Coal usage.*

Tag: Indian Economy, GS Paper – 3, Mobilization of Resources, Renewable Energy Environmental Pollution & Degradation

India plans to stop building new coal-fired power plants, apart from those already in the pipeline, by removing a key clause from the final draft of its **National Electricity Policy (NEP)**, in a major boost to fight climate change.

The government probably feels it would be a good idea to carry on with old plants even after they have completed 25 years of operation. Carrying on with generating units that are more than 25 years old is not a bad idea since the station heat rate of well-maintained plants does not get adversely affected with age. The advantages of carrying on with old plants are that the transmission links are already there and that the coal linkages are maintained.

What is the Significance of the Move?

- It shows India's commitment to fight climate change and reduce **greenhouse gas emissions**.
 - India's proposed coal power capacity is the highest after China. Both India and China account for about 80% of all active coal projects.
- Aligns with the global trend of phasing out coal and shifting to cleaner sources of energy.
- Encourages the development of **renewable energy (RE)** and energy efficiency.
 - The government plans to achieve an installed renewable energy capacity of 500 GW by 2030 and net zero carbon neutrality by 2070.
 - Allowing new coal power plants to commence construction will not just send mixed signals and distract the market from its ambitious RE targets - it will also jeopardise the growth of the renewables industry.
- Improves air quality and public health by reducing pollution from coal combustion.
- Reduces India's dependence on **coal imports** and enhances energy security.
- Reducing the cost of electricity generation
 - There are 33 "zombie" coal plant proposals which are either seeking or have received permits but are yet to start construction.
 - These power plants will be 2 to 3 times more expensive than **renewable energy (RE)** options.

How much of India's

Electricity Generation Relies on Coal?

- India is highly dependent on coal for electricity generation. Nearly 60% of total electricity generated in India is from coal and it is the main source of the nation's greenhouse gas emissions.
 - Non-fossil sources accounts for about 40%.
- The electricity generation from coal-based power plants in 2022-23 saw an increase of 8.87% over the previous year.
- The electricity generation target for 2023-24 was fixed at 1750 billion units, of which more than 75% is expected from thermal sources, mainly coal.

Why should**India Reduce dependence on Coal?**

- **Reduction of Pollution:**
 - Coal is a **highly polluting fossil fuel** that contributes significantly to air pollution and greenhouse gas emissions.
 - Burning coal releases large amounts of carbon dioxide, **sulphur dioxide**, **nitrogen oxides**, and **particulate matter**, which contribute to climate change, smog, acid rain, and respiratory diseases, cardiovascular problems, and even premature death.
 - Coal is the single **largest source of carbon dioxide emissions** globally. As a signatory to the **Paris Agreement**, India has committed to reducing its greenhouse gas emissions.
- **A Way to Clean Energy Production:** India possesses abundant **renewable energy** resources, including solar, wind, hydro, and biomass. By shifting away from coal and promoting renewable energy sources, India can tap into its vast potential for clean energy production.
- **Addressing Water Scarcity:** Coal-fired power plants **require large quantities of water** for cooling and other processes. The extraction and consumption of water for coal mining and power generation can lead to water scarcity and ecological degradation, particularly in regions already facing water stress.
- **Reduce Imports:** India has to **rely heavily on Coal imports**, reducing dependence on Coal would save lakh of **Forex reserves**.
- **Job Creation:** The transition from coal to renewable energy can **create numerous economic opportunities**. The renewable energy sector offers potential for job creation, innovation, and technological advancements.
- **Adhering to Global commitments:** India's transition away from coal aligns with global efforts to **combat climate change and transition to a low-carbon economy**. By demonstrating a commitment to reducing coal dependence, India can enhance its international standing, contribute to global sustainability goals, and attract investment in renewable energy technologies.

How can India Reduce its Dependence on Coal for Electricity Generation?

- **Increasing Renewable Energy Capacity:** India has set a target of increasing its renewable energy capacity to 500 gigawatts by 2030, which would help reduce the share of coal in the power mix. Renewable energy sources such as solar, wind, hydro and biomass can provide clean, affordable, and reliable electricity for India's growing population and economy.

- **Improving Energy Efficiency:** India can save energy and reduce emissions by improving the efficiency of its power plants, industries, buildings, appliances and vehicles. Energy efficiency measures can also lower electricity bills, create jobs and enhance competitiveness.
- **Phasing out Old and Inefficient Coal Plants:** India can retire its old and inefficient coal-fired power plants that are costly to run and maintain and replace them with cleaner and cheaper alternatives.
- **Diversifying Energy Sources:** India can reduce its reliance on coal by diversifying its energy sources and increasing the share of natural gas, nuclear and hydro power in its energy mix. These sources can provide flexibility and stability to the grid and complement the variable output of renewable energy.
- **Strengthening Grid Infrastructure:** India can improve its grid infrastructure and transmission networks to enable the integration of more renewable energy and reduce losses and outages. India can also invest in smart grids, energy storage and demand response technologies to enhance grid reliability and resilience.

What are the Challenges in Switching to Renewable Energy?

- **The poor financial condition of power distribution companies (DISCOMs)**, most of which are owned by state governments. DISCOMs are the main buyers of renewable energy, but they often delay payments to generators or curtail their power due to low demand or high costs. This affects the viability and bankability of renewable energy projects.
- **The lack of adequate grid infrastructure and storage capacity** to integrate variable renewable energy sources, such as solar and wind, into the power system. This requires investments in transmission lines, substations, smart meters, demand response and battery storage to ensure reliability and stability of supply.
- **The lack of financial intermediaries and instruments** to mobilize capital for renewable energy projects, especially from domestic sources. India relies heavily on foreign financing for its renewable energy sector, which exposes it to currency risks and policy uncertainties.
- **The lack of investor understanding and awareness** of the opportunities and benefits of renewable energy, especially among small and medium enterprises, households and rural communities.

