



Monthly Editorial Consolidation



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E-Commerce and MSMEs

This editorial is based on “Amplify E-Commerce and Help All MSMEs Reach Markets Online” which was published in Livemint on 01/02/2022. It talks about the significance of MSMEs shifting to e-commerce platforms and the challenges posed by the GST.

Tags: Indian Economy, GS Paper 2, Government Policies and Interventions, Issues Relating to Development, GS Paper 3, Inclusive Growth, Growth & Development, Industrial Growth

Covid-19 has caused a tectonic shift in all spheres of our lives, economy, entertainment, education, travel, etc. Businesses and services have become ever more dependent on technology.

In this context, the **Micro, Small and Medium Enterprises (MSMEs)**, a significant major contributor to the India growth story, still lags somewhere behind.

E-commerce marketplaces are today the best possible enablers for digital transformation at minimal cost, innovation and investment. However, in this transformation, the **Goods and Services Tax (GST)** poses several roadblocks for MSMEs.

As India charts a post-covid roadmap to economic recovery, it will be crucial to evolve a GST policy that's sale-venue agnostic, treating online and offline approaches of businesses alike.

MSMEs, E-Commerce and Indian Economy

What is the Contribution of MSMEs?

- **In GDP and Exports:** With around 36.1 million units throughout the geographical expanse of the country, MSMEs contribute around **6.11% of the manufacturing GDP** and **24.63% of the GDP from service activities**.
 - It contributes around **45% of the overall exports** from India.
- **In Growth and Development:** MSMEs **promote inclusive growth** by **providing employment opportunities in rural areas** especially to people belonging to weaker sections of the society.
 - It provides **opportunities for budding entrepreneurs** to build creative products **boosting business competition and fuels growth**.
 - However, **currently less than 10% of Indian MSMEs sell online** and 85% are unregistered.

Why is it Significant for MSMEs to Shift to E-Commerce Platforms?

- **Self-Reliance:** E-commerce can contribute significantly in **achieving the vision of 'vocal for local' and 'Atma Nirbhar Bharat'**.

- **Expands Reach of Businesses:** It allows for products even **from hinterlands to get to the national market**, thus, providing opportunities to artisans and small sellers from Tier-2/3 towns to sell online to customers **beyond their local catchment**.
- **Significance for Start-ups:** By investing in supply chains, the e-commerce sector provides opportunities for MSMEs to **partner them in supply and delivery networks**.
 - Start-ups and young brands are also finding opportunities to build national brands and even go global.
- **Generating Jobs:** According to a report by Accenture and the Trust for Retailers and Retail Associates of India, **digitizing just 10% of India's 13 million general stores** has the **potential of generating an estimated 3.2 million new jobs** in the country.

What Issues does GST Pose?

- Under the current framework, many **small businesses may not be able to transition** to e-commerce platforms **due to their GST registration related issues**, posing a hurdle in accessing the large customer base that global e-commerce majors offer.
- The e-commerce sector also suffers in terms of **Ease of Doing Business** online. Sellers on e-commerce marketplaces **do not get advantage of GST threshold exemption** (of Rs 40 lakh) for intra-state supplies that offline sellers enjoy because the online sellers have to **"compulsorily register"** even though their turnover is low.
- MSMEs operating through online platforms are burdened with cumbersome and **time-consuming periodical compliance needs** like registration and the **monthly filing of returns**, which further dissuades them from registering under the GST Network.
- The discrepancy between registration thresholds for online and offline sellers, coupled with a complex GST registration process, can prove a major deterrent for small businesses keen to venture into e-commerce platforms to expand their businesses. This also results in an indirect tax revenue loss for the government.

What are the Other Challenges?

- **Physical Principal Place of Business (PPOB):** In e-commerce, it is **not quite practical for online sellers to have a physical PPOB**.
 - It leads to increased complexities for MSMEs in registering in e-commerce marketplaces.
- **Lack of Access to Appropriate Infrastructure and Technology:** Buying the latest smart devices, best internet services, retaining skilled employees to

manage digital systems and **maintaining physical and digital infrastructure** is also an **expensive affair for small, nascent companies**.

- **Lack of Awareness:** There are still many small and medium scale enterprises who are **unaware of the impact of digital transformation** and **fail to build customer loyalty** and retention as other e-businesses.

What is the Way Forward?

- **Push for Digitization of MSMEs:** As India's economic recovery remains fragile, it would be **prudent to help fast-track India's e-commerce sector** and the onboarding of MSMEs.
 - Micro, small and medium enterprises (MSMEs) will definitely flourish with **technology and digitization of their processes, inventory management and interface with markets**, either directly or via the e-commerce ecosystem.
 - We must proactively get MSMEs selling online, as also artisans and farmer-producer organizations scattered across India, and provide them marketing support.
- **An Enabling GST Ecosystem:** In the spirit of empowering small retailers and not placing online platforms at a disadvantage to brick-and-mortar businesses, **MSMEs should be liable for GST only at the threshold value**, irrespective of whether they sell offline or online.
 - **GST parity, in terms of registration, between offline and online sellers** would help in integrating small business owners in the country with the e-commerce ecosystem.
 - Also, amending the rules to **allow small offline sellers to sell online without needing a GST registration** will increase GST and income tax collections for the government, **increase control and transparency**, and improve **efficiency of tax collection**.
- **Assistance from Tech-Giants:** Many technology based companies are building exclusive tools to support small and medium scale enterprises by enhancing their business proficiency and profitability.
 - **'Google Advantage'** is one such initiative by Google India that **facilitates MSMEs to use the growing online clientele base**.
 - **'Google My Business'** is specifically **developed to support startups, and MSMEs in India** to succeed virtually.
- **Simplifying the PPOB Requirement:** The government can **simplify the PPOB requirement by making it digital** and not requiring physical presence to expand the reach of MSMEs.

- **Eliminating the need for state specific physical PPOB** requirements will facilitate sellers to get state-level GST with a single national place of business.

Conclusion

E-commerce has clearly played a phenomenal role in the rise of economies such as China's. India must catch up fast with its domestic and export potential. In its quest to achieve a \$5 trillion economy, the Government of India should **boost digitalization, push inclusivity in ways that support MSMEs, ensure GST parity** and empower small businesses to venture into the online ecosystem and diversify their operations.



India and Unemployment

This editorial is based on "A Hazy Picture on Employment in India" which was published in The Hindu on 01/02/2022. It talks about the employment related data presented by the PLFS and the existing unemployment situation of India.

Tags: Indian Economy, GS Paper 2, Issues Related to Development, Poverty, Human Resource, GS Paper 3, Employment, Growth & Development

Causes of Lack of Employment, Restructuring of Workforce.

The two important indicators of structural transformation in any economy are rates of growth and changes in the structural composition of output and the workforce.

India has experienced fairly consistent changes in the first indicator, especially after the 1991 reforms, but the trend in employment has not revealed any consistent or clear pattern.

Though the **Periodic Labour Force Survey (PLFS)** shows increment in worker to population ratio and narrowing of the gender gap in employment in recent past, the unemployment scenario of India still remains disappointing.

Indian Economy and Employment

What are the Economic Growth Rate Trends?

- The growth rate of the economy (measured by **Gross Value Added (GVA)** at constant prices) accelerated from 4.27% in the 20 years before the economic reforms to 6.34% in the 20 years following the reforms and to **6.58% between 2010-11 and 2019-20 at 2011-12 prices**.
- This growth trajectory was accompanied by a **steady decline in the share of agriculture** from 30% in 1990-91

to 18% in 2019-20 and a **steady increase in the share of non-agriculture output** in total economic output.

Who Tracks India's Employment Related Data?

- Two major sources of data on workforce and employment have been the **Decennial Population Census** and the nationwide quinquennial (5-yearly) surveys on employment and unemployment by the **National Sample Survey Office (NSSO)**.
 - The quinquennial surveys of NSSO provide data for upto 2011-12 only. Hence, it was **replaced by the Periodic Labour Force Survey (PLFS)**, started in 2017-18 on an annual basis.
- PLFS is India's first computer-based survey launched by the **National Statistical Office (NSO)** in 2017. It has been constituted based on the recommendation of a committee headed by Amitabh Kundu.
 - It **collects data on several variables** such as the **level of unemployment**, the **types of employment** and their **respective shares**, the **wages earned** from different types of jobs, the **number of hours worked** etc.

What are the Employment Trends?

- PLFS data show an **increase in the worker to population ratio (WPR)** from 34.7% in 2017-18 to 38.2% in 2019-20.
 - This is a **reversal of the previous trend** which showed a decline in WPR after 2004-05.
- The change also implies that **employment has increased at a much faster rate than growth in population**.
- The increase in WPR has been reported in the rural and urban population and in the male and female population.
 - This increase in WPR is even more significant as it has occurred in the midst of an increase in the labour force participation rate.

What are the Women-Specific Stats?

- **Female WPR ratio** increased from 17.5% to 24% between 2017-18 and 2019-20. The ratio, when multiplied by the female population, shows an **annual increase of 17% of women workers**.
- Another positive indication from PLFS data is that the gap between the male and female worker participation rate is narrowing down.
 - As **against 100 male workers, there were 32 female workers** in the workforce in 2017-18. This number increased to 40 in 2019-20.
 - Women constituted 24% of the workforce in the country in 2017-18 and **28.8% in 2019-20**.
- Also, the **unemployment rate in the female labour**

force in rural areas is far lower than the male labour force, whereas the opposite holds true in urban areas.

- This is despite the fact that the female labour force participation rate in rural India is 33% higher than the rate in urban areas.

How is the Actual Unemployment Scenario different from the Presented Data?

- **More Job Seekers than Jobs:** PLFS data shows that the number of jobs increased at a faster rate than the increase in the number of job seekers between 2017-18 and 2019-20.
 - But despite this, the **number of unemployed persons has increased by 2.3 million** between 2017-18 and 2018-19, mainly because of an **increase in the number of job seekers** (52.8 million) in these two years.
- **Decline in Salaried Workers:** The percentage of salaried people has **dropped from 21.2% in 2019-2020 to 19% in 2021**, which means that 9.5 million people have left the salariat and become jobless or part of the informal sector.
- **No Shift out of Agriculture:** The sectoral composition of the workforce shows that 45.6% of the workers in India are engaged in agriculture & allied activities, 30.8% in services and 23.7% in industry.
 - From 2017-18 to 2019-20, there has been **no increase in the share of industry and services** in total employment. This means that the **labour shift out of agriculture is not happening**.
- **Causes of Prevalence of Agricultural Jobs:** The young labour force, which is getting increasingly educated, sought more remunerative work outside agriculture but only a few succeeded.
 - This is because the **industry and services sectors have adopted capital-intensive** and, in many cases, **labour-displacing technologies** and production strategies.
 - This is getting further **aggravated with the rising adoption of modern technologies** like **Artificial Intelligence (AI)** and **Internet of Things (IoT)**.

What Steps Can Be Taken?

- **Rethinking Our Economic Development Models:** The rising share of industry and services in national income without a sizable increase in employment puts a serious question mark on the relevance of conventional models of economic growth and development.
 - Perhaps, there is a need to **rethink the conventional economic development models** and their **applicability for emerging economies like India**.

- An optional approach can be to rethink our strategy of striving for an industry-led growth model and **explore a more relevant agri-centric model of economic transformation** to create more attractive, more remunerative and **more satisfying employment in and around agriculture**.
- **Generating Employment in Manufacturing and Services:** There is also an urgent need to generate much more employment in the manufacturing and services sector compared to the number of jobs they have offered in the recent past. This should include:
 - **Changes in labour laws** which discourage industry to adopt labour-intensive production
 - Employment-linked production incentives
 - Special assistance for labour-intensive economic activities
- **Decentralisation of Industries:** Decentralisation of Industrial activities is necessary so that people of every region get employment.
 - **Development of the rural areas will help mitigate the migration** of the rural people to the urban areas thus decreasing the pressure on the urban area jobs.
- **More Investments:** The private sector investment rate in India is declining — almost in a linear manner — since 2011. The employment scene will improve only if **private investment picks up**.
 - The government should also align technical and vocational education and make **enduring and long-term investments in human capital** through **good-quality education, skills, and on-the-job training**, as well as in basic social protection.



AI and Climate Change

This editorial is based on “The Climate Costs of AI” which was published in Indian Express on 03/02/2022. It talks about the interconnection between the development of AI Technology and Climate Change.

Tags: Science & Technology, GS Paper 3, Robotics, Scientific Innovations & Discoveries, Artificial Intelligence

Artificial Intelligence (AI) technologies have been often thought as a gateway to a future written in chrome, operating on a virtual cloud.

Even in the **Budget 2022-23**, AI was described as a sunrise technology that would “assist sustainable development at scale and modernise the country.”

In terms of climate change, AI can prove to be immensely helpful in **developing environment friendly**

infrastructure, making climate predictions and decarbonising industries. However, ironically, the AI with itself brings an environmental cost to the development of the technology.

As we look to the future, there is a need to ensure that the **benefits of using AI to tackle climate change outweigh the drawbacks.**

AI-Climate Nexus

What is AI?

- AI describes the action of machines accomplishing tasks that have historically required human intelligence.
 - In the year 1956, American computer scientist John McCarthy organised the **Dartmouth Conference**, at which the **term ‘Artificial Intelligence’ was first adopted**.
- It includes technologies like **machine learning, pattern recognition, big data**, neural networks, self algorithms etc.
 - AI is **different from hardware driven robotic automation**. Instead of automating manual tasks, AI performs frequent high volume computerised tasks reliably.
- The governments of **developing countries see AI as a silver bullet for solving complex socio-economic problems**, as a result, a high share of AI in technology-linked emissions would be seen in the coming decades.

What are the Global Trends for the Development of AI Technology?

- The “**race**” for dominance in AI is far from fair: a few developed economies possess certain material advantages right from the start, they also set the rules.
 - They have an advantage in research and development, and possess a skilled workforce as well as wealth to invest in AI.
 - **North America and East Asia** alone account for **three-fourths of global private investment in AI, patents and publications**.
- The current state of inequity in AI in terms of governance raises **concerns about the technological fluency of policymakers** in developing and underdeveloped countries and their **representation and empowerment at the international bodies** that set rules and standards on AI.
 - The developing and underdeveloped countries have not been much benefitted by the technology as **AI’s social and economic benefits are accruing to a few countries only**.

What is the Significance of AI in Tackling Climate Change?

- AI could be most valuable in helping humankind fight its biggest threat - climate change. AI can:
 - **Strengthen climate predictions**
 - Enable **smarter decision-making for decarbonising industries** from building to transport
 - Work out how to **allocate renewable energy**.
- **Greening cities** or using **wind channel architecture** to create ventilation are ways to help cities deal with extreme heat that can be guided by AI.
- AI can also help reduce the effects of the climate crisis, such as by **making smart grid designs** and developing low-emission infrastructure.

What is the Impact of AI Technology on Climate?

- **Carbon Footprint:** The climate impact of AI can be majorly attributed to the **energy use of training and operating large AI models**.
 - In 2020, digital technologies accounted for between **1.8% and 6.3% of global emissions**.
 - At this same time, AI development and adoption across sectors skyrocketed and so did the demand for processing power associated with larger and larger AI models.
 - A main problem to tackle in reducing AI's climate impact is to quantify its energy consumption and carbon emission, and to make this information transparent.
- **UNESCO's Efforts:** The idea of sustainability is rapidly entering mainstream debates on **AI ethics** and **sustainable development**. Recently, **UNESCO** adopted the **Recommendation on the Ethics of Artificial Intelligence**, calling on actors to "reduce the environmental impact of AI systems, including but not limited to its carbon footprint."
 - In this context, tech-giants like Amazon, Microsoft, Alphabet and Facebook have **announced their "net zero" policies and initiatives** which is a good sign, but **merely scratches the surface**.
- **Issue of Developing and Underdeveloped Countries:** These countries have been specifically facing challenges as most of the **current efforts and narratives on the relationship between AI and climate** impact are being **driven by the developed West**.

What is the Way Forward?

- **Dedicated Research:** The relationship between climate change and AI is understudied, not least because the largest **companies working in this space are neither transparent nor meaningfully committed** to studying,

let alone acting, to substantively limit the climate impact of their operations.

- Dedicated studies, more investments in R&D and better policy interventions are required in this field.
- AI needs to be **developed and deployed so it can meet society's needs and protect the environment** by saving more energy than it expends.
- **Merging Technology with Sustainable Development:** To make sure **AI is used to help, and not hinder the society**, it's time to merge the two big debates of the present time - **digital technology and sustainable development** (in particular, the environment).
 - If we use the former to save the latter, this could be the best possible use made out of the resources available to us.
- **Exploring the Opportunities for the Developing World:** Governments of developing countries, including India, should assess their technology-led growth priorities in the context of AI's climate costs.
 - The developing nations are **not plagued by legacy infrastructure**, hence, it would be **easier for them to "build up better"**.
 - These countries don't have to follow the same AI-led growth paradigm as their Western counterparts.
- **Recommendation of WEF:** In 2018, a **World Economic Forum (WEF)** report showed that while AI can address some of Earth's environmental challenges, it is important to manage it properly.
 - To prevent this, the WEF proposed that governments and companies should pursue advancements in **"safe" AI to ensure that humanity is not developing AI that is harmful to the environment**.
 - The AI developers "must incorporate the health of the natural environment as a fundamental dimension."



