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Monthly Editorial Consolidation

Content

Electric Vehicles: The Future Transport

*This editorial is based on the article **Is India ready for a world where electric vehicles will dominate transportation?** which was published in The Indian Express on 30/10/2021. It talks about the challenges associated with the promotion of electric vehicles and ways to increase their penetration in the market.*

Tags: Science & Technology, GS Paper - 3, Technology Missions, Scientific Innovations & Discoveries, Infrastructure, Indigenization of Technology, Growth & Development

India has the dubious distinction of having nine of the 10 most polluted cities in the world. These nine cities, all in north India, include Greater Noida, Noida, Lucknow, and Delhi. While many factors contribute to the polluted air, skies and human lungs of northern India, vehicular pollution bears substantial responsibility.

So, it is unsurprising that the Indian State is slowly but steadily encouraging electric vehicles. And with this, we may be coming a full circle in terms of our ability to commute. While in the 1900s, the **electric vehicle (EV)** lost out to fuel-based ones, that may not be the case anymore.

In 1886, Carl Benz, a German engineer applied for and was granted patent number 37435 for his "vehicle powered by a gas engine". In a few months, the commercial production of the Benz motor car started. This is by most accounts the beginning of commercially-produced vehicles using gas engines.

Interestingly, in 1880, a few years prior to Benz's patent, William Morrison, a chemist from Iowa, United States, helped bring to life, a six-seater electric vehicle. By 1900, electric cars accounted for over one-third of the vehicles sold in the US. The forward march of electric cars was stopped by the mass production of the very reasonably priced Ford automobile.

A reasonably priced car along with the cheap prices of gasoline in the early 1900s meant that the world as we now live in came to be, with fossil fuel-dependent vehicles — cars and bikes — thronging our streets.

In this context, India must prepare itself with better charging infrastructure, battery-making factories and smart incentives for car companies and consumers to go electric
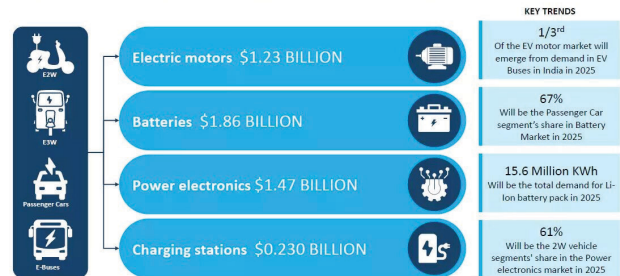
Electric Vehicles (EVs)

➢ An EV operates on an electric motor instead of an internal combustion engine and **has a battery instead of a fuel tank**.

➢ In general, EVs have low running costs as they have fewer moving parts and are also environmentally friendly.

➢ In India, the fuel cost for an EV is approximately **80 paisa per kilometre**. Contrast this with the cost of petrol which is today more than Rs 100 per litre in Indian cities, or **Rs 7-8 per kilometre to operate a petrol-based vehicle**.

Prospects in India

➢ The private sector has appreciated the inevitability of the dominance of the EV.

➢ Companies like Amazon, Swiggy, Zomato and Ikea are deploying EVs for deliveries.

➢ Car manufacturers like Mahindra are partnering with consumers like Ola, while Tata Motors is partnering with Blu Smart Mobility in moves that will ensure more EV delivery and ride-hailing services.

PERSPECTIVE: MARKET SIZE OF EV COMPONENT INDUSTRY IN 2025
ELECTRIC VEHICLE VALUE CHAIN IN INDIA IS EXPECTED TO REACH $4.8 BILLION IN 2025

	KEY TRENDS
Electric motors $1.23 BILLION	1/3rd Of the EV motor market will emerge from demand in EV Buses in India in 2025
Batteries $1.86 BILLION	67% Will be the Passenger Car segment's share in Battery Market in 2025
Power electronics $1.47 BILLION	15.6 Million KWh Will be the total demand for Li-Ion battery pack in 2025
Charging stations $0.230 BILLION	61% Will be the 2W vehicle segments' share in the Power electronics market in 2025

Associated Challenges

➢ **Lack of Charging Infrastructure:** The real challenge for the consumer is the lack of charging infrastructure in India.

○ EVs are typically powered by **lithium-based batteries**. These batteries need to be charged usually every 200-250 kilometres or so for a car. So, there is a need for a dense proliferation of charging points.

➢ **Issue of Slow Charging:** It takes up to 12 hours for a full charge of a vehicle at the owner's home using a private light-duty slow charger. To compound this technological problem of slow charging at home, there are a few charging stations around the country.

○ This is woefully inadequate in a country as large and densely populated as ours.

➢ **Lack of a Stable Policy For EV Production:** EV production is a capital intensive sector requiring long term planning to break even and profit realization, uncertainty in government policies related to EV production discourages investment in the industry.

➢ **Technological Challenges:** India is technologically deficient in the production of electronics that form

the backbone of the EV industry, such as batteries, semiconductors, controllers, etc.

➢ **Lack of Associated Infrastructural Support:** The lack of clarity over AC versus DC charging stations, grid stability and range anxiety (fear that batteries will soon run out of power) are other factors that hinder the growth of the EV industry.

➢ **Lack of Availability of Materials For Domestic Production:** Battery is single most important component of EVs. India does not have any known reserves of lithium and cobalt which are required for battery production. India is dependent on countries like Japan and China for the import of lithium-ion batteries.

➢ **Lack of skilled workers:** EVs have higher servicing costs and higher levels of skills is needed for servicing. India lacks dedicated training courses for such skill development.

Way Forward

➢ **Increasing R&D in EVs:** The Indian market needs encouragement for indigenous technologies that are suited for India from both strategic and economic standpoint.

  ❍ Since investment in local research and development is necessary to bring prices down, it makes sense to leverage local universities and existing industrial hubs.

  ❍ India should work with countries like the UK and synergise EV development.

➢ **Sensitising Public:** Breaking away the old norms and establishing a new consumer behaviour is always a challenge. Thus, a lot of sensitisation and education is needed, in order to bust several myths and promote EVs within the Indian market.

➢ **Viable Electricity Pricing:** Given current electricity prices, home charging may also be an issue if the generation is from thermal power plants run on coal.

  ❍ Thus, a shift in the electricity generation landscape as a whole is what is required to facilitate the growth of electric cars.

  ❍ In this context, India is on track to become one of the largest solar and energy storage markets by 2025.

  ❍ A combination of solar-powered grid solutions that are organised with a general improvement in grid resilience will ensure adequate charging infrastructure for EV's being a green option.

➢ **Creating the Closed-Loop Mobility Ecosystem:** Subsidizing manufacturing for an electric supplychain will certainly improve EV development in India.

  ❍ Along with charging infrastructure, the establishment of a robust supply chain will also be needed.

  ❍ Further, recycling stations for batteries will need to recover the metals from batteries used in electrification to create the closed-loop required for the shift to electric cars to be an environmentally-sound decision.

➢ The largest suppliers of lithium-based EV batteries are reported to be the Chinese and the South Korean companies. If this is so, then a new global order is emerging to replace the **Organisation of the Petroleum Exporting Countries (OPEC)**.

  ❍ India must plan for its place in this order — with better-charging infrastructure, battery-making factories and smart incentives for car companies and consumers to go electric.

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Needs For Ministry of Energy

This editorial is based on the article **Why India needs a Ministry of Energy** *which was published in The Indian Express on 01/11/2021. It talks about the issue of energy security and suggests a way forward.*

Tags: Indian Economy, Mobilization of Resources, Infrastructure, Growth & Development, Mineral & Energy Resources, Conservation of Resources, GS Paper - 3

Experts may differ on the weightage to be given to the various reasons cited for the coal shortage earlier this month, but all will agree that the blame cannot be placed on the doors of any one entity or ministry. However, the Ministry of Coal and Coal India must certainly accept that they slipped up somewhere — whether in managing the production process, planning supplies or leaving vacant crucial leadership positions. The Ministry of Power/NTPC and power DISCOMs should also accept responsibility.

There is no one public body at the central or state government level with executive oversight, responsibility and accountability for the entirety of the coal value chain. This is a lacuna that afflicts the entire energy sector. It will need to be filled to not only prevent a recurrence of another coal crisis but also for the country to realise its "green" ambition.

Significance of Energy Security

➢ Energy Security means reliable supply of energy and access to energy resources and fuel in the required quantity and quality at reasonable prices. Energy security depends on many variables.

➢ Definitions of energy security for countries importing energy materials consist mostly of three aspects:
  ○ **Access to an adequate amount of energy** resources,
  ○ **In an appropriate format**,
  ○ **For an adequate price**.
➢ India imports 80% of its oil needs and is the third largest oil consumer in the entire world.
➢ India's energy consumption is expected to grow 4.5% every year for the next 25 years.
➢ Recently due to high International Crude Oil Prices, **Current Account Deficit (CAD)** inflated because of higher cost of oil import, raising concerns about long term economic stability in India, highlighting importance of energy security.

Challenges of Energy Security in India

➢ **Policy Challenges:** Failure to attract international investment in domestic hydrocarbon exploration.
  ○ Coal mining in India suffers from delays due to regulatory and environmental clearances.
  ○ The **NITI Aayog** has produced an energy strategy but it has no executive authority and, as was the case with the Planning Commission document "Integrated Energy Policy" published in 2006.
  ○ The Planning Commission document was endorsed by the Cabinet and yet the majority of the recommendations were ignored.
➢ **Accessibility Challenge:** The household sector is one of the largest consumers of energy in India. It is responsible for about 45% of the total primary energy use. In rural areas, biomass accounts for 90% of total primary fuel consumption for cooking. This has serious health impacts on the rural people.
➢ **Infrastructure and skill related challenges:** Lack of skilled manpower and poorly developed infrastructure for developing conventional and unconventional energy.
  ○ India lacks transportation infrastructure for making energy accessible e.g. pipelines can be a useful way to boost the total supply of gas in the country. Gas will play a major role in the Indian energy mix because it can be used effectively in several demand sectors.
➢ **Economic challenges:** Coal, oil and natural gas are the most important sources of primary energy in India. Inadequate domestic supplies of these hydrocarbons are forcing the country to increase its import bill.
  ○ Rising fuel subsidies create difficult conditions for the economy.
➢ **External Challenges:** India's fragile energy security is under severe pressure from its rising dependence on imported oil, regulatory uncertainty, international monopolies and opaque natural gas pricing policies.
  ○ In wake of its difficult geographic location in South-Asia, India faces a strategic challenge to meet its energy needs.
  ○ Failure to get onboard all interested parties in IPI (Iran-Pakistan-India) gas pipeline and TAPI (Turkmenistan, Afghanistan, Pakistan and India) gas pipeline for assured supply of natural gas.

Way Forward

For the energy security purpose various steps can be taken:

➢ **Legislative Action:** The government can pass an Act (possibly) captioned "The Energy Responsibility and Security Act."
  ○ This Act should elevate the significance of energy by granting it constitutional sanctity; it should embed in law, India's responsibility to provide citizens access to secure, affordable and clean energy and in that context, it should lay out measurable metrics for monitoring the progress towards the achievement of energy independence, energy security, energy efficiency and "green" energy.
  ○ In essence, the Act should provide the constitutional mandate and frame for the formulation and execution of an integrated energy policy.
➢ **Institutional Action:** The government should redesign the existing architecture of decision-making for energy. Preference can be given for the creation of an omnibus **Ministry of Energy** to oversee the currently siloed verticals of the ministries of petroleum, coal, renewables and power.
  ○ Such a ministry did exist in the early 1980s (albeit without petroleum). The minister-in-charge should rank on equal footing with the ministers of defence, finance, home and external affairs.
  ○ An executive department within the PMO can also be established. It could be referred to as the "**Department of Energy Resources, Security, and Sustainability**".
  ○ The objective would be to identify and handle all of the issues that currently fall between the cracks created by the existing structure. It would be to formulate and execute an integrated energy policy, to leverage the weight of "India Energy Inc" and maximise India's competitiveness in its dealing with the international energy community.
➢ **Fiscal Actions:** There should be easy access to finance and the government should incubate clean energy R&D and innovation.

➢ **Raise Public Awareness:** It would be to coordinate and implement the communication strategy to raise public awareness about existing and emergent energy-related issues, especially global warming.

○ The department would have a narrower remit than the other energy departments but by virtue of its location within the PMO, it would, de facto, be the most powerful executive body with ultimate responsibility for navigating the "green transition".

Conclusion

The Ministry of Energy should not alter the existing roles and responsibilities of the various ministries that oversee petroleum, coal, renewables and power, but would identify and handle all of the issues that currently fall between the cracks created by the existing structure.

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Carbon Neutrality: India's Target

This editorial is based on the article India must resist carbon neutrality demands at COP-26 which was published in The Indian Express on 02/11/2021. It talks about the Net-Zero Emission pledge and issues related to the pledge for the developing countries.

Tags: Biodiversity & Environment, GS Paper - 3, Environmental Pollution & Degradation, Conservation, Gs Paper-2

Developed countries have an extremely poor track record on climate action. In keeping with this trend, the recently declared enhanced pledges for climate action, including declarations of net-zero emissions by 2050, also fall woefully short of what is required to ensure the safety of the planet. The pressure on developing countries to "do more" and declare similar net-zero pledges is, therefore, nothing but shifting the burden of climate action onto the backs of the world's poorest populations.

Moreover, India has announced that it will reach **carbon neutrality by 2070** as part of a five-point action plan that included reducing emissions to 50% by 2030. There is a need to analyse the decision in the interest of development needs of India.

Energy For Development

➢ There is a **strong link between energy use and development**. No country has managed to ensure reasonable levels of wellbeing for its people without increasing energy supply.

○ This would not be a problem if India could produce energy in abundance without carbon-dioxide emissions.

○ Unfortunately, energy sources that are available, which can then be directed for specific purposes such as industrial production or transportation, often have other effects, most notably the emission of carbon dioxide, the greenhouse gas most responsible for global warming.

➢ From 1850 till 2019, the world has emitted approximately 2,500 billion tonnes of carbon dioxide. Developed countries, home to 18% of the global population, are responsible for over 60% of these emissions.

○ Their unconstrained use of fossil fuel resources has allowed these countries to modernise their economies and achieve much higher levels of well-being than the remaining 82% of the population that resides in the Global South.

➢ The **United Nations Framework Convention on Climate Change(UNFCCC)** articulates the principle of differentiation between rich and poor nations and the need for the former to take lead in addressing the problem of global warming.

○ However, almost three decades since the UNFCCC, the story of climate action has been one of utter inaction by the world's richest countries, who have repeatedly shifted targets for emissions reductions and also for climate finance to the future.

○ The recent focus on net-zero declarations and the pressure on all countries to submit pledges for the same, is yet another attempt in the same direction

Net Zero Emission

➢ Net-zero emissions refer to the **balancing of anthropogenic carbon dioxide emissions**, either globally or in a region, with anthropogenic removals of the GHG so that the **net effect is zero emissions**.

➢ The push for such declarations from all countries began around 2019 at COP-25, when there was one year left for the **Paris Agreement** to come into effect.

➢ The very idea of net-zero declarations by individual countries and regions emerged from the need to hide the inaction of developed countries for the past 30 years.

➢ Even these declarations for the future are far from adequate to ensure the safety of the planet. The "**enhanced pledges**" of the US, UK and EU (27) for 2030, and their currently declared intention of achieving net-zero emissions around 2050, imply that just these two major regions will consume over 30% of even the remaining carbon budget.

❍ Together with China, they will emit at least 20% more carbon dioxide than is available to the world to limit warming to below 1.5 degrees Celsius.

Way Forward

➢ **Development For All:** The world needs much more ambition from rich countries(developed countries) so that less developed countries get some room to develop.

❍ The world needs to eliminate the multiple forms of drudgery and deprivation that a large majority of our people are subjected to.

❍ This requires ensuring access to modern, affordable, and reliable amenities and services to all. It is also critical to prepare for a world that is quite likely to be more than 1.5 degrees Celsius warmer. Our first defence against the climatic impacts in such a world will be development.

➢ **Strengthening Climate Governance:** India needs to build and strengthen its domestic institutions for climate governance. This will require identifying linkages between development needs and low carbon opportunities. In this context, a climate law can be useful.

➢ **Reaffirming CBDR:** In this upcoming climate change negotiations, India needs to reaffirm the long-standing principle of "**common but differentiated responsibility" (CBDR)** that requires richer countries to lead and argue against any pledge that risks prematurely limiting Indian energy use for development.

➢ **Increase Renewable Capacity:** According to the **Council on Energy, Environment and Waters** implications of a Net-zero Target for India's Sectoral Energy Transitions and Climate Policy' study, India's total installed solar power capacity would need to increase to over 5,600 gigawatts to achieve net-zero by 2070.

❍ The usage of coal, especially for power generation, would need to drop by 99% by 2060, for India to achieve net-zero by 2070.

❍ Consumption of crude oil, across sectors, would need to peak by 2050 and fall substantially by 90% between 2050 and 2070.

● **Green hydrogen** could contribute 19% of the total energy needs of the industrial sector.

➢ India's energy future must be determined by the developmental needs of its people and their protection against the impacts of climate change.

❍ India's efforts in the energy sector are evidence that it is punching far above its weight where climate action is concerned.

➢ While India does its fair share to check global warming, this should not be a blank cheque to developed countries to free ride on its efforts.

❍ It is essential that the fair share of India's carbon space and consequently the energy future of its people be secured now.

PM MAKES FIVE PLEDGES	WHAT IS NET ZERO?
❶ India will increase its non-fossil energy capacity to 500GW by 2030	Net zero refers to a balance where emissions of greenhouse gases are offset by the absorption of an equivalent amount from the atmosphere. Experts see net zero targets as a critical measure to successfully tackle climate change and its devastating consequences
❷ India will meet 50%of its energy requirements from renewable energy by 2030	
❸ India will reduce the total projected carbon emissions by one billion tonnes from now to 2030	**PLEDGES BY TOP THREE EMITTERS**
❹ By 2030, India will reduce the carbon intensity of its economy by 45% (from a previous target of 35%)	CHINA: Beijing announced no new pledges on Monday. It previously pledged net zero by 2060.
	UNITED STATES: The US touted domestic legislation to spend $555bn to boost renewable power and electric vehicles. It has pledged net zero by 2050.
❺ By 2070, India will achieve the target of net zero	INDIA: The country's economy will become carbon neutral by the year 2070

Conclusion

In accordance with the best available science as compiled by the most recent report of the **Intergovernmental Panel on Climate Change**, the countries who pledged for Net-Zero Emission must be asked to declare how much of the remaining carbon budget they plan to consume before they reach net-zero.

