

CivilsTap

Quality & Affordable Education



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For HPAS & Other Competitive
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Mains

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GENERAL STUDIES 1.

GEOGRAPHY

HEATWAVE AND THE WORKER

Context: Heatwaves are prolonged periods of excessively hot weather that can cause adverse impacts on human health, the environment, and the economy.

- ❖ India, being a tropical country, is particularly vulnerable to heatwaves, which have become more frequent and intense in recent years.

Criteria for Declaring Heat Wave in India:

❖ Plains and Hilly Regions:

- ✓ Heat wave is considered if the maximum temperature of a station reaches at least 40°C or more for Plains and at least 30°C or more for Hilly regions.
- ✓ Based on Departure from Normal Heat Wave: Departure from normal is 50°C to 6.40°C.
- ✓ **Severe Heat Wave:** Departure from normal is >6.40°C.
- ✓ Based on Actual Maximum Temperature Heat Wave: When actual maximum temperature $\geq 45^{\circ}\text{C}$.
- ✓ **Severe Heat Wave:** When actual maximum temperature $\geq 47^{\circ}\text{C}$.
- ✓ If the above criteria are met in at least 2 stations in a Meteorological subdivision for at least two consecutive days, it is declared so on the second day.

❖ Coastal Areas:

- ✓ When the maximum temperature departure is 50°C or more from normal, a heat wave may be described provided the actual maximum temperature is 37°C or more.

Heat Action Plans (HAPs):

- ❖ It lists preparatory, adaptive, and responsive measures for government departments to tackle the heat and its impacts.
- ❖ **They are mandated to be drafted** — not in an ad hoc manner — at the city, district, and state levels for effective implementation and as per the guidelines of the National Disaster Management Authority (NDMA).
- ❖ It aided in reducing the casualties due to heatwaves,

Issues with HAPs:

- ❖ It misses the varied nature of impacts on different vulnerable groups, like workers in the informal economy in cities.
 - ✓ As of now, a vast majority of the cities in India do not have HAPs.
 - ✓ Most of the existing HAPs barely mention the workers.
- ❖ With their “**disaster-emergency**” perspective, the HAPs leave little room for medium to long-term actions.
- ❖ They are usually biased towards rural realities, without any links to urban planning and design of cities.

Issues faced due to heat waves:

- ❖ Working in extreme heat conditions impacts productivity and income for informal workers in indoor and outdoor activities.
- ❖ Domestic workers are confronted with constant exposure to hot stoves and excessive heat.
- ❖ Home-based workers continue to work and live in a “pressure cooker” environment in small and congested houses in urban slums.
- ❖ Construction workers encounter the relentless challenges of working in the blazing sun
 - ✓ compounded by unbearably hot makeshift shelters near the worksite.
- ❖ Street vendors face income loss as the perishable goods they sell spoil rapidly, combined with a decline in customer traffic and additional expenses on water and shade.
- ❖ Women workers, constituting a substantial number of informal workers, find an increase in their care activity
 - ✓ because of food spoilage, which leads to frequent cooking and cleaning, as well as taking care of the young, sick, and vulnerable in the family.
- ❖ **Heat-related illnesses** — greater fatigue, dehydration, increased anxiety and higher chances of heat stroke.
- ❖ The lack of “basic infrastructure”, such as drinking water and a sunshade at working sites, worsens the risk of these ailments.
- ❖ Most informal workers are not protected under any health insurance and incur out-of-pocket expenses for medical treatment
 - ✓ which adds to their already shrinking income during the hot months.

Policy measures to mitigate the impact of heat waves on workers:

- ❖ It is essential to reimagine heat waves as not conventional disaster events, but as prolonged disasters
 - ✓ Moving from ad hoc, instruction-based response to linking HAPs with other long-term measures of urban planning and climate action plans (CAPs).
 - ✓ This should then translate into the NDMA working with other stakeholders in urban areas, like the Ministry of Housing and Urban Affairs (MoHUA) and the Ministry of Labour and Employment (MoLE).
- ❖ There must be mandatory inclusion of wide categories of informal workers in urban areas and clearer guidelines at the national level
 - ✓ It will help states broaden them and innovate as per their contexts.
- ❖ The general divisions of indoor-outdoor work and the nature of impacts need to be investigated further to frame holistic guidelines and interventions as, in many cases, indoor workers also face extreme heat.
- ❖ There is a clear need for the inclusion of worker communities and voices in the preparation of action plans.
- ❖ Representations from worker welfare boards and bodies similar to the Town Vending Committees (TVC) for street vendors need to be roped in for the drafting and execution of HAPs in cities.
- ❖ The impact of heat is not gender-neutral and has a harsher bearing on women workers’ lives — heat stress plans need to factor in these realities.
- ❖ **Recognise that heat waves mean losses** — of income, health, and livelihoods — and welfare measures must compensate for these.
- ❖ Workers need system-wide protections, with state interventions and employers’ contributions, which include climate-resilient social protection systems and income protection, including compensation for loss of income.

Way Forward

- ❖ As the reforms in labour laws and the Labour Codes await implementation.

- ✓ It will be critical to rethink many of them from the perspective of informal workers and the impact of climate change on work.

Our urban imagination needs to be reconfigured, not only to ensure water, shade, and rest–eat–leisure spaces to mitigate heat wave impacts, but also to find more ways of advancing workers’ rights in cities.



GENERAL STUDIES 2.

POLITY, CONSTITUTION

DEMAND FOR SPECIAL CATEGORY STATUS

Context: The talks over special category status for Bihar and Andhra Pradesh have once again gained momentum after Lok Sabha elections.

About Special Category Status

- ❖ It is a classification granted by the Centre to assist the development of States that face geographical or socio-economic disadvantages.
- ❖ It was introduced in 1969 on the recommendation of the fifth Finance Commission (FC).
- ❖ It was aimed at providing certain states with additional support to overcome geographical and infrastructural handicaps.
- ❖ Factors are considered before granting SCS includes
 - ✓ Hilly and difficult terrain
 - ✓ Low population density and/or sizeable share of tribal population
 - ✓ Strategic location along international borders
 - ✓ Economic and infrastructural backwardness and
 - ✓ Non-viable nature of state finances.
- ❖ **States Covered:** In 1969, three States — Jammu & Kashmir, Assam and Nagaland — were granted the SCS.
 - ✓ Subsequently, eight more States including Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Sikkim, Tripura, Himachal Pradesh, and Uttarakhand were given the SCS by the erstwhile National Development Council.

Benefits Attached

- ❖ The SCS States used to receive grants based on the Gadgil-Mukherjee formula, which earmarked nearly 30% of the total central assistance for States to the SCS States.
 - ✓ However, after the abolition of the Planning Commission and the recommendations of the 14th and 15th FC, this assistance to SCS States has been subsumed in an increased devolution of the divisible pool funds for all States (increased to 41% in the 15th FC from 32%).
 - ✓ Additionally, in the SCS States, the Centre-State funding of centrally sponsored schemes is divided in the ratio of 90:10, far more favourable than the 60:40 or 80:20 splits for the general category States.
- ❖ **Other benefits :** SCS states enjoy special industrial incentives such as Income-tax exemptions, custom duty waivers, reduced excise duty, corporate tax exemption for a certain period, concessions and exemptions relating to GST, and lower state and central taxes.

Controversy and Clamour for SCS

- ❖ In the intricate tapestry of India's federal structure, the concept of Special Category Status (SCS) has been a subject of much debate and discussion
- ❖ The demand for SCS has been particularly vocal in states like Andhra Pradesh and Bihar.
- ❖ Post-bifurcation, Andhra Pradesh's quest for SCS has been intertwined with its efforts to overcome the loss of revenue and to foster development in the absence of a metropolis like Hyderabad.

- ❖ Bihar's demand hinges on its quest to address endemic poverty and spur industrial growth

Conclusion and Way Forward

- ❖ India strides towards becoming a \$5 trillion economy, the debate around SCS underscores the need for a nuanced approach to development.
- ❖ The lessons learned from the SCS experience could inform future strategies aimed at reducing disparities and promoting a more harmonious development pattern across the nation.
- ❖ It is imperative that the spirit of cooperative federalism guides the dialogue on SCS, ensuring that all regions of India can share in the fruits of economic progress.

SCOPE OF SHIFTING TO PROPORTIONAL REPRESENTATION

Context: There is a growing consensus among a broad cross-section of citizens and political parties in India that the current First-Past-The-Post (FPTP) electoral system must be replaced with proportional representation.