Introducing Web 3.0

This editorial is based on "India Is Now A Nation Firmly Into Web3" which was published in Livemint on 04/02/2022. It talks about the role and opportunities for India in the adoption of Web 3.0.

Tags: Science & Technology, GS Paper 3, IT & Computers, Indigenization of Technology, Technology Missions, Scientific Innovations & Discoveries.

In the modern retelling of Web history, the world has now fully entered the third generation of the internet. We have moved from **decentralized protocols (Web 1.0)**

to centralized, **monopolistic platforms (Web 2.0)** and are now poised to move towards an era of **decentralized blockchain-based architectures - Web 3.0**.

With Web 3.0 as the current narrative, the hold of power will shift away from a few dominant Web 2.0 companies and give control back to the masses.

Web 3.0 offers a myriad of opportunities for India and its software developers but there also exist certain obstacles in terms of blockchain regulatory measures, taxation and decentralization.

If India succeeds in resolving these issues, it has a chance to **become one of the key players as the next frontier of the internet is established**.

All About Web 3.0

What is Web 3.0?

- **Web 3.0 is a decentralized internet to be run on blockchain technology**, which would be different from the versions in use, Web 1.0 and Web 2.0.
 - Web 1.0 is the world wide web or the internet that was invented in 1989, became popular from 1993 and lasted until 1999.
 - The internet in the **Web 1.0 days was mostly static web pages** where users would go to a website and then read and interact with the static information.
 - Web 2.0 started in some form in the late 1990s and it is still the age of Web 2.0.
 - The differentiating characteristic of Web 2.0 compared to Web 1.0 is that users can create content - **primarily, a social media kind of interaction**.
- In Web3, **users will have ownership stakes in platforms and applications** unlike now where tech giants control the platforms.

What will be the Significance of Web 3.0?

- The large mass of **creators and builders will leverage next-generation tools**, co-opt themselves into **self-governing organizations** and participate in this new economy.
- The **spirit of Web3 is Decentralized Autonomous Organization (DAO)**. Web3 will deliver a **decentralized and fair internet** where users control their own data.
- This will **eliminate excessive rents levied by the large platforms** and move the masses away from an obviously flawed business model of ad-based monetization of user-generated data that has become the hallmark of the modern digital economy.
- In Web 2.0, most of the data in the internet and the internet traffic are owned or **handled by very few**

behemoth companies which created issues related to data privacy, data security and abuse of such data.

- There is a sense of disappointment that the original purpose of the internet has been distorted. It is in this context that the buzz around Web3 is significant.

What are the Associated Issues?

- Web3 is in its very initial days and there is no consensus if it will take off like Web 1.0 or Web 2.0 did.
 - There is much **skepticism from top tech brains in the industry** and the academic community that **Web3 does not solve the problems it purports to solve**.
- The Web 3.0 movement in India is still in its nascent stage. There are serious **questions on the scalability and sustainability of blockchain platforms**.
- Furthermore, the **usability by developers** is an issue, and there is significant confusion on scenarios appropriate for decentralized data and smart contracts.
- Also, there is considerable **regulatory uncertainty**. In India, the **budget imposed a 30% tax on income from virtual assets**.
 - There are plans to launch a **Central Bank Digital Currency (CBDC)** and a comprehensive legislation that establishes India's posture on **cryptocurrency** is still awaited.

What is the Way Forward?

- **Proactive Approach to Web 3.0:** It would be unwise to underestimate the generational energy, developer focus and Venture Capital (VC) funding going into Web3.
 - This momentum will fuel the Web away from its current avatar into a new paradigm.
 - Undoubtedly, the **approach towards Web 2.0 was largely passive** allowing the big tech platforms to dominate our landscape—search, **e-commerce**, ride-hailing, grocery, and social media all ape western models.
 - Now, there is a need to adopt a more active approach to shaping the global Web 3.0.
- **Key Requirements for Developing Web3 Architecture:** From a technology perspective, Web3 will require **deviation from the current architecture** where there is a front-end, middle layer and back-end.
 - It will need **backend solutions for handling block chain**, persisting and indexing data in block chain, **peer to peer communications** and so forth.
 - Similarly, the middle layer, also called the business rules layer, will need to **include handling block chain-based backend**.

- **Opportunity for India:** Web3 implies a radical overhaul of legacy digital architecture.
 - New business models will evolve over the next few years, along with a universe of decentralized apps to meet consumer needs.
 - In addition, a massive amount of effort will be needed to **resolve the scalability issue**.
 - All this represents a massive **opportunity for India to move its software industry to a new level** as the 'web3 operating system' comes to life.
- **India's Role in Web 3.0:** Web3 is similar to **fintech in its rapid evolution**, its ability to attract talented young entrepreneurs and technologists, and its **ability to impact India at scale**.
 - However, there is a natural tension between the state on one side and big tech on the other, each seemingly **opposed to Web3 goals**. There is a lot to be done here beyond regulating cryptocurrency.
 - The already envisioned **National Blockchain Framework will need to be strengthened** and primed with use cases that drive adoption.
 - The newly announced **CBDC will have to be situated in the context of India's overall Web3 ambition** and the **IT services and developer ecosystem mobilized**.
 - A myriad of tricky issues related to **regulatory jurisdiction and taxation issues will need to be resolved**.



India-UK FTA — A New Opportunity

This editorial is based on "India Calling with Quite A Lot Of Trade in Mind" which was published in The Hindu on 05/02/2022. It talks about the significance of the formal Free Trade Agreement (FTA) negotiations initiated by India and the UK.

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

The beginning of the year 2022 saw the formal launch of negotiations for an **India-United Kingdom free trade agreement (FTA)** which both of them envisage concluding by the end of 2022.

These negotiations were aimed at achieving a "fair and balanced" FTA and **cover more than 90% of tariff lines** so as to reach the bilateral trade target of around **\$100 billion by 2030**.

Besides goods, services and investments, this 'new-age FTA' has been suggested to include areas such as intellectual property rights, geographical indications, sustainability, digital technology and anti-corruption.

A U.K.-India trade agreement will **stimulate growth and employment in both countries** and will help **diversify supply chains** by making it easier and cheaper for more businesses to do business across borders.

India and Free Trade Agreement (FTA)

What is an FTA?

- A **Free Trade Agreement (FTA)** is a pact between two or more nations to **reduce barriers to imports and exports** among them.
- Under a free trade policy, goods and services can be bought and sold across international borders with **little or no government tariffs, quotas, subsidies, or prohibitions** to inhibit their exchange.
- The concept of free trade is the **opposite of trade protectionism** or economic isolationism.
- FTAs can be categorised as **Preferential Trade Agreement (PTA)**, **Comprehensive Economic Cooperation Agreement (CECA)**, **Comprehensive Economic Partnership Agreement (CEPA)**.

Where does India stand in terms of FTAs with Other Countries?

- India has been demonstrating a new seriousness of purpose as it **negotiates 16 new and enhancing several other trade pacts** with nations as diverse as **Canada, the US, the European Union and South Korea**.
- India is hoping to conclude its first FTA in over a decade with the **United Arab Emirates** in 2022. And another one with **Australia** is also in the offing.
- Right before the launch of FTA talks with the U.K., **India and South Korea also decided to expedite the upgradation of the existing FTA**, formally called the **Comprehensive Economic Partnership Agreement**.

India-UK FTA

Where do India and the UK currently stand in terms of Economic Ties?

- There are nearly **600 U.K. companies in India** employing **more than 3,20,000 people**.
 - Products manufactured in India, by companies like JCB and Hindustan Unilever, are **exported to over 110 countries across the globe** supporting the vision for an **Atmanirbhar Bharat**.
- Also, **India is already a big investor into the U.K.**, especially in dynamic sectors such as **fintech, electric vehicles and batteries**.

- In 2020-21, **India was the U.K.'s second largest source of investment** in terms of number of projects.
- However, given the size of the two economies — the fifth and sixth largest in the world — **India-UK trade relationship in particular has underperformed**. An FTA will change that.

What Significance does this FTA hold for the UK?

- The UK has made a trade pact with **India, one of its post-Brexit priorities** as it seeks a greater role in the **Indo-Pacific**.
 - **India is at the heart of the U.K.'s Indo-Pacific 'tilt'**, which has generated considerable interest around the world.
- While the U.K. will also be launching trade negotiations with Canada, Mexico and the Gulf to underscore its 'Global Britain' credentials, a **trade deal with India along with its membership in the CPTPP** remains critical in anchoring the U.K. economically to the Indo-Pacific.
- The U.K. recognises the importance of a free and open Indo-Pacific to global stability and prosperity, and has made clear its intentions to deploy strategic assets to this end.
 - Partnerships like **AUKUS** and FTAs with countries like India **gives London a greater voice in the Indo-Pacific region**.

How Significant is this FTA for India?

- Trade deals with the UK could **boost exports for large job-creating sectors** such as **textiles**, leather goods, and footwear.
 - India is also expected to register a quantum jump in the **export of Marine Products** through the recognition of 56 marine units of India.
- There is also great potential for **increasing exports in service sectors like IT/ITES, Nursing, education, healthcare**, including **AYUSH** and audio-visual services.
- The UK is a permanent member of the UN Security Council, and one of the strategic partners of India.
 - Strengthening bonds with the trade would seek **UKs support at global issues** like **standoff with China** in the Ladakh sector of the **Line of Actual Control (LAC)** and **claim for permanent seat at UNSC**.

What can be the Underlying Challenges?

- **Delays in Signing FTAs:** Interim **agreements, which reduce tariffs on some products**, can however in some cases lead to significant delays in achieving comprehensive FTAs.
 - India, in 2004, signed an interim trade agreement

with Thailand to reduce tariffs on 84 goods, but the agreement was **never converted to a full-fledged FTA**.

- **Possible Challenges WTO may Pose:** Interim FTA do not graduate into full FTAs can also face challenges from other countries at the **World Trade Organization (WTO)**.
 - The WTO rules **only permit members to give preferential terms** to other countries if they have bilateral agreements that **cover "substantially all the trade" between them**.

What is the Way Forward?

- **Towards Stronger Indo-UK Ties:** Through its Indo-Pacific tilt, the U.K. is finally carving out a direction and purpose to its post-Brexit foreign policy. And it is this prioritisation that has opened up a new window for New Delhi and London to quickly finalise their FTA.
 - India is showing a newfound flexibility in engaging with its partners on trade. Moreover, **strategic partnerships without strong economic content would have no meaning in the Indo-Pacific**, where **China's economic clout is growing by the day**.
 - It is a unique "now or never" moment and the two sides seem willing to seize it despite the challenges.
- **Opportunities for India:** India has an extraordinary opportunity to transform its economy and society in the next 30 years.
 - Freer trade with the U.K. will help through **greater access to a highly open and competitive market**, offering valuable opportunities for India's booming companies — for example giving **Bengaluru's start-ups direct access to London's capital markets**.
 - Lower barriers coupled with greater regulatory certainty would **incentivise new small and medium-sized enterprises** to export their goods and services.

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Power Sector DISCOMs and RDSS

This editorial is based on "Plugging Power Reforms" which was published in Indian Express on 07/02/2022. It talks about the challenges of the power sector DISCOMs and the Revamped Distribution Sector Reform Scheme (RDSS).

Tags: Governance, GS Paper 2, Government Policies & Interventions, Issues Related to Development, GS Paper 3, Growth & Development

Distribution serves the most vital function in India's power supply chain, yet it is also possibly the weakest link. The **Power sector DISCOMs** in India continue to suffer from issues like AT&C Losses, lack of adequate investments and metering issues.

The **Revamped Distribution Sector Reform Scheme (RDSS)** was launched to specifically overcome the operational deficiencies and financial constraints of the discoms, but the scheme itself suffers from implementation issues.

To leverage various opportunities offered by the RDSS, the states must emphasize the **need for flexibility in prioritizing investments in their action plans**. This effort also needs to be accompanied by fulfilled commitments towards accelerated but deliberate implementation.

Power Sector Discoms

What are the Challenges

Faced by the Power Sector DISCOMs?

- The discoms suffer **Aggregate Technical and Commercial (AT&C) Losses**.
 - **Technical Loss:** It is due to the **flow of power in transmission** and distribution systems.
 - **Commercial Loss:** It is due to the **theft of electricity, deficiencies in metering**, etc.
- In the past decade, more than Rs 50,000 crore has been invested in rural networks, however, **actual investments have been much less than planned**.
- Moreover, the **transformer and substation capacities** in these areas were **designed to meet this minimal demand of 250 or 500 watts** assuming the consumption of only lights, fan and TV and not of appliances like refrigerators and mixers.
- About **25% of electricity sales is too highly subsidized**, agricultural consumers also receive erratic, poor quality supply.
- Despite efforts, **unmetered consumers and non-functional meters** at the consumer and feeder level persist.
 - Without functioning meters, accurate energy accounting and **loss monitoring is a challenge**.

What Initiatives have been launched for Power Sector DISCOMs?

- The **Revamped Distribution Sector Reform Scheme (RDSS)**, launched in July 2021, is the latest central government grant-based programme towards electricity distribution network investments.
- Earlier, schemes like **Accelerated Power Development Programme** (an urban loss reduction scheme), **PM SAUBHAGYA** (rural connections and network expansion

focussed scheme), **Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY)** and **Ujwal Discom Assurance Yojana (UDAY)** have played a significant role in increasing access and improving performance of power sector DISCOMs of India.

Revamped Distribution Sector Reform Scheme (RDSS)

What is the RDSS?

- It aims to improve the **operational efficiencies and financial sustainability** of discoms (excluding Private Sector DISCOMs).
 - It will provide **conditional financial assistance** to strengthen the supply infrastructure of discoms.
- Half of the outlay is for better feeder and transformer metering and pre-paid **smart consumer metering**. The remaining half, **60% of which will be funded by central government grants**, will be spent on power loss reduction and strengthening networks.
- It is an umbrella programme merging all the existing power sector reforms schemes - **Integrated Power Development Scheme, DDU Gram Jyoti Yojana**, and **Pradhan Mantri Sahaj Bijli Har Ghar Yojana** will be merged into this umbrella program.
- **Rural Electrification Corporation** and **Power Finance Corporation** are the nodal agencies for the implementation of this programme.

What are the Issues Associated with RDSS?

- RDSS has inherited several design issues from its predecessors including **complex processes and conditions for fund disbursal**.
 - Only 60% of the total Rs 2.5 lakh crore grants allocated in past schemes were disbursed.
- **Lack of public review and regulatory oversight** in states is another issue. The **prescriptive approach** of the scheme design impedes effective implementation.
 - The scheme emphasizes loss reduction investments over system strengthening.
 - However, high losses are typically connected to sustained poor quality service which, in turn, is affected by inadequate investment in system strengthening.
- RDSS stipulates **universal pre-paid metering** but **post-paid options may be more suitable** in many contexts.

What is the Way Forward?

- **Strengthening Rural Networks:** It is important to strengthen rural networks to meet the growing demand. **Increased supply hours, appliance usage** and the needs of rural enterprises will need **more network investment**.

- Without this, the risk of power outages is high. The RDSS system's strengthening plans can focus on this challenge.
- **Fulfilling the Requirements of Agricultural Consumers:** Under the **PM-KUSUM scheme**, **day-time, low-cost supply can be provided** to a large number of farmers by **installing megawatt scale solar plants**, which supply eight hours of quality power directly to dedicated agricultural feeders.
 - This would address farmers' demand for reliable supply and **almost halve the discom's cost and subsidy requirements**.
 - RDSS prioritizes investments and grants towards dedicated agricultural feeders to accelerate feeder solarisation. This **grant support can provide reliable supply** and reduce subsidy requirements.
- **Automatic Metering of Distribution Feeders:** Often, discoms under-estimate losses by over-estimating unmetered consumption in a bid to demonstrate loss reduction.
 - For greater veracity, all feeders must be equipped with **meters capable of communicating readings without manual intervention**. States should leverage **RDSS's emphasis on automatic meter** reading for this.
- **Role of States:** States shall identify implementation issues and adopt suitable strategies for metering and evolve frameworks for assessing benefits vis-a-vis the costs.
 - In their action plans, states should **emphasize the need for flexibility** and allow the discoms to make an **informed choice between prepaid and postpaid** metering.
 - Also, the state regulator must stipulate a framework to evaluate cost reduction and performance improvement due to smart meters and **protect consumers from undue tariff impacts** due to such investments.
 - Central government agencies should also be **flexible in the monitoring, tracking and fund disbursement** mechanisms.

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Uniform Prescription in Educational Institution

This editorial is based on "In India, the dangers of a homogenous public culture" which was published in The Hindustan Times on 08/02/2022. It talks about the recent

order of Karnataka government to mandatorily wear the uniform prescribed by the college and the controversy related to it.

Tags: Indian Polity, GS Paper - 1, GS Paper - 2, Fundamental Rights, Judiciary, Government Policies & Interventions, Women's Issues

Recently, the government of Karnataka passed an order stating that students of pre-university colleges will have to mandatorily wear the uniform prescribed by the college administrative board. In the absence of any prescription, **"clothes which disturb equality, integrity and public law and order" couldn't be worn**. The order came in response to a set of incidents in various colleges, where women students wearing the hijab were forbidden from entering the campus.