What should be the Way Forward?

- **Reforming the DISCOMs** by improving their operational efficiency, reducing their losses, enhancing their revenue collection and ensuring timely payments to generators.

- This could involve measures such as performance-based contracts, cost-reflective tariffs, smart metering and prepaid billing.
- The **new Electricity rules** try to bring reforms in power sector and if implemented properly would address the situation to a large extent.
- There is a need to improve information dissemination, capacity building, technical assistance and consumer engagement to increase the adoption and acceptance of renewable energy solutions.
- Strengthening the grid infrastructure and storage capacity by investing in transmission and distribution networks, enhancing grid flexibility and resilience, and deploying battery storage and pumped hydro storage systems.
 - This could involve measures such as grid codes, ancillary services, renewable energy zones and green corridors.
- Mobilizing domestic capital for renewable energy projects by developing financial intermediaries and instruments that can provide low-cost and long-term financing, risk mitigation and credit enhancement.
 - This could involve measures such as **green bonds**, green banks, green funds and green insurance.



Addressing the Menstrual Health & Hygiene

*This editorial is based on **Menstrual health is a public health issue** which was published in The Hindu on 29/05/2023. It talks about the stigma around Menstrual health and hygiene, its effect on women.*

Tag: Social Issues, GS Paper-1, Social Empowerment, GS Paper-2, Health, Issues Related to Women

In a recent incident, a man from a city in Maharashtra allegedly killed his 12-year-old sister because he mistook period stains on her clothes as a sign of a sexual relationship.

India is home to more than 350 million women and girls who menstruate every month. However, menstruation is still a taboo and a source of shame and discrimination for many of them.

In urban India, girls and women navigate a good part of their life in the public domain — a young working woman travels for hours by public transport, a teenager living in slums makes her way to school through narrow lanes, a sanitation worker begins her day before dawn cleaning the city, a vegetable vendor spends hours by her stall, and a nurse works busy 12-hour shifts. Their

lives are very different, but they all navigate public spaces on a daily basis while dealing with a private aspect of their lives: their periods.

Periods are normal, but continue to be shrouded by shame, stigma and discrimination. Consequently, people face barriers in getting accurate information about periods and related products, using toilets, and seeking help when needed.

Menstrual health is not only a matter of personal hygiene, but also a public health issue that requires urgent attention and action from governments, civil society and individuals.

How grave is the Issue of Menstrual Health and Hygiene in India?

- According to the **National Family Health Survey (NFHS-5)**, even though there has been significant progress in the past years, approximately 27% of young rural women still resort to unsanitary means of protection during their menstrual cycle.
- Among the urban population, 10% of young women reported using unhygienic methods.
- As per the report, 16 states and union territories (UTs) have a usage rate of over 90% for hygienic menstrual products. Nevertheless, some of the most impoverished states in India have a poor record in this regard. Bihar has the lowest usage rate (59%) of safe menstrual protection, followed by Madhya Pradesh (61%) and Meghalaya (65%).

What are the Consequences of Poor Menstrual Hygiene?

- **Health:** Poor menstrual health can lead to infections, irritation, dermatitis, alteration in pH balance, and increased risk of cervical cancer. It can also affect mental health by causing stress, anxiety, and low self-esteem due to stigma and shame.
- **Education:** Poor menstrual health can affect school attendance, performance, and retention of girls and **transgender** students due to lack of facilities, products, information, and support. It can also create barriers to participation in sports and extracurricular activities.
- **Marriage:** Poor menstrual health can affect the sexual and reproductive health and rights of women, girl students drop out of school, are pushed into **child marriage**, and are more like to experience **domestic violence**, infections, reproductive illnesses, **malnourishment**, and poor mental health.
- **Work:** Poor menstrual health can affect the productivity, income, and career opportunities of women and transgender workers due to absenteeism, discomfort, discrimination, and harassment. It can also limit their access to decent work and social protection.

What are the Barriers for Menstrual Hygiene?

- **Period Poverty:** Lack of awareness about menstrual hygiene and related issues is a significant barrier in India. Many girls and women, particularly in rural areas, have limited knowledge about menstrual health, including proper hygiene practices, use of sanitary products, and management of menstrual discomfort.
 - A survey conducted by the NGO Child Rights and You (CRY) revealed that access to sanitary pads was limited to many girls, with 44.5% of girls admitting to using homemade absorbents or cloth.
 - The report also found that around 11.3% of the girls did not know the correct cause of menstruation and said that it was a curse from God or caused by disease.
- **Stigma and Shame:** Menstruation is still surrounded by social stigma and cultural taboos in many parts of India. Menstruating women often face discrimination, restrictions, and isolation, leading to feelings of shame and embarrassment. This stigma can prevent open discussions, limit access to information and resources, and perpetuate negative attitudes towards menstrual hygiene.
 - The CRY report also found that Hesitation or shyness to purchase pads from the shops, difficulty in disposing of pads, poor availability and no knowledge of pads were the reasons for not using sanitary pads.
 - As much as 61.4% of girls have accepted that a sense of embarrassment existed in society with regard to periods.
- **Lack of Access to Affordable Sanitary Products:** Access to affordable and hygienic menstrual products is a major challenge in India. Many women, especially those from low-income backgrounds, struggle to afford sanitary pads or tampons. This can result in the use of unhygienic alternatives like cloth, rags, or even ash, which can increase the risk of infections and other health issues.
- **Inadequate Sanitation Facilities:** In many areas, the lack of proper sanitation facilities, including clean toilets and water supply, poses a significant barrier to menstrual hygiene. Insufficient infrastructure in schools, public places, and households can make it difficult for women and girls to manage their periods safely and with dignity.
 - Women in informal work (e.g., construction work, domestic work etc.) often have no access to washrooms, clean water for bathing, and to cost-effective hygiene products and their safe disposal. Often, they also lack privacy to change their menstrual products.