What is First Past the Post System?

- ❖ FPTP is a simple electoral system used in many countries, including the United States, Canada, the United Kingdom, and India.
- ❖ In this system, the candidate who receives the most votes in a constituency or district wins the seat, regardless of whether they have an absolute majority (more than 50% of the votes).

Features of the FPTP

- ❖ **Voting:** Each voter casts one vote for their preferred candidate.
 - ✓ They choose from a list of candidates, usually representing different political parties or independent candidates.
- ❖ **Counting Votes:** After voting closes, the votes are counted, and the candidate with the most votes is declared the winner.
 - ✓ There is no requirement for the winning candidate to receive more than 50% of the total votes cast.
- ❖ **Winner Takes All:** The candidate who wins the most votes in a constituency or district is awarded the seat, and the other candidates receive nothing, even if they have a significant share of the vote.

Significance

- ❖ The FPTP system is simple and the most feasible method in a large country like India.
- ❖ FPTP provides greater stability to the executive in parliamentary democracy because the ruling party/coalition can enjoy a majority in the Lok Sabha/Legislative assembly without obtaining a majority of the votes (more than 50%) across constituencies.

Criticism

- ❖ One common criticism is that it can lead to disproportionate representation, where parties with significant overall support may not win a proportionate number of seats.
 - ✓ It may result in over or under representation of political parties when compared to their vote share.
- ❖ It also discourages smaller parties or independent candidates from participating, as they may struggle to win seats under this system.
- ❖ Elected representatives tend to pay more attention to those who voted for them.
 - ✓ The representative is often compelled to indulge in vote-bank, competitive politics or sectoral politics to remain popular and ensure re-election in the next round.

Proportional Representation (PR)

- ❖ It is an electoral system where the distribution of seats in a legislative body is closely aligned with the proportion of votes received by each participating political party or group.
 - ✓ Unlike First Past the Post (FPTP), where the candidate with the most votes in each constituency wins, PR aims to ensure that the overall composition of the legislative body reflects the overall distribution of voter preferences.

There are various types of proportional representation systems:

- ❖ **Party List PR:** In this system, voters cast their vote for a political party rather than a specific candidate.
 - ✓ Seats are then allocated to parties in proportion to the total number of votes each party receives.
 - ✓ Parties provide a ranked list of candidates, and seats are filled based on the order of candidates on the list.
- ❖ **Mixed-Member Proportional (MMP):** This system combines elements of both FPTP and PR.
 - ✓ Voters cast two votes: one for a candidate in their local constituency and one for a political party.
 - ✓ Some seats are filled by the winners of the local constituency races, while additional seats are allocated to parties to ensure proportionality based on the overall party vote.
- ❖ **Single Transferable Vote (STV):** In STV, voters rank candidates in order of preference in multi member constituencies.
 - ✓ Candidates are elected based on achieving a certain quota of votes, with surplus votes from elected candidates and votes from eliminated candidates being redistributed until all seats are filled.
- ❖ **Mixed-Member Majoritarian (MMM):** This system combines FPTP with additional proportional seats.
 - ✓ A portion of seats are filled by FPTP, while additional seats are allocated to parties to ensure proportionality based on the overall party vote.

Significance

- ❖ Proportional representation systems aim to provide fairer representation for a broader range of political viewpoints, reduce wasted votes, and encourage voter turnout.

Criticism

- ❖ The main criticism against the PR system is that it could potentially result in instability as no party/coalition may obtain a majority to form the government in our parliamentary democracy.
- ❖ Some experts assert that the PR system slows down decision-making, resulting in the weakening of the government itself.
- ❖ It is possible that extreme pluralism can allow tiny minority parties to hold larger parties to ransom in coalition negotiations. The inclusiveness of the PR system is thus cited as a drawback.
- ❖ The PR system may reduce accountability to voters because an ousted party of the government can still remain in office by finding new coalition partners after an election.
 - ✓ Under a PR system, it may be difficult to remove a reasonably sized centre party from power.

Way Ahead

- ❖ The discrepancies and associated flaws of the FPTP can be reduced, if not eliminated, to make India's democratic system more responsive and reflective of the will of the people.
- ❖ There is a consensus among supporters of democracy that the ruling party and the opposition are equally significant for the sustainability and functioning of a democratic system.

- ✓ Because of the FPTP electoral system, the opposition has been eliminated or reduced to a minimum several times in the past, for example in 1984, 2014, and in the first three general elections held after Independence.
- ❖ The law commission in its 170th report, 'Reform of the electoral laws' (1999), had recommended the introduction of the MMPR system on an experimental basis.
 - ✓ It had suggested that 25% of seats may be filled through a PR system by increasing the strength of the Lok Sabha.

FISCAL FEDERALISM IN INDIA: BRIDGING NORTH-SOUTH GAPS

Context: Recent Lok Sabha verdict has brought back regional parties from Andhra Pradesh and Bihar to pole positions in the country's governance looking for strengthening the federal polity and making decision-making more democratic.

About the Fiscal Federalism

- ❖ It is a critical aspect of governance that deals with the division of financial powers and responsibilities between the Union and State governments within the framework of a federal system.
- ❖ It focuses on responsibilities (including finances) among federal, state, and local governments to improve economic efficiency and achieve various public policy objectives.

Fiscal Federalism in India

- ❖ **Shifts in Fiscal Landscape:** The fiscal landscape has been altered by several factors, including the shift from a planned economy to a market-mediated economic system, the transformation of a two-tier federation into a multi-tier fiscal system following the 73rd and 74th Constitutional Amendments, the abolition of the Planning Commission and its replacement with NITI Aayog, the passing of the Fiscal Responsibility and Budget Management (FRBM) Act, and the introduction of the Goods and Services Tax (GST) Act.
 - ✓ These changes have had varying consequences on India's federalism.
- ❖ **Vertical and Horizontal Imbalances:** The Indian Constitution, while expressly vesting the Centre with greater powers of taxation, also provides for an institutional mechanism — the Finance Commission — to determine the share of the States in the Central tax revenues by way of correcting the vertical imbalance (between the Centre and the States) as well as the horizontal imbalance, the one between the States with varying fiscal capacities but similar responsibilities in the provision of public services.
 - ✓ The founding fathers of the Constitution provided that the Centre shall share its tax revenues with the states as well as provide grants from the Consolidated Fund as per a formula decided by the Finance Commission every five years.
- ❖ **Federal Tax System:** India has a three-tier federal tax system, with the powers of the Centre, states, and local bodies to collect taxes clearly demarcated.
 - ✓ The Central government has the power to collect taxes on incomes of individuals and businesses, as well as indirect taxes such as the central goods and services tax, integrated goods and services tax, and customs. The Centre also collects surcharges and cesses on taxes.
 - ✓ States collect state GST, stamp duty, land revenue, state excise, and professional tax.
 - ✓ Local bodies collect property/house tax, tolls, and taxes on utilities such as electricity and water.

Challenges related to Fiscal Federalism in India

- ❖ **Centralization and Market-Mediated Economic System:** The shift from a planned economy to a market-mediated economic system, the transformation of a two-tier federation into a multi-tier fiscal

system following the 73rd and 74th Constitutional Amendments, and the introduction of the Goods and Services Tax (GST) Act have altered the fiscal landscape.

- ✓ It led to dissatisfaction due to the highly centralised system, impediments to a common market, and regional aspirations for statehood.
- ❖ **GST and Fiscal Autonomy:** The introduction of GST has transformed fiscal federalism in the country. While it has led to steady growth of GST revenue, indicating the success of the reform, it has also been cited as a restriction on the powers of the states.
 - ✓ Critics argue on the autonomy of states with the introduction of GST.
- ❖ **Equity and Income/Growth Disparities:** There has been a long-term stability in the shares of the Centre and the States in the combined tax revenues.
 - ✓ However, the actual experience in India has been astounding with the top 1% earners in India capturing less than 21% of the total income in the 1930s, but this was drastically reduced to 6% in the early 1980s and then rose to 22% during the liberalisation era.
 - ✓ It led to an increasingly divergent trend in per capita income across states.
- ❖ **Political Centralization:** The asymmetric federalism inherent to the Constitution was only accelerated and mutually reinforced with political centralization since 2014, making the Union Government extractive rather than enabling.
 - ✓ It led to states losing their capacity to generate revenue by surrendering their rights in the wake of the GST regime.
- ❖ **Post-Pandemic Fiscal Policies:** In the post-pandemic world, there is a need to rethink existing principles that guide the country's fiscal policy, including debt, which is expected to remain high.
- ❖ **North-South Divide in India:** It has been a topic of intense discussion, especially in the context of fiscal federalism.
 - ✓ The southern states of India have often expressed concerns about the alleged unfair devolution of tax money, claiming they were deprived of their legitimate share from central taxes.
 - ✓ States such as Karnataka, Kerala, Tamil Nadu, and West Bengal have also complained and protested against the alleged denial of their dues under central schemes, flagged the Centre's tight control on their borrowing limits and lack of adequate support in times of disasters.