The answer to this question is critical in determining where the world is headed. In this global context, our energy path for the future must be carefully charted, allowing flexibility, while keeping the interests of our poorest and most vulnerable populations at the centre of any pledges we make.

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Rainfed Farming

*This editorial is based on the article **Need to boost rainfed farming** which was published in The Hindu BusinessLine on 02/11/2021. It talks about the issues of rainfed agriculture and also suggests a way forward.*

Tags: Agriculture, GS Paper - 3, Government Policies & Interventions, Agricultural Resources, Agricultural Pricing

It is unequivocal that human influence has warmed the atmosphere, ocean and land mentioned in the recent **IPCC report**. It also interprets that the heat waves across India will increase thereby putting our agriculture and lives under considerable stress.

The report further infers that pluvial floods (caused by extreme monsoonal rains) will go up. With such an **'expected uncertainty'** businesses can not be as usual. India became food secure after considerable planning and efforts. Maintaining and improving it further by adding nutrition security is sine qua non.

With large parts in India under rainfed farming it is imperative to focus on the **rainfed farming** to ensure betterment of the agriculture sector in India.

Rainfed Farming and Agro-Ecology

➢ Rain-fed areas produce nearly **90% of millets, 80% of oilseeds and pulses, 60% of cotton** and support **nearly 40% of our population** and **60% of our livestock**.

➢ These facts present an existing vulnerability to ensuing climate change. The only option we have is being prepared, adapt, and mitigate climate change.

➢ Rain-fed areas are ecologically fragile and hence vulnerable to climate change and they are also largely inhabited by poorer farmers. But at the same time, rain-fed areas provide nutrition security through millets, pulses and oilseeds.

➢ Most of the endemic and cultivable land races of these regions are ephemerals. The word 'ephemeral' denotes all plants lasting a very short period of time and they inhabit rain-fed areas.

➢ Whenever rains come, dormant seeds sprout, flower, seed and disperse their seeds in a short time. Productivity of most of the rain-fed crops is meagre as compared to their irrigated cousins and hence traits of resilience and improved productivity are screened for under rain-fed crop improvement programs

➢ India is a subtropical country with **15 agro-climatic zones** and primarily dependent on the south-west monsoon.

  ○ Of India's 329 million hectares of geographical area, nearly 140 million hectares are net sown area and out of it 70 million hectares is rain-fed. The average size of Indian farm holdings is about one hectare.

Importance of Agroecology

➢ The **United Nations Environment Program(UNEP)** defines agro-ecology as "**an ecological approach to agriculture**, often described as low-external-input farming. Other terms such as regenerative agriculture or eco-agriculture are also used.

  ○ Agro-ecology is not just a **set of agricultural practices**, it **focuses on changing social relations, empowering farmers, adding value locally** and **privileging short value chains**.

  ○ It allows farmers to adapt to climate change, sustainably use and conserve natural resources and biodiversity.

➢ In simple words, agro-ecology provides crop diversity but main food staples of the world are: rice, wheat, maize, cassava, potato etc., when there are nearly 30,000 edible plants.

➢ It seeks low energy external inputs, agro-ecological services as enterprises, soil covered for a large period of time through multiple cropping, niche crops and regional markets.

Challenges of Rainfed Agriculture

➢ **Frequent Droughts:** Droughts and famines are the general features of rainfed agriculture in India.

➢ **Soil Degradation:** Since the **Green Revolution** of the 1960s, the national agricultural policy is driven by the need to maximize crop yield, using irrigation and intensive use of HYVs, chemical fertilizers, and pesticides.

  ○ This has been a major challenge in preserving soil in the drier regions and rainfed farming systems.

➢ **Low Investment Capacity:** Rainfed agriculture in India comprises small and marginal farmers who accounted for 86% of operational holdings in 2015-2016 compared with 62% in 1960-1961.

➢ **Poor Market Linkages:** Most of the rural areas are characterized by a subsistence economy. The surplus farm produce is sold only if family requirements are met.

  ○ Further, individual production units (families) operate independently which makes it difficult to pool the produce for an efficient marketing

➢ There is generally enough rainfall to double and often even quadruple yields in rainfed farming systems, even in water-constrained regions. But it is available at the wrong time, causing dry spells, and much of it is lost.

  ○ Apart from water, upgrading rainfed agriculture requires investments in soil, crop, and farm management and improved infrastructure, markets, and better and more equitable access to and security over land and water resources.

  ○ To improve production and thus rural livelihoods in rainfed areas, rainfall-related risks need to be reduced, which means that investments in water management are an entry point to unlock the potential in rainfed agriculture.

Way Forward

➢ **Govt Support Needed**: Rain-fed areas and their farmers are hardly benefited by the schemes as they use lesser fertilisers and irrigation thereby receiving lesser fertiliser and power subsidies.

  ○ These areas deserve renewed attention especially when the climate predictions are not conducive.

➢ Introducing agro-ecology in rain-fed areas could be a good policy option. The design elements of such interventions must start from seeds and end with markets.

○ Codifying endemic land races, collecting their seeds, creating a repository of indigenous knowledge curated from formal and civil society, improving land races through plant-selection or plant-breeding, developing agronomic practices, region specific orientation, institutions, gender, convergence with other programs, marketing strategies, metric for measurement and technology as an enabler are some of the key design elements.

➢ In a post-Covid world, there is a need for immunity boosting and nutritious foods with little or no chemical residues.

○ Rain-fed areas are the obvious choice and making markets work for agro-ecology could be a good strategy.

○ Consumer education on how to effectively cook these nutritious crops can create a demand pull. The Karnataka government has prepared a descriptive and colourful cookbook for millets.

➢ **More balanced approach is needed**, to give rainfed farmers the same research and technology focus, and production support that their counterparts in irrigation areas have received over the last few decades.

➢ There is an **urgent need to do more R&D** in rainfed agriculture and bring in more policy perspective like tweaking of government schemes by considering the needs of rainfed agricultural areas.

➢ In the long run, cash incentives and income support like the **PM-KISAN scheme** announced in the interim budget 2019 are better than extensive procurement as they are inclusive in character, and doesn't distinguish between farmers in one area or another, growing one crop or another.

➢ Along with income support to help farmers through the current crisis, it is now the time to design better structured interventions for the future.

➢ Like the **ease of doing business,** ease of doing farming should be done on the parameters of seeds, soil, water in rainfed areas to make agriculture attractive in the long term.

Conclusion

The importance of rainfed agriculture varies regionally, but rainfed areas produce most food for poor communities in developing countries. Although irrigated production has made a higher contribution to Indian food production (especially during the Green Revolution), rainfed agriculture still produces about 60% of total cereals and plays an important role.

In this context, it is imperative to focus on rainfed agriculture in order to make the agriculture sector sustainable and resistant to climate change.

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5G Leap For Tomorrow

*This editorial is based on the article **India's 5G leap is about powering tomorrow** which was published in The Hindu on 05/11/2021. It talks about the potential of 5G technology and suggests a way forward to deal with the challenges associated with the deployment of the technology.*

Tags: Science & Technology, GS Paper - 3, Growth & Development, IT & Computers, Indigenization of Technology, Scientific Innovations & Discoveries

The fifth generation mobile network, or 5G, is the next level of mobile network that will shape the **Fourth Industrial Revolution**, or Industrial 4.0, quality of service delivery, innovation, etc. by facilitating smarter and developing societies.

Commercial 5G networks began to be deployed in 2020 and are expected to reach 12% of world mobile connections (1.1 billion) and generate revenues up to U.S.$1.3 trillion by 2025 for operators.

The technology that 5G uses will improve data transfer speed at unexpected higher levels — almost 100 times more — and reduce latency times helping mission-critical services. Thus, 5G is essential but India needs to look if it is ready for the deployment of the technology.

Potential

➢ The new generation mobile network has the transformative potential to provide a wide range of benefits to the Indian economy, which when enhanced with artificial intelligence provides a new dimension to connected and autonomous systems.

➢ Its use is a chance for Indian policy-makers to **educate and empower citizens and businesses, and transform existing cities** into smart and innovative cities.

➢ **Socio-economic Benefits**: This may allow citizens and communities to get socio-economic benefits and comforts delivered by a well-advanced, more data-intensive, digital economy.

○ Broadly speaking, the uses of 5G in India may encompass enhanced outdoor and indoor broadband, the **Internet of things**, **smart cities**, **smart agriculture**, energy monitoring, remote monitoring, smart grids, telehealth, industrial automation, remote patient monitoring and industrial automation to name some of the areas.

○ There is great potential for India to move to an advanced digital revolution.

Issues Associated

➢ **India as a Late Adopter:** Countries in the Asia-Pacific region, including India, Bangladesh and Indonesia

are late in adopting 5G technology, hence, will get insignificant revenue from the service.

- ○ For the late adopters the 5G mobile service revenues are not expected over the next 12-18 months.

➢ **Lesser Government Subsidies:** A low likelihood of government subsidies is expected, given the history of high reserve prices set by the governments for spectrum auctions amid **ongoing fiscal deficits**.

➢ **Digital Divide:** 5G will not bridge the **digital divide among the rural and urban areas** in the short term, rather increase it as the business case of 5G even in urban areas does not have maximum accessibility.

- ○ Therefore, it will not be easily available in rural areas too.

➢ **5G, A Niche Service:** 5G will be a niche service unlike 3g and 4g which were pervasive services. It will get intensified over a comparatively longer period of time.

- ○ The rollout of 5G technology will be different from the one seen in 4g; it will be introduced in specific sectors and areas.

➢ **Inadequate Accessibility of Previous Technology:** The consumers are still grappling with basic network issues like call drops and interrupted data services.

- ○ There are still areas where 4G networks have not stabilised causing frequent disruptions in internet services.
- ○ It is important to meet the quality of service parameters of existing 4G networks before embarking on a new 5G platform.

➢ **Enabling Critical Infrastructures:** 5G will require a fundamental change to the core architecture of the communication system. The major flaw of data transfer using 5G is that it can't carry data over longer distances. Hence, even 5G technology needs to be augmented to enable infrastructure.

➢ **Financial Liability on Consumers:** For transition from 4G to 5G technology, one has to upgrade to the latest cellular technology, thereby creating financial liability on consumers.

Way Forward

➢ **Analysis of Existing Infrastructure and Capacity:** The immediate priority for India will be in identifying end users and population to be covered, analysis of the existing network and operators, identification of cities for the 5G roll out, working out an investment model, and minimisation of the digital risk and pricing based on the externalities and usage of various sectors.

- ○ The deployment of 5G in India needs to be carefully planned after a **cost benefit analysis** by independent experts which will create a level-

playing field through market mechanisms such as facilitating, simulating, auctioning, ensuring competition, functioning markets, etc.

➢ **Sector-friendly Steps:** As the deployment of 5G network is expensive, both the Central and State governments may need to consider measures which stimulate fibre investment, attract investment through public private partnerships (PPPs) and facilitate investment funds on a nominal interest basis.

- ○ Allowing 100% **foreign direct investment** in the telecom sector under the automatic route along with other policy reforms augurs well for the sector to attract investment. Implementation of 5G requires huge investment and the relief package is a welcome step.

➢ **Tax issues too:** The Government needs to address information asymmetry and negative externalities through laws and regulations/taxes and subsidies.

- ○ The deployment of 5G technology will also need the right of access to government infrastructure such as traffic lights, lamp posts, etc. where wireless operators can deploy electronic small cell apparatus.
- ○ At the same time, reasonable fees may be charged by State and local governments to operators for affordable deployment of 5G equipment.
- ○ Further, removing the tax burden for deploying fibre networks reduces associated costs, thereby promoting investment as was done by the Singapore government, could help in the smooth deployment of fibre in India.

➢ **Bridging the Rural-urban Gap:** 5G can be deployed at different band spectrums and at the low band spectrum, the range is much longer which is helpful for the rural areas.

➢ **Government's Assistance:** The government has complete control over the inputs. One of the key inputs of 5G is the band spectrum.

- ○ By managing the design of the spectrums, the government can control the price to be paid by the people.
- ○ The government shall support the telecom companies to roll out networks which are sustainable and affordable for the public.

➢ **Tackling the Spectrum Pricing Issue:** The government in recent times, has had two failed auctions. The latter failed to attract any bids in the 5G spectrum.

- ○ The current proposals for the reserve price clearly suggest the need to change the prices in order to conduct a successful auction.
- ○ The pricing will have to be worked out keeping in mind the financial stress in the sector and affordability of services.

- ➤ **Enabling the Manufacturing Sector in India:** As 5G starts taking shape in India, it is important to strengthen its domestic telecommunication manufacturing market so that it is not only the users of 5G in India, but also the manufacturers and providers of these technologies who will be able to make a mark in the global arena
- ➤ **Viable Technology from Consumers' Perspective:** For widespread 5G deployment, it needs to become financially viable otherwise rural integration will remain a pipe dream.
- ➤ Also, the **5G technology** has to be viable to the telecom operators too.

Conclusion

As India has already witnessed digital revolution even in its remotest areas due to cost-effective 4G technology, the use of 5G can play a vital role in enhancing this sector and also facilitating India's goal to emerge as a manufacturing and innovation hub. The negative implication of 5G is furthering the 'digital divide'. Therefore, Government policies should also focus on affordable coverage too.

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Issue of Bail Box

*This editorial is based on the article **What we need to fix our judicial system** which was published in The Indian Express on 06/11/2021. It talks about the issue regarding the implementation of bail plea and use of technology in the criminal justice system.*

Tags: Governance, GS Paper - 2, Judiciary, E-Governance

Recently the Indian public has observed with interest the criminal proceedings that followed the arrest of Aryan Khan, son of Shah Rukh Khan. When the Bombay High Court finally granted bail to Aryan, millions of Indians learnt that grant of bail by a court does not automatically entitle the accused to an immediate release, unless the bail order is deposited in a physical letterbox installed outside the Arthur Road prison.

The box is opened four times a day and Khan's lawyers missed the last deadline because of which his son had to spend an extra night in jail. People were astonished to learn that a **"bail box"** can stand between jail and the freedom of an Indian citizen.

In this context there is a need to relook at the rules and criminal justice system and adoption of technology in the court system.

Initiatives Taken

- ➤ Justice DY Chandrachud, who heads the **e-Committee of the Supreme Court**, commented at a public event that the delay in communicating bail orders has to be addressed on a war footing.
- ➤ In this regard, the Supreme court judges recently had taken suo moto cognisance of the issue of non-release of prisoners after grant of bail and directed the creation of **FASTER (Fast and Secured Transmission of Electronic Records) System**, which would transmit **e-authenticated copies of the interim orders**, stay orders, bail orders and record of proceedings to the duty holders.
- ➤ The court was entirely silent on the fact that the Phase II document for the e-courts project, published in 2014, had announced an ambitious but unfulfilled plan to allow for the transmission of information between key institutions in the criminal justice system.
- ➤ The "**bail-jail**" connectivity issue in this case is but a symptom of a much deeper problem with the structure, management and accountability of the e-Committee, which is responsible for steering the e-courts project.

Associated Issues With e-Courts Project

- ➤ A budget of Rs. 935 crore and Rs. 1,670 crore was approved by the government for Phase I and II of the project, respectively, and the e-Committee, headed by a Supreme Court judge, decides how to spend it. Yet, there is relatively little to show for all this money.
- ➤ Many courts do have computers and it is easier to get case information for ordinary citizens but why is it that a basic functionality, like electronic transmission of orders between the courts and the prisons, escaped the attention of the e-Committee, despite being mentioned in its own vision documents
- ➤ This could be because the **e-Committee is not accountable to anybody**. Neither the **Comptroller Auditor General (CAG) nor the Public Accounts Committee (PAC)** of the Lok Sabha has reviewed its handling of the e-courts project, despite the substantial expenditure of public funds.
- ➤ The Department of Justice (DoJ), which works under the Ministry of Law and Justice, after much pressure from the Parliamentary Standing Committee on Law and Justice, commissioned two timid, if not limited, evaluations of the project.
- ➤ A project as complex as this should, at the very least, be subject to public review or a performance audit. These are, after all, the basics of public accountability and project management.

Issues of Using Technology in the Judiciary

➢ **Increase in the Cost:** e-Courts will also prove to be cost-intensive as setting up state of the art e-courts will require the deployment of new-age technology.

➢ **Hacking and cybersecurity**: On the top of technology, cyber-security will be a huge concern too. The government has initiated remedial steps to address this problem and formulated the Cyber Security Strategy but it is more on the side of prescribed guidelines alone. The practical and actual implementation of the same remains to be seen.

➢ **Infrastructure:** Challenges can erupt due to insufficient infrastructure and non-availability of electricity and internet connectivity in most of the Talukas/villages.

  ○ Electricity connection is a must along with internet connectivity and computers to ensure justice reaches every section equally.

➢ **Maintaining e-courts record:** The paralegal staff is not well equipped and trained to effectively handle document or record evidence, and make them readily accessible to the litigant, to the council as well as to the court.

➢ Other issues might involve the litigant's lack of confidence in the process due to lack of proximity.

Way Forward

➢ **Address Uneven Digital Access:** While mobile phones are widely owned and used, access to the Internet remains limited to urban users.

➢ **Infrastructure Deficit:** Open court is a cardinal principle in the delivery of justice. The question of public access cannot be pushed to the sidelines but must be a central consideration.

  ○ The shortage of technical infrastructure has too often meant that access to online hearings is curtailed.

➢ **Filling Up Vacancies:** Just as doctors cannot be replaced by chatbots, technology, no matter how advanced, cannot be a substitute for judges of whom there remains a big shortfall.

  ○ The India Justice Report 2020 pegs vacancies in the High Court at 38% (2018-19) and in lower courts at 22% for the same period.

  ○ More than four out of every 10 posts of High Court judges remain vacant as of August 2021.