What is the Debate Around Prescription of a Uniform?

➤ Arguments For:

- Supporters of the administration's actions have argued that college spaces ought to be free of any public displays of religion.
- Still others have argued that wearing the hijab is not an exercise of genuine free choice, but an imposition of patriarchal structures — which cannot be defended in the vocabulary of freedom.

➤ Arguments Against:

- Some argue that the wearing of the hijab is an essential element of Islam, and its prohibition violates the students' constitutionally **guaranteed freedom of religion**.
- Some have argued that in a country where a chief minister can carry a religious title, it is hypocritical to deny Muslim women the right to wear a hijab in public spaces.

What are the Issues Associated With the Government Order?

➤ Religious Freedom Protected under the Constitution:

- Article 25(1) of the Constitution guarantees the **"freedom of conscience and the right freely to profess, practise and propagate religion"**.
- It is a right that guarantees a negative liberty — which means that the state shall ensure that there is no interference or obstacle to exercise this freedom.
 - However, like all **fundamental rights**, the state can restrict the right for grounds of public order, decency, morality, health and other state interests.

- Hijab ban may create more **problems for girls in getting education**. Their families may ask them to not attend schools and this may go against the right to education of all.
- Muslim women are not wearing hijabs to disrupt colleges or force any other group of students to adopt or give up any dress or practice. They are wearing hijabs with uniforms the same way Sikh men wear turbans, or Hindus wear bindis/tilak/vibhuti with uniforms.
- **Court Judgements in related cases:**
 - In 2015, at least two petitions were filed before the Kerala High Court challenging the prescription of dress code for All India Pre-Medical Entrance which prescribed wearing “light clothes with half sleeves not having big buttons, brooch/badge, flower, etc. with Salwar/Trouser” and “slippers and not shoes”.
 - Admitting the argument of the Central Board of School Education (CBSE) that the rule was only to ensure that candidates would not use unfair methods by concealing objects within clothes, the **Kerala HC directed the CBSE to put in place additional measures for checking students** who “intend to wear a dress according to their religious custom, but contrary to the dress code”.
 - In **Amna Bint Basheer v Central Board of Secondary Education (2016)**, the Kerala HC examined the issue more closely.
 - The Court held that the practice of wearing a hijab constitutes an **essential religious practice** but did not quash the CBSE rule.
 - The court once again allowed for the “additional measures” and safeguards put in place in 2015.
 - However, on the issue of a uniform prescribed by a school, another Bench ruled differently in **Fathima Tasneem v State of Kerala (2018)**.
 - A single Bench of the Kerala HC held that **collective rights of an institution would be given primacy over individual rights** of the petitioner.

What is the Way Forward?

- Religious sentiments should not prevail while taking decisions on such matters but it should be based on the combination of rationality and modern views.
- Educational institutions should avoid the violation of the rights of individual students in the name of their right to administer a school or college.
- Our daily lives require us to live together with people who look different from us, wear different clothing, and eat different food, why should those differences be shut out from educational spaces in particular.

- Our Constitution guarantees to everyone an inviolate “**zone of freedom**” in personal matters, as long as the effect of this freedom does not cause harm, or discrimination, at a broader social level. In the case of the hijab, there is no such harm or discrimination.
- However, an **Essential Religious Practices Test** is required for Hijab as it was done for keeping a beard. The Supreme court in 2006, held that keeping a beard was not an essential part of Islamic practices.

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Launching Digital Rupee - Challenges and Opportunities

This editorial is based on “RBI Shouldn’t Rush the Launch of India’s Official Digital Rupee” which was published in Livemint on 09/02/2022. It talks about the significance of digital rupee and the associated challenges of its hasty launch.

Tags: Indian Economy, GS Paper 2, Government Policies & Interventions, GS Paper 3, Growth & Development, IT & Computers

Recently, in its **Budget 2022-23**, the Government of India announced that its central bank will issue a **digital currency** as early as 2022-23. It is one crucial decision that most major economies are refusing to make in a hurry.

The arguments in favor of digital rupee claim that an **electronic representation of India’s legal tender will boost its digital economy**. However, it is also important to evaluate the **risks associated with a hasty transition** to a **Central Bank Digital Currency (CBDC)**.

India’s Own Digital Currency

What is Digital Rupee?

- The **Reserve Bank of India (RBI)** will issue the digital currency in the next fiscal which will be called **Digital Rupee**.
 - A central bank digital currency (CBDC) uses an electronic record or **digital token to represent the virtual form of a fiat currency** of a particular nation (or region).
- The digital rupee will allow users to **transfer purchasing power from deposit accounts into smartphone wallets** in the form of online tokens, which like cash will be a **liability of the Reserve Bank of India**.
 - A digital rupee will be like banknotes, minus ATMs.

What are the Arguments in Favor of the Digital Currency?

- CBDC aims to **bring in the best of both worlds** - the **convenience and security of digital forms** like cryptocurrencies, and the **regulated, reserved-backed money** circulation of the traditional banking system.
- The digital currency will **mitigate the risk of losses that Indian depositors face** when dealing with commercial banks.
- Consumers may find an **e-rupee to be a safer alternative to bank deposits**, which underpin ₹76 trillion in annual real-time payments via apps like PhonePe, Google Pay and Paytm.
- As purchases go online, the basis of trust in demand deposits, that they convert to cash at face value, may get reduced to a theoretical construct.
 - An **e-currency could keep the notion of convertibility grounded** in daily reality.
- It could **eliminate the need for an expensive network** of correspondent banks to settle cross-border payments.
 - For Indians working abroad, **sending money home will become simpler and cheaper** resulting in huge savings for **India, the world's top recipient of remittances**.

What are the Arguments

Against the Digital Currency?

- If e-cash becomes popular and RBI places no limit on the amount that can be stored in mobile wallets, **weaker banks may struggle to retain low-cost deposits**.
- Even as these small banks lose that cushion, **lenders may be reluctant to shed their loan assets** and sacrifice profits.
 - Their **less-liquid balance sheets** could leave them vulnerable to bank runs.
- All economies are mindful of the threat to financial stability and the advanced nations also worry about the **dwindling use of banknotes, especially after Covid**.
- Unlike perfectly anonymous cash, most CBDCs will be designed in such a way that the **central banks will be able to trace the spending**.
 - However, transactions conducted with them may not be visible to payment apps, and fintech firms may lose access to some data being mined for cheap loans to those who don't have collateral.

Where do the Other

Countries Stand about Digital Currency?

- Some countries have already introduced CBDCs in some form or the other. In 2020, the central bank of **Bahamas issued a digital currency**.
 - More and more central banks across the world are beginning to explore the viability, usefulness and value of digital currencies.

- The only large economy where a **CBDC is being experimented on a national scale is China**, which had the compulsion to go for a CBDC in view of absence of competition to two large players in digital payments.
- Banknotes in **Sweden** account for 1% of the money supply. Yet, the Riksbank (Swedish Central Bank) is in **no hurry to embrace a CBDC**.
 - After five years of weighing options, the Swedish monetary authority is still to take a final decision on whether to issue an e-krona.
- The **US Fed is seeking the public's views** on whether to provide an official tender to compete against private stablecoins riding on the dollar as the world's most popular unit of account.
- A **digital euro is in a 24-month investigation**. If all goes well, the European Central Bank may offer it by 2025.
 - **Japan may delay the introduction** of its digital currency **by 2026**.

Why the Rush for Digital Rupee?

- India's rushed deadline seems to be **at least partly a response to cryptocurrencies**, though it's hard to see how an e-rupee can discourage the public from the **'get-rich-quick'** lure of the former.
- Another reason for hurry may be **a desire to head off China** which is also **set to launch its e-CNY (Chinese Yuan Renminbi)**.
 - China intends to promote a rival to the dollar in cross-border trade and finance.

What is the Way Forward?

- **A Well-Evaluated Implementation:** With depleting usage of paper currency, there is a need to popularize electronic platforms of currency. This becomes **more efficient in high physical cash usage economies like India**.
 - However, a properly planned and well-evaluated implementation of such a crucial decision is important as **hasty implementation may result in more losses than gains**.
- **Strict KYC Norms:** A digital rupee may well be a boon. For one thing, it may not be a bad idea for the monetary authority to use technology to put bank managements on notice that they need to stop taking depositors for granted.
 - There is a need to **enforce strict compliance of Know Your Customer (KYC) norms** to prevent the currency's use for **terror financing or money laundering**.
- **Role for RBI:** RBI must do its homework. The blockchain technology or whatever will be used to run the digital currency, will need to **balance the often-conflicting**

goals of speed, scalability, auditability, security and privacy.

- Given India's still-vast digital divide, a **protocol for offline use** has to be worked out. Rushing the implementation of what should **ideally be a multi-year project** may be fraught with unnecessary risks.



Digital University

This editorial is based on "How A Digital University Can Transform India's Education System" which was published in Hindustan Times on 10/02/2022. It talks about the arguments in favour and against the establishment of a digital university.

Tags: Governance, GS Paper 2, Government Policies & Interventions, Education, Issues Relating to Development, GS Paper 3, Growth & Development, Inclusive Growth

The **Covid-19 pandemic** has greatly affected the education sector. But even before the pandemic, the lack of an adequate number of universities led to limited options for aspiring students. This created a need to reform the way in which we impart higher education.

The surge of digital technologies provided a whole new view to imagine teaching-learning methods, university governance systems, higher education goals, and how future universities are perceived by employers.

The **Budget 2022-23** announced the **establishment of a digital university**. This is a decision of great significance as a digital university will provide better access to high-quality higher education in multiple languages and also aligns with the vision laid out in the **National Education Policy, 2020**.

The Prospect of Digital University in India

What has been Proposed regarding Digital Universities?

- The central government will set up a **digital university to impart "world-class quality education"** and promote online learning in different Indian languages.
- To address **"learning loss"** due to school closures, the government will also expand the **'One Class One TV Channel' initiative** under the **PM e-Vidya scheme**.
- The proposed digital university and the expanded TV education programme will lead to a modern, pioneering and practical blueprint for steering India in the **Amrit Kaal**.

What are the Arguments in Favour?

- **Inefficiency of the Current Model of Learning:** There

is an increasing recognition that **the current university model is rigid** and that traditional universities have **failed to customise education** to take care of needs, interests, financial capabilities, and diverse cognitive abilities of students.

- Thus, the educators and policymakers feel the need to create flexible educational systems to provide customised high-quality "anytime/anywhere" education.

- **Economic Advantage:** Such pre-packaged education by academics would help in achieving the economies of scale required in India.
- **Being Updated with Technology:** With emerging technologies driving information economies, it also becomes **necessary for those employed to acquire new skills relevant to their changing roles**. The current model is of little help in this context.
- **Contributing in Scientific Advancements:** Since the digital university will be built on a networked hub-spoke model, it can **develop cutting-edge information and communications technology** platforms and digital content, using emerging technologies such as **AI, machine learning, virtual reality, augmented reality, and blockchain**.

What are the Arguments Against Digital Universities?

- Online learning via digital universities raises questions about **how far will online education help support greater access to and success in higher education** among those who are on the margins.
- Online teaching should **not be confused with meaningful education**. It may provide some engagement when schools are closed, but is **pedagogically inferior to in-person learning** within the learning community of the classroom and the school.
- The **first-generation aspirants** have no cultural capital to bank on while struggling their way through college.
 - These students are also from the other side of the digital divide which makes them **vulnerable to a double disadvantage** if digital modes become the mainstay of education.
- Digital learning is further associated with a plethora of socio-economic problems ranging from **intermittent Internet connectivity** and **frequent power cuts** to financial constraints in **procuring a high-speed Internet connection** and **limited access to digital literacy** and devices among college goers in the country.

What is the Way Forward?

- **Online and Offline Learning to Complement Each Other:** If universities have to remain relevant for

students, they need to recalibrate their functioning to **resonate with the priorities of their non-working and working students**.

- While digital forms of learning have the potential to enable students to pursue independent learning, **conventional and digital forms of education should not be considered mutually exclusive**.
- Online learning needs to be understood as **one strand in a complex tapestry of curricular communication** that may still assign an important central role to direct human engagement and social learning.
- **Opportunities Presented by Digital Universities:** The digital university can **integrate all the components of the learning value chain**, from the admission process to providing learning material in the digital format, online interactions, continuous evaluations, and awarding of degrees.
- **Digital Hub for Education:** The digital university can integrate the existing capabilities such as **SWAYAM, SWAYAM-Prabha, ePG-Pathshala, eGyanKosh, National Digital Library**, and **Virtual Labs into one organic entity**.
 - This hub can then **collaborate with the best public higher educational institutes**, such as the IITs, IIMs and central universities to provide an affordable world-class teaching-learning ecosystem.
- **Supporting the First-Generation Aspirants:** The first generation aspirants need to be provided **consistent hand-holding and backstopping from teachers and peers**, otherwise they will tend to remain on the margins and eventually drop out or fail.
 - It is therefore necessary to think deeply and introduce effective measures by which digital education, even if it becomes a mainstay, **does more benefit to these students rather than isolating them** from rest of the tech-savvy generation students.



State of Prisons in India

This editorial is based on “Decongesting Jails: Data Reveals A Grim Picture” which was published in Hindustan Times on 11/02/2022. It talks about the data presented by the Prisons Statistics of India (PSI) 2020 and the problem of overcrowding in prisons.

Tags: Social Justice, GS Paper 2, Social Empowerment, Issues Arising Out of Design & Implementation of Policies, Judiciary

The clamour for decongesting prisons has been raging for a while now. The need became even more acute with the coronavirus pandemic.

The **Prisons Statistics of India (PSI) 2020**, released recently, provides a disappointing picture of the prisons in India suffering from overcrowding, delays in trials and unavailability of proper medical health facilities to the prison inmates.

As we stare at potential waves of Covid-19, there is a dire need for the justice system to look into the **risks it is subjecting prison populations to**, and urgently formulate the remedies. It is important to **decongest jails** and adopt **measures that protect the right to life and health of the prisoners**.

Prison Statistics of India (PSI) 2020

What does the PSI 2020 Present?

- The recently released Prisons Statistics of India (PSI) 2020 gives a glimpse of how successful the prison decongestion and medical safeguards have been.
 - The Prison Statistics India 2016, published by the **National Crime Records Bureau (NCRB)**.
 - The 2020 report does not contain any Covid-19 specific data.
- Between December 2019 and December 2020, prison occupancy **reduced marginally from 120% to 118%**.
 - The pandemic year (2020) **witnessed nearly 900,000 more arrests** than in 2019.
 - In absolute numbers, in December 2020, there were 7,124 more people in jail than in December 2019.
- The **increase in the share of under-trials** in prisons was at an all-time high. PSI 2020 puts the percentage at 76% in December 2020: An increase from the earlier 69% in December 2019.
 - The people who are **undertrials are those yet to be found guilty of the crimes** they have been accused of.

What is the State-wise Scenario of PSI 2020?

- In 17 states, on an average, prison populations rose by 23% from 2019 to 2021, as opposed to 2-4% in previous years.
- The appalling figures come from states such as **Uttar Pradesh, Sikkim, and Uttarakhand**, which had **tragic occupancy rates** of 177%, 174%, and 169%, respectively (December 2020).
- Only **Kerala** (110% to 83%), **Punjab** (103% to 78%), **Haryana** (106% to 95%) **Karnataka** (101% to 98%), **Arunachal Pradesh** (106% to 76%) and **Mizoram** (106% to 65%) could **reduce their occupancy of prisons below 100%**.

To What Extent is the Video-Conferencing Facility Available for Trials and How Far is it Relevant?

- Video-conferencing (VC) promised some relief from court closures. Currently, 69% of prisons have VC facilities, as opposed to 60% in 2019.
 - However, the facility is **not evenly distributed across the country**.
- Tamil Nadu, Manipur, West Bengal, Nagaland, A&N Islands, Rajasthan and Lakshadweep still have **VC facilities in less than 50% of their jails**.
- Tamil Nadu, which has more than 14,000 prisoners, has VC facilities in **only 14 of its 142 jails**.
- **Uttarakhand, which has VC facilities in all its jails**, continues to increase under-trial numbers and has an **occupancy rate of 169%**.
- It is important to keep in mind that the VC facilities only accomplish the necessity of law that a prisoner must be produced before a magistrate every two weeks. **Fulfilling this technicality does nothing for decongestion or effectuating speedy justice.**

Where does the Availability of Medical Staff in Prisons Stand?

- There remains a **huge shortage of medical staff** (resident medical officers/medical officers, pharmacists, and lab technicians/attendants), **leading to delays in attending to the needs of inmates**.
- **Goa has the highest vacancy (84.6%) of medical staff**, followed by Karnataka (67.1%), Ladakh (66.7%), Jharkhand (59.2%), Uttarakhand (57.6%) and Haryana (50.5%).
 - While Goa has only two medical staff for over 500 inmates, Karnataka has 26 for 14,308 prisoners.
 - With a vacancy of 90%, Uttarakhand has only one medical officer for 5,969 inmates. Jharkhand's vacancy levels are at 77.1%.
- In 15 states, the number of available medical staff was reduced in 2019-20; whereas the inmate population increased by nearly 10,000.
- Shortages in **medical officer vacancies average around 34% nationally**. Mizoram is reported to have no medical officer.
- **Only Arunachal Pradesh and Meghalaya meet the benchmark of at least one medical officer for every 300 prisoners.**

What can be the Way Forward?