Strengthening Fiscal Federalism

- ❖ Strengthening fiscal federalism in India is a complex task that involves multiple aspects. It is crucial for addressing these concerns and fostering cooperation and accommodation between the North and South.
- ❖ **Cooperative Federalism:** NITI Aayog has been constituted to actualize the important goal of cooperative federalism and to enable good governance in India. It acts as the quintessential platform for the Government of India by bringing States together as 'Team India' to work towards the national development agenda.
 - ✓ A number of steps have been taken by NITI Aayog to foster cooperative federalism through structured support initiatives and engagement with the States/UTs on a continuous basis.
- ❖ **16th Finance Commission:** It, headed by Arvind Panagariya, has been given more freedom to determine the scope of its recommendations, providing it more room to strengthen fiscal federalism.
 - ✓ Its job is to ensure balance in resource transfers between the Centre and states, and among states.
 - ✓ However, states grudgingly relinquish their resource-raising capacity and resent any loss of agency over expenditure.

- ❖ **Addressing Inequities:** The concerns of the founding fathers — addressing socio-economic inequities — are being forgotten in today's fiscal policy.
 - ✓ The original intention of addressing inequities was turned on its head as it metamorphosed into one of the world's most regressive taxation systems due to a centralised fiscal policy.
 - ✓ India's intergovernmental transfer system should be decidedly more equity-oriented.
- ❖ **Granting State Governments the Powers to Levy Income Taxes:** One tangible solution to restore the balance in fiscal federalism is to grant State governments the powers to levy income taxes.
- ❖ **New Fiscal Federal Architecture:** India will be able to truly actualize the 'grand bargain' and see the GST as an enduring glue holding the four pillars together by creating the new fiscal federal architecture and strengthening India's unique cooperative federalism.

Future Directions

- ❖ The future of fiscal federalism in India likely to involve further reforms to address these challenges and imbalances that includes making the intergovernmental transfer system more equity-oriented, addressing the resource asymmetry between the Centre and the States, and managing growing regional tensions.

Conclusion

- ❖ Fiscal federalism in India has faced numerous challenges, including the transition from a planned economy to a market-based system, globalisation, and the changing political environment. The system had to be reoriented to create a competitive environment. There has been dissatisfaction due to the highly centralised system, impediments to a common market, and regional aspirations for statehood.

GOVERNMENT'S TAX DEVOLUTION TO STATES

Context: The Central Government has released an instalment of ₹1.39 lakh crore for tax devolution to the states.

About

- ❖ It includes the regular devolution amount for June 2024 and an additional instalment, enabling State Governments to accelerate development and capital spending.
 - ✓ The additional funds will support State Governments in enhancing their developmental activities and infrastructure projects, thereby boosting economic growth at the state level.
- ❖ The Interim Budget for FY25 had earmarked Rs. 12.19 trillion towards devolution of taxes to states. With this release, the total amount devolved for FY25 to states till 10 June stands at Rs. 2.8 trillion.

About Tax devolution

- ❖ It is a crucial revenue stream for states, involving the Centre allocating tax collection to states.
- ❖ Article 270 of the Constitution provides for the scheme of distribution of net tax proceeds collected by the Union government between the Centre and the States.
 - ✓ The taxes that are shared between the Centre and the States include corporation tax, personal income tax, Central GST, the Centre's share of the Integrated Goods and Services Tax (IGST) etc.
- ❖ Article 280(1) of the Constitution lays down that the modalities for setting up of a Finance Commission to make recommendation on the distribution of net proceeds of taxes between the Union and the States, allocation between the States of respective shares of such proceeds; grants-in-aid and the revenues of the States and measures needed to supplement the resources of the Panchayats during the award period.

- ❖ The divisible pool, however, does not include cess and surcharge that are levied by the Centre. the basis for allocation
- ❖ The share of States from the divisible pool (vertical devolution) stands at 41% as per the recommendation of the 15th FC.
- ❖ The distribution among the States (horizontal devolution) is based on various criteria. The criteria as per the 15th FC can be briefly explained as follows.
 - ✓ 'Income distance' is the distance of a State's income from the State with highest per capita income.
 - ✓ States with lower per capita income would be given a higher share to maintain equity among States.
 - ✓ 'Population' is the population as per the 2011 Census. Till the 14th FC, weightage was given for the population as per the 1971 Census but that has been discontinued in the 15th FC.
 - ✓ 'Forest and ecology' consider the share of dense forest of each State in the aggregate dense forest of all the States.
 - ✓ 'The demographic performance' criterion has been introduced to reward efforts made by States in controlling their population.
 - ✓ States with a lower fertility ratio will be scored higher on this criterion.
 - ✓ 'Tax effort' as a criterion has been used to reward States with higher tax collection efficiency.

Criticism and Issues

- ❖ The Constitutional scheme has always favoured a strong centre in legislative, administrative and financial relations.
- ❖ However, federalism is a basic feature and it is important that States don't feel short-changed when it comes to distribution of resources.
- ❖ While there are always political differences between the Union government and Opposition-ruled States that exacerbate the problem, there are genuine issues that need to be considered.

Suggestions and Way Ahead

- ❖ The divisible pool can be enlarged by including some portion of cess and surcharge in it.
- ❖ The Centre should also gradually discontinue various cesses and surcharges it imposes by suitably rationalising the tax slabs.
- ❖ The weightage for efficiency criteria in horizontal devolution should be increased.
- ❖ GST being a consumption-based destination tax that is equally divided between the Union and the State means that State GST accrual (inclusive of Integrated GST settlement on inter-state sales) should be the same as the Central GST accrual from a State.
 - ✓ Hence, relative GST contribution from States can be included as a criterion by providing suitable weightage in future FCs.
- ❖ Finally, similar to the GST council, a more formal arrangement for the participation of States in the constitution and the working of the FC should be considered.
- ❖ These are measures that need to be implemented by the Centre after discussion with all the States.
- ❖ It is also imperative that the States uphold principles of fiscal federalism by devolving adequate resources to local bodies for vibrant and accountable development.

FISCAL FEDERALISM IN INDIA: BRIDGING NORTH-SOUTH GAPS

Context: Recent Lok Sabha verdict has brought back regional parties from Andhra Pradesh and Bihar to pole positions in the country's governance looking for strengthening the federal polity and making decision-making more democratic.

ISRO's Reusable Launch Vehicle (RLV) Programme

- ❖ Recently, the Indian Space Research Organisation (ISRO) informed that it is all set to carry out the third and final RLV Landing Experiment (RLV LEX) under the Reusable Launch Vehicle (RLV) Programme.

About the Reusable Launch Vehicle Landing Experiment (RLV LEX) of ISRO

- ❖ RLV-LEX missions involve taking an unmanned winged prototype, christened Pushpak, to a designated height and releasing it to land safely under varying conditions.
- ❖ The configuration of RLV-TD is similar to that of an aircraft and combines the complexity of both launch vehicles and aircraft.
- ❖ The winged RLV-TD has been configured to act as a flying test bed to evaluate various technologies, namely, hypersonic flight, autonomous landing, and powered cruise flight.
- ❖ In the future, this vehicle aims to be scaled up to become the first stage of India's reusable two-stage orbital launch vehicle.