➢ **Accountability of Judges:** The solution lies in demanding accountability from judges who insist on running administratively-complex projects (like e-courts) for which they are not trained and for which they lack the required skills

➢ One aspect that needs to be focussed on is the **deployment of a robust security system** that provides secure access to case information for appropriate parties. The security of e-courts infrastructure and system is of paramount importance.

➢ Also, a **user-friendly e-courts mechanism**, which is simple and easily accessible by the common public will encourage litigants to use such facilities in India.

Conclusion

It could be the opportune time for making lasting changes that could transform the creaking justice delivery system in India.

But an over-reliance on technology is not a panacea to all the ills plaguing the courts and if done without forethought, could become counterproductive.

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MGNREGA Delay in Payments

*This editorial is based on the article **The long road to timely MGNREGA payments** which was published in The Hindu on 08/11/2021. It talks about the issues of implementation of MGNREGA and the way forward to deal with the issues.*

Tags: Social Justice, GS Paper - 2, Issues Relating to Development, Government Policies & Interventions

The **People's Action for Employment Guarantee (PAEG)** recently released a tracker with important metrics on **Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)** implementation. It showed that funds allocation this financial year (FY 2021) is 34% lower than the revised budget allocation of last year. And this year's funds have been exhausted.

Moreover, there is a pending arrears of Rs. 17,543 crore from previous years. In a welcome move since the media reports, the Chief Ministers of Odisha and Tamil Nadu wrote to the Prime Minister seeking additional funds for MGNREGA.

In the light of this, there is a need to review the working of MGNREGA and analyse the issues associated with its implementation.

Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)

➢ MGNREGA is one of the largest work guarantee programmes in the world.

➢ **Objective:** 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.

➤ **Legal Right to Work:** Unlike earlier employment guarantee schemes, the act 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**.

➤ **Demand-Driven Scheme**: The most important part of MGNREGA's design is its legally-backed guarantee for any rural adult to get work within 15 days of demanding it, failing which an 'unemployment allowance' must be given.

   ○ This demand-driven scheme enables the self-selection of workers.

➤ **Decentralised planning:** There is an emphasis on strengthening the process of decentralisation by giving a significant role in **Panchayati Raj Institutions (PRIs)** in planning and implementing these works.

   ○ The act mandates Gram sabhas to recommend the works that are to be undertaken and at least 50% of the works must be executed by them.

Issues Associated with Implementation of Scheme

➤ **Delay and Insufficiency in Funds Dispersal**: Most states have failed to disburse wages within 15 days as mandated by MGNREGA. In addition, workers are not compensated for a delay in payment of wages.

   ○ This has turned the scheme into a supply-based programme and subsequently, workers had begun to lose interest in working under it.

   ○ There is ample evidence by now, including an admission by the Ministry of Finance, that delays in wage payments are a consequence of insufficient funds.

➤ **Caste Based Segregation:** There were significant variations in delays by caste. While 46% of payments to SC workers and 37% for ST workers were completed in the mandated seven-day period, it was a dismal 26% for non-SC/ST workers.

   ○ The negative impact of caste-based segregation was felt acutely in poorer States such as Madhya Pradesh, Jharkhand, Odisha and West Bengal.

➤ **Ridiculously Low Wage Rate:** Currently, the MNREGA wage rates of at least 17 of the 21 major states are even lower than the state minimum wage for agriculture. The shortfall is in the range of 2-33% of the minimum wage.

➤ **Ineffective Role of PRI:** With very little autonomy, gram panchayats are not able to implement this act in an effective and efficient manner.

➤ **Large Number of Incomplete works:** There has been a delay in the completion of works under MGNREGA and inspection of projects has been irregular. Also, there is an issue of quality of work and asset creation under MGNREGA.

➤ **Fabrication of Job cards:** There are several issues related to the existence of fake job cards, the inclusion of fictitious names, missing entries and delays in making entries in job cards.

Way Forward

➤ **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 must take the initiative to implement the scheme and must not block the work.

➤ **Gender Wage Gap:** Some discrepancies in the payouts need to be addressed, too. Women in the sector, on an average, earn 22.24% less than their male counterparts.

➤ **Short-Term Measures:**

   ○ State governments must ensure that public work gets started in every village. Workers turning up at the worksite should be provided work immediately, without much delay.

   ○ Local bodies must proactively reach out to returned and quarantined migrant workers and help those in need to get job cards.

   ○ Adequate facilities such as soap, water, and masks for workers must be provided free of cost, at the worksite.

MGNREGs CONTRBUTION TO SUSTAINABLE DEVELOPMENT GOALS (SDGs)

○ At this time, there is a need to speed up the payments to MGNREGA workers. Preferably, cash needs to reach the workers easily and efficiently.

➢ **Long-Term Measures:**

○ The pandemic has demonstrated the importance of decentralised governance.

● **Gram panchayats** need to be provided with adequate resources, powers, and responsibilities to sanction works, provide work on demand, and authorise wage payments to ensure there are no delays in payments.

○ MGNREGA should be converged with other schemes of the government. For example, **Green India initiative**, Swachh Bharat Abhiyan etc.

○ **Social Auditing** creates accountability of performance, especially towards immediate stakeholders.

● Hence, there is a need to create awareness regarding government policies and measures in rural areas.

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Approach Towards Eurasia

This article is based on "The Eurasia Opportunity" which was published in the Indian Express on 10/11/2021. It talks about India's need for a new, integrated approach towards Eurasia.

Tags: International Relations, GS Paper 2, India and its Neighbourhood, Effect of Policies & Politics of Countries on India's Interests

New Delhi's intensive diplomacy in recent years has led to **India's Indo-Pacific strategy** acquiring political and institutional traction. However, the Indo-Pacific is only about maritime geopolitics and **India must equally focus on its continental strategy too.**

The time has come for India to begin a strategic conversation with Europe on **Eurasian security** for Eurasia plays a key role in the recalibration of India's continental strategy.

India must now **devote similar energy (as Indo-Pacific) to the development of a "Eurasian" policy** as it will be a natural complement to the fledgeling engagement between **India and Europe on the Indo-Pacific.**

All About Eurasia

➢ **What Comprises Eurasia:** Geographically, Eurasia is a **tectonic plate** that **lies under much of Europe and Asia.** However, when it comes to the political boundaries, there is **no shared international understanding** of what constitutes the region.

○ For Delhi, it makes sense to use the broadest possible definition of Eurasia in reimagining the region.

➢ **India-Eurasia Historical Ties:** There are references to India's ancient civilisational links with Eurasia; the **collaboration between the Sangha and the Shreni** in the Buddhist era produced lasting interaction between the two regions.

○ The **arrival of the British in India** and the **consolidation of the Raj** as a territorial entity in the subcontinent saw the outward projection of India's influence into Central Asia.

● **British rivalry with Russia** during the **Great Game** in the 19th and early 20th centuries put Eurasian geopolitics at the top of undivided India's security agenda.

○ The **Partition** of the subcontinent and **India's physical disconnection** from inner Asia, however, cut India off from Eurasian geopolitics.

● Overcoming the **geographic limitation represented by Pakistan** is central to an expanded Indian role in Eurasian geopolitics.

➢ **India's Eurasian Strategy:** The recently held **Delhi Regional Security Dialogue on Afghanistan** is a part of **developing a Eurasian strategy.** India's **National Security Advisor** invited his counterparts from Pakistan, Iran, Central Asia, Russia, and China to join this discussion.

○ However, **Pakistan and China skipped the meeting.** Pakistan's reluctance to engage with India on Afghanistan reveals **Delhi's persisting problem with Islamabad** in shaping a new Eurasian strategy.

○ It also **reinforces the urgency** of an Indian strategy to deal with Eurasia.

➢ **USA's Interests in Eurasia:** Washington's Indo-Pacific strategy does not seem to account adequately for the rise of Eurasia.

○ **US' interests** in Asia **lie primarily in the western Pacific** and the **South China Sea**. Both regions are far from the core of the Eurasian theater.

○ However, amidst mounting challenges from China in the Indo-Pacific maritime domain, Washington has begun to rethink its strategic commitments to Eurasia.

● The **USA and EU are engaging in talks** about rebalancing the trans-Atlantic responsibilities for Europe's collective defence.

➢ **China, A Major Player in Eurasia:** The recent most important development in Eurasia is the dramatic rise of **China and its growing strategic assertiveness,** expanding economic power and rising political influence.

○ Beijing's approach to the long and **disputed border with Bhutan** and **India**, its **quest for a security presence in Tajikistan**, the active search for a **larger role in Afghanistan**, and a **greater say in the affairs of the broader sub-Himalayan region** speak volume about its growing influence.

● As the world's second-largest economy, **China's commercial influence is felt across the world** and the **physical proximity multiplies China's economic impact** on the inner Asian regions.

○ The expansion of **China's Belt and Road initiative** across central Asia and Russia, onto the shores of the Atlantic, and Europe's growing economic interdependence with China have added to Beijing's powerful leverages in Eurasia.

● These leverages were reinforced by a **deepening alliance with Russia** that straddles the Eurasian heartland.

Way Forward

➢ **Putting Europe Back into India's Continental Calculus:** Before independence, many **Indian nationalists turned to Europe to secure the nation's liberation** from British colonialism.

○ However, post-independence, Delhi's drift towards an alliance with Moscow saw India neglect Europe's strategic significance.

○ As India now steps up its engagement with Europe, the time has come for it to **begin a strategic conversation with Brussels** (often dubbed as the **capital city of the EU**) on Eurasian security.

➢ **Greater Engagement with EU and NATO Members:** India's Eurasian policy **must necessarily involve greater engagement with both the European Union** and the **North Atlantic Treaty Organisation**.

○ A **dedicated military office in the Indian mission to Brussels**, where both EU and NATO are headquartered, will be a crucial step towards a sustained security dialogue with Europe.

➢ **Intensifying India-Russia Dialogues on Eurasian Security:** While Indo-Russian differences on the Indo-Pacific, the **Quad**, China, and the Taliban are real, the two have good reasons to **narrow their differences on Afghanistan and widen cooperation** on continental Eurasian security.

○ Moreover, Russia has cultivated links with the Taliban in recent years. **India would need Russia's support** in any form of direct engagement with the Taliban.

➢ **Geo-Economic Cooperation:** India can **pursue EU countries to engage in Indo-pacific** narrative, geo-economically if not from security prism.

○ It can **mobilise massive economic resources for sustainable development** of regional infrastructure, wield political influence and leverage its significant soft power to shape the Eurasian discourse.

➢ **Substantive Indian Collaboration with Persia and Arabia:** If Persia's (Iran's) location makes it critical for the future of Afghanistan and Central Asia, the religious influence of Arabia is quite consequential in the region.

○ India's **partnerships with Persia and Arabia** are also **critical in overcoming Turkey's alliance with Pakistan** that is hostile to Delhi.

➢ **Integrated Approach in Eurasia:** It will require a response far more nuanced than placing most bets on the Indo-Pacific.

○ **Bolstering deterrence** and simultaneously walking the talk on **multi-alignment** may be the answer which will require re-centering Eurasia by **repairing fraying relations with Iran**, striking a hard g**eopolitical bargain with Russia** and perhaps even the unspeakable, **outreach toward Pakistan.**

Conclusion

India, over the decades, has dealt with Eurasia's constituent spaces separately but what Delhi now **needs is an integrated approach to set a strong foothold in Eurasia.**

➢ India will surely encounter many contradictions in its path between and among the USA, Europe, Russia, China, Iran, and the Arab Gulf but it should not let these contradictions hold India back.

➢ The **key for India lies in greater strategic activism** that opens opportunities in all directions in Eurasia.

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Quantifiable Reservation Data

This editorial is based on the article "No quota without quantifiable data" which was published in The Hindu on 09/11/2021. It talks about the issues associated with the reservation implementation and the issue of lack of existing data.

Tags: Governance, GS Paper - 2, Indian Constitution, Judiciary, Issues Related to SCs & STs

The Madras High Court's recent verdict of quashing the 10.5% special reservation for Vanniyakula Kshatriyas within the overall 20% quota for **Most Backward Classes (MBC)** and **Denotified Communities (DNC)** has again highlighted the importance of quantifiable data as a prerequisite for reservation in education and employment.

In 2020, the Tamil Nadu government passed the special quota law which was challenged before the High Court, which held it unconstitutional for a host of reasons.

Even though the Court described the submission that the law was enacted only on the basis of "adequate authenticated data on population" of the MBCs and DNCs enumerated by the **second Backward Classes (BC) Commission** as the "main thrust" of arguments of Tamil Nadu's Advocate General, it concluded that "**there is no data, much less quantifiable data, available with the State government before the introduction**" of the law.

In this context there is a need to relook into the nuances of reservation and lack of existing data.

Need For Reservation

➢ To **correct the historical injustice** faced by backward castes in the country.

➢ To provide **a level playing field for backward sections** as they can not compete with those who have had the access of resources and means for centuries.

➢ To **ensure adequate representation** of backward classes in the services under the State.

➢ For **advancement of backward classes**.

➢ To **ensure equality** as the basis of meritocracy i.e all people must be brought to the same level before judging them on the basis of merit.

Pros of Reservation

➢ It **ensures diversity** in advanced education, equality in the workplace and offers protection from hatred.

➢ It helps in the **emancipation of disadvantaged** individuals and thereby promotes equality for all.

➢ It breaks stereotypes regarding caste, religion, and ethnicity.

➢ It increases social mobility.

➢ It is needed to compensate for centuries of oppression and discrimination and provides level-playing fields.

➢ It seeks to bring equity in society by addressing 'graded inequalities'.

Cons of Reservation

➢ There are concerns that lead to **erosion of meritocracy.**

➢ It can still reinforce stereotypes as it demeans the achievements of marginalized sections.

  ○ People coming under the **ambit of reservation**, their success is labelled as a result of Reservation, instead of their capabilities and hard work.

➢ There are concerns that reservation can serve as a medium for reverse discrimination.

  ○ **Reverse discrimination** is discrimination against members of a dominant or majority group, in favour of members of a minority or historically disadvantaged group.

➢ Due to **vote bank politics**, even after discrimination issues have been diminishing, it is difficult to withdraw the reservation.

Associated Issue

➢ **No Exhaustive Study:** It is a fact that no exhaustive study has been done to collect quantifiable data on the representation of different communities in education and employment since the second BC Commission (Tamil Nadu), popularly known after its chairman, J.A. Ambasankar, carried out one during its existence (1982-1985).

➢ **Internal Reservation:** The need for internal reservation has been felt for more than one reason. It has been found certain sections of the communities are more backward than others.

  ○ The situation has got compounded in the absence of application of the creamy layer rule in reservation.

Way Forward

➢ **Reviewing the 1992 Judgement:** The Supreme Court shall go a step further and look into the Indra Sawhney case to clear the issues that have arised due to various judgements given by the high courts.

  ○ The reservation facility should be aimed at improving the socio-economic conditions of the marginalised in keeping with their standing in the caste-based census.

➢ **Maintaining the Federal Structure:** While deciding the reservation issue, it is also important to take into account whether the states providing reservations to different communities are maintaining the federal structure of the government or destroying it.

  ○ Under Article 341 and **Article 342,** declaring a particular community as Scheduled Caste (SC) or Scheduled Tribe (ST) is the power that vests in parliament.

➢ **Balancing the Reservation and Merit:** While giving reservation to the communities, the efficiency of the administration has to be looked upon too.

  ○ Reservation beyond the limit will lead to the ignorance of the merit, which will disturb the entire administration.

  ○ The sole purpose of reservation is to address the issue of historical wrong done to the less-advantaged communities but the merit beyond a certain point must not be neglected too.

➢ A strong political will is indispensable to find an equilibrium between justice to the backwards, equity for the forwards and efficiency for the entire system.

Conclusion

Reservation provides appropriate **positive discrimination** for the benefit of the socially and educationally backward sections of the society. It helps in ensuring that the most downtrodden members of the society get reservation benefits.

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Climate Goals and Vehicular Emissions

This article is based on ***"The Fatigue of Hearing About Climate Goals Minus Roadmaps"*** *which was published in Livemint on 10/11/2021. It talks about the major role of vehicular emissions in global GHG emissions and how the negligence of these emissions at national and international levels is worsening the climate change scenario.*

Tags: Biodiversity & Environment, GS Paper 3, Conservation, Environmental Pollution & Degradation

As the **summit in Glasgow** continues, the **inability of the most important players** to look beyond their individual goals shows why the world has made so little progress on one of the **biggest crises of the time; climate change.**

Melting ice caps, floods and loss of lives have become a norm and despite billions of dollars of commitments and technological innovations, **no significant progress has been made.**

With reference to the transport sector, one of the major sector-wise global carbon emitters, **little has been pledged to muzzle the exhaust of large car markets.**

Decarbonisation of the transport sector by mid-century will require **a holistic and integrated approach.** Leveraging technology to create a cleaner road sector is essential, but it needs to be combined with other interventions too.

Global Emissions and Transport Sector

➢ **The Plight of Increasing Temperatures:** Even the **most basic objectives are out of reach right now** including the **Paris Agreement**'s goal of limiting global temperature rise to below 1.5°C and hitting carbon neutrality by 2050.
  ○ The UN Secretary-General warned that the planet was on a "catastrophic pathway" to 2.7°C of heating, breaking the promise made six years ago.

➢ **Global Emissions From Transport Sector:** The transport sector **accounts for a quarter of total emissions**, out of which **road transport accounts for three-quarters** of transport emissions (and 15% of total global CO_2 emissions).
  ○ Passenger vehicles are the largest chunk of this, releasing about 45% of CO_2.
  ○ If the conditions prevail, **annual GHG emissions in 2050 will be 90% higher** than those of 2020.

➢ **India-Specific Emissions:** India's **transport sector contributes to 12% of the country's GHG emissions** with the railways accounting for about 4% of these emissions. These emissions have more than **tripled since 1990.**
  ○ According to the latest estimates, transport is also among the **fastest-growing emitters.**
  ○ The Global Carbon Project (a private organisation) reports that India's carbon emissions are rising more than two times as fast as the global rise in 2018.