- **Limited Healthcare Services:** Rural areas often face a shortage of healthcare providers, including doctors, nurses, and midwives, who are specifically trained in addressing menstrual health issues. This shortage further hampers women's access to knowledgeable healthcare professionals. This lack of healthcare infrastructure also contributes to the persistence of myths and misconceptions about menstruation.
- **Cultural and Religious Practices:** Certain cultural and religious beliefs and practices can impede menstrual hygiene. For example, some communities consider menstruating women as impure and restrict their participation in religious activities or social gatherings. Such practices can further reinforce stigma and hinder proper menstrual hygiene practices.
 - In Maharashtra, a study found that the practice of segregating menstruating girls and women to 'kurmaghars', or "period huts", with no sanitation and other basic facilities poses a significant barrier to conducive sexual and reproductive health outcomes among females.
- **Lack of Policy Measures:** The 2022 '**Right of Women to Menstrual Leave and Free Access to Menstrual Health Products Bill**' specified three days of paid leave for women and transwomen during their periods, and additional benefits for students is yet to become act. Only two states, Kerala and Bihar, currently have menstrual leave policies for women.

What Needs to be Done?

- **An Inclusive Approach:** It must also cater to the menstrual needs of the differently abled, trans-male/female, and people with other gender identities who menstruate. Gender-nonconforming persons face safety problems and a lack of menstrual supplies. We need to urgently understand their unique needs as well.
- **Improve the quality of Sanitary Products:** Despite being cheap and affordable, officials have also noted quality issues in sanitary napkins distributed under various government schemes.
- **Promote better Alternatives:** Menstrual cups are a cheap, sustainable, and eco-friendly alternative to sanitary napkins, but they are still treated with scepticism.
- **Telemedicine and teleconsultation services:** Utilizing telemedicine platforms can provide remote access to healthcare professionals specialized in menstrual health. Through video consultations, women and girls in remote areas can receive personalized guidance, support, and expert advice on menstrual hygiene, ensuring that accurate information is easily accessible regardless of geographical constraints.

- **Community-based peer education programs:** Engaging local communities through innovative peer education programs can help break the silence and stigma surrounding menstruation. These programs can train and empower women and girls to become menstrual hygiene ambassadors.
- **Robust Waste Disposal:** Safe disposal of sanitary napkins and the associated difficulties and misconceptions.
 - **IoT technology** can be employed to develop smart toilets equipped with sensors for detecting menstrual waste and automatically initiating proper disposal mechanisms.
- **Constructing Smart Toilets:** These toilets can provide real-time feedback on hygiene practices, monitor supply levels of menstrual products, and send alerts for maintenance and restocking.
- **Raise Awareness:** Awareness must be raised among women through Initiatives like the use of mobile applications, interactive websites, and voice-based information systems to provide easily accessible and culturally appropriate information on menstrual health and hygiene.
 - **Augmented Reality (AR) and Virtual Reality (VR)** technologies can create immersive and interactive learning experiences for menstrual health education.
 - Virtual simulations and scenarios can be used to teach proper hygiene practices, demonstrate the biological processes involved, and address myths and misconceptions.
- **Policy Measures:** Policies like Reduction of tax, setting standards for sanitary products and creation of female friendly infrastructure should be implemented. Also, the 'Right of Women to Menstrual Leave and Free Access to Menstrual Health Products Bill should be made a law and implemented in Letter and Spirit.

Conclusion

Inadequate menstrual hygiene can harm women and girls physically, mentally, and socially, causing infections, **anemia**, infertility, school dropout, violence, and discrimination. It is not just a personal hygiene matter but a public health concern demanding immediate action from governments, civil society, and individuals. To overcome these challenges, we need a comprehensive strategy involving education, awareness campaigns, policy reforms, infrastructure enhancements, and better healthcare services. By destigmatizing menstruation, ensuring affordable sanitary products, and providing comprehensive menstrual health education, we can enhance menstrual hygiene in India.



Diversifying India's Rural Economy

*This editorial is based on **Is India's rural economy diversifying?** which was published in The Hindu Business Line on 29/05/2023. It talks about the Data which shows that rural employment diversification could be reversing due to lack of opportunities beyond farming.*

Tag: ECONOMY, GS Paper - 1, Social Empowerment, GS Paper - 3, Economy, Employment, Issues Relating to Development, Issues Related to Women, Cropping Patterns.

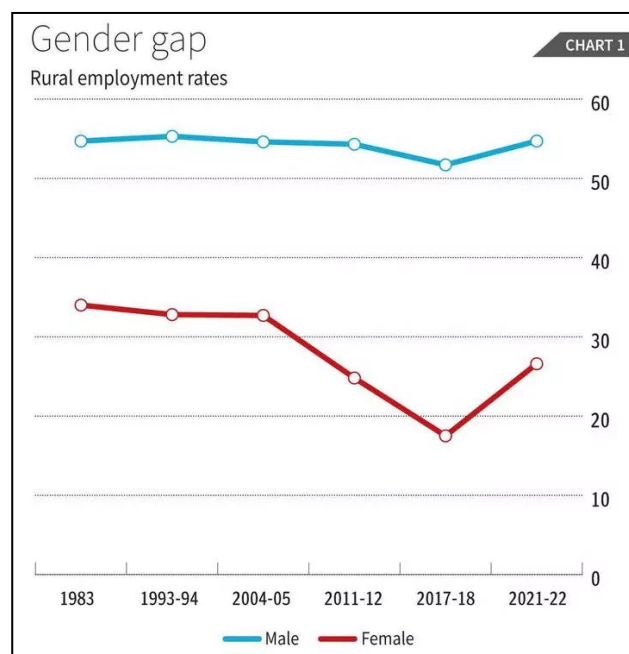
In Indian rural economy, the slow pace of employment diversification has created an unstable and unviable situation as workers remain crowded into agriculture even as that sector show significant declines in share of GDP.