Significance of the Experiment

- ❖ It marked a significant milestone in ISRO's journey towards achieving low-cost access to space. The successful execution of the landing experiment demonstrated ISRO's capability to develop a reusable launch vehicle, which is expected to significantly reduce the cost of launching satellites into orbit.
- ❖ The RLV-TD programme is a testament to ISRO's commitment to innovation and technological advancement. With the successful completion of this landing experiment, ISRO has moved one step closer to realising its vision of developing a fully reusable launch vehicle.
- ❖ After the successful completion of the RLV-LEX series, ISRO plans to proceed with the next stage of tests under the RLV-TD Programme, involving an unmanned Orbital Re-entry Vehicle (ORV) that is 1.6 times the size of 'Pushpak' used in the LEX missions.
 - ✓ The ORV will be placed in a 400-kilometre orbit around Earth using a modified Geosynchronous Satellite Launch Vehicle (GSLV)

COMPLEXITIES OF INDIAN FEDERALISM

Context: In recent years, disputes between the Union government and the States have become more frequent.

Federalism in India

❖ Meaning:

- ✓ Federalism refers to a vertical division of power in a political system. It is a system in which power is divided between a central authority and other constituents.
- ✓ For e.g. in India, political power is divided between the Central government, state governments and the institutions of local governance.

❖ Features of a federal system:

- ✓ **Multiple levels of government:** Federalism, by its very definition, requires multiple levels of government functioning within their defined territory.
- ✓ **Division of Power:** The power is divided by the division of subjects between the entities so that the chances of conflict are reduced to a minimum.
- ✓ **Written Constitution:** It ensures there is clarity in the respective division of power. Again, a rigid constitution ensures that this division of power is not easily disturbed.
- ✓ **Independent Judiciary:** It acts as a dispute resolution mechanism between the different levels of government.

❖ Interdependence of state and Central Government:

- ✓ India consciously adopted a version of federalism that made the Union government and State governments interdependent on each other (latter more vis-a-vis the former).

- ✓ Thereby violating the primal characteristic of a federal constitution i.e., autonomous spheres of authority for Union and State governments.

❖ **'Holding together' Federalism:**

- ✓ India's centralised federal structure was not marked by the process of 'coming together' but was an outcome of 'holding together' and 'putting together'.

❖ **Indestructible & Flexibility:**

- ✓ B. R. Ambedkar called India's federation a Union as it was indestructible which is why the Constitution does not contain words related to federalism.
- ✓ He also said that India's Constitution holds requisite flexibility to be federal and unitary on a need basis.

Types of Federalism

❖ **Cooperative Federalism:**

- ✓ It refers to the horizontal relationship between the entities in a federal structure.
- ✓ Cooperative federalism refers to the cooperation between the two entities in pursuit of unified socio-economic development of the country.

❖ **Competitive Federalism:**

- ✓ It refers to promoting healthy competition between the states to keep them motivated in pursuit of economic development.
- ✓ The laggard states are expected to put in extra efforts to catch-up with the front-runners, while the front-runners are expected to work hard to retain their ranking in the indices.

❖ **Fiscal Federalism:**

- ✓ It deals with the division of financial powers as well as the functions between multiple levels of the federal government.
- ✓ It has within its ambit the imposition of taxes as well as the division of different taxes between the Centre and the constituent units.
- ✓ Similarly, in the case of joint collection of taxes, an objective criterion is determined for the fair division of funds between the entities.
- ✓ Usually, there is a constitutional authority (like Finance Commission in India) for the purpose to ensure fairness in the division.

About the increasing federal frictions

❖ **Dependence over public expenditure:**

- ✓ Continuing economic reforms since 1991 has led to the relaxation of many controls on investments, giving some room to States.
- ✓ But the autonomy regarding public expenditure policies is not absolute as State governments depend on the Centre for their revenue receipts.
- ✓ This equation between the Centre and the States has given way to friction between them in recent days, leaving little room to negotiate.

❖ **Others:** Apart from issues around resource sharing, there are other areas that have emerged as sites of conflict. These include:

- ✓ The homogenisation of social sector policies,
- ✓ Functioning of regulatory institutions and
- ✓ The powers of central agencies.

❖ **Increasing influence of centre:**

- ✓ Ideally bulk of the policies in these spheres should be at the discretion of States, with an apex central body overseeing the process of resource allocation.

- ✓ However, the apex bodies have often attempted to increase their influence and push States in directions that are amenable to the Centre.

Economic consequences of the federal frictions

❖ Dilemma of investments:

- ✓ The spread of the Centre's span of activities leads to a situation where the Centre starts crowding out the States in terms of investments.
- ✓ Consider a case of infrastructure development in recent years.
 - The Centre launched the PM Gati Shakti, a digital platform, to incorporate schemes of various Ministries and State governments to achieve integrated planning and coordinated implementation of infrastructure connectivity projects.
 - All States and UTs had to prepare and operationalise a State master plan in line with the national master plan for seamless implementation.
- ✓ However, the flexibility of States in formulating their master plan is curtailed by the centralisation of planning and implementation of the national master plan.
 - This leads to underinvestment by States.

❖ Concentrated spending:

- ✓ The centre's spending has become more concentrated within the three largest States of Uttar Pradesh, Maharashtra and Gujarat, accounting for nearly half of the expenditure by 16 States between 2021-22 and 2023-24.
- ✓ Data for 25 States shows that a total of ₹7.49 lakh crore was budgeted for by these States but they spent only ₹5.71 lakh crore which is 76.2% of the total.
 - Investment by these States is important in terms of their impact on regional economies as they induce more local level linkages while national infrastructure projects forge more linkages with the global economy.

❖ Little competition:

- ✓ In a scenario of friction with the Centre, State governments will engage in competition with other States and with the Centre. Welfare provisioning is one such area.
- ✓ The Centre with enhanced fiscal space has more spending power, while States' revenues, especially non-tax revenues, remain flat as possibilities of raising non-taxes are confined to a smaller sphere due to the direct provisioning of many utilities and services by the Centre.

❖ Inefficiencies associated with 'parallel policies':

- ✓ Federal abrasions lead to either the Centre or the States duplicating the other's policies.
- ✓ The emergence of parallel schemes is mainly due to the trust deficit prevailing in the federal system, the fiscal costs of which have long run consequences on the economy.

Way ahead

- ❖ For securing the implementation of many of its laws and policies, the Centre depends on the States, particularly in the concurrent spheres.
- ❖ The States also entrust their executive functions, with the consent of the Centre, to the government or agencies of the Centre (Article 258A).
- ❖ Such interdependence is inevitable, especially in a large, diverse, developing society and needs to be preserved.

GOVERNANCE

MISSION KARMAYOGI: NATIONAL PROGRAMME FOR CIVIL SERVICES CAPACITY BUILDING

Context: Recently, Indian Institute of Public Administration assessed the impact by seeking inputs on trained staff and reported increased proficiency in data analytics and e-governance tools under Mission Karmayogi.

Mission Karmayogi

- ❖ India's ambitious vision of becoming a global manufacturing hub, a critical exporter of value-added services, and a mass supplier of human skills to an ageing developed world by 2047 hinges on efficient governance and competent civil services.
- ❖ Recognising this, the Prime Minister of India launched Mission Karmayogi, the National Programme for Civil Services Capacity Building to transform India's three million civil servants into citizen-centric, future-ready, and result-oriented 'Karmayogis'.

Need for Transformation

- ❖ Historically, delayed infrastructure projects plagued India. Mega initiatives like Rail Freight Corridors and National Highways often faced setbacks due to inter-ministerial permissions and siloed approaches.
 - ✓ To address this, the PM Gati Shakti platform emerged as a game-changer.
- ❖ By integrating legal, geographic, and planning layers, it facilitated a holistic approach to infrastructure development.
- ❖ However, for the platform to succeed, civil servants needed expertise in emerging technologies and Geographic Information Systems (GIS).
- ❖ India aims to become a global manufacturing hub, a critical exporter of value-added services, and a mass supplier of human skills to developed countries.
 - ✓ It covers 46 lakh Central government employees at all levels, and it needs to evolve to meet the demands of a \$30 trillion economy by 2047.

Approach For Mission Karmayogi

- ❖ **Capacity Building Commission (CBC):** It provides policy guidance and tools to enhance civil servants' capabilities at all levels.
 - ✓ Collaborating with institutions like Gati Shakti Vishwavidyalaya and the National Academy of Customs, Indirect Taxes, and Narcotics, the CBC curated digital training courses.
 - ✓ These courses equipped civil servants with skills to apply to PM Gati Shakti for project planning and coordination across departments.
- ❖ **Competence Rooted in Indian Ethos:** Mission Karmayogi aims to create a competent civil service rooted in Indian values.
 - ✓ It fosters a shared understanding of the country's priorities, emphasising effective and efficient public service delivery.
- ❖ **Technology-Enabled Karmayogis:** The program focuses on making civil servants more creative, constructive, imaginative, and proactive.
 - ✓ It encourages transparency and leverages technology for better governance.
 - ✓ It can be done either in-house or through knowledge partners. Carefully crafted and vetted content from top-notch institutions, universities, private content providers and individual resources will be made available as training modules.