- **Addressing Structural Deficiencies:** As much as the Supreme Court's directions and the efforts of the prison administration are appreciated, it is also important to address the structural deficiencies in prison otherwise the prisons will continue to remain the places where the innocent spend an unwarranted

amount of time and face unfair and unacceptable health and safety risks.

- **Making Prisons Correctional Institutions:** The ideal policy prescription of **making prisons into places of rehabilitation** and "correctional institutions" will only be achieved when the issues of **unrealistically low budgetary allocation, high workloads** and the **unmindfulness of the police regarding procedural safeguards** are addressed.
- **Recommendation for Prison Reforms:** The Supreme Court appointed **Justice Amitava Roy (retd.) Committee** which gave the following recommendations to address the **overcrowding of prisons**:
 - **Speedy trial** remains one of the best ways to remedy the unwarranted phenomenon of overcrowding.
 - There should be **at least one lawyer for every 30 prisoners**, which is not the case at present.
 - **Special fast-track courts** should be set up to deal exclusively with petty offences which have been pending for more than five years.
 - An **adjournment should not be granted in cases where witnesses are present**.
 - The **concept of plea bargaining**, in which the accused admits guilt for a lesser sentence, should be promoted.

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Space Strategy for India

This editorial is based on "India Needs A Comprehensive Space Strategy" which was published in Hindustan Times on 12/02/2022. It talks about the steps that India shall take to become one of the major powers in the space sector.

Tags: Governance, GS Paper 2, Government Policies & Interventions, GS Paper 3, Scientific Innovations & Discoveries, Growth & Development, Space Technology

India's ability to secure its use of outer space has played a major role in its growth and prosperity in the present era.

With the advent of the second space age, private NewSpace companies such as SpaceX are beginning to take the charge. However, as outlined in the **Outer Space Treaty (OST)**, the existing international laws hold nation-states responsible for the actions and consequences of their private space companies, citizens, and functionaries.

It is **prudent for countries and alliances of nations to formulate strategic publications** detailing the broad direction of their space programmes. Such an initiative will **bolster inter-organisation coordination** and help build investor confidence.

Space Strategy and The World

Why is Space a Part of the Wider Strategic Context?

- Space has **overarching applications and dependencies** across almost all aspects of **civilian life and military operations**.
 - Space is emerging as a **potential fourth arm of India's defence setup**.
- With the US, Russia and China already in pursuit of becoming a Space power, India will need to equip itself appropriately to **meet emerging security challenges**.
- There is **increasing competition in the space sector**. New Zealand is positioning itself as a location for private rocket launches.
 - Singapore is offering itself as a hub for space entrepreneurship based on its legal environment, availability of skilled manpower and equatorial location.

What about India's Space Strategy?

- In 2020, the **Indian Space Research Organisation (ISRO)** released the draft of a new **Spacecom Policy 2020** which was approved by the union government allowing private players' participation.
- India has recently set up its **Defence Space Agency (DSA)** supported by the **Defence Space Research Organisation (DSRO)** that has the mandate to create weapons to **"degrade, disrupt, destroy or deceive an adversary's space capability"**.
- DSA is looking to acquire technologies that can evaluate threats and **maximise the effectiveness of Indian operations in space**, land, sea and air domains.

Where do Different Countries

Stand in Terms of a Space Strategy?

- The **United Kingdom (UK)**, **China** and **North Atlantic Treaty Organization (NATO)** countries have **published the latest iterations** of their strategic publications focused on the use of space.
- **India has not yet published a comprehensive space strategy**. It may be wise for New Delhi to bring out its own strategic documents, outlining achievements, prospects and its broad approach to space.

How Influential is China in Space?

- India's progress in space exploration has gained a lot of momentum in the last few years, but it is **still behind China in ambition and execution**.
- China is the strategic adversary of India, and its **space programme's budget is almost six times higher** compared to India's.

- India's budgetary allocations for space, execution of its projects and the dedication towards research & development are **not sufficient to compete with China in space**.

- China already has its **"Tiangong" space station's** first module in orbit and is also **planning to build a near-earth object defence system** in the next five years.
 - Its latest white paper on space highlights **Beijing's willingness for international cooperation** in monitoring and responding to near-earth objects.
 - India does not have any plans for planetary defence on the horizon.

What Steps Can Be Taken?

- **Balanced Approach for Space Projects:** India needs to **avoid hyper-fixation on selected outer space projects**. Instead, there is a need for a balanced approach to **address in-orbit, Earth-to-space, and space-to-Earth applications**.
 - The NATO strategy's reference to space being of relevance "across the spectrum of conflict" is a correct articulation of the idea.
- **Engagement in International Fora:** The international community and the **United Nations General Assembly (UNGA)** are figuring out norms for responsible behaviour in outer space.
 - New Delhi's strategy should indicate that it will not only be a participant but also a key stakeholder - it is imperative to put forward India's concerns around **ensuring unrestricted access to use of space by all nations**.
- **Greater Space Situational Awareness (SSA):** Space Situational Awareness (SSA) is the **awareness of the location and activities of any space object** and the impact it can have.
 - **Transparent SSA** should also be a priority for India's strategic publication, as it augments India's capabilities across the spectrum for defence and deterrence.
 - New Delhi should express its resolve to hold its adversaries accountable with publicly available SSA data.
- **Space Debris Mitigation:** China, after facing criticisms when debris from the wreckage of its Fengyun-1C satellite threatened the International Space Station (ISS), released a white paper on space, aimed to mitigate international concerns and project China as a responsible player.
 - India faced international criticism for its 2019 **Mission Shakti**, Direct Ascent Anti-Satellite test.
 - It can also use a prospective strategic publication

on its use of space to declare that **mitigating space debris is a newfound focus**.

- Technologies like **self-eating rockets, self-vanishing satellites and robotic arms to catch space debris** are an area of push for ISRO.
- **Establishing A Permanent Presence in Space:** ISRO has undertaken manned space flight as a key focus area, beginning with the upcoming **Gaganyaan mission**.
 - It is of strategic and scientific significance for India to **highlight the value of human space flight missions** as well as **sustained human presence in orbit and deep space exploration**.
 - Another area of relevance India should accelerate research on is **defence from near-earth objects**.
 - India should take the **initiative to cooperate with international bodies** in the short term and plan for a planetary defence program in the long term.
 - Without international cooperation, India is unlikely to catch up to China

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Tackling Agri-Emissions

This editorial is based on "For 'Climate Smart' Agriculture" which was published in Indian Express on 14/02/2022. It talks about the greenhouse gas emissions from the agriculture sector and the need for climate smart agricultural practises.

Tags: Biodiversity and Environment, GS Paper 3, Environmental Pollution & Degradation, Conservation, Buffer Stocks & Food Security

In the backdrop of the **2070 carbon neutrality target** set by India at the **Cop26 in Glasgow**, the **Union Budget for 2022-23** has listed "**climate action**" and "**energy transition**" as one of the four priorities for the **Amrit Kaal**.

However, considering that **agriculture contributes 73% of the country's methane emissions**, the Budget announcements have been rather limited. Agricultural and allied activities such as **rice cultivation**, rearing of domestic animals and biomass burning account for **22%-46% of the global methane concentration**.

Agricultural Emissions and Climate Smart Agriculture

What is the Share of Agricultural Emissions?

- As per the national GHG inventory, the **agriculture sector emits 408 MMT (million metric ton) of CO₂ equivalent**.

- **Rice cultivation is the third highest source** (17.5%) of GHG emissions in Indian agriculture after enteric fermentation (54.6%) and fertiliser use (19%).
- Paddy fields are **anthropogenic sources of atmospheric nitrous oxide (N₂O) and methane (CH₄)**, which have been reckoned as 273 and **80-83 times more powerful than CO₂** in driving temperature increase in 20 years' (as per **IPCC AR6, 2021**).
 - The amount of CH₄ emitted from paddy fields of India is **3.396 teragram** (1 teragram = 10⁹ kilograms) per year or 71.32 MMT CO₂ equivalent.

Why are the Agricultural Emissions so High?

- The damage is largely a result of the various kinds of **subsidies — on urea, canal irrigation and power for irrigation**.
- The **Minimum Support Prices (MSP)** and procurement policies concentrated on a few states and largely on two crops, rice, and wheat has led to their **overproduction**.
 - As of 1 January 2022, the **stocks of wheat and rice in the country's central pool were four times higher** than the buffer stocking requirement.
 - Despite the record distribution of rice in the **Public Distribution System (PDS)** and exports in 2020-21, the rice stocks with the **Food Corporation of India (FCI)** are seven times the buffer norms for rice.
 - This data not only reflects **inefficient use of scarce capital**, but also the **large amount of greenhouse gases (GHG) embedded in these stocks**.

What are the Underlying Issues?

- There is scientific evidence that **intermittent flooding reduces water and methane emissions but increases nitrous oxide emissions**.
 - Thus, lowering of methane emissions through controlled irrigation does not necessarily mean net low emissions.
 - Also, India **does not report N₂O emissions** in its national GHG inventories.
- The **GHG emissions in rice production do not include:**
 - Emissions due to burning rice residues
 - Application of fertilisers
 - Production of fertilisers for rice
 - Energy operations like harvesting
 - Pumps
 - Processing
 - Transportation
- Paddy fields require about 4,000 cubic metres of water per tonne of rice for irrigation. This high amount of water needed, ends up **blocking oxygen** from getting

to the soil, which creates the perfect conditions for bacteria that release methane.

What is CSA?

- **Climate-Smart Agriculture (CSA)** is an **integrated approach to managing landscapes** (cropland, livestock, forests and fisheries) that addresses the interlinked challenges of food security and accelerating climate change. CSA aims to simultaneously achieve three outcomes:
 - **Increased Productivity:** Produce **more and better food to improve nutrition security** and boost incomes, especially of 75% of the world's poor who live in rural areas and mainly rely on agriculture for their livelihoods.
 - **Enhanced Resilience:** Reduce vulnerability to drought, pests, diseases and other climate-related risks and shocks; and **improve capacity to adapt and grow in the face of longer-term stresses** like shortened seasons and erratic weather patterns.
 - **Reduced Emissions:** Pursue **lower emissions for each calorie or kilo of food produced**, avoid deforestation from agriculture and identify ways to absorb carbon out of the atmosphere.

What Can Be The Way Forward?

- **Revisiting Policies:** The **Economic Survey 2021-22** points out that the country is over-exploiting its ground water resource, particularly in the northwest and some parts of south India which is primarily due to **paddy cultivation** on 44 million hectares.
 - Although this has helped India achieve food security, it's **time now to save groundwater and the environment**.
 - This calls for **revisiting policies to subsidise power and fertilisers**, MSP and procurement and **reorient them towards minimising GHG emissions**.
- **Three-Pronged Approach for GHG Emissions:** A study by the **International Maize and Wheat Improvement Centre (CIMMYT)** pointed out that India has the potential to cut 18% of its annual greenhouse gas emissions from the agriculture and livestock sector.
 - The study estimated that 50% of this reduction could be achieved by implementing these three measures:
 - Efficient use of fertiliser
 - Adoption of zero-tillage
 - Management of water used to irrigate paddy
- **Encouraging Farmers:** Farmer groups and the private sector can be **mobilised to develop carbon markets in agriculture**, both at the national and international levels.

- Moreover, **specific water, fertiliser and soil management practises** can lead to **triple win** - reducing the **climate impacts of rice cultivation** while **increasing productivity** of this culturally important grain and **increasing farmer profits**.

- Such a move will give India a **"climate smart" agriculture in Amrit Kaal**.

- Also, if we can **protect productivity levels with a low-carbon footprint**, it will help India to access global markets too.

- **Carbon Pricing:** According to the **International Monetary Fund (IMF)**, the **world needs a carbon tax of \$ 75 per tonne** by 2030 to **reduce emissions to a level consistent with a 2°C warming target**.

- Many countries have begun to implement carbon pricing; Sweden leads the pack with a carbon price as high as \$137 per tonne of CO₂ equivalent while EU is at \$50/tonne of CO₂ equivalent.

- It is high time for India to **announce indicative carbon pricing** and create a vibrant carbon market to **incentivise green growth in Amrit Kaal**.

- **Increasing Farmer Awareness:** The right approach is to give the rice-producing-farmers the **right advice and incentives at the right time** so that they add only as much water or fertilisers as the rice plant needs.

- Rice farming shall be made **more sustainable, without having a negative impact on farmers livelihood**.

- What is needed going forward is the **flow of sufficient financial resources** to on-the-ground organisations that have the cultural competence and scientific capability to bring the right advice to farmers at the right times.

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Occupational Safety and Health

This editorial is based on "A Dipping Graph in Occupational Safety" which was published in The Hindu on 14/02/2022. It talks about the scenario of occupational safety and health in India.

Tags: Social Issues, GS Paper 1, Population and Associated Issues, GS Paper 2, Government Policies & Interventions, Human Resource, Health, Issues Relating to Development

India's record in promoting occupational and industrial safety remains weak even with years of robust economic growth. **Making work environments safer is a low priority**, although the productivity benefits of such investments have always been clear.

The consequences are frequently seen in the form of a **large number of fatalities and injuries**, but in a market that has a steady supply of labour, policymakers tend to ignore the wider impact of such losses.

Although **occupational safety and health (OSH) is an existential human and labour right**, it has not received the due attention from law-makers and even trade unions in India.

There is a need for **strong monitoring (inspections) and comprehensive databases** in all the states to frame corrective actions and policies to **ensure safe workplaces for all**.

Occupational Safety in India

What are the Provisions for Ensuring Occupational Safety?

- In India, the statistics concerning industrial accidents and eventually occupational safety are produced by the **Labour Bureau**, Ministry of Labour and Employment.
- The **Occupational Safety, Health and Working Conditions Code, 2020** spells out duties of employers and employees, and **envisages safety standards for different sectors**, focusing on the **health and working condition of workers, hours of work, leaves**, etc.
 - The code also recognises the right of contractual workers.
 - The code provides for **statutory benefits like social security and wages to fixed-term employees at par with their permanent counterparts**.
- The code also brings in gender equality and empowers the women workforce.
 - Women will be entitled to be employed in all establishments for all types of work and, with consent, can work before 6 am and beyond 7 pm subject to such conditions relating to safety, holidays and working hours.

What are the Shortcomings of the Statistics Presented by the Labour Bureau?

- The available government statistics show a **decreasing trend in occupational injuries in manufacturing and mining sectors**. However, when interpreting the statistics, the **unregistered factories and mines are not covered**.
 - During 2011-16, the number of cases of **occupational diseases** reported to the government in India was only 562. In contrast, a scientific article published in the National Medical Journal of India, 2016, indicates **prevalence of occupational diseases such as silicosis and byssinosis**.
- The Labour Bureau compiles and publishes data on

industrial injuries relating only to a few sectors, viz. factories, mines, railways, docks and ports.

- The body has **not yet expanded the scope of statistics on injuries** by adding sectors such as plantations, construction, the service sector, etc.
- Also, the data produced is **not representative of the situation in India** as several major States default in the provision of data to the Labour Bureau.
 - For example, during 2013-14, several major States such as Delhi, Gujarat, Kerala, Odisha, Punjab, Tamil Nadu, Uttar Pradesh and West Bengal **defaulted**; then the all-India statistics was reduced to that extent.
- **Under-reporting** is another serious issue which is **more likely to be in case of non-fatal injuries** than fatal ones for obvious reasons.
 - There is massive under-reporting of industrial injuries in small-scale industries.

What is the Status of Employing Factory Inspectors and Inspection Rates?

- According to the **Directorate General, Factory Advice and Labour Institutes (DGFASLI)**, in 2019, the proportion of working in sanctioned posts for factory inspectors (employment rate) for India was **70.60%**.
 - However, major States such as Maharashtra (38.93%), Gujarat (57.52%), Tamil Nadu (58.33%), and Bihar (47.62%) had poor employment rates of inspectors.
 - In 2019, there was **only one inspector for every 487 registered factories** (one inspector for every 25,415 workers), thus revealing the heavy workload of inspectors.
- The **inspection rates for all-India declined** from 36.23% during 2008-11 to 34.65% during 2012-2015 and further to **24.76% in 2018-19**.
 - While Kerala and Tamil Nadu had higher inspection rates at 63%-66%, Gujarat and Maharashtra had lower rates at 26%-30% and **Haryana the lowest at 11.09%** during 2008-2019.
 - The decline over the three sub-periods noted above for Maharashtra (31% to 12%) and Haryana (14% to 7%) was much higher (50% and over) than for others.
 - The inspection rates fell in almost all the States over the last 12 years.

What Can Be The Way Forward?

- **Abiding by the Conventions:** India has ratified **International Labour Organization (ILO)** conventions, the **Labour Inspection Convention, 1947** and **Labour Statistics Convention, 1985**; and hence, it should take

immediate and strict actions to prevent the violation of these conventions.