Insufficient economic diversification, from low value added to higher value-added activities, has been one of the important failures of the Indian development trajectory.

What are Statistics about Employment in Rural India?

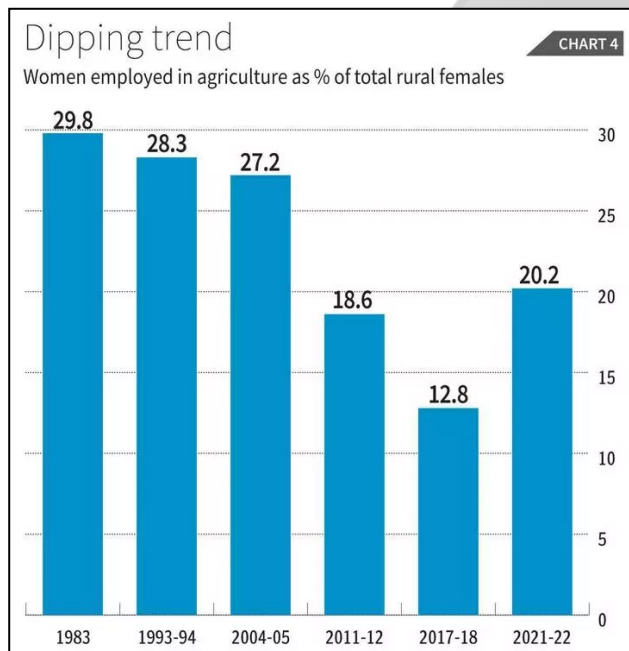
Most of the **workforce** remains trapped in **low-value employment in agriculture and other primary activities, along with low-paying services** unlike the successful late industrialisers like Japan, South Korea and more recently China.

- **Rural Employment diversification in past two decades:** It happens with declining work participation rates for both men and women. Chart 1 shows how employment rates for rural males are very low and have remained broadly stagnant over four decades.



➤ Employment for Women:

- **Low employment With Unstable Trend:** For rural females the employment is very low rate of only **34 per cent**, it further collapsing to as low as **17.5 per cent in 2017-18**. There was a slight recovery in 2021-22 to less than 27 per cent, well below the rate of four decades earlier.
- This severe fall in women's recognised employment was responsible for the absolute decline in total employment over the period from 2011-12 to 2017-18.
- Chart 4 presents the share of women employed in agriculture as a proportion of the total rural female population. **This declined continuously over the decades, reaching only 12.8 per cent in 2017-18**. The subsequent increase to 20.2% in 2021-22 seems to be more of a distress move because even that remains well below the levels of earlier decades.

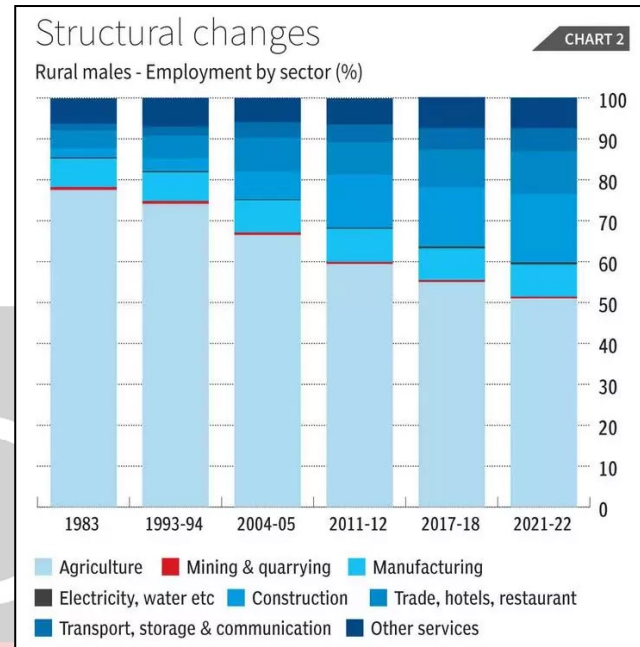


- **Unrecognized female labor:** Female work participation rates do not capture all work, but only recognised employment, including self-employment. This excludes a very large amount of work performed in **unpaid form by (mainly) women** in the process of activities that ensure household consumption and survival.
- Unpaid work consists not just of unpaid care work within households, but also essential activities like fetching water and fuelwood, kitchen gardening, poultry raising etc.
- **Female not only unpaid workers but unpaid helpers also:** The significant proportion of recognised women workers (around one-third in

rural areas) are described as “unpaid helpers in family enterprises” — typically farms.

Structure of employment for male workers:

- **Employment in Agriculture:** There have been changes in the structure of employment for male workers. **Chart 2** provides a sense of the **sectoral changes in employment for rural male workers**. There is a **continuous decline in the share of agriculture** from 77.5 per cent in 1983 to 51 per cent in 2021-22.