Six Key Pillars Under Mission Karmayogi

- ❖ **Policy Framework:** Provides strategic direction for capacity-building initiatives.
- ❖ **Institutional Framework:** Establishes the organisational structure to support the program.
- ❖ **Competency Framework:** Defines skills and knowledge required for effective civil service.
- ❖ **Digital Learning Framework (iGOT-Karmayogi):** Comprehensive online learning platform.
- ❖ **Electronic Human Resource Management System (e-HRMS):** Streamlines personnel management processes.
- ❖ **Monitoring and Evaluation Framework:** Ensures continuous improvement and impact assessment.

Potential of Mission Karmayogi

- ❖ **Enhanced Proficiency:** The Indian Institute of Public Administration assessed recently trained staff and reported increased proficiency in data analytics and e-governance tools.
- ❖ **Continuous Capacity Building:** Mission Karmayogi provides a mechanism for continuous capacity building, ensuring civil servants stay updated and skilled.
- ❖ **Equal Opportunities:** The program aims to provide equal opportunities for personal and professional growth for government officials at all levels.
- ❖ **Ideal Civil Servants:** By upgrading post-recruitment training mechanisms, Mission Karmayogi aims to create ideal civil servants who are citizen-centric, future-ready, and result-oriented.

Key Outcome Under Mission Karmayogi

- ❖ **PM Gati Shakti Platform for Infrastructure Development:** It integrates legal, geographic, and planning layers for mega infrastructure projects.
 - ✓ Over 24,000 officials completed PM Gati Shakti learning modules, and 3,88,000 personnel were certified in emerging technologies.
 - ✓ New rail lines increased from 4 km/day to 12 km/day by 2024.
 - ✓ 15 highway projects under Bharatmala-2 were prepared using PM Gati Shakti.
 - ✓ Sensitive wildlife habitats were avoided during rail and highway alignments.
- ❖ **Mission Karmayogi for Citizen-Centric Policing:** Over 50,000 police personnel underwent a two-day training on self-reflection and proactive problem-solving.
 - ✓ Field research addressed flashpoints, including biased behaviour complaints.
 - ✓ Impact assessment showed increased citizen satisfaction in Puducherry after training.
 - ✓ Citizen satisfaction increased 1.5 to 1.9 times in Mumbai, Asansol, Bengaluru, and Lucknow divisions.
 - ✓ Gramin Dak Sevaks and village-level CSCs also received enhanced training.

Challenges Ahead

- ❖ **Skill Gap:** Despite training efforts, bridging the skill gap across diverse ministries and field-level officials remains a challenge.
 - ✓ Proficiency in emerging technologies and Geographic Information Systems (GIS) is critical for successful implementation of initiatives like PM Gati Shakti.
- ❖ **Inter-Ministerial Coordination:** Achieving a 'whole of government' approach requires seamless coordination among ministries.
 - ✓ Overcoming silos and ensuring collaboration remains an ongoing challenge.
- ❖ **Adaptation to Change:** Transforming civil services necessitates a cultural shift. Encouraging civil servants to embrace technology, innovation, and citizen-centric approaches may face resistance.
- ❖ **Monitoring and Evaluation:** Effective monitoring mechanisms are essential to track progress and address bottlenecks. Establishing robust evaluation processes is crucial.

Conclusion

- ❖ Mission Karmayogi seeks to transform India's civil services, making them better prepared and citizen-oriented, ultimately contributing to the nation's ambitious goals.
- ❖ It is a transformative initiative that empowers civil servants to drive India's progress. By nurturing citizen-centric, tech-savvy Karmayogis, we pave the way for a Viksit Bharat by 2047.

BALANCING HEALTH-CARE COSTS IN INDIA

Context: With rising health disparities and uneven access to medical services, there is an urgent need for equitable and sustainable health-care policies.

About the Health Care Costs in India

- ❖ India's health care system is a dynamic landscape, influenced by various factors such as infrastructure, location, and disease prevalence.
- ❖ As we navigate this complex terrain, cost considerations play a crucial role in shaping health-care policies.

Factors Influencing Health-Care Costs

- ❖ **Geographic Location:** The cost of health care varies significantly based on the location of treatment.
 - ✓ Metropolitan cities generally have higher treatment costs compared to smaller towns.
 - ✓ Within metropolitan areas, costs may differ from one locality to another.
- ❖ **Infrastructure and Quality:** The type of infrastructure at health-care centers impacts costs.
 - ✓ Advanced and modern facilities tend to be more expensive.
 - ✓ Unfortunately, this often means that middle and lower-middle class patients can only access low-quality health-care services.
 - ✓ Investing in infrastructure for broader Internet access and improving digital literacy empowers more people to benefit from health-care advancements.
- ❖ **Availability of Services:** Rarely available services come with higher costs.
 - ✓ Patients may incur additional expenses for transportation to access specialized treatments.
- ❖ **Disease Severity:** Fatal or incurable diseases require expensive drugs, tests, and frequent checkups.
 - ✓ The severity of the disease significantly contributes to the overall treatment cost.

Navigating Health Care Costs in India

- ❖ **Cost Considerations in Health Care Delivery:** Rising health disparities and uneven access to medical services are driving the need for equitable and sustainable health-care policies.
 - ✓ Discussions about setting rates for medical services significantly impact how we perceive, access, and deliver health care across India.
- ❖ **Innovations in Private Hospitals:** Private hospitals, accredited by organizations like JCI and NABH, serve as both specialized care centers and innovation hubs.
 - ✓ Cutting-edge technologies enhance patient outcomes, especially in complex procedures.
 - ✓ Investments in top-tier infrastructure and advanced technologies enable seamless integration of telemedicine and remote care.
- ❖ **Legal Perspectives:** Legislative reform is essential for managing health-care costs effectively.
 - ✓ Tailoring approaches to local demographic and economic conditions can support rate standardization and high-quality care.
 - ✓ States like Rajasthan and Tamil Nadu advocate for robust legal frameworks to address gaps in rate fixation provisions.

Role of Technology in Cost Management

- ❖ Technology is revolutionizing health care by diagnostics being faster and more accurate with artificial intelligence.
- ❖ Electronic health records improve care coordination.
- ❖ Telemedicine initiatives in Karnataka have reduced hospital visits by 40%, making medical care more accessible and cost-effective, especially in remote areas.
- ❖ Integration of technology reduces pressure on health-care facilities and delivers timely care directly to patients' homes.
- ❖ Mobile health apps and wearable devices play a crucial role in managing chronic conditions outside hospitals.
 - ✓ These innovations significantly cut costs and enhance patient outcomes.
 - ✓ Ensuring technology reaches all population segments is vital.

What needs to be done?

- ❖ **Flexible Pricing Strategies:** Recent surveys with health-care professionals in India highlight the need for pricing strategies that mirror the complexities of medical procedures and patient-care requirements.
 - ✓ Engaging all stakeholders, including private health-care providers, is essential for crafting effective, sustainable policies.
 - ✓ India has the potential to lead globally in health-care innovation by leveraging technology and thoughtful policy approaches.

Leveraging Data for Health Care Policies

- ❖ **Data-Driven Insights:** In the big data era, health-care policy decisions should rely on data analytics.
 - ✓ Data sheds light on patient outcomes, treatment efficacy, and cost-efficiency.
 - ✓ Nuanced rate-setting frameworks benefit from data-driven insights.
- ❖ **Predictive Analytics and Rate Fixation:** Predictive analytics can foresee long-term impacts of rate fixation on health-care innovations.
 - ✓ Policymakers can adjust regulations to encourage innovation and accessibility.
 - ✓ Adjusting regulations based on these insights can encourage accessibility and innovation.
- ❖ **Balancing Price Caps, Quality, and Innovation:** The Supreme Court's deliberation on standardizing medical procedure rates across government and private sectors raises questions about affordability.
 - ✓ One-size-fits-all price caps may compromise health-care quality and lead to patient dissatisfaction.
 - ✓ Value-based pricing, reflecting health outcomes rather than service volume, could be a solution.
 - ✓ Dynamic pricing models, considering medical complexity and patient financial status, offer a fair approach.
 - ✓ Thailand's tiered pricing system, based on patient income levels and medical necessity, serves as a successful model for managing costs in India's diverse economic landscape.