- It is critical that India establishes efficient **Occupational Safety and Health (OSH) data collection systems** to better understand the situation for effective interventions.
- **Revisiting Existing Policies:** The labour codes, especially the OSH Code, the inspection and the labour statistical systems need to be reviewed as the Government is in the process of framing the **Vision@2047 document for the Labour Ministry**.
- It is essential to formulate **policies that go through careful scrutiny by experienced parliamentarians**, aided by fresh **inputs from employees, employers and experts**.
- Compromising on safety can lead to extreme consequences that go beyond factories, and leave something that is etched in the nation's memory as in the case of the **Bhopal gas disaster**.
- **Public Awareness:** Public awareness for **preventing work-related accidents and diseases** and improving hazardous working environments should also be encouraged.
- India can **undertake stronger national campaigns** and awareness raising activities for workers and employers.
 - **Young people** are especially vulnerable to OSH risks and need to play an **active role in finding OSH solutions**.
- The **mass media and journalists could highlight the safety and health challenges** of workers in various economic sectors and disseminate information on how to mitigate accidents and diseases.
- **OSH Committees:** At the workplace level, the first thing to do is to **establish OSH committees and involve workers** for identifying hazards and improving OSH.
- Workers are in the frontline to notice OSH risks and implement solutions.
- It has been well established that **a safe and healthy workplace is a productive and dynamic one**, leading to sustainable businesses.

Conclusion

The world of work is undergoing profound changes. It is important for governments, employers and workers, and other stakeholders to **seize the opportunities to create a safe and healthy future workplace** for all. Their day-to-day efforts to improve safety and health at work can directly contribute to the **sound socioeconomic development of India**.



Geospatial Sector

This editorial is based on "Zooming in on The Potential of India's Geospatial Sector" which was published in The Hindu 15/02/2022. It talks about the Geospatial Sector of India.

Tags: Governance, GS Paper 2, Government Policies & Interventions, GS Paper 3, Growth & Development, Space Technology, IT & Computers

February 15, 2021 can be regarded as a watershed moment when new guidelines took effect to completely de-regulate the **geospatial sector** for Indians.

India has a robust ecosystem in geospatial, with the Survey of India (Sol), **ISRO**, remote sensing application centres (RSAC)s, and the **National Informatics Centre (NIC)** in particular, and all ministries and departments, in general, using geospatial technology.

However, the lack of awareness within the public and private sector is one of the major roadblocks to harnessing full benefits of the sector.

Geospatial Sector of India

What is Geospatial Technology?

- Geospatial technologies is a term used to **describe the range of modern tools contributing to the geographic mapping** and analysis of the Earth and human societies.
 - The term 'geospatial' refers to a collection of technologies that help to collect, analyse, store, manage, distribute, integrate, and present geographic information.
- Broadly, it consists of the following technologies:
 - **Remote Sensing**
 - **GIS (Geographic Information System)**
 - **GNSS (Global Navigation Satellite System)**
 - **Survey**
 - **3D modelling**
- It **enables better measurement, management, and maintenance of assets, monitoring of resources** and even providing predictive and prescriptive analysis for forecasting and planned interventions.

What was the

Liberalisation of the Geospatial Sector?

- The Ministry of Science and Technology, in February 2021, released **new guidelines for the Geo-Spatial Sector in India**, which deregulated the previous protocol and **liberalised the sector to a more competitive field**.
- The policy granted **open access to the geospatial data and services**, including maps, **for all Indian**

entities, with the exception of sensitive defence or security-related data.

- Indian corporations and innovators are **no longer subject to restrictions** nor do they require prior approvals before generating or updating digital geospatial data and maps within the territory of India.
- There is also **no requirement for security clearance, licence** or any other restrictions.

What is the Significance of Revised Guidelines?

- The declaration of the guidelines followed by the mention of geospatial in the **Union Budget 2022-23** have created the necessary hype about the sector.
- The growth in the net-worth of the sector has been projected to be about **₹1 lakh-crore by the year 2029** with 13% **Compound Annual Growth Rate (CAGR)**.
 - Consequently, the geospatial sector, which was considered taboo by investors, is seeing new interest.
- The liberalisation of the guidelines has brought in a **response from the private industry which is no more apprehensive** and conservative like it was in previous years.

What are the Underlying Challenges?

- Among the most prominent hurdles is the **absence of a sizable geospatial market** in India.
 - There is **no demand for geospatial services** and products on a scale linked to India's potential and size.
- This lack of demand is mainly a consequence of the **lack of awareness among potential users** in government and private sectors.
- The other hurdle has been the **lack of skilled manpower** across the entire pyramid.
- The **unavailability of foundation data**, especially at high-resolution, is also a constraint.
 - The **lack of clarity on data sharing** and collaboration prevents co-creation and asset maximisation.
- Additionally, there are still **no ready-to-use solutions** especially built to solve the problems of India.
- Though India has many who are trained in geospatial this is mostly either through a master's level programme or on-job training.
 - Unlike the West, **India lacks a strata of core professionals** who understand geospatial end-to-end.

What Can Be The Way Forward?

- **Increasing Awareness:** India needs to be aggressive to make a leapfrog; special attention is required as far as the geospatial sector is concerned.

- First and foremost is the need to **publish the entire policy document and make government and private users aware** of things.
- The data available with government departments should be unlocked, and **data sharing should be encouraged and facilitated**.
- The Government needs to **invest in developing standards** and must **mandate the adoption of standards**.

- **Availability of Data:** There is a need to establish a **geo-portal to make all public-funded data accessible** through data as a service model, with no or nominal charge.
 - Most important is to inculcate the culture of data sharing, **collaboration and co-creation**.
 - While different types of data will be produced on a project-to-project basis, there is a need to generate foundation data across India.
 - This should include the **Indian national digital elevation model (InDEM)**, data layers for cities, and data of natural resources.
- **Role of Start-Ups:** Solution developers and **start-ups should be engaged to build solution templates** for various business processes across departments.
 - **Local technology and solutions should be promoted**, and competition should be encouraged for quality output.
- **Localisation of Data:** As the new guidelines prevent high-accuracy data being stored in overseas clouds, there is a need to **develop a geospatial data cloud locally** and facilitate a solution as service.
 - The Environment Ministry can host a complete suite of **Geographic Information Systems (GIS) applications** like working plan, wildlife corridor mapping, social forestry, etc.
 - National organisations like **Sol and ISRO should be entrusted with the responsibility of regulation** and the projects related to the nation's security and scientific significance.
- **Academic Backing:** India should start a **bachelor's programme in geospatial** also in the Indian Institutes of Technology (IITs) and the National Institutes of Technology (NITs). Besides these, there should be a **dedicated geospatial university**.
 - Such programmes will **propel research and development efforts** which are crucial for the development of technologies and solutions locally.

Conclusion

The geospatial sector in the country is rightly positioned for investment. However, clarity on the issues discussed and the creation of an enabling ecosystem are

essential. By the time India celebrates the 10th anniversary of the liberalisation of this sector, it should have achieved the projected market volume and have Indian entrepreneurs stand out internationally.



Need For Federal Judiciary

This editorial is based on "A case for a more federal judiciary" which was published in The Hindu 17/02/2022. It talks about the issues of federalism and centralisation in the Judiciary.

Tags: Indian Polity, GS Paper - 2, Judiciary, Indian Constitution

Nearly 150 years ago, A.V. Dicey wrote, "The essential characteristic of federalism is the distribution of limited executive, legislative and judicial authority among bodies which are coordinated with and independent of each other". Much has been written about the federal structure in relation to the legislature and the executive.

India is a union of States. The Supreme Court of India has held that the federalist nature of our country is part and parcel of the basic structure of the Constitution. But is this the case for Judiciary, one of the important organs of the state?

What is Federalism in Judiciary?

- Federalism is a midpoint between unitarism which has a supreme centre, to which the States are subordinate, and confederalism wherein the States are supreme, and are merely coordinated by a weak centre.
- The idea which lies at the bottom of federalism is that **each of the separate States should have approximately equal political rights** and thereby be able to maintain their non-dependent characteristics within the larger union.
- An integral requirement of a federal state is that there be a **robust federal judicial system** which interprets this constitution, and therefore adjudicates upon the rights of the federal units and the central unit, and between the citizen and these units.
- The federal judicial system comprises the Supreme Court and the High Court in the sense that it is only these two courts which can adjudicate the rights.
- Dr. B.R. Ambedkar stated in the Constituent Assembly: "**The Indian Federation though a dual polity has no dual judiciary at all.** The High Courts and the Supreme Court form one single integrated judiciary having jurisdiction and providing remedies in all cases arising under the constitutional law, the civil law or the criminal law."

Whether the Supreme Court and High Courts are Equal in Status?

- The Indian Constitution envisaged the equality of power of High Court judges and Supreme Court judges, with a High Court judge not being a subordinate of a Supreme Court judge.
 - Famously, the Chief Justice of the Bombay High Court, Justice M.C. Chagla and the Chief Justice of the Madras High Court, Justice P.V. Rajamannar, when offered seats in the newly formed Supreme Court, rejected the offer, preferring to be Chief Justices of prestigious High Courts than being ordinary judges in a newly formed court.
- The Supreme Court has, on many occasions, reiterated the position that the **Supreme Court is superior to the High Court only in the appellate sense.**
 - Therefore, the theoretical position has always been that **High Court judges and Supreme Court judges are equals.**
- A delicate balance between two courts existed from Independence onwards, until the **1990s. Since then, however, it has been tilting in favour of the central court.**
 - The need for this balance was underscored during the Emergency, when the High Courts (a significant number, at least) stood out as beacons of freedom, even as the Supreme Court failed in this duty.
- In recent years, **three specific trends have greatly eroded the standing of the High Court**, leading to an imbalance in the federal structure of the judiciary.
 - First, the Supreme Court (or rather, a section of its judges, called "the Collegium") has the power to appoint judges and chief justices to the High Courts and the Supreme Court. This Collegium also has the power to transfer judges and chief justices from one High Court to another.
 - Second, successive governments have passed laws that create parallel judicial systems of courts and tribunals which provide for direct appeals to the Supreme Court, bypassing the High Courts.
 - Third, the Supreme Court has been liberal in entertaining cases pertaining to trifling matters.

What are the Issues of Centralisation of Judiciary?

- **Centralised Ruling:** This has inevitably led to the balance tipping in favour of a centralisation of the judiciary. The greater the degree of centralisation of the judiciary, the weaker the federal structure.
- **Centralised Judiciary More in Interests of Centre:** In the United States, empirical research by the legal

researcher shows that the U.S. Supreme Court is far more likely to strike down a state statute as unconstitutional than a federal statute.

- This research leads to the conclusion that judicial review by a centralised judiciary tends toward unitarism (the opposite of federalism).
- In Nigeria, a similar federal country, research has shown that the Supreme Court favours the jurisdiction of the central government over the State units, and this has manifested itself in recent litigations over mineral rights and subsoil rights, where the Supreme Court has favoured interpretations which support the rights of the centre over the States.
- **Interference of SC in High Courts:** The Supreme Court of India today, by playing the role of a collegium, effectively wields the power to appoint a person as a judge to a High Court or to transfer him or her to another High Court, or to appoint (or delay the appointment) of a sufficiently senior High Court judge as a chief justice or as a judge of the Supreme Court. The practical impact of this in the power dynamic between a High Court judge and a Supreme Court judge, leaves little to be said or imagined.
- **Interference of SC in Matters of Local Importance:** An aggressively interventionist Supreme Court leads many to approach it directly as a panacea for all ills befalling the nation. In 2018, some individuals from Delhi directly filed a petition in the Supreme Court to curtail Deepavali celebrations.
 - The Supreme Court interferes in matters which are clearly of local importance, having no constitutional ramifications. The Court itself observed recently, "Frivolous matters are making the institution dysfunctional... These matters waste important time of the court, which could have been spent on serious matters, pan-India matters."
- **High Court Becomes Redundant:** Every time the Supreme Court entertains an appeal against a High Court decision, it second guesses the High Court. This makes the high court look like a redundant body.
- **High Court can Effectively Dispose PILs:** Every time the Supreme Court entertains a Public Interest Litigation(PIL) on some matter which could just as effectively have been dealt with by the High Court, raises doubts on the effectiveness of the High Court.
- **The creation of parallel hierarchies of courts and tribunals,** whether it be the Competition Commission, or the company law tribunals, or the consumer courts. In all these cases, the High Courts are bypassed.
 - Laws have been drafted such that the High Court has no role to play and the Supreme Court directly acts as an appellate court.

What Can Be The Way Forward?

- The Supreme Court should itself recognise the importance of self-abnegation and restore the federal balance by re-empowering the High Courts. This will be in the best interest of the nation.
- The Supreme Court was created under the Constitution, and is a relatively new court. On the other hand, some of the High Courts in our country have been in existence since the 1860s (and some existed even before that, in their earlier avatars as supreme courts of the Presidencies).
 - It is advisable that their role should not be minimised even unintentionally.
- A **delicate balance is required** to be maintained between the Supreme Court and the High Courts in order for the constitutional structure dreamt of by B.R. Ambedkar to work.



Ensuring Road Safety

This editorial is based on "India has Still to Get A Good Grip on Road Safety" which was published in The Hindu on 18/02/2022. It talks about the measures taken to ensure road safety in India and the pertaining challenges.

Tags: Governance, GS Paper 2, Government Policies & Interventions, GS Paper 3, Infrastructure

Road Safety, though extremely important, has still not been able to attract due attention in India. More than 150,000 people die every year in India while 500,000 get injured.

Although India has set impressive targets to reduce fatalities from road accidents and ensure road safety, strict implementation of laws and a dedicated enforcement manpower is still a missing component in this strategy.

As essential as it is to remain optimistic while fixing targets, the past record of road accidents and available infrastructure to deal with road safety measures in India should not be lost sight of.

Road Safety in India

Where does India stand in terms of Road Safety?

- Although a number of steps have been taken in the last decade to check road accidents, statistics published by the Ministry of Road Transport and Highways (MoRTH) show that the number of **deaths in road accidents** increased from **1,42,485 in 2011 to 1,51,113 in 2019**.
 - The Ministry is yet to publish its data for the year 2020.

- The annual publication of the **National Crime Records Bureau**, titled **Accidental Deaths & Suicides in India (2020)** shows that **1,33,201 deaths were recorded in 2020** (declined as compared to 2019).
 - However, the **fatality** (number of deaths per 100 accidents) which was 26.9 in 2001, has **continued to rise from 28.63 in 2011 to 37.54 in 2020**.
 - Also, the reduction of accidents in 2020 was primarily due to the **various Covid-19 lockdowns** when only a limited number of motor vehicles were on the roads.

What are the SC Interventions in this Regard?

- The **Supreme Court of India** had set up the three-member **Justice K.S. Radhakrishnan** panel on road safety in April 2014 which recommended the ban on the sale of alcohol on highways to restrain drunk driving.
 - It also directed states to implement laws on wearing helmets.
 - The committee stressed the importance of creating awareness among people on road safety rules.
- The SC in 2017, issued a number of directives with regard to road safety that, inter alia, included:
 - The **constitution of a State Road Safety Council**
 - The setting up of **road safety fund**
 - Notification of a **road safety action plan**
 - The constitution of a **district road safety committee**
 - The establishment of **trauma care centres**
 - Inclusion of **road safety education in the academic curriculum** of schools

What Other Initiatives has India Taken?

- MoRTH participated in a conference in Sweden in 2020 — the **Third High Level Global Conference on Road Safety for Achieving Global Goals 2030** — where it was conceptualised to have zero road fatalities in India by 2030.
- India signed the **Brasilia declaration** and committed to reduction in fatalities.
 - The declaration was signed at the **Second Global High-Level conference** on Road Safety held in Brazil.
- The **Motor Vehicles (MV) (Amendment) Act, 2019** which hiked the penalties for traffic violations, defective vehicles, juvenile driving, etc.
 - It provides for a **Motor Vehicle Accident Fund**, which would provide compulsory insurance cover to all road users in India for certain types of accidents.
 - It also provides for a **National Road Safety Board**, to be created by the Central Government through a notification.

- It also provides for the protection of **good samaritans**.

What are the Challenges to Ensuring Road Safety?

- **Issues with MV (Amendment) Act, 2019:** The **MV (Amendment) Act, 2019** increased the existing fines for violating traffic rules which was criticised on the pretext that the (fine) **paying capacity of an average Indian was still limited**.
 - Also, only a few cases of traffic violations are contested by the accused in a court of law.
 - Therefore, the expected impact of the deterrent provisions of the amended law could not be realised on ground.
- **Lack of Enforcement Manpower:** The enforcement manpower available is insufficient to deal with the steadily increasing volume of traffic. The **automation of processes is still in its infancy** and limited to large cities.
- **Lack of Finances:** There are **inadequate funds for the rectification of black spots** and the undertaking of traffic calming measures.
 - Though more than 60% road accidents reportedly take place because of over-speeding, **'speed limit' sign boards are rarely seen** or found even on State highways and major roads.
- **Improving Driving Skills:** Even today, getting a driving licence is not a difficult task as there is **no standard written and rigorous practical test**.
 - Many **States do not have test driving tracks**. There are no institutes for refresher training if a driving licence of a person is suspended.
- **No Stringent Enforcement of Laws:** About two-thirds of victims of road fatalities are two-wheeler drivers and pillion riders. Though the wearing of safety headgear is mandatory, it is **not enforced strictly** in all States due to a lack of strong will.
 - Even an amended provision that relates to **'Offences by Juveniles'** is not enforced strictly.
- **Unavailability of Accurate Data:** Road safety data is a **contested area** in India. The figures of death and injury from accidents are viewed as an underestimate by scholars; the Transportation Research and Injury Prevention Programme at IIT Delhi, for instance, estimates that cumulatively, **road traffic injuries recorded by the police are underestimated by a factor of 20**, and those that **need hospitalisation by a factor of four**.