➢ **India's Recent Initiatives In-Line:**
  ○ In August, 2021 the **Forum for Decarbonizing Transport** was launched as a part of the **NDC-TIA Project** for developing a coherent strategy for decarbonising transport in the region.
  ○ The **Indian Railways** also announced that it is **likely to become world's first 'net-zero' carbon emitter** by 2030.
  ○ The **FAME Scheme** was launched as a part of the **National Electric Mobility Mission Plan** whose main thrust is to encourage electric vehicles by providing subsidies.
  ○ Under the **PLI Scheme**, around Rs.18,000 crore was approved for **development of advanced cell chemistry** battery storage manufacturing.
    ● These incentives aim to encourage indigenous development of **Electric Vehicles (EVs)** so as to bring down their upfront cost.

Challenges Associated

➢ **No Commitments From Largest Emitters in Automobile Industry:** The **world's biggest car markets and automakers**; Volkswagen, BMW and Toyota Motor are **unlikely to get on board with an emissions pledge of COP26** climate summit because their respective governments are reluctant.
  ○ Seven out of ten of the biggest automobile groups don't even have plans to do this before 2035.
  ○ As per **Greenpeace** (an NGO), a detailed evaluation of the commitments and actions showed that the automakers (representing 80% of the market) weren't doing nearly enough.

➢ **Lack of Accountability by Governments:** Governments of three of the world's biggest automobile markets, the **US, China, and Japan, abstained from taking the pledge.**

○ However, India (4th largest auto market in the world) joined the coalition along with the UK, Canada, the Netherlands, Norway, Poland, and Sweden.

○ The three countries avoiding these commitments **account for around 50% of the world's CO$_2$** from burning fossil fuels.

➢ **Under-Reporting of Emissions:** Several countries under-report their greenhouse gas emissions to the UN.

○ The **gap ranges from at least 8.5 billion to as high as 13.3 billion tonnes** a year; enough to have a meaningful impact on the planet's temperature.

○ It implies that the problem is not even being measured correctly, and the world is in **constant danger of chasing a moving (or even misguided) goal** that **may do little to mitigate the damage** already done.

Way Forward

➢ **Decarbonising Road Transportation:** According to Greenpeace, to reach targets, road transportation needs to be entirely decarbonized by 2050.

○ Companies need to **phase out internal combustion engine vehicles** over the next decade to get there.

○ **Financial Assistance to Policymakers:** A Smaller number of policymakers are looking for focused solutions to immediate problems. Those in progress are not getting enough attention or money.

○ The days of overarching goals are over and there is a **need for clearer outcomes and targets that address specific problems**, with a defined way to finance them.

○ **Public capital must guide private money to priority areas.**

➢ **EVs as Alternatives:** It is equally important to take into account the issues faced in the manufacturing and adoption of Electric Vehicles (EVs).

○ Getting a better handle on what automakers' issues are whether it's **cost, technology, manufacturing at scale or margins** would be a good starting point.

○ India has a great opportunity to decarbonize its urban transport sector. **Promotion of walking, cycling and public transport coupled with electrification of motor vehicles** should be the right strategy for the country.

● To leverage and streamline EVs across India, there is a need to create a **favourable ecosystem for different stakeholders.**

➢ **Changing Approach Towards Transport Policies:** A scenario-based modelling approach for formulating transport policies would be ideal. Through such modelling, the government can **assess how GHG emissions reductions could be achieved** through a feasible set of scenarios rather than by applying a one-size-fits-all policy decision.

○ Using such tools and scenario building exercises, such a framework can be developed which not only **gives policymakers a wealth of data**, but also **allows for different policy options to be tested** and their future impact predicted and quantified, thus allowing for the optimal one to be chosen.

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Towards Formalisation of Informal Sector

*This article is based on **"The High Cost of India's Illusive Quest for Formalisation"** which was published in Livemint on 12/11/2021. It talks about the latest estimates describing shrinkage in the informal sector of the Indian economy and what needs to be done to facilitate formalisation in the economy.*

Tags: Indian Economy, GS Paper 1, Population & Associated Issues, GS Paper 3, Employment, Growth & Development, Inclusive Growth

Be it the **demonetization** imposed on the country, the roll-out of India's **Goods And Services Tax (GST)** or the outbreak of **Covid-19 Pandemic**, much of the **brunt was felt by the informal sector,** which largely deals in cash and operates mostly outside the regulatory ambit. The **net beneficiary was the protected organized sector.**

The rising fortunes of the organized sector, driven by galloping profits at a time when casual wages in rural areas show a real decline, are a reflection of how **two-sided the Indian economy has become.**

Being the primary provider of jobs to an overwhelming proportion of Indian workers, the informal sector in its current form is in **an urgent need to undergo effective formalisation in the least possible time.**

India's Informal Sector

➢ **Informal Sector, The Worst Sufferer:** Following demonetisation, a disproportionately higher number of jobs were created in rural India.

○ The fact is not as positive as it seems as **wages are 2.5 times lower in rural than in urban India.** As a result, **overall wage levels and GDP declined** over the next few years.

➢ Informal sector workers suffered far more from the **national lockdown in 2020** than their formal sector counterparts.

○ With an inadequate safety net, there were painful accounts of **displaced informal workers** trying to get back to their rural homes.

➤ **Decline in Wages of Non-Agricultural Workers:** As per the latest data from the Labour Bureau for August 2021, the **real wages of non-agricultural workers have declined 1.6% per annum** in the last two years.

○ For **agricultural** workers, they **fell 0.4% per year.**

➤ **Shrinkage of Informal Sector in the Economy:** A recently released report-**'Ecowrap'** by the State Bank of India (SBI) research team claimed that the **informal sector's share in the overall economy has shrunk** from 52% in 2017-18 to 15- 20%.

○ The **share of our informal sector in Gross Value Added (GVA)** stood at **44%** in 2019-20 which was **marginally higher than in 2017-18.**

○ As per the Ecowrap report, **construction & accommodation** and **food services & trade** are the two sectors that **witnessed the sharpest declines** in their shares of the informal economy.

Issue Associated

➤ **Absence of Indicators for Informal Sectors:** The **lack of high-frequency real-time economic indicators** makes it hard to track India's large informal sector, which employs around 80% of the labour force and produces about 50% of GDP.

➤ **Mere Registration in Official Records is not Enough:** The registration of workers on the **E-Shram portal** is no indicator of formalization of jobs unless s/heis able to get all the social security benefits listed on the portal as a matter of right.

○ **Increasing digitalization and registration** in official records is **neither a necessary nor sufficient condition** for any enterprise/worker to be classified as formal.

➤ **Insufficient Wages of Registered Informal Workers:** 92% of the **workers registered on E-shram have monthly incomes of under ₹10,000** which is lower than the minimum wages of unskilled manual workers in most of the states.

➤ **Ambiguity Regarding the Standards of Improved Economy:** The real issue is whether formalization is necessarily a measure of improvement in the economy or the material condition of workers.

○ However, on both counts, the **economy has performed poorly with a worsening employment situation,** decline in incomes and **setbac**

○ **ks on human-development indicators** such as nutrition.

Way Forward

➤ **Responsibility of Policymakers:** It is important to recognize the importance of the informal sector which is clearly not limited to providing livelihoods to a significant majority of the country's population.

○ The **policymakers need to define the sector appropriately**, **provide labour legislation** to protect employment, provide **adequate wages** and treat them on par with the formal sector.

○ Moreover there is a **need to create an institutional regulatory framework** to improve the working conditions and well- being of those engaged in the informal sector.

➤ **Understanding Forced and Natural Formalisation:** There is a need to understand the difference between "forced" and "natural" formalisation.

○ Formalisation that comes only on the back of external pressure or leads to deep distress in the informal sector, may not be sustainable.

○ By contrast, **formalisation that happens on the back of policy changes** that **help small and informal firms grow** over time into medium or larger formal sector firms is **more sustainable**.

➤ **Providing Security to Informal Sector:** What is needed now is **protection for informal sector workers via social welfare schemes** so that the disruption they are facing does not lead to a permanent fall in demand.

○ There is a case for remaining generous with programmes such as the **MGNREGA scheme** for longer.

➤ **Establishing an Urban Social Welfare Structure:** India doesn't have an equivalent urban social welfare scheme which provides more of a cause to **set up a more permanent direct urban social welfare structure.**

○ Promotion of reforms that assist small businesses in growth are also critical. For instance, lowering the regulatory burden associated with growing firms.

Conclusion

➤ Adhering to the fact that the informal sector provides livelihood to the major share of the working population, stricter and more timely measures are required to be taken for the upliftment of the people engaged in it with regard to working conditions, job opportunities, wages and maintaining their database.

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COP26 — Achievements and Scope

*This article is based on **"The Glasgow Summit on Climate Change: What Has It Achieved"** which was published in Livemint on 14/11/2021. It talks about the achievements*

of the UNFCCC COP26 Summit and the scope of improvement in climate change mitigation.

The recently held **COP26** was widely hyped as the last chance to save the planet. The meeting began with a bang, but ended on a more modest note. Notwithstanding, it did make some progress even if much less than was needed.

The summit had to deal with the disturbing prospect that the world was set to reach nearly +3°C by the end of the century, above the **2015 Paris Agreement** target of **"well below 2°C"** and **ideally 1.5°C** above pre-industrial levels.

In this global problem of climate change, a much larger role is yet to be fulfilled by the world's three largest emitters, the developed nations and undoubtedly India.

Minutes of the Meeting: Achievements & Setbacks

➤ **New Global and Country Targets:** The **Glasgow Summit** has **urged countries to consider strengthening their 2030 targets by COP27** to be held in Egypt in 2022.
  ○ The summit targeted global warming not to exceed +1.5°C and **got about 140 countries to announce target dates** for bringing emissions down to **net zero**.
    ● The achievement is significant as in the Paris Agreement, the developing countries did not agree to reduce emissions but just the "emissions-intensity" of GDP.
  ○ India has also joined the consensus and announced its **net-zero target of 2070.**
    ● This is a step ahead from India's past position where it never accepted the need to reduce emissions.

➤ **Glasgow Breakthrough Agenda:** A potentially important development which emerged out of COP26 (but outside the COP process) is the **Glasgow Breakthrough Agenda** endorsed by 42 countries (including India).
  ○ This is **a cooperative effort to accelerate the development and deployment of clean technologies** and sustainable solutions in areas such as clean power, road transport, steel and hydrogen.

➤ **Phasing-Down Coal Consumption:** Coal is the dirtiest of fossil fuels and an early phasing out of coal is clearly desirable. European countries have pushed hard for its phase out; however, developing countries have resisted this.
  ○ A **middle path, as suggested by India**, was referred to at the COP26 calling for a **"phase-down" of coal-based power.**

➤ **Best Case Scenario:** An early assessment by Climate Action Tracker (CAT), an independent organisation, suggests that the targets declared, if fully achieved, **could limit global warming to around +1.8°C.**
  ○ However, it also warns that the targets for 2030 are insufficiently ambitious. Unless significantly tightened, the world is more likely to end up seeing **global temperatures rise by 2.1°C to 2.4°C.**

➤ **Setbacks of the Meeting:**
  ○ **Voluntary Targets:** The targets set at the meeting are voluntary with **no mechanism for enforcement or penalties** for non-compliance. Many **targets are conditional** on availability of adequate financial support.
  ○ **Lack of Specific Details and Actions:** Many countries have **not provided details on specific actions** to be taken which would determine the actual trajectory to net zero which creates uncertainty about what will be achieved.
  ○ **Failure in Securing Climate Finance:** The summit's mild admonition **only urges the developed country** parties to scale up their provision of **climate finance**. It failed to firmly secure funding commitments from developed nations.
  ○ **Unequal Distribution of Carbon Budget:** The world's top three largest emitters (China, USA, Europe) which account for about 30% of the world's population, would take up **78% of the carbon budget.**
    ● China intends to hit peak emissions only by 2030, before going down to net zero in 2060; it would take up 54% of the global carbon budget against a global population share of only 18.7%.
      ■ The US, with 4.2% of the total population, would take up 14.2% of the budget and Europe, with 6.8%, would take up 9.5%.
    ● This problem reflects the fact that focusing on net-zero dates **does not ensure a fair apportioning of the available carbon space** if the initial position in terms of emissions varies so greatly.

Way Forward

➤ **Suggestions for Largest Emitters:** China, instead of increasing emissions up to 2030, as currently declared, may **need to keep them at their current level for a few years** and then go down to net zero by 2050.
  ○ The **US should achieve a sharper reduction in emissions by 2030**, and also advance its net-zero date to 2040.

- ❍ Europe as a whole should **follow the German/ Swedish example and aim at net-zero by 2045.**
  - With this recalibration, the carbon emissions of this group would fall to 32% of the carbon budget, much closer to their population share.
- ➢ **Suggestions for India:** India's 2070 target would take up **18.1% of the carbon space**, which is a little higher than our **population share of 17.7%.**
  - ❍ It should be willing to consider a **modification in its trajectory as part of an agreed global package**, in which other countries also take appropriate action.
- ➢ **Coal-Based Power and India:** India has made **no commitments regarding phasing-down** of coal-based power; however, its **renewable energy goals 2030** are likely to reduce the share of the same from current 72% to about 50% by 2030.
  - ❍ Also, the government shall consider **ordering against establishment of any new coal-based plants** apart from those currently under construction.
  - ❍ What more is needed is a **policy of accelerated retirement of older, inefficient and polluting plants**, provided suitable financing can be obtained.
- ➢ **Encouraging Electric Vehicles (EVs):** India's net-zero by 2070 also requires phasing out petrol and diesel in transport and **shifting to Electric Vehicles (EVs) that use electricity from renewables.**
  - ❍ In order to make the country's entire fleet emissions-free by 2050, the government may consider **announcing against the sale of fossil fuel based vehicles after 2035.**
    - This would give the automotive sector about 15 years to restructure its production.
- ➢ **Need of Policy Changes:** Expanding renewable capacity requires policy action aimed at resolving problems such as **stabilizing intermittent supply from renewables,** building transmission infrastructure, **creating efficient electricity markets** and **fixing the financial weakness of India's discoms.**
  - ❍ These actions are not specified in the **Nationally Determined Contributions** but will have to be built into the domestic policy agenda in the years ahead.

Conclusion

- ➢ The COP26 of Glasgow is a promising start on emissions reduction, however, on the part of global largest emitters, much more is expected to be done.
- ➢ In India's context, it needs to work out a detailed plan of action with reference to phasing-down coal-based power generation and encouraging electric vehicles.

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India and The Rise of Turkism

This article is based on *"Doing Business with Turkey"* *which was published in the Indian Express on 16/11/2021. It talks about Turkey's expanding influence in Eurasian region and the consequences it holds for India.*

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

Internationalism based on religion, region or secular ideologies has always run headlong into resistance from sectarianism and nationalism. However, these calls for regionalism, internationalism as well as religious and ethnic solidarity often end up as instruments for the pursuit of national interest.

At present, the best suited example of playing the internationalist card for national interest is the Turkish President, Recep Tayyip Erdoğan, who seeks to reshape his modern nation with the imprint of its earlier Islamic and military glory.

With Turkish presence gradually becoming dominant in the Arab world and in India's neighbourhood as an ally to China, Pakistan and Afghanistan, it becomes necessary for India to turn the tables and start looking towards Turkey as a possible ally.

Expansion of Turkey's Influence

- ➢ **Origin of Pan-Turkism:** The origin of the ideology of pan-Turkism dates back to the **mid-19th century** when campaigns **for uniting Turkic people in Russia** gained traction.
  - ❍ Its geographic scope eventually became much wider, covering the huge spread of Turkic people from the **"Balkans to the Great Wall of China".**
  - ❍ However, in the 20th century, the decline of Turkey began with the integration of Turkic people into other states.
- ➢ **Increasing Influence of Turkey:**
  - ❍ **Economic Influence:** Nearly 5,000 Turkish companies work in Central Asia. Turkish annual trade with the region is around $10 billion.
    - Turkey has also made **impressive progress in building transportation corridors to Central Asia and beyond**, to China, Georgia and Azerbaijan.
  - ❍ **Turkey's Armed Power:** Turkey has stunned much of the world with its **military power projection into the region**; in the **Armenia-Azerbaijan conflict**, Turkish military intervention decisively tilted the war in favour of the latter.

○ **Geopolitical Influence:** For the Central Asian states, living under the shadow of Chinese economic power and Russian military power, **Turkey offers a chance for economic diversification** and greater strategic autonomy.

- Turkey's good relations with both Afghanistan and Pakistan have also given space for Ankara to present itself as a **mediator between the warring South Asian neighbours.**

  ■ Turkey's **"Heart of Asia" conference or the Istanbul Process** has been a major diplomatic vehicle for attempted Afghan reconciliation in the last few years.

○ **The Ambitious Turkey:** Turkey is a NATO member, however, the fact has not stopped the country from **establishing a strategic liaison with Russia.**

- Despite Turkey's criticism of **China's repression of Turkic Uighurs** in Xinjiang, the former shares deep economic collaboration with Beijing.

- Moreover, Ankara's ambitious pursuit of the Islamic world's leadership has not led it to break **diplomatic ties with Israel.**

➤ **Causes of Expanding Turkish Influence:** Over the last three decades, a number of **soft power initiatives** in education, culture, and religion have raised Turkey's profile in Central Asia and generated new bonds with the region's elites.

○ Though, it is in the **domains of hard power; commercial and military** that Turkey's progress has been impressive.

Challenges for India

➤ **Complexes India's Eurasian Policy:** The rise of pan-Turkism is bound to have important consequences for Afghanistan, the Caucasus, Central Asia and, **more broadly on India's Eurasian neighbourhood.**

○ Pan-Turkism certainly adds another layer of complexity to Eurasian geopolitics.

➤ **Different Approach in Global Politics: India's opposition to alliances** and **Turkey's alignments** reflected **divergent international orientations** of Delhi and Ankara after the **Second World War.**

○ The shared secular values between Delhi and Ankara in the pre-Erdogan era were not enough to overcome the strategic differences between the two in the **Cold War.**

○ Moreover, the current **differences between Delhi and Ankara over Kashmir, Pakistan and Afghanistan** are real and serious.

- Turkey's growing role in Afghanistan opens a more difficult phase in relations between Delhi and Ankara.