India's Aspiration as a Global Health-Care Leader

- ❖ Foster an environment conducive to innovation.
- ❖ Ensure equitable access to quality health care.
- ❖ Prioritize the well-being of every individual.
- ❖ NITI Aayog emphasizes affordable health care as a national priority, leveraging technology to reduce costs for all citizens.

Future of India's Health-Care Industry

- ❖ Despite significant growth in infrastructure, health-care costs continue to rise.

- ❖ Advanced technology has improved treatment processes but hasn't eased medical expenses for many Indians.
- ❖ The current annual rate of medical inflation stands at 15%, while overall inflation is 6-7% per annum.
- ❖ Health expenditure currently accounts for 5% of India's private final consumption expenditure.

Conclusion

- ❖ India must strike a delicate balance between affordability, innovation, and quality health care.
- ❖ By leveraging technology, data-driven insights, and strategic policies, India can lead globally in health-care innovation while ensuring equitable access for all citizens.

REVIEW OF THE AGNIPATH SCHEME

Context: The National Democratic Alliance (NDA) coalition said the new government should review the "Agnipath" scheme for short term recruitments to the armed forces.

Agnipath Scheme

- ❖ It was introduced in 2022, and is also called the Tour of Duty scheme.
- ❖ It is a short-term recruitment scheme for the Indian Army.
- ❖ Under the policy, soldiers — called 'Agniveers' — are recruited for four years, at the end of which only 25 percent of recruits from a batch are retained for regular service for 15 years.
- ❖ Age Limit : Candidates between the age of 17.5 years to 21 years are eligible for enrolling in the Agnipath scheme.
- ❖ The scheme provides an avenue to Indian youth, desirous of serving the country to get recruited in the Armed Forces for a short duration.
 - ✓ The scheme enhances the youth profile of the Armed Forces.

Significance of the Scheme

- ❖ **Reducing the Average Age in Military:** There has been a focus within the military to bring down the average age of soldiers, especially within the Army, since the 1980s.
 - ✓ The scheme aims to recruit Indian youth to serve in the Armed Forces.
- ❖ **Short Term Services in Other Countries:** In modern armed forces of various countries, the service ranges from 2 to 8 years with options for active and reservist.
 - ✓ The Israeli army has service of 30 months and 20 months respectively for men and women.
 - ✓ Similarly the United States and United Kingdom also have short duration contracts.
 - ✓ The 'Agnipath' scheme will be comparable to the time frame in many world class armed forces.
- ❖ **Technologically Advanced Future:** Future wars will be fought with artificial intelligence, autonomous systems, cyber space and space based ISR (Intelligence Surveillance and Reconnaissance).
 - ✓ Agnipath in India will ensure a youthful and tech-savvy profile of the armed forces.
- ❖ **Budgetary Constraints:** One of the greatest challenges facing the Indian armed forces today is overall budgetary constraint.
 - ✓ Huge salary and pension bills have placed enormous stress on the availability of funds for military modernization.
- ❖ **Employment:** This scheme will increase employment opportunities and because of the skills and experience acquired during the four-year service such soldiers will get employment in various fields.
 - ✓ This will also lead to availability of a higher-skilled workforce to the economy which will be helpful in productivity gain and overall GDP growth.

Concerns

- ❖ **Short Duration:** Four years is too short a time for a conscript to acquire the skills essential for operating sophisticated systems in the technology-intensive Navy and Air Force.
- ❖ **May Lead to Cohesiveness:** For the Army, which has a regimental system, it is feared that it will impair the unit's cohesiveness as the soldier on a short-term contract would not have the same dedication and devotion to the nation or duty.
- ❖ **Lack of Employment Guarantee:** It is argued that it would be unfair to the recruit since he would be devoid of an employment guarantee at the expiry of four years.
- ❖ **Training Duration:** The main weakness of the scheme is that a mere six-month training for a soldier, especially to prepare him for an increasingly high technology environment, would be thoroughly inadequate.

Conclusion

- ❖ The Agnipath scheme, designed to modernize and streamline the Indian Armed Forces, has faced significant criticism and challenges.
- ❖ With political promises to abolish the scheme and ongoing feedback from military personnel, the future of the Agnipath scheme remains uncertain.
- ❖ As the government and military leadership consider adjustments, the primary goal will be to balance operational effectiveness with the welfare and satisfaction of soldiers.

REPRESENTATION OF WOMEN IN THE LOK SABHA

Context: A total of 74 women have won the recent Lok Sabha elections, a slight dip from 78 elected in 2019.

About the Women in the 18th Lok Sabha

- ❖ India has elected 74 women Members of Parliament (MPs) to the Lok Sabha in 2024, four fewer than in 2019, but 52 more than in India's first elections in 1952.
- ❖ These 74 women constitute just 13.63% of the elected strength of the Lower House, which is much less than the 33% that will be reserved for women after the next delimitation exercise.

Comparison with Previous Years

- ❖ Over the years, the Lok Sabha's gender composition has shown a general trend towards increasing women's representation. However, progress has been slow and not linear.
- ❖ In 1952, women made up just 4.41% of the strength of the Lower House, and it increased to more than 6% in the election held a decade later, but again dipped to below 4% in 1971.
- ❖ Since then, there has been a slow, but steady rise in women's representation (with a few exceptions), which crossed the 10% mark in 2009, and peaked in 2019 at 14.36%.
- ❖ After the 2014 Lok Sabha elections, that number rose to just 12.15%. There are no seats set aside for female or male candidates in the Indian parliament.

Global Comparison

- ❖ According to the Inter-Parliamentary Union, women make up roughly 26% of lawmakers worldwide.
- ❖ One of the few nations with a majority of female legislators is New Zealand.
- ❖ For instance, 46% of MPs in South Africa, 35% in the UK, and 29% in the US, are women.

Reasons for low Participation of Women

- ❖ **Low literacy:** One of the biggest obstacles to empowering women politically is illiteracy. In general, female candidates are less educated and experienced than male candidates.
 - ✓ In India, women have a literacy rate of 65% compared to men's 82%.

- ❖ **Lack of political will:** The fact that the bill reserving one-third of the seats for women was repeatedly defeated shows that the lawmakers lack political will.
 - ✓ All parties' platforms still include the measure, but it has never been put into action.
- ❖ **Masking of the identity:** 206 women individually participated in the 2019 elections, but only one of them took home the victory.
 - ✓ It demonstrates the role that political parties and a person's upbringing played in determining their political success. Her true identity is concealed by the party and family.
- ❖ **Patriarchy:** Despite having the majority, women do not actually experience their authority because male spouses or other family members often have a say in their decisions. The formation of Sarpanchpati in Panchayati is a clear example of this.
- ❖ **Gender Disparities:** Women still face obstacles in the form of gender biases and disparities in education, resource ownership, and attitudes.
- ❖ **Lack of confidence and finance:** They were the other main obstacles that kept women from pursuing careers in politics.
- ❖ **Sexual division of labour:** A system in which the ladies of the household either handle all domestic labour themselves or organise it through domestic assistants.
 - ✓ It implies that women devote far more time to caring for the home and children than do males.
- ❖ **Slander and abuse:** This is one of the primary barriers that prevent women from running in elections that they encounter during campaigning.
 - ✓ Lack of safety is the additional factor stated.

Significance of Women Participation

- ❖ **Representation:** Women lawmakers ensure that the interests and issues of women are represented in policy-making.
- ❖ **Diversity:** They bring diverse perspectives and experiences to the table, which can lead to more comprehensive and inclusive policies.
- ❖ **Empowerment:** Their presence in law-making bodies can empower other women and girls by providing them with role models.
- ❖ **Equality:** It is a matter of gender equality. Women make up half of the population and should therefore have an equal say in the laws that govern society.