What Steps Can Be Taken?

- **Implementation of First Tier Norms:** The transition to a professional road environment requires implementation of first-tier reforms that **deal with quality of road infrastructure, facilities for vulnerable users and zero-tolerance enforcement of rules** by a trained, professional and empowered machinery.
 - A mandatory monthly public hearing of **District Road Safety Committees involving local communities** can highlight safety concerns, and their follow-up action can then be supervised by the field experts.
- **Better Data Collection:** The **accident data collection format of the MoRTH** is essential to identify the true cause of an accident and take remedial measures.
 - Similarly, the **iRAD (Integrated Road Accident Database) Project** aims to enrich the accident database and improve road safety in the country by collecting data from different stakeholders using the iRAD mobile and web application.
 - The **integration of these projects** can bring some synergy and make the data collection procedure more user-friendly.
- **Better Centre-State Coordination:** It is a high time that we realise that lives cannot be lost at the cost of poor enforcement of traffic laws.
 - It is important for the States and the Centre to be on the same page in **improving and strengthening the infrastructure of States** by enabling more funds.
 - Merely and only fixing targets is not a pragmatic approach to reduce road accident fatalities. **Putting dedicated efforts in achieving those targets** is also required.
- **Bringing Behavioural Change:** While the strict enforcement of traffic safety laws would go a long way, **educating citizens about the impact of accidents on the kin of the victims** through public discourse could help in reducing accidents.
 - It is important that road users and people, in general, are **sensitised about the norms and spirit of road safety**.
 - Regular **road safety awareness and education programmes** should be conducted in residential areas, over the weekends, with the active assistance of the RWAs/local bodies/NGOs.



India-UAE Relations

This editorial is based on “Etching A Trade Line To Bond Beyond Oil” which was published in the Hindu on 18/02/2022. It talks about the economic relations of India and UAE.

Tags: International Relations, GS Paper 2, India and its Neighbourhood, Bilateral Groupings & Agreements, GS Paper 3, Growth & Development

India's approach towards **Free Trade Agreements (FTAs)** is changing and now focusing more on **gaining meaningful market access** and facilitating **Indian industry's integration into global value chains**.

The Union Minister of Commerce and Industry has repeatedly emphasised that India would no longer be signing trade agreements just to join a group, but the new approach of FTA negotiations would **respond to the need of new emerging dynamics in international trade** and the Indian economy.

The recent **signing of the India-UAE Comprehensive Economic Partnership Agreement (CEPA)** by the Commerce Ministers of the two countries is one such example of India's response to new emerging dynamics in international trade.

India and UAE

How are India's Bilateral Relations with the UAE?

- India and the UAE **established diplomatic relations in 1972**.
- The greater push has been achieved in bilateral relations when the visit of India's Prime Minister to the UAE in August 2015 marked the **beginning of a new strategic partnership between the two countries**.
- Further, during the visit of the **Crown Prince of Abu Dhabi** to India in January 2017 as the chief guest at **India's Republic Day celebrations**, it was agreed that bilateral relations were to be **upgraded to a comprehensive strategic partnership**.
 - This gave momentum to launching negotiations for an **India-UAE comprehensive economic partnership agreement**.

What is the Economic Significance of the UAE?

- The UAE has **emerged as an important economic hub** not just within the context of the Middle East/ West Asia, but also **globally**.
 - The UAE, **due to its strategic location**, has emerged as an important economic centre in the world.
- In recent years, the UAE, through its '**Vision 2021**', has sought to diversify its economy and reduce its dependency on oil.
 - Since 2012, growth has been led, according to a **World Trade Organisation** document, **by the non-hydrocarbon sectors** reflecting the successful diversification of the economy.

- Although the UAE has diversified its economy, the hydrocarbon sector remains very important followed by services and manufacturing.
 - Within **services, financial services, wholesale and retail trade, and real estate and business services** are the main contributors.

What About India's Economic Ties with UAE?

- The **India-UAE total trade merchandise has been valued at U.S.\$52.76 billion** for the first nine months of the fiscal year 2021-22, making the **UAE India's third largest trading partner**.
 - The aim is to boost bilateral merchandise trade to above U.S.\$100 billion and services trade to U.S.\$15 billion in five years.
- A trade agreement is also an enabler for two-way investment flows. The UAE's **investment in India is estimated to be around U.S.\$11.67 billion**, which makes it the **ninth biggest investor in India**.
- Also, many Indian companies have set up manufacturing units either as joint ventures or in **Special Economic Zones** for cement, building materials, textiles, engineering products, consumer electronics, etc. in the UAE.
 - Many Indian companies have also invested in the tourism, hospitality, catering, health, retail, and education sectors.
- Under India's revamped FTA strategy, the Government has prioritised at least six countries/regions to deal with, in which the UAE figures at the top of the list for an **early harvest deal (or Interim Trade Agreement)**; the others are the **UK, the EU, Australia, Canada, Israel** and a group of countries in the **Gulf Cooperation Council (GCC)**.
 - The UAE too announced earlier its intent to pursue bilateral economic agreements with India and seven other countries (U.K., Turkey, South Korea, Ethiopia, Indonesia, Israel, and Kenya).

What Can Be The Way Forward?

- **Manifold Benefits of India-UAE Trade Agreements:** With India's newfound strength in exports, a trade agreement with an important country such as the **UAE would help sustain the growth momentum**.
 - As we are witnessing a big turnaround in manufacturing, the **UAE would be an attractive export market** for Indian **electronics, automobiles, and other engineering products**.
 - As both the UAE and India are aggressively pursuing FTAs with several important countries, not only companies from these two countries but also **MNCs from other geographies** too would **find the UAE and India an attractive market to invest in**.

What is an Interim Trade Agreement (ITA)?

- An interim or early harvest trade agreement is **used to liberalise tariffs on the trade of certain goods** between two countries or trading blocs **before a comprehensive FTA is concluded**.
- Government's emphasis on interim agreements may be tactical so that a deal may be achieved with minimum commitments and would allow for contentious issues to be resolved later.
- Recently, **India and Australia have announced plans to conclude an ITA** in March 2022.
 - India is also looking to complete an early harvest agreement with the UAE and the UK in the first half of 2022.

- **Paving Way for Better Relations with the GCC:** The UAE is a party to several regional and bilateral FTAs, including with countries in the GCC.
 - As part of the GCC, the UAE has strong economic ties with Saudi Arabia, Kuwait, Bahrain, and Oman and shares a common market and customs union with these nations.
 - Under the **Greater Arab Free Trade Area (GAFTA) Agreement**, the UAE has free trade access to Saudi Arabia, Kuwait, Bahrain, Qatar, Oman, Jordan, Egypt, Iraq, Lebanon, Morocco, Tunisia, Palestine, Syria, Libya, and Yemen.
 - This FTA with the UAE will **pave the way for India to enter the UAE's strategic location**, and have **relatively easy access to the Africa market** and its various trade partners which can **help India to become a part of that supply chain** especially in handlooms, handicrafts, textiles and pharma.
- **Compliance to UAE's NTBs:** The UAE tariff structure is bound with the GCC (applied average tariff rate is 5%), therefore, the scope of addressing **Non-Tariff Barriers (NTBs)** becomes very important.
 - The reflection of NTBs can be seen through **Non-Tariff Measures (NTMs)** mostly covered by **Sanitary and Phytosanitary (SPS)** and **Technical Barriers to Trade (TBT)**.
 - The SPS notifications are mainly related to **live poultry, meat, and processed food** and the TBT notifications are related to **fish, food additives, meat, rubber, electrical machinery**, etc.
 - These compliances pose a challenge for Indian exporters.
 - The FTA agreement must try to **bring more transparency and predictability in the use of NTBs** so that their compliance becomes less cumbersome.

Boosting EV Manufacturing

This editorial is based on "Jumpstarting Electric Vehicle Manufacturing in India" which was published in Hindustan Times on 19/02/2022. It talks about the challenges of Electric Vehicle Manufacturing in India.

Tags: Governance, GS Paper 2, Government Policies & Intervention, GS Paper 3, Growth & Development. Technology Missions, Scientific Innovations & Discoveries, Infrastructure, Indigenization of Technology

Electric Vehicles (EVs) are the latest automotive trend and all developed and developing nations are encouraging the switch to EVs from conventional Internal Combustion Engine (ICE) vehicles.

The EV technology is attracting eyeballs worldwide for the simple reason of **reducing dependency on fossil fuels** and achieving the **global goal of zero carbon emission** and sustainable development.

India's growing market for EV mobility, particularly in the **two and three-wheeler segment**, offers a significant opportunity to transition India's road transport sector towards a low carbon pathway.

The sector has **potential to create more jobs**, reduce local **air pollution** and **crude dependence**. However, these opportunities can only materialise if policymakers and stakeholders in India's EV sector **recalibrate their focus towards building local and more resilient supply chains**.

Electric Vehicles in India

What is the Current Scenario of EVs in India?

- EVs currently **account for less than 3% of all vehicles sold** in India. This is despite EV registrations crossing 50,000 units for the first time in December 2021, the highest ever monthly sale recorded.
- Although **80% of the volume of EVs** sold is occupied by **low-cost and low-speed three-wheelers**, overall EV sales have picked up pace due to the rise of next-gen two-wheeler companies.
- As per the **Accelerated e-Mobility Revolution for India's Transportation (e-AMRIT)** portal in India, only 7,96,000 EVs have been registered till December 2021, and **just 1,800 public EV charging stations have been installed**.
- While there has been a **growth of 133% in the sales of EV** from FY 2015 to FY 2020, when compared to sales of conventional ICE vehicles, the numbers seem insignificant. In FY 2021-22, only 1.32% of the total vehicles sold in the country were electric.

What Recent Measures have been taken regarding EV Manufacturing?

- **FAME and PLI Schemes:** The Government of India has been pushing for greater localisation of EV manufacturing through multiple policy measures such as the **Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles Scheme-II (FAME-II)**.
 - It has also launched several **Production Linked Incentive (PLI) schemes for manufacturers in the automobile, automotive components and Advanced Chemistry Cell (ACC)** battery sector to develop indigenous supply chains for critical EV components.
- **Consumer-Centric Incentives:** To boost sales, the government has also launched several **consumer-centric incentives, such as tax exemptions**, subsidies and interest subvention schemes, intended to trigger a mass demand for EV mobility options.
- **Battery Manufacturing in Gigafactories:** Recently, it announced the receipt of bids from 10 companies to avail **PLI Scheme to manufacture Advanced Chemistry Cell (ACC)** batteries locally.
 - These next-generation batteries will be made in 'gigafactories', which signifies end-to-end **battery manufacturing** and large-scale production.
- **Guidelines for Charging Infra:** The government has also **revised its guidelines for charging infrastructure**, which includes a revenue-sharing model for use of public land.
 - It capped off these announcements with a **promise to implement a battery swapping policy**, interoperability standards, and special mobility zones via the Union Budget.

What are the Challenges to EV Manufacturing?

- **Supply Chain Disruption:** The last two years of supply chain disruptions **due to the Covid-19 pandemic** and the **US-China trade war** have precipitated fundamental changes in global manufacturing strategies.
 - This is particularly true of high-tech industries that continue to face logistical headwinds, including **shortages of critical components like silicon chips and batteries**.
 - India's big automobile companies also had to stop production owing to shortages of chips, like those that power new multimedia features in the vehicles.
- **Expensive Materials:** The consequence of supply chain disruptions and the race to shorten supply chains, is that **critical components are becoming prohibitively expensive**.
 - In the case of EVs, Indian manufacturers are also **struggling to source lithium-ion batteries**, which are **largely imported from China, South Korea and Taiwan**.

- Prices for battery-grade lithium carbonate, a key input, went up 400% year-on-year in November 2021.
- **Import Dependence for Raw Materials:** India **does not possess critical raw materials** such as lithium, cobalt and nickel, which are used to make lithium-ion (Li-ion) battery cells.
 - Consequently, Indian manufacturers must **rely heavily on imports of battery cells** from China, Japan, Korea, and Taiwan, and assemble them into battery packs.
 - Although India has received an encouraging response from investors under the PLI scheme to manufacture ACC batteries domestically, most bidders are expected to start manufacturing only from 2025.
 - So, India's import-driven strategy, for the domestic assembly of critical battery packs, will continue for a few more years.

What Can Be The Way Forward?

- **Increase Competitiveness:** Automobile industry majors must act fast to ensure the **future competitiveness of the Indian EV ecosystem**, which relies heavily on imports.
 - Indian automobile majors would do well to shore up **supply chains and upgrade capacities** within and between different manufacturing clusters.
- **Two-Wheelers for EV Headstart:** The two-wheelers offer a good opportunity to **localise EV component manufacturing**. This segment already accounts for nearly half of all new passenger EV registrations.
 - India is already the largest two-wheeler manufacturer in the world, and the bids to set up battery gigafactories indicate a healthy appetite for new-age technologies that can help shorten supply chains.
 - It's time the bigger companies wake up and jump-start their EV ambitions.
- **Battery Manufacturing - Key Focus:** India needs to focus on building a **supply chain, primarily by manufacturing batteries domestically** and bringing down the cost of EVs in India.
 - Recently Tesla Inc. has incorporated an Indian subsidiary - Tesla India motors and Energy Private Limited with an aim to eventually set up a manufacturing unit in India wherein Tesla cars will be locally produced.
 - Similarly, India needs to **attract foreign battery manufacturers** as well as **domestic players to set up local production facilities**. Such measures would lower the cost of batteries and EVs, improving the cost competitiveness.

- **Mining Urban Waste:** Recent commitments by Indian industrial houses (Reliance Industries, Adani Group, and Tata Chemicals) to locally manufacture battery cells is reassuring.
 - However, there is an urgent need to calibrate strategies on battery development by working in a closed loop.
 - Manufacturers need to think about the life cycle of batteries and **formulate plans to mine urban waste** to ensure that **precious materials can be extracted from batteries**.
 - This strategy has the potential to **save up to 50% of materials required to produce new batteries**.

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MGNREGA and Budget 2022

This editorial is based on "Questions on MGNREGA Budget Estimation" which was published in The Hindu on 22/02/2022. It talks about the issue of low budgetary allocations for MGNREGA and associated challenges.

Tags: Social Justice, GS Paper 2, Poverty, Government Policies & Interventions, Issues Relating to Development, GS Paper 3, Employment, Growth & Development

Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGA) has made immense contributions towards livelihood security and the creation of durable assets in rural areas. It has been a valuable employment tool and safety net as seen in the **migrant crisis**.

Despite the high demands of the scheme as suggested in the **Economic Survey 2021-22**, the allocation for the MGNREGS in the **FY 2022-23 budget** has been disappointing.

Organisations such as the All India Kisan Sabha and NREGA Sangharsh Morcha (NSM) have raised concerns about the inadequacy of the amount.

MGNREGA and the Issue of Budgetary Allocations

What is MGNREGA?

- MGNREGA is one of the **largest work guarantee programmes in the world** which was launched in 2005.
- The primary objective of the scheme is to **guarantee 100 days of employment in every financial year** to adult members of **any rural household** willing to do public work-related **unskilled manual work**.
- Unlike earlier employment guarantee schemes, MGNREGA aims at **addressing the causes of chronic poverty** through a **rights-based framework**.

- At least **one-third of beneficiaries have to be women**.
- Wages must be paid according to the statutory minimum wages specified for agricultural labourers in the state under the **Minimum Wages Act, 1948**.

What is the Issue of Low

Budgetary Allocations for MGNREGA?

- The initial allocations in the past two FYs (2020-21 and 2021-22) have been just **about half of what was recommended** by groups like the **People's Action for Employment Guarantee (PAEG)** and NSM.
 - The consistent shortage of funds has caused a situation endemic to MGNREGA — that of **deficits for State governments**, long **delays in wage payments**, **decline in the work provided** in the last two quarters of the FYs, and significant **pending dues at the end of the FYs**.
- Even for FY 2022-23, this flagship rural employment programme has **received lower allocation — by about ₹25,000 crore** (25% decrease) from RE 2021-22 of ₹98,000 crore.
 - The NSM has argued that the **current allocation provides for only 16 days of employment** to all the active job card-holding households.

What are the Issues in

Calculating Projected Persondays?

- Projected persondays are the **total days of work anticipated for the year**. Projected person days and the wage rate are the two important variables on which budget calculations depend.
- In FYs 2019-20 and 2020-21, the persondays generated was about **18.4% higher in Q4 when compared to Q3**.
 - However, the projected **persondays for Q4 in FY 2021-22 was significantly lower** than that in Q3.
- The projection of Q4 for FY 2021-22 was **only about 40% of the Q4 of FY 2020-21**.
 - This is despite only a slight difference in the persondays generated (only 7% lower) in the first three quarters of FY 2021-22 as compared to FY 2020-21.
- What this data suggests is that the **government has not revised its projections for the Q4 of FY 21-22** even though it recently announced supplementary grants worth ₹25,000 crore for MGNREGA.