➤ **Increasing Bilateral Ties with Pakistan:** Turkey's deepening bilateral military-security cooperation with Pakistan made it even harder for Delhi to take a positive view of Ankara.

○ Turkey has become the **most active international supporter of Pakistan** on the Kashmir question.

Way Forward

➤ **Arranging Strategic Dialogues:** The current political divergence only reinforces the case for a **sustained dialogue between the two governments** and the strategic communities of the two countries.

○ Dealing with Turkey must now be an important part of India's foreign and security policy.

➤ **Lessons From Turkey's Geopolitics:** Turkey's own geopolitics offers valuable lessons on how to deal with Ankara; Turkey's enduring enthusiasm for Pakistan does not preclude it from doing business (economic and strategic) with India.

○ India, along with maintaining good ties with Saudi Arabia (who considers itself the leader of the Arab world), can also adopt Turkey's approach of maintaining diplomatic ties with both sides.

➤ **Taking Advantages of Turkey's Politics:** Many Arab leaders reject the policies of the Turkish President that remind them of Ottoman imperialism.

○ They resent his support of groups that seek to overthrow moderate governments in the Middle East. This opens a range of **new opportunities for Indian foreign and security policy in Eurasia.**

Conclusion

➤ Independent India has struggled to develop good relations with Turkey over the decades. However, **a hard-headed approach in Delhi** might now open new possibilities with Ankara.

➤ With Turkey set to play a major role in Afghanistan, **India needs to vigorously challenge the former's positions** where it must, and, at the same time, **prepare for a more intensive bilateral engagement.**

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An Emerging Player in the Indo-Pacific

*This article is based on **"The EU's role in the Indo-Pacific"** which was published in The Hindu on 15/11/2021. It talks about the way ahead for the European Union to set a strong foothold in the Indo-Pacific region with India as an ally against China.*

The world's economic and political centre of gravity has been shifting towards the **Indo-Pacific** for years. The region has **acquired striking salience with the U.S.-China strategic contestation** becoming sharper than before.

Speedy development of the **Quad**, the emergence of **AUKUS partnership** and the emergence of several other minilateral tie-ups themselves provide recognition to the **increasing significance of the Indo-Pacific region.**

With China playing an increasingly dominant role in everything from trade to military power to technology and the **declining American supremacy,** it **becomes crucial for the** European Union **to step-in** whose economic future and geopolitical relevance is inextricably linked to developments in Asia.

What India can do is **welcome the entry of the EU in the region** and **jointly address its common concerns** of increasing competition, power rivalry etc. with the latter.

EU's Emerging Interests in the Indo-Pacific

➢ **Age-Old Connection of Europe and Indo-Pacific:** Europe's Asia-connection is **old, strong and multi-layered.** Asia is viewed and evaluated through national and regional perspectives.
  ○ At least since 2018, countries such as France, the Netherlands, Germany and the U.K. announced their specific policies towards the Indo-Pacific.

➢ **EU's Present Relations with Asia and Pacific:** Brussels sees the EU and the Indo-Pacific as **"natural partner regions".**
  ○ The EU is already a significant player in the Indian Ocean littoral states, the **ASEAN** area and the Pacific Island states.
  ○ **EU's recent Indo-Pacific strategy** also aims to enhance its engagement across a wide spectrum.

➢ **Interests Behind Engagement:** The European Union (EU) is in the process of coping with:
  ○ The **rise of China and other Asian economies**
  ○ The **tensions due to China's aggressiveness** along its periphery
  ○ **Economic consolidation** through the **Regional Comprehensive Economic Partnership**, and the **Comprehensive and Progressive Agreement for Trans-Pacific Partnership**.

➢ **EU's Recent Initiatives for Indo-Pacific:** The announcement by the **Council of the European Union** of its initial policy conclusions in April, 2021 followed by the unveiling of the **EU strategy for cooperation in the Indo-Pacific** in September, 2021 are notable.

➢ **Vision for Indo-Pacific:** EU's future progress in the region is based on the principles of **"rules-based international order"**; **promoting a level-playing field for trade and investment**, **Sustainable Development Goals** & multilateral cooperation; and **protecting human rights** & democracy.
  ○ It also envisages **cooperation in green transition,** ocean governance, **digital governance and partnerships**, connectivity, **security and defence,** and human security.

Challenges Associated

➢ The European Union's **security and defence capabilities are quite limited**, as compared to those of the U.S. and China.

➢ The EU suffers from marked **internal divisions**; Many states view China as a great economic opportunity, but others are acutely conscious of the full contours of the China challenge.
  ○ They believe that neither China's dominance in Asia nor bipolarity leading to a new Cold War will serve Europe's interests.

➢ The risks faced by the EU are varied; the immediate neighbour **Russia is a more traditional threat.** It is increasingly on China's side.
  ○ Hence, the EU should find it easy to cooperate with the Quad. However, the recent **AUKUS partnership has disappointed France**, an important EU member.

Way Forward

➢ **Strengthening Economic Capabilities:** To obviate an imbalance (against US and China) in favour of economic links, EU will need to **give adequate space and support to France** and other EU nations **which have sizable assets and linkages with the Indo-Pacific.**

➢ **New Alliances:** It also must **forge strategic coordination with the U.K.** as the latter prepares to expand its role in Asia as part of its **'Global Britain' strategy.**
  ○ As a major economic power, the EU has an **excellent chance of success in its trade negotiations with Australia**, Indonesia and New Zealand; in concluding **discussions for an economic partnership agreement with the East African Community.**
  ○ To achieve all this and more, the **EU must increase its readiness to share its financial resources** and new technologies with partners.

➢ **India-EU Cooperation:** India has reasons to be pleased with the EU's policy as its **pivotal position in the region necessitates a closer India-EU partnership.**

❍ The recent **renegotiation of the India-EU Comprehensive Trade Agreement** and a standalone investment protection agreement are major steps towards improving bilateral ties.

- Cooperation in Industry 4.0 technologies is also desirable.

❍ **Consolidating and upgrading defence ties** with France, Germany and the U.K. should also remain a significant priority.

❍ With an enhanced focus on their strategic relations and engagement with other like-minded regional players, India and EU can play a significant role in **preserving an open, free, inclusive and rules based order in the Indo-pacific.**

Conclusion

➤ The EU can create a vantage position for itself in the Indo-Pacific by being more candid with itself, more assertive with China, and more cooperative with India.

➤ Increasing convergence of interests and shared values offer scope for deepening India-EU cooperation in the region to secure global commons, maintain stability and support economic prosperity in a cooperative manner and together shape a stable multipolar order.

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Boarding the Crypto-Flight

*This article is based on **"Crypto Opportunity"** which was published in the Indian Express on 18/11/2021. It talks about the need for the regulation of Cryptocurrency in India.*

Tags: Indian Economy, GS Paper - 3, IT & Computers, Mobilization of Resources

Recently, the **RBI** Governor, once again, raised concerns over **cryptocurrencies** with reference to **macro-economic and financial stability.** Due to the same reasons, the central banks of various countries have stood against the legitimisation of cryptocurrencies; the case being the same in India.

However, considering the nature of cryptocurrencies, **restrictions on such transactions may end up having the opposite effect,** pushing them beyond the realm of scrutiny and making it harder to enforce the law in case of felony.

Currently, the cryptocurrency market is worth over three-trillion-dollars. India cannot and should not have to exclude itself from such a huge opportunity, rather create effective provisions for the regulation of the same.

Crypto and Chaos

➤ **Lack of Global Consensus:** Globally, there is **no uniformity in the regulatory approach towards cryptocurrencies**. Countries are grappling with questions over the appropriate regulatory framework, and are opting for different approaches.

❍ On one hand, countries like **Cuba and El Salvador have permitted Bitcoin as legal tender.**

- **Iran** too saw the potential of cryptocurrency in helping circumvent sanctions, and encouraged "mining", provided the resulting tokens are sold to the central bank.

❍ On the other, **China has imposed a blanket ban** on all crypto transactions and mining.

- Other countries that have banned the trading, holding, and mining of cryptocurrency include **Bolivia, Nepal, North Macedonia, and Indonesia.**

➤ **Status of Cryptocurrency in India:** At the moment, there is no legislation that covers cryptocurrencies in India owning that it is still not illegal.

❍ In India, the RBI had barred all banks from dealing in cryptocurrencies in 2018, however, **this ban was struck down by the Supreme Court in 2020.**

❍ Most recently, the Prime Minister of India chaired a **meeting regarding the management of the cryptocurrency** sector which arrived at a consensus that steps taken by the government in the field of cryptocurrency should be **progressive and forward looking.**

- The government is **likely to introduce a Bill on cryptocurrencies** in the **winter session of Parliament.**

Associated Concerns

➤ **Legitimate Concerns Over Cryptocurrencies:** These concerns stem from the fact that there is **no underlying asset and no benchmark to assess their values against.** Moreover, cryptocurrencies are extremely volatile in nature.

❍ The **lack of awareness, transparency and clarity** puts the money of the investors, most importantly, **retail investors, at risk.**

- This industry which holds so much of capital is **not monitored or regulated in India.**

- How cryptos are being advertised was also a concern raised in the meeting held by the Prime Minister.

➤ **Ambiguous Perspectives Regarding Crypto:** It greatly varies how a country views cryptocurrency; as a currency, an asset or a commodity and how it is classified will in turn determine the regulatory architecture.

○ The Indian government is likely to introduce a Bill on cryptocurrencies in the winter session of **Parliament** and it could classify crypto exchanges as **e-commerce platforms**.

- However, this will **raise questions about who would be the appropriate regulator.**

➤ **Banning Crypto, An Unwise Solution:** Although the central bank is right to advise caution, an **outright ban is not a prudent way forward.**

○ Considering the nature of cryptocurrencies, restrictions on such transactions may end up having the opposite effect, pushing them beyond the realm of scrutiny and making it harder to enforce the law in case of felony.

○ The **very purpose of the ban will be defeated.**

➤ **Ban is Contradictory to Existing Provisions:** Banning cryptocurrency will also contradict the **Draft National Strategy on BlockChain, 2021** of the MeitY, which hailed block chain technology as transparent, secure and efficient in putting a layer of trust over the internet.

○ It is **quite ironical to promote blockchain**, a part of the technology-driven innovation **while stifling its ancillary, crypto assets** instead of currency

Way Forward

➤ **Regulatory Framework for Crypto:** A regulatory framework needs to be urgently framed.

○ The apparatus will need to **deal with myriad aspects of cryptocurrencies;** sale, purchase as well as intermediaries like exchanges and trading platforms.

○ The government **must identify the associated risks, and create the appropriate regulatory architecture** to address them.

○ **Regulation can aid in monitoring the money-laundering** and **terror-financing** issues and also prevent scams.

➤ **Investor Protection:** While sophisticated investors may not need guidance, **retail investors need to be cautioned about cryptocurrencies** and the volatility associated with them.

○ An efficient regulatory framework will **provide accountability** as also a grievance redressal mechanism for investors.

➤ **Structuring the Unregulated Space:** What India needs at this moment is structuring the unregulated space of cryptocurrency rather than banning it. It will create a safeguard for retail investors.

○ Moreover, it will also **prevent the India-based crypto companies from moving out of the country,** so there will be no flight of capital.

○ It wil**l create a healthy ecosystem for India** and **Indians to explore emerging technologies** and become leaders and innovators in this space.

Conclusion

➤ **Cryptocurrency is an inevitability**; it cannot be banned or walled out through any meaningfully enforceable mechanism. A blanket-ban on crypto would be both impractical and over-restrictive.

➤ It becomes imperative for the government to **bring forward legislation that understands the vision of the technology**, takes into account the inputs of all stakeholders, and enables citizens to enjoy the benefits that entail with this new-age technology.

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The Issues of Micro-Irrigation Sector

This article is based on "An SOS Call from the Indian Micro-Irrigation Industry" which was published in Livemint on 19/11/2021. It talks about issues faced by the micro-irrigation industry.

Tags: Indian Economy, GS Paper 3, Irrigation, Modes of Irrigation, Direct & Indirect Farm Subsidies

Water is a scarce natural resource and the major requirement in the agricultural sector. The efficient use of available water for **irrigation** is a major challenge. Technological innovations such as **micro-irrigation** play an essential role in water-resource management.

Despite several benefits and widespread acknowledgement of the critical role of micro-irrigation in the sustainability of Indian agriculture, the industry that provides the wherewithal for it, is currently struggling to survive.

Price controls and bureaucratic delays in scheme enrolment, lack of field reviews and the delays in reimbursement of subsidies, etc, have pushed this industry to the brink of collapse despite its importance.

Water Availability & Micro-Irrigation in India

➤ **Declining Water Availability:** India first **entered the league of water-deficient countries in 2011.**

○ India's **per capita water availability** is estimated at **1,428 kilolitres per year.**

- A nation with annual water availability of below 1,700 kilolitres per head is considered water deficient.

○ It has **one of the fastest shrinking water pools** among G-20 economies.

➤ **About Micro-Irrigation:** It is a modern method of irrigation by which water is irrigated through drippers, sprinklers, foggers and by other emitters on the surface or subsurface of the land.

○ **Sprinkler irrigation and drip irrigation** are the commonly used micro-irrigation methods.

➤ **Significance of Micro-Irrigation:**

○ Micro-irrigation **ensures water use efficiency** as much as 50- 90%.

○ **Water savings** in comparison with flood irrigation are to the tune of 30-50%, with an average of 32.3%.

○ **Electricity consumption falls** significantly.

○ Adoption of micro-irrigation **results in savings on fertilizers.**

○ **Increase in the average productivity** of fruits and vegetables.

○ It leads to overall **enhancement of farmers' income.**

Challenges Faced by Micro-Irrigation Industry

➤ **Slower Adoption Pace for Drip Method of Irrigation (DMI):** The **Task Force on Micro-Irrigation in India (2004)** estimated India's total drip irrigation potential stands at 27 million hectares.

○ However, the area under drip-irrigation accounts for a mere 4% of gross irrigated area and about 15% of its total potential (2016-17).

○ Moreover, the adoption of DMI is also concentrated only in a few States.

➤ **Issues Associated to Irrigation-Related Schemes:**

○ **Irresponsibility by State Governments:** In most Indian states (with Gujarat and Tamil Nadu being the major exceptions), the **scheme is operational only for a few months in a year.**

● Despite the availability of funds, scheme applications are processed only at the end of a financial year, done typically to achieve pre-set targets in what is famously known as the **'March rush'.**

● As a result of this narrow window, **only a handful of farmers can apply.**

○ **Delays in the Reimbursement of Subsidies:** Unlike other subsidies that are directly transferred to beneficiaries, those for installing drip irrigation systems are **transferred to vendors only after due diligence.**

● There is **no fixed timeline for the inspection and testing** of the installed system for transferring subsidies.

➤ **Financial Difficulties:** The farmers often face **difficulty in getting necessary support from financial services.**

○ It was reported that a lower adoption rate for micro-irrigation was due to the reduction in budget during the period 2013-16.

➤ **Availability of Power:** The main input for an irrigation system is energy, and for large scale projects, only **electricity is a viable source** which, despite having respective welfare schemes in place, **is still beyond the reach of every farmer.**

Way Forward

➤ **Role of Administration: Setting a timeline for each stage**, from an application by a farmer to the execution and payment disbursement and **strengthening the government's monitoring mechanism** by insisting on a periodic review of applications, approvals, work orders and actual installations.

○ **Deploying direct benefit transfers for subsidy sums** for micro-irrigation to go straight into the bank accounts of farmers.

○ Also, farmers should be made able to **avail the benefits of such welfare schemes in accordance with their crop cycles** or sowing patterns.

➤ **Expanding the Scope of Micro-Irrigation:** The **capital cost** required for the drip-irrigation method should be **brought down substantially.**

○ A special **subsidy programme may be introduced for water-intensive crops** like sugarcane, banana and vegetables.

● A **differential subsidy scheme for water-scarce and water-abundant areas** can also be introduced.

○ Currently, water from surface sources (dams, reservoirs, etc) is not used for DMI. A **share of water from each irrigation project can be allocated** only for DMI.

Conclusion

The future revolution in agriculture will come from precision farming. Micro-irrigation can, indeed, be the stepping stone for achieving the goal of making farming sustainable, profitable and productive.

However, **'per drop more crop'** can only be achieved by deploying advanced and efficient irrigation technologies, and these can only be developed if a wholesome business environment is ensured by eliminating delays, discretion and red tape.

■■■

Hope from the New Quad

*This article is based on **"A collaborative tech vision for US, UAE, Israel and India"** which was published in the Indian Express on 19/11/2021. It talks about the new alliance of India, USA, UAE and Israel which is being termed as the 'New Quad' and how technology is the most important sector where the four can cooperate.*

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

The recent meeting between the **foreign ministers of India, the US, Israel, and the UAE** has set foreign policy circles in India abuzz with talks of the potential emergence of another quadrilateral grouping being termed by analysts as a "**New Quad**".

Amongst all the issues discussed, the **technology dimension of this partnership promises a far greater potential for collaboration.** Each country with its unique advantages in science and technology, innovation and start-ups can make a significant contribution to advance shared technological goals.

Working together in the field of technological developments makes it imperative for the US, Israel, UAE, and India to strengthen their newly established cooperation.

Cooperation within the 'Other Quad'

> **Recent Israel-UAE Collabs:** Recently, Israel and UAE's **startup sectors signed a deal to collaborate on fintech** and digital security.
> - The agreement between **Start-Up Nation Central,** an Israeli non-profit that connects the tech ecosystem, and **Dubai International Financial Centre,** the UAE's financial hub, will create regulatory sandboxes and accelerators for start-ups and provide them with market access opportunities.
> - The signing of the **Abraham Accords** in 2020 has resulted in **multiple collaborative projects between Israel and the UAE.**

> **India's Collaboration with UAE and Israel:** India and the US have been separately working with the two countries on multiple projects.
> - In May 2021, the Israel-based company Ecoppia, that specialises in robotic solar cleaning technology, **signed an agreement to utilise its manufacturing facility in India** for a project in the UAE — an initiative supported by the International Federation of Indo-Israel Chambers of Commerce.
> - Israel, the UAE and the US are also **collaborating on water and energy projects.**

> **Efforts in Quantum Technology:** Technology Innovation Institute of Abu Dhabi is building the **UAE's first quantum computer.**
> - Israel and the US have **made research on quantum technology a priority** by allocating $91 million and $1.2 billion respectively to this sector.
>   - Tech giants IBM and Google have already achieved breakthroughs through their quantum computers.
> - India is also fast catching up through its **National Mission on Quantum Technologies and Applications** and joining hands with countries like France to work on this technology.