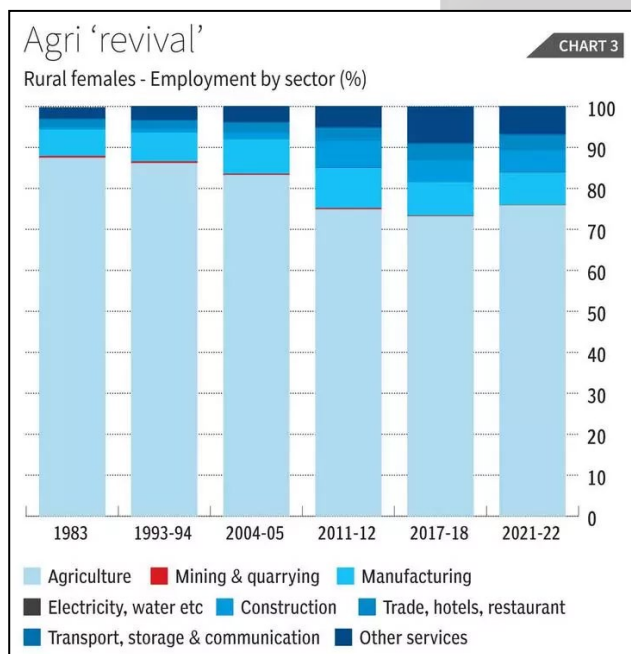


- **Employment in Construction:** More than half of declining share of agriculture is explained by the rise of construction as a major employer, which accounted for 16.6 per cent of rural male employment by 2021-22.
- The share of manufacturing barely budged, remaining at 7-8 per cent, indicating the failure of rural industrialization to take off to any meaningful extent.
- **Employment in Service Sector:** Trade hotels and restaurants more than **doubled their share of male employment**, and transport services also increased. But a **significant proportion of these also remain relatively low-paying activities**.

Structure of employment for female workers:

- **Much limited diversity in female employment:** For rural females' diversification of employment was much less evident.
- **Employment in Agriculture:** The share of **agriculture declined**, but only from 87.5 per cent in 1983 to 73.2 per cent in 2017-18 — and then remarkably **showed a renewed increase in 2021-22 to 75.9%**.

- Most of the women declared themselves as self-employment works as an unpaid help in family farms, since wage employment (whether regular or casual) is less likely to be a “refuge” sector.
- **Employment in Manufacturing:** Manufacturing employment provided work for 6.4 per cent of rural women in 1983, and this **increased to 9.8 per cent in 2011-12. It declined once again, to account for only 7.9% of rural women recognised workers in 2021-22.**
- **Employment in Construction:** Construction **increased significantly** but still accounted for **only 5.3%** of rural female employment.
- **Employment in Service Sector:** Other services, mainly **community and personal services, also showed substantial increases** (from 2.8 per cent in 1983 to 8.9 per cent in 2017-18) **but then declined again for the most recent period, to 6.8 per cent.**
- The recent “revival” in the share of agriculture in women’s employment reflects the decline of other activities in terms of viable employment opportunities.



- **Women Employment as per NFHS-5:** Around 75% of boys and men in the age group of 15-49 are currently employed, while **only 25% of girls and women in the same age group have jobs.**
 - In the working age group of 15 to 49, about 32% women are employed. The shocker is that 15% of working women are not paid for their work.

What are Reasons for lack of Diversity in Rural Area?

- **Agriculture-centric economy:** Rural economy massively relies on agriculture (more than 50% of the population

directly or indirectly depend upon agriculture), which is dependent on unpredictable monsoon and prone to droughts and floods. This leads to low and erratic income for farmers and agricultural workers.

- Due to factors like small landholdings, lack of modern techniques, and inadequate infrastructure, farmers often face low productivity and income instability.
- **Lack of non-agricultural job opportunities:** Lack of access to financial resources, such as credit, insurance and savings, limits the ability of rural people to invest in productive activities, cope with shocks and diversify their livelihoods.
 - Industries and businesses tend to concentrate in urban areas, resulting in a lack of diverse economic activities in rural regions.
- **Inadequate infrastructure:** Lack of adequate infrastructure, such as roads, electricity, irrigation, telecommunications, housing, health and education, hampers the growth of non-farm sectors and reduces access to markets, services and opportunities.
- **Limited access to education and skills training:** Low levels of education and skills among rural people restrict their employability and mobility in the labour market. Many rural children drop out of school due to poverty, lack of sanitation facilities, early marriage or household work.
 - The lack of educational and vocational opportunities hinders the development of new economic sectors.
- **Social and cultural factors:** Social inequalities based on caste, gender, religion or ethnicity also affect the economic opportunities and outcomes of rural people. Women, scheduled castes and tribes, minorities and other marginalized groups face discrimination, exclusion and violence that limit their economic potential.
- **Limited access to credit and financial services:** Rural communities often face difficulties in accessing credit and financial services. This makes it challenging for entrepreneurs and small businesses to start or expand their operations. The lack of financial support hampers the growth of diverse economic activities.

What have been done to diversify employment in Rural India?

- **The Deendayal Antyodaya Yojana - National Rural Livelihood Mission (DAY-NRLM)** aims to enable economically weak households to access **gainful self-employment and skilled wage employment** opportunities resulting in sustainable and diversified livelihood options for them. The cornerstone of the Mission is its ‘community-driven’ approach which has provided a huge platform in the form of community institutions for women empowerment.

- The Mission has mobilised a total of 8.7 crore women from poor and vulnerable communities into 81 lakh SHGs.
- **Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS):** The scheme is to provide guaranteed employment to unskilled workforce with secured employment to women.
 - The work done under the scheme have a significant positive impact on agricultural productivity, production-related expenditure, and income per household, along with a negative association with migration and fall in indebtedness, especially from non-institutional sources.
- **Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY):** Scheme provides Skills to the unskilled youth to have employment in the various non-Agri sectors.
- **Women Empowerment:** Women empowerment by employing them in various non-Agri sectors in rural area like **NRHM (ASHA), Aganwadi (PM-POSHAN),** Banking Correspondence (BC-Sakhi) etc.
- **Rural Infrastructure:** Under **Pradhan Mantri Gram Sadak Yojana rural** roads measuring 7,23,893 km have been created.
- **Shyama Prasad Mukherji Rurban Mission:** The scheme has been launched to develop a cluster of villages that preserve and nurture the essence of rural community life with focus on equity, and inclusiveness, without compromising with the facilities perceived to be essentially urban in nature, thus creating a cluster of urban villages.