What is the Consequence of

Underestimated Projection of Persondays?

- Since budget allocations are based on projected persondays, **underestimated projections will lead to inadequate allocation**.

- The unusually low projections of the Q4 of FY 21-22 contributed to the supplementary allocation of only ₹25,000 crore, when activists had been demanding an additional allocation of at least ₹50,000 crore.
- The low allocation for FY 2022-23 is also likely to be an outcome of artificially low persondays projections.

What is the Problem of MGNREGA Wage Rates?

- According to the **NREGA 'At a Glance' report**, the average MGNREGA wages paid in FY 21-22 remain at a **meagre ₹209 per day**. The official MGNREGA wages also **contribute to keeping the budget low**.
- Despite a clear mandate of the MGNREGA Act that the **wage remuneration cannot be lower than the minimum wage in each State**, the former remains much below the latter.
- This has led to the **violation of the provisions of the Act**, as well as the **fundamental rights of MGNREGA workers**.

What Steps Could Be Taken?

- **Adequate Budget Allocations for MGNREGA:** MGNREGA treats **employment guarantee as a legal right**; any rural household can demand work up to 100 days every year, and the government has to provide it. As and when demand arises, the government must fulfil it.
 - Correcting for the mentioned discrepancies, the PAEG recommended a **minimal budget of ₹2.64 lakh crore for FY 2022-23**, considering only the households that were active this year.
 - Although this number is much lower than the number of households that are registered under the scheme, a beginner's effort in this direction will be appreciated.
- **Replenishing MGNREGA Funds:** Treating the budget allocation as a **'ceiling' to the work** that can be provided **erodes the core premise of the scheme**.
 - While an initial budget allocation has to be made, **MGNREGA funds must be regularly replenished by supplementary grants provided based on actual work demand in each State**.
 - The approach to estimating projections, keeping the wages illegally low, and treating the budget as an upper limit to the work that can be provided has eroded the very premise of MGNREGA.
- **Revising Minimum Wage Rates:** There have been estimates devised of what the average MGNREGA wage should be.
 - For instance, an **expert committee under the chairmanship of Dr. Anoop Satpathy** estimated a

need-based national **minimum wage of ₹375 per day as of July 2018.**

- In comparison, PAEG used a **conservative estimate of ₹269 per day** in its recently released pre-budget brief.
- Either way, there is an urgent need to increase the minimum wage rates for the scheme to fulfil its purpose.
- **Strengthening the Scheme:** There is a need for **better coordination between various government departments** and the mechanism to allot and measure the work.
 - This is one of the best welfare schemes in recent years and it has helped the rural poor. However, **government officials need to take the initiative** to implement the scheme and must not block the work.
 - The government must ensure that **work is provided notwithstanding the demand** and should **expand the scheme and focus on value addition** and multiply community asset works.

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The Link between Caste and Manual Scavenging

This editorial is based on “Indignity Made Invisible” which was published in Indian Express on 23/02/2022. It talks about manual scavenging and how caste based division has further exacerbated this social issue.

Tags: Social Issues, GS Paper 1, Population and Associated Issues, GS Paper 2, Issues Related to SCs & STs, Issues Relating to Development, Government Policies & Interventions

Since independence, India has undergone profound changes in power dynamics and political ideals that have also transformed individual lives as well as the idea of the collective. However, the modernising forces have been deeply biased. **Caste is an overbearing reality** which is not simply a tag of identity but something that has been **dictating the way of lives.**

Caste continues to reinforce inequality as a basic value and the allocation of labour is one of its prime manifestations. **Caste hierarchy reinforces occupational hierarchy** and the idea of occupational purity and pollution are further embedded in the lives of individuals.

Manual Scavenging and Caste Based Prejudice

What is Manual Scavenging?

- **Manual scavenging** is defined as “the removal of human excrement from public streets and dry latrines,

cleaning septic tanks, gutters and sewers without any safety gears and with bare hands”.

- Manual scavenging is **violative of Article 21 of the Indian Constitution** that guarantees ‘Right to live life with dignity’.
- **The Prohibition of Employment as Manual Scavengers and their Rehabilitation (Amendment) Bill, 2020** proposes to completely mechanise sewer cleaning, introduce ways for ‘on-site’ protection and provide compensation to manual scavengers in case of sewer deaths.
 - It is **still awaiting cabinet approval.**

How is Caste Division

Linked to Manual Scavenging?

- Caste leads to the division of labour as well as labourers. Dalits often **face discrimination when seeking employment** in sectors that are considered “pure”.
 - Manual scavenging or cleaning of dry latrines, for instance, is a job that the Dalit classes have been burdened with.
- They are expected to carry loads of human excrement, and clear sewage for little or no income. They are **trapped in a vicious cycle of poverty and social exclusion.**
- Although banned under the Prohibition of Employment of Manual Scavengers Act, 2013, the inhumane exercise still continues.
 - According to government data, **97% of manual scavengers are Dalits** - about 42,594 manual scavengers belong to SCs, 421 belong to STs and 431 belong to OBCs.
- The statistics are a **disturbing reminder of our collective failure to rise above caste lines** and provide dignity of labour to all.

What Efforts have been

made to end Manual Scavenging?

- The **Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013** supersede and goes beyond prohibitions on dry latrines, and outlaws all manual excrement cleaning of insanitary latrines, open drains, or pits.
- In 1989, the **Prevention of Atrocities Act** became an integrated guard for sanitation workers; more than 90% people employed as manual scavengers belonged to the Scheduled Caste.
 - This became an important landmark to free manual scavengers from designated traditional occupations.
- **Safaimitra Suraksha Challenge** was launched by the Ministry of Housing and Urban Affairs on **World Toilet**

Day for all states to make sewer-cleaning mechanised by April 2021.

- **Safai Karmachari Andolan** was also a **movement for elimination of manual scavenging**.

What is the Current Scenario Despite the Efforts?

- Caste-based prejudice has been normalised to such an extent that the plight of manual scavengers **does not get the attention that it deserves**. The governments at central and state levels have been enshrining the problem.
 - There has always been an **attempt to fudge the data**, and contradictions are found in government data itself.
- The government said that there is no report of people currently engaged in manual scavenging and no death has been reported due to the practice in five years (2013-2018).
 - However, according to the **National Convener of the Safai Karmachari Andolan**, **472 manual scavenging deaths** across the country were recorded between 2016 and 2020.
- According to some well-researched media reports, the **Indian Railways, the army, and urban municipalities** remain the **biggest bodies that still have workers engaged in manual scavenging**.
 - They either find ways to outsource such work to contractors so as not to be held directly accountable or liable or simply **misrepresent such workers as "sweepers"**.

What Can Be The Way Forward?

- **Implementation of Existing Welfare Policies:** The government's response reflects a deep sense of apathy. It needs to realise that **denial only contributes to the delay** in solving the problem. Sewer deaths are still a reality.
 - India is still a long way from the rehabilitation of manual scavengers. The government scheme provides for **one-time cash assistance of Rs 40,000, skill development training, and capital subsidy** for self-employed projects.
 - Effective implementation of these schemes is needed.
- **Stringent and Integrated Laws:** If a law creates a **statutory obligation to provide sanitation services** on the part of state agencies, it will create a situation in which the rights of these workers will not hang in the air.
 - As of now, the **provisions for punishment are both weak** and more importantly, as highlighted

by activists, there have been **next to no serious legal proceedings** against people and organisations accused of engaging workers for manual scavenging.

- There are demands by activists that the **law needs to be read along with the SC & ST (Prevention of Atrocities) Act, 1989** in order to strengthen it.
- **Behavioural Change:** To address the social sanction behind manual scavenging, it is required first to acknowledge and then understand how and why manual scavenging continues to be embedded in the caste system.
 - It is important to understand that **manual scavenging is not just a problem of technology** or financial assistance **but also of social prejudice**.
 - The state must accept the role of caste and should actively solve it. We must show impatience and a sense of urgency and should not make equality, justice and the dignity of labour wait any longer.
- **Social Awareness:** To end the problem of Manual Scavenging, it is obsessively necessary to work from the core of the problem. Lack of skills for doing another job and discrimination from the society itself are the reason they all are engaged in such kind of occupations.
 - It is a **collective responsibility** of the governments at all levels, NGOs, health officers and social communities to **create awareness among the manual scavenger community** regarding health issues, hygiene practices, and sanitization processes.
 - The **general public should also be made aware of legal implications** regarding employment of manual scavenging.

Conclusion

Work is fundamental to how we realise our destiny in this world; to provide economically for oneself and one's family is central to dignity — a lack of it leads to alienation and stunted human growth.



Roadmap for Natural Farming

This editorial is based on "Road To Natural Farming" which was published in Indian Express on 24/02/2022. It talks about the significance of natural farming.

Tags: Agriculture, GS Paper 1, Agricultural Resources, GS Paper 2, Government Policies & Interventions, GS Paper 3, E-Technology in the Aid of Farmers, Cropping Patterns

In the budget speech, the Finance Minister of India reaffirmed the Government's commitment to **natural**,

chemical-free, organic and Zero-Budget Natural Farming (ZBNF). It is the third time in the last four budget speeches where (zero budget) **natural farming** finds a mention.

Natural Farming, as the name suggests, is the art, practice and, increasingly, the **science of working with nature to achieve much more with less.**

This practice, however, has been associated with decline in yields and not much improvement in farmers' incomes. To overcome such challenges, **providing incentives to farmers** for transitioning to chemical-free farming and providing them the **assistance of peer farmers and institutions who are already engaged** in natural farming, would be ideal.

Natural or Chemical-Free Farming

What is Natural Farming and Its Significance?

- This farming approach was **introduced by Masanobu Fukuoka**, a Japanese farmer and philosopher, in his 1975 book **The One-Straw Revolution**.
- It is a diversified farming system that **integrates crops, trees and livestock**, allowing the optimum use of functional biodiversity.
 - Internationally, Natural Farming is considered a form of regenerative agriculture—a **prominent strategy to save the planet**.
- It holds the **promise of enhancing farmers' income** while delivering many other benefits, such as restoration of soil fertility and environmental health, and mitigating and/or reducing greenhouse gas emissions.
- It has the **potential to manage land practices** and **sequester carbon** from the atmosphere in soils and plants, where it is actually useful.

What Initiatives have been Launched in this Regard?

- In India, Natural farming is promoted as **Bhartiya Prakritik Krishi Paddhati Programme (BPKP)** under **Paramparagat Krishi Vikas Yojana (PKVY)**.
 - BPKP is aimed at **promoting traditional indigenous practices** which reduce externally purchased inputs.
- **Sub-mission on AgroForestry (SMAF)** aims to encourage farmers to **plant multi-purpose trees together with the agriculture crops** for climate resilience and an additional source of income to the farmers, as well as enhanced feedstock to inter alia wood-based and herbal industry.
- **National Mission on Sustainable Agriculture (NMSA)** was launched to develop, demonstrate and disseminate the techniques to make agriculture resilient to adverse impacts of climate change.
- **Mission Organic Value Chain Development for**

North Eastern Region (MOVCDNER) is a sub-mission under NMSA which aims to **develop certified organic production in a value chain mode.**

- In the Budget 2022-23, **Rashtriya Krishi Vikas Yojana** has received a **4.2-times (year-on-year) larger allocation** of Rs 10,433 crore, which will earmark funds for the on-ground implementation of chemical-free farming.

What are the Associated Issues?

- **Sikkim (India's first organic state)**, has seen some **decline in yields** following conversion to organic farming.
- Many **farmers have reverted to conventional farming** after seeing their ZBNF returns drop after a few years.
- While ZBNF has definitely helped preserve soil fertility, its role in boosting productivity and **farmers' income isn't conclusive yet.**
- An often-cited barrier by farmers in transitioning to chemical-free agriculture is the **lack of readily available natural inputs**. Not every farmer has the time, patience, or labour to develop their own inputs.
- A study in Nature Sustainability states that while the nutrient value of the natural inputs is similar to the chemical ones **used in low-input farms** (farms using lower quantities of fertilisers and pesticides), it is **less in high-input farms**.
 - When such nutrient deficiencies are aggregated at a large scale, it might hamper the yield over the years, **potentially leading to food security concerns**.
- Although the **Budget 2022-23 envisages the promotion of natural or chemical-free farming** across the country, **no specific allocations have been made** to the Ministry of Agriculture and Farmers Welfare.
 - The currently-operational schemes such as the **PKVY** and the **National Project on Organic Farming** also **did not find any mention in the budget**.

What Measures Can Be Taken to Scale up Chemical-Free/ Natural Farming?

- **Going Beyond Ganga Basin:** Focussing on **promoting natural farming in rainfed areas beyond the Gangetic basin**.
 - Rainfed regions **use only a third of the fertilisers per hectare** compared to the areas where irrigation is prevalent.
 - The shift to chemical-free farming will be **easier in these regions**.
 - Also, the farmers stand to gain as the current crop yields in these areas are low.
- **Risk Prevention for Smooth Transition:** Enabling

automatic enrollment of farmers transitioning to chemical-free farming into the government's crop insurance scheme, **PM Fasal Bima Yojana (PMFBY)**.

- Any transition in agriculture — crop diversification, change in farming practices — adds to the farmer's risk.
- Covering such risks could **enhance the appetite of the farmers to embark on the transition**.
- **Providing Support to Agri MSMEs:** Microenterprises that produce inputs for chemical-free agriculture shall be provided support from the government.
 - To address the challenge of unavailability of readily available natural inputs, the promotion of natural farming needs to be combined with the **setting up of village-level input preparation and sales shops**.
 - **Two shops per village** across the country could provide a livelihood to at least five million youth and women.
- **Peer Farmers as Inspiration:** NGOs and champion farmers who have been promoting and practising sustainable agriculture across the country can be leveraged for this purpose.
 - A CEEW (Council on Energy, Environment and Water) research estimates that at least five million farmers are already practising some form of sustainable agriculture and hundreds of NGOs are involved in promoting them.
 - **Learning from peers**, especially champion farmers, through **on-field demonstrations** has proved highly effective in scaling up chemical-free agriculture in Andhra Pradesh.
- **Leveraging Community Institutions:** Community institutions can be leveraged for **awareness generation, inspiration, and social support**.
 - The government should facilitate an ecosystem in which farmers learn from and support each other while making the transition.
 - Beyond evolving the curriculum in agricultural universities, there is a need to **upskill the agriculture extension workers on sustainable agriculture practices**.



Making Science Women-Inclusive

This editorial is based on "A More Inclusive Science" which was published in Indian Express on 24/02/2022. It talks about the under-representation of women in the field of science and technology.

Tags: Governance, GS Paper 2, Gender, Education, Government Policies & Interventions, Issues Related to Women

The **underrepresentation of women in the sciences** exists across the entire career trajectory — in recruitment and promotion, in awards, in selection to science academies as members/fellows and in leadership positions in scientific institutions.

The status of women's representation in science academies reflects their overall position in the scientific community. The problem needs to be addressed at two levels – at **societal level** which **requires long term effort** and the **policy and institutional level**, which can be **started with immediate effect**.

Representation of Women in Science

What are the Global Trends?

- The early part of the **20th century witnessed the acceptance of women scientists** as members in many of the European academies.
- A recent study done jointly by **GenderInSITE** (Gender in Science, Innovation, Technology and Engineering), the **InterAcademy Partnership (IAP)** and the **International Science Council (ISC)** shows that elected membership of women in senior academies increased marginally from 13% in 2015 to 16% in 2020.
 - In the case of **young academies**, although the position is better, there is under-representation as the **average share is 42%**.
 - Among the senior academies, the **Academy of Sciences of Cuba leads with 33%**.

What are India-Specific Stats?

- A survey conducted in 2020 showed that out of **1,044 members of the Indian National Science Academy (INSA)**, only 89 are women, amounting to **9%**. In 2015, it was worse with **6% women scientist members out of 864 members**.
- Similarly, the governing body of INSA had seven women out of 31 members in 2020, while there were no women members in 2015.
- The three academies, the Indian National Science Academies (INSA), the Indian Academy of Sciences (IAS) and the National Academies (NAS) are striving to enhance the representation of women in science, including in professional bodies and related institutions.

What Initiatives have been

Launched to Promote Women in Science?

- **Vigyan Jyoti Programme** was launched to address the underrepresentation of women in different fields of **Science Technology Engineering and Mathematics (STEM)** in the country.

- Initially, it was **introduced at the school level** wherein meritorious girl students of Class 9-12 were being encouraged to pursue higher education and career in the STEM field.
- Recently, the programme was **extended to 100 districts in its 2nd phase**.
- **KIRAN scheme** was launched in 2014-15 to provide opportunities for women scientists in moving up the academic and administrative ladder.
 - One of the programmes under the scheme — **'Women Scientist Scheme'** — provides **career opportunities to unemployed women scientists** and technologists, especially those who had a break in their career.
- The DST (**Department of Science & Technology**) has also additionally **established Artificial Intelligence (AI) labs in women universities** with the goal to foster AI innovations and to prepare skilled manpower for AI-based jobs in future.
- Under the **Indo-US Fellowship for Women in STEM (WISTEMM) program**, women scientists can work in research labs in the US.
- The Consolidation of University Research for Innovation and Excellence in Women Universities (**CURIE**) **programme** aims at **improving R&D infrastructure** and establishing state-of-the-art research facilities in order to **create excellence in S&T in women universities**.
- The **Gender Advancement for Transforming Institutions (GATI) program** was launched to develop a comprehensive Charter and a framework for **assessing Gender Equality in STEM**.