Challenges

> **China's Increasing Technological Advancement and Role in West Asia:** By collaborating with Russia, and domestic flagship initiatives like "**Made in China 2025**", Beijing has **pursued emerging technologies and successfully reduced the capability gap with Washington.** In some cases, it has, in fact, attained a competitive advantage
> - China in the recent years, has **increasingly assisted a number of India's partners in West Asia** in infrastructure, connectivity and technology related projects.
>   - UAE was one of the first countries that got Huawei's (A Chinese MNC) assistance for its **5g** project.

> **Solo National Effort, Not Enough:** With the breakneck speed of technological advancement, **a solo national effort, made by even a global power like the USA**, in developing and adopting these transformative technologies **will not lead to optimal results.**
> - The **US, despite being the world's largest spender** on defence technology R&D, **no longer enjoys the absolute technological lead it earlier had.**

Way Forward

> **Opportunities for India's Tech-Hubs:** Given the recent synergies in the innovation and startup sector, it is logical that the **"new Quad" works towards tech-based collaboration.**
> - From the Indian perspective, such partnerships can **leverage US's venture capital funding**, **Israel's close-knit organic linkages** between start-ups, industry, and academia, and **UAE's funding and focus on innovation.**
> - Adding to these, **Bengaluru and potentially Hyderabad can add opportunities for scaling up** and

manufacturing as they have a vibrant technology base with multiple defence public sector units and research establishments, private sector companies and several startups.

- **Major Technologies for Collaboration:** The agenda for the new Quad's technology cooperation can begin by selecting three technologies; **quantum science, blockchain,** and **3D printing**.
  - These transformative technologies **offer exciting applications for encrypted communications, cryptography, aerospace engineering, and manufacturing.**
  - The startup community in the US, Israel and the UAE have already reached an advanced R&D stage providing an **opportunity for India to build expertise and offer the scale to the development** and applications of these technologies.
    - Israel has taken the lead in manufacturing about 40% of 3D printers worldwide and a Dubai based company has emerged as a pioneer in 3D printing in the region.
    - India, in contrast, has been slow in getting onto the 3D printing bandwagon but it can certainly benefit from the expertise of the US, Israel and the UAE.
- **Technology Cooperation to Assist in Other Areas:** Likewise in blockchain, India and the UAE can **leverage the American and Israeli expertise in cyber and cryptography** to craft customised **applications for use in banking, fintech and trade financing.**
  - This can contribute to reducing administration and transaction costs.
  - Moreover, their dual-use nature offers the **potential to give a technological edge to the four countries' militaries.**
    - This, in turn, can **add the security cooperation element** to the grouping's agenda.

Conclusion

- Technology-based partnerships seem to be the current trend, with many like-minded countries discussing ways to collaborate on emerging technologies.
- If the four countries plug their innovation ecosystems in this collaboration to shortlist, fund and develop technologies, it will also help to broaden the base of cooperation for this grouping, rather than restrict it to the government-to-government domain.

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Way Ahead for Asset Reconstruction Companies (ARCs)

*This article is based on **"Tackling the Problem of Bad Loans"** which was published in the Indian Express on 22/11/2021. It talks about the constraints in clearing the bad loans in India and the solutions to improve the performance of ARCs.*

Tags: Indian Economy, GS Paper 3, Monetary Policy, Banking Sector & NBFCs, Capital Market, Mobilization of Resources

Over the last five years, considerable progress has been made in resolving and recovering bad debts of banks. However, there are still around Rs 10 lakh crore worth of stressed assets hanging around in the system.

The **National Asset Reconstruction Company (NARCL)** incorporated under the Companies Act, 2013 offers hopes for the faster clean up of lenders' balance sheets.

As much as the NARCL is a welcome initiative, addressing the fundamental problem of accumulation of elevated and recurring **NPAs (Non-Performing Assets)** generation is also crucial.

ARCs in India

- **Status of ARC's:** Of the 28 ARCs (private sector) in operation, many are bit players; the top 5 ARCs account for over 70% of the asset under management (AUM) and nearly 65% of the capital.
  - Even private sector ARCs have **not done well in the sale of zombie assets**; hardly 13.9% of the assets acquired are actually sold.
    - Nearly one-third of debts are rescheduled.
    - This is not much value addition to what lenders would have otherwise done at no additional cost.
- **Previous Initiatives to Resolve Bad Debts:**
  - Over the last three decades, there have been several institutional and policy measures to resolve the bad debts. The institutional measures include:
    - **Board for Industrial and Financial Reconstruction** (BIFR), 1987
    - **Lok Adalat**
    - **Debt Recovery Tribunal** (DRT), 1993
    - **Corporate Debt Restructure**, 2001
    - Securitisation and Reconstruction of Financial Assets and Enforcement, (**SARFAESI Act**), 2002
  - However, the resolution for these is a measly 6.2%, 4.1% and 26.7% for Lokadalat, DRT and SARFAESI respectively.

○ The RBI has also launched a slew of measures during 2013-14 to resolve, reconstruct and restructure stressed assets.

  ● However, these too **did not serve the purpose well** and were all **abandoned subsequently.**

➢ **Establishment of NARCL:** The **National Asset Reconstruction Company (NARCL)** has been incorporated under the Companies Act, 2013 and has applied to the Reserve Bank of India for a license as an **Asset Reconstruction Company (ARC).**

  ○ The newly-created NARCL in the public sector **offers hopes for the faster clean up of lenders' balance sheets.**

    ● This would be the 30ᵗʰ ARC in the business of resolving distressed assets, but the **first in the public sector.**

  ○ Its **greatest virtue lies in the faster aggregation of distressed assets** that lie scattered across several lenders. Also, its securitised receipts (SRs) carry sovereign assurance.

  ○ It would **initially focus on large accounts with debts over Rs 500 crore** and is expected to free the banks from the tortuous recovery process and afford them more space to focus on much-needed credit expansion.

➢ **Progress of IBC:** The **Insolvency and Bankruptcy Code (IBC), 2016** was landmark legislation and **marked a welcome departure from the earlier measures,** with a legally time-bound resolution.

  ○ Qualitatively, it has **instilled a sense of fear in mischievous corporate borrowers** who have siphoned off funds, and dethroned them. It **nearly put an end to evergreening.**

  ○ Even though there are delays under this newfound promise, they are counted in terms of days and not years and decades.

Challenges Faced in Clearing Bad Loans

➢ **Lack of Adequate Infrastructure in NCLT:** The **NCLT (National Company Law Tribunal)** is the backbone of the IBC, but **lamentably is starved of infrastructure** and over 50% (34 out of 63) of NCLT **benches were bereft of regular judges.**

  ○ Over 13,170 cases involving **distressed debt of Rs 9.2 lakh crore are languishing with the NCLT.**

  ○ This lack of adequate infrastructure, coupled with the poor quality of its decisions, has proved to be the IBC's Achilles' heel.

➢ **Delayed Recognition and Resolution:** 47% of the cases referred to the IBC, representing over 1,349 cases, have been **ordered for liquidation.**

○ Over 70% of these **cases were languishing at the now-defunct BIFR** for years and decades.

○ Against the aggregate claims of the creditors of about Rs 6.9 lakh crore, the **liquidation value was estimated at a meagre Rs. 0.49 lakh crore.**

➢ **Anchoring Bias Close to Liquidation Value:** The tendency to make decisions on the basis of first available information is called **"anchoring bias".**

  ○ This information in bidding for distressed assets is the **cost of acquisition to ARCs.**

    ● In the case of the IBC process, **it is the liquidation value determined by the IBBI** (Insolvency and Bankruptcy Board of India) valuers.

  ○ These distressed assets may be taken over by NARCL at 20%.

    ● This low cost of acquisition would suffer from the anchor effect and bias. Potential bidders would quote prices nearer to this anchor.

Way Forward

➢ **Judicial and Regulatory Reforms:** Judicial **reforms for early and final resolutions** are urgently required.

  ○ Lenders and regulators need to address the issue of delayed recognition and resolution.

    ● Incentivising lenders for **more flexible provisioning requirements** would encourage them to recognise early.

    ● Business stress and/or financial stress needs to be recognised even prior to regulatory norms on **NPA (Non-Performing Asset)** classification.

➢ **Mitigating Anchor Bias: Nobel Laureate Daniel Kahneman** has argued that "the anchoring effect is not a laboratory curiosity and can be just as strong in the real world".

  ○ "When people face a difficult situation they clutch at (a) straw and that straw is (the) anchor straw". This may be **mitigated by "opposite thinking".**

  ○ He suggests a three-step process to mitigate anchor bias:

    ● **Acknowledging the bias.**

    ● Seeking more and **new sources of information.**

    ● **Dropping your anchor** on the basis of new information.

      ■ Anchor bias needs to be mitigated by **better extrinsic value discovery.**

➢ **Measures for the New ARC:** The IBC has made considerable progress in bringing about behavioural change in errant and wilful defaulters by forbidding them to take back distressed assets.

- ❍ The **NARC should uphold this principle** and not dilute it, otherwise, the credit culture would suffer.
- ❍ Also, it should have a **sunset clause of three to five years** to avoid the perpetuation of moral hazard and also encourage expeditious resolution.
  - ● It should also **avoid selling to other ARCs.**
- ➢ **Limiting the Accumulation of NPAs:** The NARCL is a welcome initiative, however, no number of resolution and recovery tools and frameworks can address the fundamental problem of accumulation of elevated and recurring NPA generation.
  - ❍ **Keeping the accumulation of NPAs below 2% is critical.**

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Improving India US Trade Ties

This article is based on "The Push US-India Trade Needs" which was published in the Indian Express on 23/11/2021. It talks about the revival of India US Trade Policy Forum and the opportunities for both the countries to cooperate in the field of bilateral trade.

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

Over the past two decades, the partnership between the world's oldest and largest democracies; USA and India, has strengthened tremendously. From strategic cooperation to our deepening people-to-people ties, the gains have been impressive.

In the same period, trade and investment volumes between the two have also experienced enormous growth but still lag behind their deepening strategic and cultural alignment.

Recently, India's Union Minister of Commerce and Industry met his American counterpart for the Trade Policy Forum (TPF) for the first time since 2017.

This meeting marks the first opportunity under the Joe Biden administration for India and the US to try to untangle some of the thorny market access issues that have obstructed their trade relationship.

Indo-US Trade and Revival of TPF

- ➢ **India-US Trade Ties:** The USA is one of the few countries with which **India has a trade surplus**. For the USA, India was the **sixth largest supplier of services imports.**
  - ❍ India's large market, economic growth and progress towards development make it an **essential market for USA exporters.**

- ❍ During the Donald Trump administration, the two sides came close to agreeing to a **"mini trade deal"**, which would have seen India remove tariffs on some products in exchange for reinstatement into the **Generalized System of Preferences (GSP) programme.**
  - ● However, the **Joe Biden administration** has been lukewarm to new trade agreements.
- ➢ **Efforts for Expansion of Trade:** Prior to the start of the US-India Trade Policy Forum, the US Chamber of Commerce called for urgent action to **lay the groundwork** for an eventual **comprehensive bilateral trade agreement.**
  - ❍ In India, too, there is a positive momentum in the economic partnership to build on, including **recent initiatives to raise FDI caps** in key sectors and the **repeal of the retroactive tax law** have boosted investor confidence and stoked optimism on India's liberalisation path.
  - ❍ The Indian government has signalled its dedication to reform and has **expressly supported a trade deal with the US.**
- ➢ **TPF, a Win-Win Situation for India and US:** Along with other countries, the US is trying to navigate a boom in consumer spending, tame inflationary pressures, and align global supply chains with broader strategic objectives.
  - ❍ Expanding trade can reduce consumer prices and **put its economic recovery on a more stable footing.**
  - ❍ At the same time, India is also trying to move up value chains and reach ambitious development targets.
- ➢ **Significance of Trade Policy Forum (TPF):**
  - ❍ Though TPF is not likely to result in any major breakthroughs, it is an **important opportunity to forge a robust bilateral trade relationship** in the Biden years.
    - ● The US is one of India's most important partners and both countries have grown closer.
    - ● **Shared concerns about China have translated into a robust defence and strategic relationship**, overshadowing the tensions in the trade relationship.
  - ❍ TPF offers an opportunity for India to **put together a market access package** that will **decrease trade tensions with the US**, while giving the Biden administration political cover to remove the Section 232 tariffs, which, ultimately, will benefit Indian firms.
  - ❍ India aims to grow to a **$5 trillion economy by 2025**, become a hub for high-tech manufacturing, and install 500 GW of renewable energy by 2030.

- These are the **goals that can be achieved better with US capital,** investment and continued access to the American market.

Challenges Associated

➤ **Tariff Imposition:** In 2018, the **US imposed a 25% tariff on certain steel products** and a 10% tariff on certain aluminum products from India.

- ❍ **India retaliated** in June, 2019, **by increasing tariffs on 28 products** worth about $1.2 billion on US imports.
  - However, after the imposition of the Section 232 tariffs, **steel exports to the US declined by 46% year-on-year.**

➤ **Misunderstanding Self-Reliance as Protectionism:** The **Atmanirbhar Bharat Campaign** has exacerbated the view that India is increasingly becoming a protectionist closed market economy.

➤ **Exemption from US' Generalised System of Preferences:** Effective since June 2019, the USA decided to withdraw duty-free benefits to Indian exporters under the **GSP programme**.

- ❍ Consequently, **special duty treatment on US$5.6 billion worth of exports** to the US **was removed, affecting India's export-oriented sectors** such as pharmaceuticals, textiles, agricultural products and automotive parts.

Way Forward

➤ **Pursuing Negotiations:** As the first US-India TPF in over four years begins, neither of these starting points is likely to culminate in the broad trade deal for which India has long advocated. However, both governments can make real progress by pursuing negotiations on two parallel tracks:

- ❍ Dedicatedly **removing and resolving long standing irritants** and disputes.
- ❍ **Building a 21ˢᵗ century trade framework** that can bring together the best of both countries, starting with the key sectors that are driving growth and innovation across the economic corridor.

➤ **Initiating Tariff Removal:** The first step towards a potential deal is for **India to take the initiative** and consider unilaterally removing its retaliatory tariffs. This will represent India as willing to be a constructive player in trade talks.

- ❍ Even though removing the tariffs without a commitment from the US is a leap of faith, it ultimately will be beneficial for the bilateral trade relationship.

➤ **Together Countering China:** From a strategic point of view, one of the ways that India can counter China is through **deepening trade ties with partners who are committed to supporting India's growth**.

- ❍ A deal with the US will be beneficial for India, both strategically and economically.
  - As the US companies assess whether to shift some of their manufacturing from China, a vibrant trade strategy can complement the **Production-Linked Incentive (PLI) schemes**, and help to **boost both manufacturing and exports.**

➤ **Facilitating Digital Growth:** To promote further growth in the digital sphere, which represents over $100 billion of bilateral trade, the two must **address several foundational issues;** digital service tax, cross-border data flows and common cellular standards.

- ❍ It's important that on the digital services tax, **India accords with emerging global agreements** that will accelerate trade.
- ❍ Also, India and the US shall come to a common ground on **5G** standards to operate in an integrated telecom ecosystem.

➤ **Cooperation in the Health Sector:** US-India cooperation in the healthcare sector stands to be one of the most impactful of the global health architecture.

- ❍ As the two countries emerged from the **global pandemic**, this is a **unique moment to form a health initiative** that **removes barriers to the Indian market** that harm both American workers and Indian patients.
- ❍ To facilitate growth in the sector and drive investment in R&D, it is essential that:
  - The governments embrace **market-based approaches on innovative medical products**
  - Ensure that **public procurement policies do not discriminate** against foreign firms
  - Align regulatory structures to **speed the approval of medical devices and pharmaceuticals** so that critical and life saving therapies can get to the market faster.

Conclusion

➤ In this period of geopolitical flux, it is wise for the world's two largest democracies to come together; strengthening trade and investment ties through a reimagined US-India Trade Policy Forum is a great place to start.

➤ Like their growing cultural and strategic alignment, better trade partnership will help the two countries better navigate the post-pandemic landscape.

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New MSP –
Maximum Support Policy

*This editorial is based on the article **"The MSP that rural India needs: Maximum support policy"** which was published in The Indian Express on 24/11/2021. It talks about the issues associated with the Minimum support price and suggest ways for maximum support policy.*

Tags: Agriculture, GS Paper - 3, Agricultural Marketing, Direct & Indirect Farm Subsidies

Even after the historic withdrawal of the three farm Acts, the issue of **"minimum support price" (MSP)** for key agricultural commodities has been a persistent sticking point in the negotiations between the government and the farmers.

The movement's leaders have demanded the legalisation of MSP, increasing this support price and extending it to all crops while the government has stonewalled such demands. While the issue of MSP relates primarily to cost-effective pricing and is understandably the fulcrum on which agriculture should be assessed as an enterprise, business, or means of livelihood, it may be important to go beyond it.

Much of rural India has largely been neglected economically while also being manipulated for votes. It may, therefore, be time to seek a package of "**maximum support policies**".

Maximum Support Policies
➢ The policy must emanate from the recognition that mere pricing, marketing and distribution of agricultural products cannot be the panacea for the ailments inflicted on rural India by the larger political economy of the country.
➢ Only holistic policies that address the structural inequities, institutional and administrative deficits and political distortions of rural India will provide it a new lease of life.

Issues With the MSP (Minimum Support Price)

➢ **No MSP For Allied Sector:** The scope for augmenting farmers' incomes is going to be more from allied sectors like rearing animals (including fisheries). It is worth noting that there is no minimum support price (MSP) for products of animal husbandry or fisheries and no procurement by the government.
  ○ It is demand-driven, and much of its marketing takes place outside APMC mandis.
➢ **Inadequate Storage System:** Those who believe that farmers' income can be increased by continuously raising the MSP of grains and government procurement.