Efforts to reduce the gap

- ❖ In India, the National Commission for Women has been actively working towards enhancing women's participation in all spheres, including law-making.
 - ✓ They have organised consultations on the rights of women under property law and conducted impact assessments of the 73rd and 74th Amendments (1992) in the Indian Constitution, which pertain to the role of women representatives in Panchayati Raj Institutions (PRIs) and Urban Local Bodies (ULBs).
- ❖ The National Human Rights Commission (NHRC) has conducted an analytical study on the United Nations Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) and its implementation in India.
 - ✓ It is expected to be of great value to lawmakers, policymakers, executives, civil society, academicians, and students of gender studies, human rights, and related disciplines.
- ❖ **Nari Shakti Vandan Adhiniyam (2023):** This recent amendment, also known as the Women's Reservation Bill, proposes to reserve one-third of seats for women in the Lok Sabha (lower house of parliament) and state legislative assemblies. While pending presidential assent, it marks a significant step towards greater female representation in national politics.

- ❖ **National Policy for Women Empowerment:** The goal of this Policy is to bring about the advancement, development, and empowerment of women.
 - ✓ The Policy aimed to be widely disseminated so as to encourage active participation of all stakeholders for achieving its goals.

Conclusion

- ❖ The representation of women in the Lok Sabha is a reflection of the broader societal attitudes towards gender equality.
- ❖ While there has been a gradual increase in the number of women MPs over the years, there is still a long way to go to achieve gender parity in the Indian Parliament.
- ❖ The upcoming delimitation exercise, which will reserve 33% of seats for women, is a step in the right direction.
 - ✓ However, it is essential to continue the discourse on this issue and work towards creating an inclusive and representative political system.

PRADHAN MANTRI AWAS YOJANA

Context: The Cabinet has decided to further expand the Pradhan Mantri Awas Yojana and construct 3 crore additional rural and urban houses.

About Pradhan Mantri Awas Yojana (PMAY)

- ❖ The Government of India has been implementing Pradhan Mantri Awas Yojana since 2015-16 to provide assistance to the eligible rural and urban households for construction of houses with basic amenities.
 - ✓ All the houses constructed under PMAY are provided the other basic amenities such as Household Toilets, LPG connection, Electricity connection, Functional Household Tap Connection etc. through convergence with other schemes of Central Government and State Governments.
- ❖ It has two components, PMAY-U for the urban poor and PMAY-G and PMAY-R for the rural poor.

PMAY-Urban :

- ❖ The Ministry of Housing and Urban Affairs has been implementing PMAY-U under '**Housing for All**' Mission since June, 2015 by giving Central assistance to implementing agencies through States/Union Territories (UTs) for providing all-weather pucca houses with basic civic amenities to all eligible urban beneficiaries.
- ❖ It is a demand driven scheme and the Government of India has not fixed any target for construction of houses.
- ❖ It is being implemented through four verticals i.e., Beneficiary Led Construction (BLC), Affordable Housing in Partnership (AHP), In-Situ Slum Redevelopment (ISSR) and Credit Linked Subsidy Scheme (CLSS).
- ❖ Government of India is providing its fixed share as Central Assistance of ₹1.0 lakh under ISSR, ₹1.5 lakh for AHP and BLC verticals of PMAY-U.

PMAY-Gramin:

- ❖ In order to achieve the target of "**Housing for All**" in rural areas, the Ministry of Rural Development is implementing PMAY-G with effect from 1st April 2016 to provide assistance to eligible rural households with an overall target to construct 2.95 crore pucca houses with basic amenities by March, 2024.

- ❖ Under PMAY-G, beneficiaries are provided financial Assistance of Rs.1.20 lakh in plain areas and Rs.1.30 lakh in hilly States (including North-eastern States and UTs of Jammu & Kashmir and Ladakh), difficult areas and Integrated Action Plan (IAP) districts. Additional assistance of Rs.12,000/- is extended for construction of toilets.

Importance and Progress

- ❖ In a nation where millions dream of owning a home, the Pradhan Mantri Awas Yojana (PMAY) emerges as a beacon of hope.
- ❖ It stands as a testament to the government's commitment to providing affordable housing and improving the quality of life.
- ❖ It is not just a housing scheme but a mission to empower citizens with a sense of dignity and security.
- ❖ Under PMAY, a total of 4.21 Crore houses have been completed for the eligible poor families under the housing schemes in the last 10 years.

WORLD DAY AGAINST CHILD LABOUR

Context: In 2002, the International Labour Organisation (ILO) established June 12th as the World Day Against Child Labour to raise awareness about the global issue of child labor and advocate for its elimination.

About

- ❖ This year, in 2024, the day is observed under the theme, "Let's Act on Our Commitments: End Child Labour," which emphasizes the need for collective action to eradicate child labour and protect children from exploitation.
- ❖ This year also marks the 25th anniversary of the adoption of the Convention on the Worst Forms of Child Labour. It's also a chance to encourage all stakeholders to enhance their implementation of the two main conventions on child labour, namely Convention No. 182 and Convention No. 138 on the Minimum Age for Admission to Employment or Work.

What is Child Labour?

- ❖ Child labour is defined as any work that is inappropriate for a child's age, physical, or mental capacity, and its far-reaching consequences can have devastating effects on their development and future.
- ❖ In India, the Constitution explicitly prohibits children under the age of 14 from working in mines, factories, or hazardous occupations. Similarly, the International Labour Organisation (ILO) defines a child as anyone below the age of 18 who should not be involved in hazardous work.
- ❖ The activities such as helping their parents around the home, assisting in a family business or earning pocket money outside school hours and during school holidays are not included in the Child Labour.
- ❖ Article 24 of the Indian constitution prohibits the employment of children below the age of 14 years in any factory or mine or employed in any hazardous employment.

Types of Child Labour

- ❖ **Hazardous Child Labour:** This involves children working in dangerous environments or performing tasks that pose significant risks to their health, safety, or morals. Examples include mining, construction, manufacturing with hazardous chemicals, and work involving heavy machinery.
- ❖ **Domestic Child Labour:** Children, predominantly girls, are employed within households for tasks like cooking, cleaning, and childcare. This often involves long hours, minimal pay, and potential exposure to abuse.

- ❖ **Bonded Child Labour: Children** are forced to work to repay a debt incurred by their family. This traps them in a cycle of exploitation, as the debt often becomes insurmountable.
- ❖ **Child Trafficking:** Children are recruited, transported, or harbored for the purpose of exploitation, which can include forced labor, sexual exploitation, or organ trafficking.
- ❖ **Commercial Sexual Exploitation of Children (CSEC):** Children are used in commercial sex acts, including prostitution and pornography. This is a grave violation of their rights and well-being.

Child labour in India: Data Facts

- ❖ According to UNICEF, child Labour amounts to approximately 13% of our workforce, or in other words, 1 in every 10 workers in India is a child.
- ❖ According to the Census 2011, there are approximately 10.1 million child labourers in India aged between 5 to 14 years.
- ❖ Boys constitute about 5.6 million and girls about 4.5 million of the total child labour population.
- ❖ The prevalence of child labour in rural areas (14%) is close to three times higher than in urban areas (5%).
- ❖ The majority of child labourers (around 70%) work in the agriculture sector, including farming, livestock, forestry, and fisheries followed by 20% in services.
- ❖ Uttar Pradesh has the highest number of child labourers, approximately 2.1 million.

Impacts

- ❖ **Health and Physical Development:** Child labour accompanied by poor nutrition stunt a child's growth and development.
- ❖ **Educational Impact:** This will increase school dropouts and absenteeism and missing out on education results in low literacy rates and lack of essential skill.
- ❖ **Economic Impact:** Child labour contributes to the cycle of poverty. As children grow up without proper education and skills, they are likely to remain in low-paying, unskilled jobs.
- ❖ **Social Inequality:** Child labour reinforces social inequalities, as children from disadvantaged backgrounds are more likely to be pushed into work.

Steps Taken to Eradicate Child Labour in India

- ❖ **Indian Constitution:** Article 21 A (Right to Education): The State shall provide free and compulsory education to all children of the age of 6 to 14 years in such manner as the State, by law, may determine.
 - ✓ **Article 23:** Any type of forced labour is prohibited.
 - ✓ **Article 24:** It states that a child under 14 years cannot be employed to perform any hazardous work in any factory or mine.
 - ✓ **Article 39:** It states that "the health and strength of workers, men and women, and the tender age of children are not abused".
- ❖ **Child Labour Act (Prohibition and Regulation) 1986:** It prohibits children under the age of 14 years to be working in hazardous industries and processes.
- ❖ **National Policy on Child Labour, 1987:** It contains the action plan for tackling the problem of child labour.
- ❖ **Juvenile Justice (Care and Protection of Children) Act 2015:** It governs laws relating to children alleged and found to be in conflict with the law.
- ❖ **Protection of Children from Sexual Offences (POCSO) Act 2012:** It seeks to prevent commercial sexual exploitation of children.