What are the Causes for Under-representation?

- **Stereotypes:** The paucity of women in STEM is not merely due to skill inadequacy, but also a result of assigned stereotypical gender roles.
 - It is still considered okay to **judge the parental or life-partner status of a woman scientist** while deciding to hire her or give her a leadership position, **overlooking her merit**.
 - A common norm, it has become that women spouses of already hired faculty, however meritorious, will not be hired.
- **Patriarchal and Societal Causes:** There are patriarchal attitudes in hiring practices or awarding fellowships and grants etc.
 - **Stressors related to marriage** and childbirth, **pressures to conform to societal norms** and **trappings of domesticity** - responsibility related to running of households and elder care further hinder the

representation of women in these 'non-conventional' fields.

- **Lack of Role Models:** Organisational factors have also played a big role in preventing gender parity. Lack of women leaders and women role models may be preventing more women from entering these fields.
- **Absence of Supportive Institutional Structure:** Women leave the workforce, due to the absence of supportive institutional structures **during pregnancy, safety issues in fieldwork and workplace**.
 - Not just societal norms but issues related to poor education and healthcare access are responsible for a lesser number of women in these fields.

What Steps Can Be Taken?

- **Role of Science Academies:** While the given issue emanates from the larger problem of the underrepresentation of women in all spheres of life, its persistence in science shows that scientists and science academies need to **develop policies and strategies to enhance the representation of women**.
 - More importantly, science academies have to **reflect upon their role and contributions to promote and retain women in science**, thereby **making science inclusive and sensitive**.
- **Bringing Behavioural Changes:** Subdued gender participation emanates from social-economic issues, which can be treated by bringing behavioural change.
 - This can be changed if **more women are given leadership positions**.
 - Contributions of **women in the STEM sector should be highlighted in textbooks** thus **making them the role models** for the next generation of girls to be leaders in the STEM sector.
 - It is imperative that we understand and **remove the sexism and institutional obstacles** that prevent more women from entering the scientific field.
- **Realising Manifold Significance of Higher Representation:** Women's representation in science and technology is **essential to design inclusive and sustainable societies**.
 - Gender equality is not just an **ethical imperative**, but also a **business priority**. Organisations with greater **diversity among their executive teams tend to have higher profits** and **greater innovation capability**.
 - We all must increase efforts to rapidly change the status quo. This fight against gender disparity must be fought by all — families, educational institutions, companies and governments.



Russia-Ukraine Conflict

This editorial is based on “Stay the Course” which was published in Indian Express on 26/02/2022. It talks about the ongoing conflict between Russia and Ukraine.

Tags: International Relations, GS Paper 2, Bilateral Groupings & Agreements, Effect of Policies & Politics of Countries on India's Interests

The **Ukraine crisis** has crossed a critical point, with Russia following up its **recognition of rebel regions in eastern Ukraine (Donbas region)- Donetsk and Luhansk** with a full-fledged invasion to “demilitarise” and “denazify” Ukraine.

This decision by Moscow is a rejection of the inviolability of national borders in Europe as agreed to in the **Helsinki agreement of 1975** and a **major challenge to the global order**.

While on one hand **Russia remains India's biggest and time-tested supplier** of military hardware, the **US, the EU, and UK are all vital partners** that India cannot afford to antagonise. Considering India's strategic interests, a **balanced approach** that India has followed till now, is a pragmatic way forward.

What is the Conflict?

- Contestation about **post-Cold War central European territoriality** and resurrecting a burnished Russian past is at the **core of the Ukraine crisis**.
- Ukraine and Russia share hundreds of years of cultural, linguistic and familial links.
- For many in Russia and in the ethnically Russian parts of Ukraine, the shared heritage of the countries is an emotional issue that has been **exploited for electoral and military purposes**.
- As part of the Soviet Union, Ukraine was the second-most powerful Soviet republic after Russia, and was crucial strategically, economically and culturally.
 - The **balance of power in the region, Ukraine being a crucial buffer** between Russia and the West, **Ukraine's bid for NATO membership** and **Russian interests in the Black Sea** accompanied by the protests in the Ukraine are the major causes of the ongoing conflict.

What is the Current Scenario?

- The conflict is now the **largest attack by one state on another in Europe since the Second World War**, and the first since the Balkan conflict in the 1990s.
- With the invasion of Ukraine, agreements like the **Minsk Protocols of 2014**, and the **Russia-NATO Act of 1997 stand all but voided**.

- The **G7 nations strongly condemned** Russia's invasion of Ukraine.
 - **Sanctions have been imposed** by the U.S., the **European Union (EU)**, the UK, Australia, Canada and Japan.
- **China rejected calling Russia's moves on Ukraine an “invasion”** and urged all sides to exercise restraint.
- **India did not join the Western powers' condemnation** of Russia's intervention in Crimea and kept a low profile on the issue.
 - More recently, **India abstained on a US-sponsored UNSC resolution** that “deplores in the strongest terms” Russia's “aggression” against Ukraine, with New Delhi saying dialogue is the only answer to settling differences and disputes and voicing “regret” that the path of diplomacy was given up.
 - China too abstained, along with the United Arab Emirates (UAE).

What is Russia's Stand?

- NATO's expansion **violated promises made prior to the breakup of the Soviet Union**; that Ukraine's accession to NATO would **cross Russia's red lines**; and that NATO's strategic posture poses a continuing security threat to Russia.
- NATO's expansion as a politico-military alliance, even after the dissolution of the Soviet Union and the **Warsaw Pact**, was a U.S.'s initiative intended to **temper European ambitions for strategic autonomy and to counter Russia's resurgence**.
- The Ukraine crisis was justified by the Russian President on the grounds of **security interests and the rights of ethnic Russians** in former Soviet Republics.
- Russia wants an assurance from the West that **Ukraine will never be allowed to join NATO**. Kyiv is currently a “partner country”, which implies that it will be allowed to join the military alliance in the future.
 - The US and its western allies are **refusing to bar Ukraine** from NATO, claiming it as a **sovereign country that is free to choose its own security alliances**.

How will India be impacted by this Conflict?

- The Russia-Ukraine crisis will **send cooking gas, petrol and other fuel bills soaring** for Indian households and businesses. **Higher oil prices add to freight/transportation costs**.
- Depending on how long global oil prices remain elevated, the tensions could raise **questions on the RBI's credibility** in making inflation projections and **upset the government's budget calculations**, particularly fiscal deficit.

- The surge in crude oil prices will lead to an **increase in India's oil import bills**, and gold imports could jump back up, **keeping the rupee under pressure**.
- India's imports of petroleum products from Russia are only a fraction of its total oil import bill and, thus, replaceable.
 - However, getting **alternative sources for fertilisers and sunflower oil** may not be as easy.
- Exports to Russia account for less than 1% of India's total exports, but exports of **pharmaceuticals and tea could face some challenges**, as will shipments to **CIS countries**. Freight rate hikes could make **overall exports less competitive**, too.

What Could Be The Way Forward?

- **Immediate Ceasefire:** Unlike during the Cold War, though, the global economy is now deeply integrated. The **costs of a prolonged conflict are too dire**, foremost in terms of the **loss of life** and suffering that is already underway in Ukraine.
 - The world is **still reeling from the Covid-19 pandemic**, which hurt the poorest countries and people the most; it can ill-afford a conflict-induced slowdown.
 - It is **incumbent on Russia to implement a ceasefire** and, subsequently, for both sides to **return to the negotiating table**. Escalation is not an option.
- **New Security Order for Europe:** Without justifying the manner in which Russia has chosen to "right" the perceived "wrongs", the current crisis somehow **results from a broken security architecture in Europe**.
 - A **sustainable security order** has to reflect current realities: it cannot be simply an outgrowth of the Cold War order, and it has to be driven from within.
 - Also, a European order that does not **accommodate Russia's concerns through genuine negotiation** cannot be stable in the long term.
- **Reviving Minsk Peace Process:** A practical solution for the situation is to revive the Minsk peace process.
 - Therefore, the West (US and Other western Countries) should push both sides to **resume talks and live up to their commitments as per the Minsk agreement** to restore relative peace on the border.

What is an India-Specific Way Forward?

- **Geopolitical Aspect:** India has to brace itself for some immediate challenges flowing from the Russian actions.
 - It will have to **balance the pressure** from one strategic partner to condemn the violation of international law, with that from another to **understand its legitimate concerns**. India managed

these pressures during the 2014 crisis of Crimea annexation; it shall again manage it effectively.

- **Economic Aspect:** On the fiscal side, the Government, which has been conservative in its revenue assumptions in the Budget, has the **room to pre-emptively cut domestic fuel taxes** to nip inflationary expectations, **stoke faltering consumption levels** and **sustain India's fragile post-Covid-19 recovery** through this global churn.
- **A Balanced Approach:** India-Russia ties have ensured that Delhi has not been entirely left out of the **conversation on Afghanistan**, and in **Central Asia**, while also providing some leverage with the US.
 - At the same time, the **US, the EU, and UK are all vital partners**, and India's relations with each of them, and the Western world in general, go far beyond the sum of their parts.
 - Delhi must **talk continually to all sides**, and engage with all of its partners, keeping in mind that there is **no justification for the violation of any country's territorial sovereignty**.
 - India must also make it clear to coercing countries that their **"with us or against us" formulations are hardly constructive**.
 - The best course is for all parties to **step back and focus on preventing an all-out war**, rather than divide the world and return it to the days of the Cold War.



Healthcare Workforce and Women

This editorial is based on "India needs More Women Leaders in Health Care" which was published in Hindustan Times on 26/02/2022. It talks about the role of women in the healthcare workforce.

Tags: Governance, GS Paper 2, Government Policies & Interventions, Health, Gender, Issues Relating to Women, GS Paper 3, Growth & Development, Employment.

Development by and for women is at the **centre of India's vision for inclusive growth**. The **Union Budget's Nari Shakti initiatives** reinstated this by equipping women with tools to steer change and lead the way towards a brighter tomorrow.

Leaders have the power to transform, and women are integral to this change story. In contexts where structural inequalities are endemic and support systems are fragile, such as in India, **strong women leaders can bring about positive, lasting change** in people's lives.

What is the Status of Women in the Healthcare Workforce?

- Reaching leadership positions has proven to be especially rare for women, and the health sector is no different. As per a study published in the **medical journal Lancet** in 2021, **women represent 71% of the global health care workforce** and though both men and women progress similarly in this field in their early careers, **women are five times more likely to face disruptions** in their pathways.
- This gender gap in global health leadership is particularly troubling because women's health and reducing **unjust health inequalities are central to the field**.
 - Addressing this gap will not in itself solve all women's health problems. But it is a first step that is overdue.
- India's health system has been stretched to the breaking point many times during the pandemic, with the **bulk of the caring burden on women**.
 - Women are estimated to make up to **30% of doctors and more than 80% of nurses and midwives**. Medical staff in India and around the world have saved millions of lives, often while risking their own.

What Challenges do Women Face?

- The Indian landscape is aligned with global trends — women are not commonly found in senior positions in our country's health domain. The common issues include:
 - **Low pays or Unpaid work**
 - **Absence of agency**
 - Harsh realities of **gender bias and harassment**.
 - **Lack of networks and support systems**
- The barriers faced by female health workers undermine their well-being and livelihoods, hold back broader gender equality and negatively impact health systems.
- Women in the health care sector **earn on average 28% less than men** with occupational segregation alone appearing to **drive a 10% pay gap**.
 - This gap in earnings, multiplied over a lifetime, translates into poverty in older age for many women.
- And **outside the formal labour market** are the women whose work in health and **social care is not even recognised**, let alone paid.

What about Women's own Health?

- In India, women's and children's health are areas of concern with **more than half of the cohort being anaemic** and a large proportion suffering from **malnutrition**.

- As per the **National Family Health Survey-5**, in adolescent girls, **anaemia** has actually gone up from **54% (2015-16) to 59% (2019-21)**.

- These issues are closely related to **socio-cultural factors** such as **early marriage, teenage pregnancy**, and **unsafe abortion**, which lead to compromised nutritional and health status among young girls and their children.
- Further, with women taking up most of the household work, they are **exposed to the threats of Neglected Tropical Diseases (NTDs)** such as **lymphatic filariasis**. Often, they don't even seek care on time, unless their husbands or guardians agree.

What is the Significance of Women in the Healthcare Workforce?

- Studies establish that placing more women in leadership positions not only **increases organisational productivity** but **maximises the value of the female workforce**.
- Having women at the front and centre of decision-making processes will help **integrate nuances of our social fabric in policies**.
- It is estimated that **women in health contribute 5% to global GDP** (US\$ 3 trillion) annually, out of which almost 50% is unrecognised and unpaid.
 - If women were able to participate in the economy equally, it would **result in nearly an estimated \$160 trillion increase in global GDP** or a **21.7% increase in human capital wealth**.

What Could Be The Way Forward?

- **More Investments and Creation of Opportunities:** Effective leadership depends on intentional investment and creating opportunities **to level the playing field**.
 - With the pandemic revealing the fragility of existing systems and the need for timely, efficient decision-making, it is critical to relook at our investments such that the **health leadership at all levels is inclusive, diverse and equitable**.
- **Evolving with the Changes:** Health leadership is largely centred on the ability to **identify priorities, provide strategic direction to multiple actors within the health system** and create commitment across the health sector.
 - As health systems change, the **leadership must modify and respond to political, technological, social, and economic developments** that are essential for strengthening the health system.
- **Bringing Women in Leadership Roles:** Significantly, the **Nari Shakti** initiative and **Mission Shakti** were re-launched in the Budget session to deliver **unified**

citizen-centric support for women through integrated care and safety, rehabilitation, for women as they progress through life. This is a step in the right direction.

- Having **more women at the head of decision-making tables** is urgent to introduce more women-centric interventions.
- It is extremely important to **address social barriers, build resilient, inclusive health systems** and for **diverse perspectives to be integrated** into health resource allocation, research policies and financing.

➤ **A Collective Responsibility:** We must make more concerted and intentional efforts to accelerate women's leadership in health and optimise pathways to this.

- This requires changing perspectives, **breaking away from deep-rooted sociocultural beliefs** and making equal opportunities available to all.
- Only by believing in and **working towards gender transformative leadership** can we ensure that policy decisions benefit all and **bring intergenerational change**.



Drishti Mains Questions

1. Discuss the issues associated with the transition of MSMEs from conventional offline methods of doing business to e-commerce platforms.
2. Discuss the unemployment scenario of India and what measures can be taken to tackle this unemployment wave.
3. "It's time to start thinking about doing AI in a more environmentally friendly way". Comment.
4. Discuss the key challenges that India needs to overcome to join the global race for the decentralized, blockchain run Web 3.0.
5. Discuss the importance that the launch of formal Free Trade Agreement (FTA) between India and UK holds for the two countries.
6. Discuss the issues faced by the power sector DISCOMs in India and how reforms in the Revamped Distribution Sector Reform Scheme (RDSS) can improve the present condition of the former.
7. "Public places ought to be free of any public displays of religion." Critically discuss the statement in reference to recent orders by Karnataka government regarding school uniforms.
8. "The RBI must carefully weigh the pros and cons before launching the digital rupee remaining mindful of the various issues". Comment.
9. Discuss the opportunities offered by the establishment of a digital university, especially when the covid-19 pandemic has disturbed the functioning of the whole education system.
10. "The overcrowding and lack of proper medical health facilities in prisons is a violation of the right to life and right to health of prison inmates". Comment.
11. Discuss the need for a comprehensive space strategy that India shall adopt to become one of the major space powers.
12. Discuss the causes of high GHG emissions from the agriculture sector and the steps that can be taken to minimise the emissions.
13. "A safe and healthy workplace is a productive and dynamic one. It directly contributes to the sound socioeconomic development of India.". Comment.
14. Discuss the roadblocks to harnessing full benefits of India's geospatial sector and suggest measures to overcome these challenges.
15. A delicate balance is required to be maintained between the Supreme Court and the High Courts in order for the constitutional structure. Discuss the issues with reference to integrated judiciary in India.
16. "Road Safety should be dealt with as a public health issue rather than a transportation issue". Comment.
17. Discuss the economic and strategic significance of UAE for India and suggest measures that can be taken for stronger India-UAE Relations.
18. Discuss the steps that can be taken to boost the manufacturing of electric vehicles in India.
19. "Treating the budget allocation as a 'ceiling' to the work that can be provided erodes the core premise of the scheme". Comment.
20. "Manual scavenging in the 21st century sounds an abhorrent alarm about caste domination". Comment.
21. Discuss the significance of natural farming and suggest measures that can be taken for smooth transition from conventional to chemical-free farming.
22. "Gender inequality in STEM can only become a thing of the past if collective efforts, from the society, families, educational institutions and government, are given to fight against it". Comment.
23. Discuss the implications of the Russia-Ukraine conflict on India and the right approach that the latter shall take in this regard.
24. Discuss the challenges faced by women in the healthcare workforce and what measures can be taken to ensure a significant representation of women in this field.