  ○ However, the fact that grain stocks with the government are already overflowing and more than double the buffer stocking norms.
➢ **MSPs in Favour of Paddy and Wheat:** Skewed MSP dominated system of rice and wheat leads to overproduction of these crops.
  ○ Further, it discourages farmers to grow other crops and horticulture products, which has higher demand and subsequently could lead to increase in farmers income.
➢ **Economically Unsustainable:** The economic cost of procured rice comes to about Rs 37/kg and that of wheat is around Rs 27/kg. However, market prices of rice and wheat are much lower than the economic cost incurred by the **Food Corporation of India (FCI)**.
  ○ Due to this, the FCI's economic burden is touching Rs 3 lakh crore.
  ○ This amount eventually will have to be borne by the Union government and may subsequently lead to divergence of funds from being invested in agriculture infrastructure.
➢ **Loopholes in the Implementation of MSP Scheme:** The Shanta Kumar Committee, formed to suggest restructuring of the Food Corporation of India (FCI) in 2015, in its report, had stated that only 6% of the MSP could be received by the farmers, which directly means that 94% of the farmers in the country are deprived from the benefit of the MSP.
➢ The **MSP-based procurement system** is also dependent on **middlemen, commission agents and APMC officials**, which smaller farmers find difficult to get access to.

Way Forward – Maximum Support Policy

➢ **Adopting Natural Farming:** A substantial and phased withdrawal from the Green Revolution model of promoting subsidised agriculture that's based on the use of industrial chemicals must be initiated.
  ○ A shift to "sustainable" agriculture via "zero-budget natural farming" is possible but it will not be apt to have a single model of "natural farming" for India's diverse agro-climatic cultural zones.
  ○ A combination of regionally evolved and established sustainable agro-cultures, that can be tweaked to rid them of their social inequities (such as bonded labour and tenancies) and made amenable to the new climatic trends, is required.
➢ **Equitable Distribution of Resources:** Policies to ensure equitable distribution of resources — land as well as water — and access to a range of alternative economic practices and support structures must also be framed.

○ Instead of subsidies (that largely go to non-rural beneficiaries), moratoria on loans and populist pay-outs just before elections, it is imperative that payments be made to promote the spread of "restorative agriculture" — one that regenerates our soil and water resources and promotes seed and agro-biodiversity

➤ **Promoting Climate Change Mitigation Strategies:** A comprehensive programme should enable not only a transition to sustainable agriculture but also enable people to develop climate change mitigation and adaptation strategies.

○ Supporting farmers to form collectives in which resources, labour, skills and knowledge are pooled for production, value addition and marketing could go a long way in correcting the multiple ways in which they are excluded from profits or gains.

➤ **Democratisation and decentralisation of agricultural planning** can be linked to revitalising ecologically suitable cultivation, facilitating local collection and distribution and sustaining local food cultures that can alleviate malnutrition.

○ A new seed policy, which focuses on enabling local seed banks, can help farmers circumvent the problematic commercial seed industry.

➤ The divide between the rural and agrarian, on the one hand, and the urban and industrial, on the other, is not tenable today. Promoting small-scale industries and processing centres that help rural areas to retain resources and skills along with providing employment is the answer to the vexed issue of unemployment and migration.

○ Rural India requires a new economic deal that addresses past mistakes and heals the wounds caused by years of neglect in healthcare, education and other avenues that enhance the quality of life.

➤ Public institutions such as panchayats, anganwadis, schools and primary health centres require urgent reforms that de-bureaucratise state-citizen transactions and ensure that rural residents are treated as citizens, and not supplicants.

○ Instead of the band-aid approaches that seek to alleviate a range of problems caused by structural inequities and disadvantages, we need policies to address caste, ethnic, gender and class inequities.

Conclusion

It is being said that tractors have won over the tanks in this year-long stand-off between farmers and the state. Such a victory via non-violent means must enthuse us to intensify our solidarity towards a range of "maximum support policies" for rural and agrarian India.

Our first effort should be to petition our respective MPs so that the forthcoming parliamentary session does not see just a recall of the three farm Acts but also paves the way for projects to realise the best for rural India.

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India's Telecom Space

This editorial is based on "Don't Wait for a Distress Call" which was published in Indian Express on 25/11/2021. It talks about the significance of the Telecom Sector in the Indian Economy.

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

In July 2021, India celebrated three decades of its "big-bang" economic reforms of 1991, one that catapulted the country from being a socialist economy with a heart but no trickle-down, to a market-oriented economy with a mind and a little trickle-down.

In the pre-1991 period, the principal modes of redistribution were taxation and public sector operations. In the post-1991 period, it has been a combination of taxation, technology, smartphones and the associated **Direct Benefit Transfers (DBTs)**.

While the sources of growth in the Indian economy are aplenty, there are very few that have potentially addressed the twin objectives of growth and inclusion, one of them being the **Telecom sector**.

Telecom Sector and Economic Growth

➤ **Telecom Sector and India:** India is currently the **world's second-largest telecommunications market** with a subscriber base of more than 1.20 billion and has registered strong growth in the past decade and a half.

➤ **Telecom's Contribution in Economic Growth:** Telecom is the **second highest revenue earner** for the government, after income tax. The **Digital India programme** is also almost completely dependent on the telecom sector.

○ Every 10% increase in investment in telecom, for example, leads to a 3.2% increase in **GDP growth** for India.

○ Indian telecom has played a **critical role in building the country's digital infrastructure.**

● By June 2021, there were 768 million mobile broadband subscribers, almost double the number of subscribers three years ago.

○ Mobile data traffic increased at a **Compound Annual Growth Rate (CAGR)** of 44% during 2018-21.

- This has largely driven the proliferation of content services, **e-commerce, ride-hailing, hyper-local, e-education and e-healthcare services.**

➤ **The Jan Dhan-Aadhar-Mobile (JAM) Trinity for Inclusion:**

○ Mobile phones have become a means for sophisticated financial integration, as shown by the expanding usage of pre-paid payment instruments and mobile banking.

○ The **Jan-Dhan Yojana (JDY)** attempts to **include the marginalised and unbanked** through technology.

- As of October 2021, a total of 440 million bank accounts have been opened and more than 310 million RuPay cards have been issued under the scheme, indicating the large unmet demand for banking services.

○ The **Aadhaar identity card is envisaged as the sole KYC proof**, besides serving as the **backbone for Direct Benefit Transfer (DBT)** when linked to bank accounts.

○ This JAM trinity ties the Aadhaar number to an active bank account, making income transfers predictable and targeted.

- Aadhaar-linked bank accounts have **increased efficiency and reduced leakages.**

➤ **Recent Reforms in Telecom Sector:** Recently, the Government of India has approved a number of structural and process **reforms in the Telecom sector**.

○ Besides providing immediate **relief on payment of licence fee** and penalties due to the government, the package **increased FDI limits**, **extended licence tenure** to 30 years from 20, **removed charges on spectrum-sharing** and proposed timelines for spectrum auctions.

Issues Faced by the Telecom Sector

➤ **Issues With Telecom Policy:** Reforms in India, more often than not, happen on the back of a crisis. The same is also true for the telecom sector.

○ Although digital investments have had a salutary effect on inclusion and growth, they have done so in intermittent bursts, simulating a wave-like motion.

○ The benefits of digitalisation could have been much larger and more widespread, **had the telecom policy been more predictable and less erratic.**

➤ **Telecom, A Heavily Indebted Industry:** From the past few years, the government has been struggling to bail out the heavily indebted industry, the proximate reasons for which are:

○ An intense and debilitating price war

○ Unreasonable definition of **Adjusted Gross Revenue (AGR)**

○ Extractive spectrum auction regime

➤ **Possible Duopoly in Telecom Market:** Over the last 20 years, the telecom sector has turned out to be a graveyard for over two dozen companies, leading to massive erosion of value for stakeholders.

○ India's telecom market is at the **brink of becoming a duopoly** with two of four key operators struggling to stay afloat.

Way Forward

➤ **Pool of Capital to Buy the Spectrum:** The government could form a pool of capital to buy the spectrum from telcos, and lease it back for short periods for a share of the telcos' revenue, **relieving them from the urgency of spectrum payment fees.**

➤ **Special Zero-Coupon Bonds:** The administration should **accept special zero-coupon bonds** worth the entire amount due from telecom companies that have AGR funding issues, at a discount to face value, based on the comparable sovereign bond yield at the time of issue.

○ The zero-coupon structure would mean that telecom companies will have **no immediate interest costs, thus easing pressures on cash flows** without tariff increases.

➤ **Increasing Competition, Eliminating Duopoly:** It is imperative to have adequate competition in the market, and a duopoly would hardly ensure it.

○ It is **critical to have at least three private players** in telecom.

○ **Bringing down spectrum usage charge** (SUC), a relic from an era when spectrum was allotted (bundled with a licence to operate), is only logical and fair in a regime when spectrum is being auctioned at high prices.

○ An **integrated view for telcos, with innovative solutions**, is the need of the hour.

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Menace of Girl-Child Marriage in India

*This editorial is based on **"Save Her Childhood"** which was published in Indian Express on 26/11/2021. It talks about causes of girl-child marriages in India, recent findings about the same and the issues associated to ending child marriage.*

Child marriage is a global issue fuelled by gender inequality, poverty, social norms and insecurity, and has devastating consequences all over the world. High levels of child marriage reflect discrimination and lack of opportunities for women and girls in society.

Despite various statutory provisions in India and initiatives like **Conditional Cash Transfer (CCT) programmes**, the progress is not very impressive. **Nationwide Covid-19 Lockdown** further deteriorated the scenario.

Child Marriage in India

➢ **Prevalence: United Nations Children's Fund (UNICEF)** estimates suggest that each year, at least 1.5 million girls under 18 get married in India, which makes it home to the largest number of child brides in the world - accounting for a third of the global total.

➢ **Root Causes of Girl Child Marriage:** Child marriages happen within a social and economic context, embedded in a **set of beliefs about the status of women and girls, and their role as wives** and mothers.

  ❍ Associated with these are the reality of domestic labour and care work performed by women; a **belief that girls need to marry early for safety and protection;** and **apprehensions about the risk to family honour** or economic burden.

  ❍ Another cause include the **preference for sons which result in more than the preferred number of daughters.**

    ● The problem is not much prevalent in rich families who can afford to raise more children.

    ● However, for poorer families, one solution is to marry these daughters off prematurely, thus creating a supply of child, even prepubescent, brides.

  ❍ Some parents consider the **age period of 15-18 as unproductive**, especially for girls, so they start finding a match for their child during this age period.

    ● Underaged girls are more prone to child marriage than boys.

    ● Moreover, the **Right To Education Act** makes education free and compulsory up to the age of 14 only.

➢ **NFHS Findings about Child Marriage:** Data from the fourth round of the National Family Health Survey (NFHS4) in 2015-16 shows that pre-Covid, one in four girls in India was being married before 18.

  ❍ Around 8% of women aged 15-19 years were mothers or pregnant at the time of the survey.

  ● As per reports, **more child marriages have been noticed during the Covid pandemic.**

  ❍ The first phase findings of **NFHS5** (2019-20) also **do not show any substantial improvements towards ending child marriage.**

Child Marriage – Associated Issues

➢ **Human Rights Violation:** Child marriage violates girls' human rights and makes them almost invisible to policy.

  ❍ Some of the basic rights include the **Right to Education**, **Right to Rest and Leisure**, **Right to Protection from Mental or Physical Abuse** including Rape and Sexual Exploitation.

➢ **Disempowerment of Women:** Since child brides are not able to complete their education, they **remain dependent and underpowered** which acts as a big hurdle towards achieving gender equality.

➢ **Associated Health Issues:** The costs of child marriage include **teenage pregnancy and child stunting, population growth, poor learning outcomes** for children and the **loss of women's participation in the workforce.**

  ❍ The low domestic status of teenage wives typically condemns them to long hours of domestic labour; **poor nutrition and anaemia; social isolation; domestic violence** and lesser decision-making powers within the home.

  ❍ Poor education, **malnutrition**, and early pregnancy also lead to low birth weight of babies, perpetuating the **intergenerational cycle of malnutrition**.

➢ **Inefficiency of CCTs in Ending Child Marriage:** Conditional Cash Transfer (CCT) programmes give money to households on the condition that they comply with certain predefined requirements.

  ❍ CCTs have been the main policy instrument introduced by most states in the last two decades to end child marriage.

  ❍ However, they **alone cannot change social norms.** With one-size-fits-all conditions, that **may not always be responsive to the lived realities of teenage girls.**

Way Forward

➢ **Policy Interventions:** Legislation is one important part of the approach towards eliminating girl-child marriage from India.

  ❍ Karnataka amended the **Prohibition of Child Marriage Act** in 2017, **declaring every child marriage *void ab initio***, making it a cognisable offence, and introducing a minimum period of

rigorous imprisonment for all who enable a child marriage. **Similar can be done at the central level.**

➢ **Governmental Action for Social Change:** Field bureaucrats across multiple departments, including teachers, anganwadi supervisors, panchayat and revenue staff, all of whom interact with rural communities, **should be notified as child marriage prohibition officers.**

○ Moreover, **decentralising birth and marriage registration to gram panchayats** will protect women and girls with essential age and marriage documents, thus better enabling them to claim their rights.

➢ **Drivers of Social Change to Play a Fundamental Role:** These include expansion of secondary education, access to safe and affordable public transport, and support for young women to apply their education to earn a livelihood.

○ **Expansion of education goes far beyond mere access to it.** Girls must be able to attend school regularly, remain there, and achieve.

● **States can leverage their network** of residential schools, girls' hostels, and public transport, especially in **underserved areas**, to ensure that teenage girls do not get pushed out of education.

○ Regular **gender equality conversations** need to be held with high school girls and boys to shape progressive attitudes that will sustain into adulthood.

➢ **Empowerment Measures:** Empowerment measures, too, are required to end child marriage, such as **community engagement through programmes** like Mahila Samakhya.

○ **Children's village assemblies** in the gram panchayats across India can provide a **platform for children to voice their concerns.**

➢ **Economic Growth, Essential for Prevention of Child Marriage:** Ensuring later marriage for girls requires **India to evolve not only culturally but also economically.**

○ Some of this has happened, as Indians have become more prosperous, and as extreme poverty levels have declined, decline in child brides has been witnessed.

○ **Economic growth will save Indian girls from child marriage**. Combined with educational and **cultural awareness against a sex preference,** which no doubt will take longer; economic success a lasting solution.

Conclusion

➢ Drivers for social change like education, legal provisions and initiatives for creating awareness have still a lot to cover with respect to eliminating girl child marriage. Moreover, it is a change that has to come from within.

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NFHS-5: A Closer Look

This article is based on ***"A Close Reading of the NFHS-5, the Health of India"*** *which was published in The Hindu on 27/11/2021. It talks about the key findings of the latest National Family Health Survey (NFHS-5) and causes behind lack of improvement in various key sectors.*

> **Tags:** Social Justice, GS Paper-2, Government Policies & Interventions, Health, Gender, Issues Related to Children, Issues Related to Women, Issues Relating to Development, Issues Relating to Poverty & Hunger

The **National Family Health Survey (NFHS)** is a large-scale, multi-round survey conducted in a representative sample of households throughout India.

The key results from the second phase of the **latest NFHS (NFHS-5, 2019-21)** have been released which comes out as a mixed verdict, containing both cheer and alarm in abundant measure.

These results, in particular, are of great significance and must be given appropriate attention as it is not a hastily put together state-of-health index but a detailed, comprehensive, multi-dimensional report card on the state of India's demographic and health trajectory.

Key Findings of the Survey

➢ **NFHS 4 & 5, a Comparison:** There are many pluses in the report card of NFHS-5.

○ **Improvements have been witnessed in several dimensions** such as educational attainment, institutional deliveries, vaccinations, infant mortality etc.

○ Irrespective of the pace, the progress shall be appreciated especially given the abysmal state of India's health infrastructure which has been tragically apparent since the COVID-19 pandemic hit.

➢ **Decline in TFR, a Major Positive:** The **Total Fertility Rate (TFR) has been falling** over time and has **now reached (at 2.0)** just below the replacement rate of 2.1.

○ This is true across all States of India which means that the total population has stabilised.

➢ **Difference in Sex Ratio at Birth and at Adulthood:** For the first time in India, between 2019-21, there were **1,020 adult women per 1,000 men.**

○ However, the data shall not undermine the fact that India still has a **sex ratio at birth (SRB) more skewed towards boys than the natural SRB** (which is 952 girls per 1000 boys).

○ Uttar Pradesh, Haryana, Punjab, Rajasthan, Bihar, Delhi, Jharkhand, Andhra Pradesh, Tamil Nadu, Odisha, Maharashtra are the major states with low SRB.

➢ **Poor Performance in Dealing with Anaemia:** The incidence of anaemia in under-5 children (from 58.6 to 67%), **women** (53.1 to 57%) and men (22.7 to 25%) has **worsened in all States of India** (20%-40% incidence is considered moderate).

○ Barring Kerala (at 39.4%), all States are in the "severe" category.

➢ **Performance of Malnutrition Indicators:** The three indicators of **malnutrition**; stunting (low height-for-age), wasting (low weight-for-height) and underweight (low weight-for-age), **show an overall improvement.**

○ However, this overall improvement creates an anomaly as in Phase 1 of the NFHS-5, several States revealed a worsening in one or more of these indicators, whereas in Phase 2, none of the States showed a worsening.

● It might be possible that the covid-19 affected the survey in Phase 2, leading to **undercounting of incidences.**

○ Additionally, an **increase is witnessed in the proportion of overweight** children, women and men which also reflects malnutrition leading to serious health consequences in the form of **non-communicable diseases (NCDs)**.

Issues Associated

➢ **Non-Inclusion of Micronutrients:** In addition to anthropometric measures, **lack of adequate nutrition is also measured by micronutrient deficiencies,** i.e. lack of vitamins and minerals that are essential for body functions such as producing enzymes, hormones and other substances needed for growth and development.