What need to be Done?

Addressing these challenges requires a multi-faceted approach, including investments in infrastructure, education and skill development, access to credit and financial services, and the implementation of policies that promote diversification and inclusive growth in rural areas.

- **Infrastructure development:** Improve transportation, communication, and other basic infrastructure in rural areas to attract businesses and investment.
- **Entrepreneurship support:** Encourage entrepreneurship and provide support to rural entrepreneurs by bringing better implementation of schemes like **PM-EGP (Prime Ministers Employment Generation Programme).**
- **Industry diversification:** Promote the development of **diverse industries (like Food Processing, Traditional goods & services, rural tourism, etc.)** in rural areas to reduce dependence on a **single sector (Agriculture).** This can involve identifying and nurturing sectors that have growth potential and align with the local resources, such as agriculture, tourism, renewable energy, manufacturing, or technology.

- **Skill development and education:** Enhance access to quality education and skill development programs in rural areas **by vocational training and internship in urban industries.**
- **Support for remote work and telecommuting:** Invest in infrastructure and resources that enable remote work and telecommuting opportunities in rural areas. This can include improving internet connectivity, establishing co-working spaces, and promoting telecommuting initiatives with local businesses.
- **Regional collaboration and partnerships:** Encourage collaboration between rural areas, government agencies, private sector organizations, and nonprofit entities to pool resources, share knowledge, and develop joint initiatives aimed at attracting investment and creating employment opportunities.
- **Community engagement and involvement:** Encourage community engagement and involvement in the planning and decision-making processes related to rural development. This can help ensure that initiatives reflect the needs and aspirations of local residents and create a sense of ownership in the development process.
- **Recognize Unpaid work of women:** If such unpaid work is recognized (though it is not remunerated) **more than 85 per cent of women in India are actively engaged in “economic” activity.**
 - Recognition of unpaid work brings choice among workers and the will to do work as per the demand and supply in the market and as per interest and capabilities and not as per compulsion. It further brings more formalization of the work force among females and their economic contribution in the nation building.



New Parliament Building For New India

This editorial is based on ‘India’s new Parliament, and why it is needed’ which was published in Indian Express on 29/05/2023. It talks about the need of New Parliament building and its features.

Tag: Governance, GS Paper – 2, GS Paper – 1, Government Policies & Interventions, Parliament, Indian Heritage Sites.

In a significant milestone during the 75th year of Independence, Prime minister of India unveiled new Parliament building. Designed and constructed by Indians, this architectural marvel encapsulates the culture, pride, and spirit of the entire nation and looks forward to fulfilling

the longstanding need of Indian democracy to have more spacious parliament as the number of seats and MPs will increase in the coming time.

The new parliament building, **developed as a part of Central Vista Redevelopment project**, takes care of infrastructural hurdles in parliamentary functioning.

Prime minister inaugurated the parliament and placed '**Sengol**', the symbol of power transfer to India from the British.

What was the Need for the New Parliament Building?

➤ **Need of More Space:**

- The **existing Parliament building**, erected in 1927, was **never designed to accommodate a bicameral legislature for a fully-fledged democracy**, according to the government data.
- With the number of **Lok Sabha seats fixed at 545 since the 1971 Census**-based delimitation, the building's seating arrangements have become cramped and cumbersome.
- During joint sessions, the **limited seating capacity** exacerbates the problem. Moreover, the lack of space for movement poses a significant security risk. It is **likely to increase substantially after 2026** as the freeze on total number of seats is only till 2026.

➤ **Outgrowing the Heritage:**

- The existing Parliament House, commissioned in 1927, is a century-old **Heritage Grade-I building**. With a substantial increase in parliamentary activities and users over the years, the building's age and limited infrastructure **no longer meet the current requirements** in terms of space, amenities, and technology.
- **Heritage Grade-I comprises buildings and precincts of national or historic importance**, embodying excellence in architectural style, design, technology and material usage and/or aesthetics.
- They may be **associated with a great historic event, personality, movement or institution**. They have been and are the prime landmarks of the region. **All natural sites shall fall within Grade-I.**

➤ **Infrastructure Distress:**

- Ad hoc constructions and modifications have strained the building's infrastructure. The **addition of essential services like water supply, air conditioning, and CCTV cameras has led to seepage issues**, impacting the building's aesthetics.

- Moreover, **outdated communication structures and inadequate fire safety measures** raise concerns about the safety of occupants.

➤ **Concerns of Structural Safety:**

- **Old parliament was built when Delhi was in Seismic Zone-II**, the current Parliament building **now falls within Seismic Zone-IV**.
- This shift raises significant structural safety concerns, necessitating the construction of a new building that meets modern seismic standards.

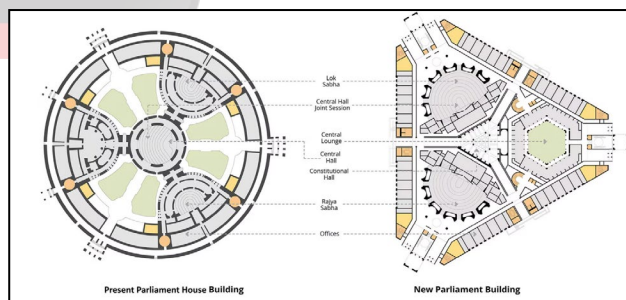
➤ **Inadequate Office Spaces:**

- Over time, the conversion of inner service corridors into offices has resulted in poor-quality workspaces.
- **Sub-partitions further reduce the already limited space**, adversely affecting the productivity and well-being of employees.