○ The **NFHS does not have data on micronutrients.**

➢ **'One Size Fits All' Approach for Monitoring Dietary Intake:** Indian diets display a rich diversity. Many traditional diets reflect both local climatic conditions as well as a multiplicity of sources of essential nutrients, such as proteins, fats etc.

○ Policing of diets, by **imposing an unnatural uniformity,** and preventing access to animal protein for large sections of Indians that are not traditionally vegetarian is likely to **reduce micronutrient diversity and contribute to poor health outcomes.**

➢ **Covid-19 Blame Game:** The poor health outcomes have been **argued to reflect the effect of Covid-19** as the data for the Phase-2 of NFHS-5 have been, to a large extent, collected during the highly unusual conditions of the COVID-19 pandemic.

○ However, the deterioration in public health indicators **cannot be attributed entirely to the pandemic.**

○ The Pandemic might have added fuel to the fire of poor public health, but it did not cause the fire.

➢ **Unethical Delivery Practices Affecting Women Health:** The survey focuses on women's empowerment, autonomy and mobility indicators and shines a spotlight on women's reproductive health.

○ However, as per data, cesarean births have increased dramatically; **in private health facilities, 47.5% births are by C-section** (14.3% in public health facilities).

○ These figures are highly unnatural and **call into question unethical practices of private health providers who prioritise monetary gain** over women's health.

➢ **Limited Male Engagement in Family Planning: Female sterilisation** continues to **dominate as the modern method of contraceptives** in States like Andhra Pradesh (98%), Telangana (93%), Kerala (88%), Karnataka (84%), Bihar (78%) and Maharashtra (77%).

○ Male engagement in family planning continues to be limited as seen by the low uptake of condoms and male sterilisation across the States.

Way Forward

➢ **Policy Interventions to Address Health Concerns:** The survey highlights deep inequalities in health outcomes. The overall evidence is compelling that health ought to be a matter of concern for the governments at national and state level.

○ **An action plan to improve India's health needs** is required **which also needs to be inclusive**, firm in its commitment, and backed by solid resources.

➢ **Lessons to be Taken from NFHS:** The NFHS findings are a **reminder of the urgent need to close gaps in girls' education** and **address the pathetic nutritional status** of women and children.

○ The impact of the pandemic may also be noted; the **disruption it caused to services such as balanced nutrition for children must be acknowledged**.

○ Such scenarios underscore the **need for building resilient and fortified systems** capable of delivering in the most trying circumstances.

➢ **Collaboration in Health Sector:** Current times require **integrated and coordinated efforts from all health institutions,** academia and other partners directly or indirectly associated with the health care services **to make the basic as well as advanced health services accessible**, affordable and acceptable to all.

- > **Behaviour-Change Communication Strategy:** The Government must adopt a targeted social and behaviour-change communication strategy to **ensure that men also take responsibility for family planning.**

Conclusion

- > The NFHS is second only to the exhaustive data that the decennial population census provides. It ought to be treated as an important turning point for policy-making in India.
- > The greater idea for the states as well as the centre is to recognise it as a matrix to work on and improve the development indicators further.

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Slumbering Parliamentary Opposition

This article is based on ***"WorkMaking the House"*** *which was published in the Indian Express on 29/11/2021. It talks about the significance of parliamentary opposition in a country like India, how it is declining and the measures that can be taken to curb it.*

Tags: Indian Polity, GS Paper 2, Parliament, Transparency & Accountability

Parliamentary democracy is characterised by a system of mutual accountability of the ruling party and opposition party and a much-crucial deliberative process.

The **Parliamentary Opposition** plays a crucial role in preserving the true essence of the democracy and raising the concerns of a larger number of people of the country.

However, today, India's parliamentary opposition is not merely fragmented but also in disarray. There seems to be hardly any Opposition party with a vision or strategy for its institutional working or for the Opposition as a whole.

Reviving and strengthening the parliamentary opposition of India becomes extremely important for the world's largest democracy, especially, when its global rankings, in various indices evaluating democracy, are declining.

Parliamentary Opposition in India

- > **About Opposition:** Parliamentary opposition is a form of political opposition to a designated government, particularly in a Westminster-based parliamentary system.
  - ○ The title of "Official Opposition" usually goes to the largest of the parties sitting in opposition with its leader being given the title *"Leader of the Opposition"*.
- > **Significant Role of Opposition:**
  - ○ The opposition **reacts, questions, scrutinises the government on a day-to-day basis** in parliament and its committees and outside the parliament, in the media and among the masses.
  - ○ The role of the opposition is to e**nsure that any government maintains the constitutional guardrails.**
  - ○ Whatever a government adopts as a policy measure and legislation, the **opposition views it from an essentially critical gaze.**
  - ○ Moreover, in parliament, the opposition goes beyond merely following the government and raises, **demands and appeals for the specific needs of their constituencies,** amendments and assurances using various **parliamentary devices**.
- > **Powerful Opposition in the Past:** From the early 1960s powerful movements broke out all over India on issues such as land reforms, rights of the industrial working class, unemployment, foodgrains and their distribution, ethnic demands and language rights.
  - ○ The then **opposition significantly connected itself to these social movements**.
    - It also **encompassed the broadest spectrum of the Opposition,** including the communists.
  - ○ The parliamentary Opposition in history had **imparted creativity and ingenuity to India's parliamentary democracy.**
- > **Weak Opposition and Irresponsible Government Spells Doom:** A weak opposition is far more perilous than a weak government; an irresponsible government in combination with a timid opposition spells doom.
  - ○ A weak opposition simply refers to the opinions/ demands of a large populace (who did not vote for the ruling party) left unaddressed.
- > **Need for a Strong Opposition:** India's current government has drawn severe criticism from multiple quarters.
  - ○ The current moment is marked by a slide in India's status in international **rankings on democracy**, **human rights** and **press freedom**, an ever-increasing number of **sedition** cases and spiralling **UAPA cases**.
    - Further, many laws passed by Parliament are increasingly being seen as unacceptable.
  - ○ These instances clearly indicate an ineffective and weaker opposition as well.

Issue with the Parliamentary Opposition

- > The contemporary crisis of the opposition is

primarily the **crisis of its effectiveness and electoral representation** of these parties.

➢ There is also a **lack of trust and absence of leadership** in the political parties.

➢ The opposition parties are always stuck with **clustered forms of representativeness limited to some specific social groups** and are unable to extend this umbrella beyond a few identities.

➢ The representational assertion enabled the opposition to be formed, expanded and consolidated.

   ○ However, the inability of this phenomenon to realise **substantive representation within all sections of the society** contributed to the **shrinking of the opposition's space.**

➢ A key failure of the opposition in the past few years has also been its **failure to set the political agenda and persuade fence-sitters to their side.**

   ○ This is reflected in its **inability to corner the government on its numerous failures.**

Way Forward

➢ **Reviving Opposition:** There is a need to **revive and reconstitute parties in villages, blocks and districts** as opposed to dictating from the top.

   ○ The opposition parties require a **sustained perennial campaign and mobilisation.** There is no shortcut or "artificial stimulus" that could build an effective opposition.

   ○ Parties in opposition need to **shed their acquired identities and embrace newer ones,** which are broader and deeper in perception and practice.

➢ **Strengthening the Role of the Opposition:** In order to strengthen the role of the opposition, the institution of **'Shadow Cabinet'** can be formed in India.

   ○ Shadow cabinet is a unique institution of the British cabinet system formed by the opposition party to balance the ruling cabinet.

   ○ In such a system each action of a Cabinet Minister must be countersigned by the minister in the shadow cabinet.

➢ **Intrinsic Factors to Strengthen Opposition:** The intrinsic factors go beyond just weaving an opposition by uniting several parties to electorally replace the ruling party.

   ○ The need is to **revamp the party organisation,** to **go for mobilisation** and acquaint the masses with respective party programmes and also to **adopt mechanisms for a timely evaluation of internal democracy** in the parties.

➢ **Responsibility of Representation:** At this juncture, an important responsibility lies with the Opposition to **ensure coordination on common issues**, strategise on parliamentary procedures and above all, **endeavour to represent the suppressed voices.**

➢ **Lessons from Legacy:** The parliamentary opposition in India has much to learn from its own legacy.

   ○ It can **draw from its lessons to position itself as the representative voice** of democratic and egalitarian urges.

   ○ It also may be the opportune context to think of **new ways by which dissent and opposition can be sustained in a new media-induced public culture** that invariably breeds docility and compliance.

➢ **Role of Ruling Party Members:** While the opposition needs to **take up the responsibility to challenge and probe the government**, the idea of representation requires that all the **MPs are sensitive to public opinion.**

   ○ Moreover, independence of ruling party members is connected both to **intra-party democracy and intra-party factionalism.**

      • When parties have factions, they become democratic in their internal functioning.

   ○ For the Parliament to regain its representative character, **ruling party members need to be more sincere** about the parliamentary system.

Conclusion

As a polity following the 'first past the post' system of voting, the role of the opposition is especially significant. Engendering a parliamentary opposition that is the conscience of the nation is important for India to function as a true democracy.

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India's Startup Ecosystem

This article is based on "The Promise and Pitfalls of India's Startup Boom" which was published in the Livemint on 30/11/2021. It talks about the growth of the startup sector of India and the key issues faced by the sector.

Tags: Indian Economy, GS Paper-3, Employment, Growth & Development, IT & Computers, Mobilization of Resources

It is an era of unprecedented innovation and disruption — benefitting from the surge of **start-ups**, armed with transformative products, business models, and capital to take on the world.

Today, India is the third largest start-up ecosystem globally (by number of start-ups) with more than 15,000 start-ups established in 2020, up from 5000 in 2010. The underlying enablers of this startup ecosystem include

smartphone and internet penetration, **cloud computing**, **application programming interfaces (APIs)**, and a national payments stack in place.

Additionally, amid the Covid-19 pandemic, India has witnessed more number of **Unicorn startups** (startups having valuation of over $1 billion) in just 2021 than it did in the period 2011-20.

However, still there are many challenges that act as a hindrance in realising the true potential of startups in India.

Startup Sector in India

➢ **Increasing Investments in Startup Sector:** A private organisation (VCCircle) based weekly startup activity in its latest round has shown **robust inflows in the startup sector.**

　○ The total value of private equity and venture capital deals involving new ventures jumped over threefold; nearly $1.7 billion was raised, with as many as 42 deals notched up.

　○ **Slice** (Bengaluru based fintech) was **India's 41st (and the latest) unicorn** in the year 2021, and the 11th fintech firm to achieve the status, after raising $220 million from investors.

➢ **Unicorns in India:** India currently stands **third in the global list** of the number of companies that have attained unicorn status (well **behind the US and China**, but **ahead of the UK and Germany**).

　○ While **fintech** and **e-commerce** companies have led this phenomenon and **remained at the forefront** of establishing the unicorn ecosystem, other sectors such as **edtech, food delivery and mobility have also made significant contributions.**

　○ Against a cumulative number of 33 unicorns, from 2011 to 2020, the year 2021 alone has seen the **emergence of 41 startup unicorns.**

➢ **Role of Government Policies & Forex Inflow:** India's **changing reforms and policies towards start-ups** and various government initiatives have helped the Indian start-ups scale.

　○ The **inflow of forex especially from leading tech companies** such as Facebook, Google, and Microsoft into the Indian start-up ecosystem signals the immense potential of the domestic market.

➢ **Role of Technology:** Technology has played a key role in the making of pioneer business models.

　○ Most of the unicorns have **leveraged technology in all possible ways;** from refining internal organizational processes to enhancing the value proposition for their customers.

　○ The lockdown and social distancing pushed several businesses to **shift from conventional methods** to **entirely digitally-driven operations,** thereby creating better avenues for market forces.

　○ Leveraging new-age technologies such as **artificial intelligence, internet of things, data analytics, big data, robotics,** etc. several startups worked towards **bridging wide-ranging gaps** that were introduced in the market.

➢ **Unicorns, Employment and Women Entrepreneurs:** The Indian start-up ecosystem is nothing short of a revolution with $106-billion worth of value-creation by 44 unicorns, in turn **creating 1.4 million direct and indirect jobs.**

　○ Moreover, women **entrepreneurs have also contributed immensely** to the start-up ecosystem (Swati Bhargava of CashKaro and Falguni Nair of Nykaa to name a few).

Challenge Associated

➢ **Increasing Investments Do Not Ensure Success of a Startup:** Amid the Covid-19 crisis, when the central banks have released a global glut of liquidity, money is no more a difficult task to raise.

　○ The billions of dollars being invested in startups **represent the large bets on distant outcomes, and not value generation** by way of revenues.

　○ Plus, one **cannot assume the high rate of survival of these startups with such investments,** as it can be assured by profits.

➢ **India, Still a Marginal Player in the Space Sector:** While India's startups in the fintech and e-commerce sector are doing exceptionally well, the space startup sector remains an outlier

　○ Currently, the global space economy is worth $440 billion, with **India having less than 2% share in the sector.**

　　● This is despite the fact that India is a leading space-faring country with end-to-end capabilities to make satellites, develop augmented launch vehicles and deploy interplanetary missions.

　○ The reason for the lack of independent private participation in space includes the **absence of a framework to provide transparency** and **clarity in laws.**

➢ **Indian Investors Unwilling to Take Risks:** The big investors in India's startup sector are from overseas; Japan's SoftBank, China's Alibaba, and Sequoia from the US.

　○ That's because **India does not have a serious venture capital industry** with an appetite for risk.

　○ The country's established **conglomerates have mostly stuck to traditional businesses.**

Way Forward

➢ **More Investments are Important:** One cannot expect an entire herd of unicorns to gallop its way to glory. Such quibbles, however, should not dampen risk-taking.

- ❍ Whether the wagers of investors work out well, all these **investments are crucial for the incubation of value-generators** that could help rewire India's economy for faster expansion over the decadesa head.

➢ **Policy Interventions:** Policy favour has helped the startup sector significantly, such as by **exempting the tax on startup earnings for some years.**

- ❍ However, the taxation of stock options issued to workers is rather too complex.
  - ● **Levies on investments** and capital gains made by early-stage investors **can also be eased with a little more clarity.**
- ❍ Liability overlaps in complicated tax rules often let officials abuse their discretionary authority.
  - ● The scope of this investor put-off needs reduction and the **ambiguity shall be ended by introducing tax reforms.** Top-level intervention would help.

➢ **Legislative Framework for Space Startups:** A stringent framework to provide transparency and clarity in laws with re0000000spect to the startup ecosystem in the space sector is required.

- ❍ The laws need to be broken down into multiple sections, each to address specific parts of the value chain and in accordance with the **Outer Space Treaty.**

➢ **Ensuring Availability of Capital:** The nation's policy-makers, risk-taking corporates and funding agencies need to **foster a conducive climate for ensuring easier availability of domestic capital.**

- ❍ The **regulators have to play a more proactive role** in formulating appropriate regulations that **encourage innovation and support emerging business models.**
- ❍ Besides promoting local funding, the government and corporate entities may need to invest in a big way through leading academic institutions to de-risk start-up investments in the long run.

■■■

1. 'Electric vehicles are the future of transportation.' Discuss in the light of the statement the challenges associated and ways to increase the electric vehicles penetration in the Indian market.

2. Energy security is significant for socio-economic development. Discuss the challenges in achieving energy security and suggest measures to ensure it.

3. Pledge for Net-Zero emission should be taken keeping the interests of our poorest and most vulnerable populations at the centre.

4. With large parts in India under rainfed farming it is imperative to focus on the rainfed agriculture to ensure betterment of the agriculture sector in India. Discuss

5. The new generation mobile network has the transformative potential to provide a wide range of benefits to the Indian economy. In the light of the statement discuss the challenges confronting the 5G technology deployment.

6. There is a need to use technology to make the criminal justice system efficient and effective. Critically analyse the statement.

7. Mahatma Gandhi National Rural Employment Guarantee scheme originally supposed to be a demand-based programme. But lately it has become a supply based programme. Discuss.

8. Discuss the significant role that Eurasia plays in India's continental strategy and how China's increasing political and economic influence in the region impacts India's 'Eurasia policy'.

9. Reservation provides appropriate positive discrimination for the benefit of the socially and educationally backward sections of the society. Critically discuss.

10. "In the context of the transport sector, one of the major sector-wise global carbon emitters, quite little has been pledged to muzzle the exhaust of large car markets. However, decarbonisation of the transport sector by mid-century will require a holistic and integrated approach". Discuss.

11. Discuss the significance of the informal sector in the Indian economy along with the key issues faced by the sector and the need for a quicker and more efficient formalisation of the informal workers.

12. Discuss the role of the largest global emitters and the developed nations in climate change mitigation.

13. Turkey plays a significant role in India's Eurasia policy. Comment.

14. "With increasing Chinese dominance and declining American supremacy in the Indo-Pacific, the European Union offers a potent ally for India to collaborate in the field of shared interests and concerns". Comment

15. "Regulation of cryptocurrency is now necessary in India to offer the investors a degree of protection, ensure compliance with norms, provide clarity with regard to taxation and enable citizens to enjoy the benefits of this new-age technology". Discuss.

16. Discuss the significance of micro-irrigation in sustainable agriculture and the steps that can be taken to empower the micro-irrigation sector of India.

17. India can collaborate with its partner countries in a number of fields in which the latter has reached a more advanced stage, technology being the most important one of those. Discuss.

18. Discuss the issues faced by the banking sector due to bad loans and how better functioning of the Asset Reconstruction Company (ARCs) can help reduce the stress of bad loans.

19. Discuss the issues that India and USA are facing in their bilateral trade ties and the measures that can be taken to boost the trade relationship.

20. Minimum support price (MSP) is not enough for the betterment of farmers. It may, therefore, be time to seek a package of "maximum support policies". Discuss.

21. Indian telecom has played a critical role in building the country's digital infrastructure. Discuss.

22. Drivers for social change like education, legal provisions and initiatives for creating awareness have still a lot to cover with respect to eliminiating girl child marriage. Comment.

23. "The National Family Health Survey (NFHS) is second only to the exhaustive data that the decennial population census provides. It ought to be treated as an important turning point for policy-making in India". Comment.

24. Engendering a parliamentary opposition that is the conscience of the nation is important for India to function as a true democracy. Discuss.

25. Discuss the challenges that act as a hindrance in realising the true potential of startups in India.