What are the Significant Features of the New Parliament Building?

➤ **Optimum Space Utilization:**

- The new Parliament building, standing alongside the existing one, encompasses a **built-up area of approximately 65,000 sq m**. Its **triangular shape ensures efficient utilization of space**, accommodating the evolving needs of a growing nation.



➤ **Enhanced Seating Capacity:**

- The new building includes a larger Lok Sabha Hall with a **capacity of up to 888 seats and a larger Rajya Sabha hall with up to 384 seats**.
- **Joint sessions** of Parliament can now accommodate up to **1,272 seats**, facilitating inclusive and robust democratic proceedings.

➤ **State-of-the-Art Facilities:**

- A state-of-the-art **Constitutional Hall** serves as the heart of Indian democracy, placing citizens at the center of governance.
- The building also offers **ultra-modern office spaces** equipped with **cutting-edge communication technology**, promoting efficiency and security.

➤ **Commitment to Sustainability:**

- The new Sansad Bhavan stands as a **“Platinum-rated Green Building,”** reflecting India’s dedication to environmental sustainability.
- **Cultural Integration:**
 - The new Parliament building seamlessly integrates the vibrance and diversity of modern India, **incorporating regional arts, crafts, and cultural elements.**
- **Inclusivity for All:**
 - Recognizing the importance of accessibility, the **new Parliament building prioritizes divyang (differently-abled) individuals.**
 - It ensures that **people with disabilities can move freely within the premises,** fostering inclusivity and equal participation.
- **Galleries and Exhibitions:**
 - The public entrances lead to three galleries - the **Sangeet Gallery** which exhibits dance, song, and musical traditions of India; the **Sthapthya Gallery** depicts the architectural heritage of the country, and the **Shilp Gallery** showcases distinct handicraft traditions of different states.
- **Enhanced Facilities and Access:**
 - The Lok Sabha and the Rajya Sabha chambers boast a **digitised voting system, well-engineered acoustics,** and state-of-the-art **audiovisual systems** to ensure effective legislative proceedings.
 - The **Ministers’ chambers can be accessed through corridors running parallel to the triangular boundary of the building.**
- **Symbolic Design:**
 - **The Lok Sabha hall’s interior, inspired by India’s national bird, the peacock, and the Rajya Sabha hall,** representing the **lotus, India’s national flower,** embody the rich symbolism of the nation.
 - **Installation of Sengol,** the symbol of power transfer, is symbolic tribute to power transfer to India.

What is its Overarching Central Vista Redevelopment Project?

- The Central Vista Redevelopment Project is a project that aims to revamp the Central Vista, India’s **central administrative area located near Raisina Hill, New Delhi.**
- The area was **originally designed by Sir Edwin Lutyens and Sir Herbert Baker** during British colonial rule and was retained by Government of India after independence. The **redevelopment of the project is being overseen by Ar. Bimal Patel.**
- Central Vista of New Delhi houses **Rashtrapati Bhawan, Parliament House, North and South Block, India Gate, National Archives among others.**

- In December **1911, King George V** made an announcement in **Delhi Durbar** (a grand assembly) to shift the capital of India from Calcutta to Delhi.
- The redevelopment project includes:
 - Constructing a **triangular Parliament building** next to the existing one.
 - Constructing **Common Central Secretariat.**
 - **Revamping** of the 3-km-long **Rajpath (Kartavya Path)** — from Rashtrapati Bhavan to India Gate.
 - **North and South Block** to be repurposed as museums.

What is the Historical Significance of Sengol?

- **Chola Period:**
 - The Sengol is derived from the **Tamil word “Semmai” which means “Righteousness”.**
 - It was **made of gold** and was **carried by emperors during ceremonial occasions** to represent their authority in **Chola empire** And was handed over from one king to another as a mark of succession and legitimacy.
 - The Cholas ruled over parts of Tamil Nadu, Kerala, Karnataka, Andhra Pradesh, Telangana, Odisha, and Sri Lanka from the 9th to 13th century CE.
 - The **ceremony was usually performed by a high priest** or a guru who blessed the new king and conferred him with the Sengol.
- **Before Independence:**
 - Before Independence there was a question that, **‘What is the ceremony that should be followed to symbolise transfer of power from British?’**
 - **C. Rajagopalachari suggested Chola ritual of handing over ‘Sengol’** as suitable ceremony for power transfer as it would reflect India’s ancient civilisation and culture, as well as its unity in diversity.
 - The Sengol was **presented to PM Nehru by Thiruvavaduthurai Adheenam** (a 500-year-old Saivaite monastery) on August 14, 1947.
 - A golden sceptre was **crafted by Vummidi Bangaru Chetty,** a famous jeweller in Madras (now Chennai).
 - The **Nandi, with its unyielding gaze as the beholder of “Nyaya”,** is hand-carved at the **top.**
- **Post Independence:**
 - After receiving the **Sengol sceptre in 1947,** Nehru kept it at his residence in Delhi for some time before donating it to Anand Bhavan Museum in Allahabad (Prayagraj).
 - It **remained at Anand Bhavan Museum for over seven decades.**

- In **2021-22**, when the **Central Vista redevelopment project was underway**, the government decided to **revive this historical event and install the Sengol sceptre in the new Parliament building**.
 - It has been placed near the Speaker's seat in the new Parliament building, accompanied by a **plaque that will explain its history and meaning**.
- The installation of Sengol in the new Parliament building is not just a **symbolic gesture but also a meaningful message**.
 - It signifies that **India's democracy is rooted in its ancient traditions and values** and that it is **inclusive and respectful of its diversity and plurality**.

How did the Old

Parliament Building Come into Being?

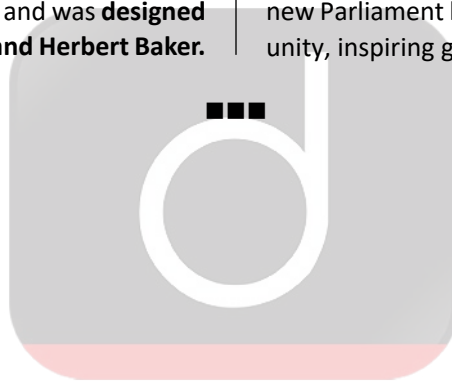
- The old parliament building's **construction began in 1921 and was completed in 1927** and was **designed by the architects Edwin Lutyens and Herbert Baker**.

- The building was originally called **the Council House** and housed the Imperial Legislative Council, the legislature of British India.
- The parliament building's **circular shape was inspired by the Colosseum**, the Roman historical monument.
- A few **Indian elements, such as jaalis and chhatris**, were added to the design.

Conclusion

India's new Parliament building is a state-of-the-art facility that showcases India's rich cultural heritage while providing modern amenities for effective legislative proceedings. The government plans to use both the buildings in conjunction for smooth functioning of parliamentary affairs.

It not only reflects India's cultural diversity but also paves the way for an inclusive and efficient democratic process. As the nation embarks on this new chapter, the new Parliament building becomes a beacon of hope and unity, inspiring generations to come.



Drishti Mains Questions

1. Discuss the potential benefits of a Trade and Economic Partnership Agreement (TEPA) between India and EFTA states and explain how it could contribute to the economic growth and welfare of both the parties.
2. How can India achieve the goal of zero hunger and ensure food security for its population? Discuss the challenges in achieving this goal and suggest measures that can be taken to address them.
3. Analyze India's trade relationship with China and explain the reasons for its growing trade deficit with China. What policy measures can be taken to reduce this deficit and increase self-reliance?
4. Discuss the impact of unseasonal rain in India on the agricultural sector and on the Indian economy. What are the measures that can be taken to address this issue?
5. India has a great opportunity to realize its demographic dividend, however, it is important to prioritise a strong skilling and upskilling strategy specially in the field of technology. Comment.
6. Discuss the causes of rapid urbanisation in India and also suggest measures to overcome issues arising out of rapid urbanisation.
7. Examine the causes and consequences of recent violence and unrest between the Meitei and Kuki communities in Manipur. What steps need to be taken to address the grievances of all the stakeholders and restore peace and harmony in the northeastern region?
8. "Amid the ongoing geopolitical instabilities across the world and the increasing frequency of the US weaponising the US Dollar to impose sanctions against countries, the world is now looking for more suitable alternate means of payment settlement. Internationalisation of Indian Rupee offers a prudent way ahead". Comment.
9. Discuss the significance of India-Gulf relationship in the context of India's foreign policy and regional dynamics. Also, evaluate the challenges associated with India's engagement with the Gulf countries.
10. Discuss the current state of the Indian aviation industry and the challenges it faces. What measures can be taken to address these challenges and improve the industry?
11. India has been thriving to introduce Private Players into its Space Economy since a very long time. In this context discuss the significance of Private Sector in Space Economy and also, discuss the Role of Indian Space Policy 2023 launched by ISRO towards achieving this goal.
12. The Open Network for Digital Commerce which has been launched recently by Ministry of Commerce & Industry has a huge potential to revolutionise the e-Commerce sector in India. In this light discuss the challenges in promoting the platform and suggest some way forward also.
13. As the year 2023 is supposed to be an El Nino Year, discuss the impact of weather on food security and suggest some measures to maintain the Food Security in India.
14. In the light of recent developments, discuss the concept of default bail in India's criminal justice system. Examine its significance in safeguarding the rights of the accused and ensuring speedy justice.
15. Making agriculture economically viable is crucial for ensuring the livelihoods of millions of farmers in India. Discuss the challenges in achieving economic viability and suggest measures that can be taken to address these challenges.

Drishti Mains Questions

16. The Digital India Land Records Modernization Programme (DILRMP) was launched by the government to develop a transparent land record system. What are the benefits and challenges of the scheme, and what measures can be taken as way forward?
17. "Considering much of the India envisioned for 2050 is yet to be built, an 'accelerated steel industry decarbonisation' offers a clear opportunity for India to build it right at the outset". Comment.
18. The government has recently launched the National Quantum Mission. Discuss the significance of the mission and the challenges it faces.
19. What is the significance of the Supreme Court's reversal of its previous verdict on Jallikattu, which deemed it cruel to bulls and resulted in the banning of all similar bull taming and bull racing sports in the country? Analyze the judgment in this context.
20. Discuss the potential impact of electric vehicles on the transportation sector and the environment. Evaluate the challenges and opportunities associated with their widespread adoption.
21. Economic abuse is a form of domestic violence that is rarely discussed. Examine the factors that contribute to its prevalence and the impact it has on victims. Suggest strategies that can be adopted to effectively raise awareness, prevent, and address economic abuse.
22. Discuss the implications of the delay in conducting a census on governance, planning, and resource allocation.
23. Pakistan is going through one of the gravest political and economic crises. In such a situation, what are the opportunities and threats for India and how should India respond in such a situation? Discuss.
24. Discuss the need, challenges and opportunities of phasing out coal for India's energy security and climate action.
25. Examine the barriers and challenges faced by women in accessing adequate menstrual health care and propose measures to ensure inclusive and comprehensive menstrual health management.
26. Indian agriculture is facing several issues ranging from the feminisation to lack of diversity of employment. Discuss the hurdles in the Indian agricultural economy and suggest measures in the context of given statement.
27. The new parliament building, developed as a part of Central Vista Redevelopment project, takes care of infrastructural hurdles in parliamentary functioning. Discuss.