- ❖ **Trafficking in Persons (Prevention, Care and Rehabilitation) Bill:** There are specified penalties for offences divided into “trafficking” and “aggravated trafficking”. It widened the scope of “victims” to include transgender persons.
- ❖ **National Child Labour Project (NCLP) Scheme:** The government initiated it in 1988 to rehabilitate working children in 12 child labour endemic districts of the country and expanded with time. This is the major Central Sector Scheme for the rehabilitation of child labour.
- ❖ **The Child and Adolescent Labour (Prohibition and Regulation) Act (CALPRA):** CALPRA states that no child shall be allowed to work for more than five hours in a day, and for not more than three hours without rest. The provisions of CALPRA also state, that at least 20% of the income earned by the child from the production or event is to be directly deposited in a fixed deposit account in a nationalised bank in the name of the child which may be credited to her/him on attaining majority.
- ❖ **Platform for Effective Enforcement for No Child Labour (PENCIL):** It is an electronic platform that aims at involving Centre, State, District, Governments, civil society and the general public in achieving the target of child labour free society.

International Efforts

- ❖ The United Nations made 2021 the International Year for the Elimination of Child Labour, calling for urgent action needed to meet a goal of ending the practice by 2025.
- ❖ The Sustainable Development Goals (SDGs) target 8.7 adopted by world leaders in 2015, include a renewed global commitment to ending child labour.
- ❖ **ALLIANCE 8.7:** It is an inclusive global partnership committed to achieving Target 8.7 of the 2030 Sustainable Development Goals (SDGs). It works for eradicating forced labour, modern slavery, human trafficking and child labour around the world.
 - ✓ The International Labour Organization (ILO) currently serves as Secretariat for Alliance 8.7.

Challenges in Tackling Child labours

- ❖ **Poverty and Economic Pressures:** High poverty rates force families to rely on the income generated by their children to meet basic needs.
- ❖ **Lack of Access to Quality Education:** Insufficient educational infrastructure, lack of schools, and poor quality of education discourage attendance and completion.
- ❖ **Weak Enforcement of Laws:** Inadequate implementation and monitoring of child labour laws due to corruption, lack of resources, and administrative inefficiencies.
- ❖ **Informal Economy and Unregulated Sectors:** A significant portion of child labour occurs in informal sectors like agriculture, domestic work, and small-scale industries, which are hard to regulate.
- ❖ **Cultural Norms and Social Acceptance:** In many communities, child labour is culturally accepted and seen as a norm, making it challenging to change mindsets.
- ❖ **Migration and Displacement:** Migrant families and displaced populations are more vulnerable to child labour due to lack of stable income and access to social services.
- ❖ **Lack of Awareness:** Many parents and communities are unaware of the long-term negative impacts of child labour and the benefits of education.
- ❖ **Gender Disparities:** Girls are particularly vulnerable to exploitation in domestic work and are often kept out of school to help with household chores.
- ❖ **Child Trafficking:** Trafficking of children for labour is a significant issue, exacerbated by weak law enforcement and border controls.
- ❖ **Impact of COVID-19:** The pandemic has exacerbated the situation, pushing more children into labour due to economic hardship, school closures, and lack of access to remote education.

Way Ahead

- ❖ **Ensuring Access to Quality Education:** Empowering children with the knowledge and skills needed to break free from the constraints of child labour.
- ❖ **Strengthening Enforcement of Labour Laws and Providing Social Protection:** Implementing robust labour law enforcement and comprehensive social protection measures to safeguard children from exploitation.

DELAY IN CONDUCTING CENSUS IN INDIA

Context: India is among a select few countries that have not conducted the latest Census.

- ❖ The last census conducted in India was in 2011 and has been postponed indefinitely since 2021.

About

- ❖ India shares distinction of not conducting the census with conflict-ridden countries such as Ukraine, Yemen, Syria and Myanmar — impacted by civil wars, the Taliban-ruled Afghanistan, the economic crisis-affected Sri Lanka besides several sub-Saharan African countries that have also undergone turmoil.

What is the Census?

- ❖ The Census refers to a periodic and systematic collection of demographic, economic, and social data of a population within a specific region.
- ❖ It is typically conducted by governments to gather detailed information about the population's characteristics and living conditions.
- ❖ The Census provides crucial data that governments, businesses, researchers, and policymakers use for various purposes such as planning public services, allocating funding, and making informed decisions.

Census in India

- ❖ The Census in India has been conducted regularly since 1871. The first complete Census was conducted in 1881.
 - ✓ Initially, the Census was primarily aimed at assessing revenue and taxation needs under British colonial rule.
 - ✓ Over time, its scope expanded to include demographic, social, and economic data.
- ❖ **Constitutional Mandate:** The Census of India is conducted under the provisions of the Census Act of 1948, which empowers the Government of India to conduct periodic population surveys.
- ❖ **Frequency:** The Census of India is conducted decennially, meaning it takes place every ten years.
 - ✓ The most recent Censuses were conducted in 2011.

Significance of Census

- ❖ **Policy Formulation:** It provides crucial inputs for planning and formulating policies related to education, healthcare, infrastructure development, and social welfare.
- ❖ **Resource Allocation:** It helps in equitable distribution of resources by providing data on population distribution, demographics, and socio-economic conditions.
- ❖ **Demographic Trends:** It aids in understanding demographic trends, urbanization patterns, migration flows, and population growth rates.
- ❖ **Monitoring Development Goals:** The Census data is instrumental in monitoring progress towards national and international development goals, such as Sustainable Development Goals (SDGs).

Why There is a delay in conducting the Census in India?

- ❖ **COVID-19 Pandemic:** The COVID-19 pandemic significantly disrupted the scheduling and planning of various activities, including large-scale surveys like the Census.
- ❖ **Preparation and Planning:** Conducting a Census in a country as vast and populous as India requires meticulous planning, resource mobilization, and coordination across various government departments.

- ❖ **Political and Administrative Priorities:** Governments prioritize other activities or elections, leading to delays in the Census process.
- ❖ **Technological and Methodological Upgradation:** Periodic updates and improvements in technology and methodologies used for data collection, processing, and analysis require additional time and resources.
- ❖ **Complexity of Data Collection:** India's diversity in terms of geography, languages, cultures, and socio-economic conditions poses unique challenges in conducting a comprehensive Census.

Conclusion

- ❖ Census data should validate the various estimates on mortality based on 'excess deaths' analyses during the COVID-19 pandemic.
- ❖ It is imperative that decadal changes in India's demography related to urbanisation and migration of people across States are captured adequately.
- ❖ Welfare schemes such as the targeted Public Distribution System under the National Food Security Act depend on population estimates, and the government continues to rely on Census 2011, which is now outdated.
- ❖ Considering these and other imperatives for the smooth planning and implementation of administrative, welfare and statistical management for governance, the Union government must show eagerness in commencing the Census.

ADDRESSING HEALTH EQUITY IN INDIA

Context: With a large and diversified population, India faces persistent obstacles to health equity.

Health Equity

- ❖ Equity is the absence of avoidable, unfair or remediable differences among groups of people due to their social, economic, demographic or geographic circumstances.
- ❖ Health equity is the state in which everyone has a fair and just opportunity to attain their highest level of health.

Importance of Health equity

- ❖ It ensures that every person has an equal opportunity to achieve their highest health potential, no matter what their circumstances.
- ❖ It addresses the root causes of inequities such as poverty, discrimination, limited access to high-quality education, a healthy diet, clean water, fresh air, and housing, and merely grants equal access to health care.
- ❖ It is a fundamental component of social justice.
- ❖ **Health and development :** They are interlinked. The health of a population is a fundamental need for economic and social well-being. Thus, the developmental trajectory of a nation hinges significantly on its capacity to furnish top-tier healthcare services to its populace.
 - ✓ Doing so enhances productivity, encourages better lifestyles, and creates a more informed and mature labour force, thereby enriching the overall standard of living.

Initiatives

- ❖ **"Public Health and Hospitals"** being a state subject, the primary responsibility of strengthening the public healthcare system lies with the respective State Governments.
 - ✓ However, under the National Health Mission (NHM), technical and financial support is provided to the States/UTs to strengthen the public healthcare system at public healthcare facilities.
- ❖ **Ayushman Bharat initiative:** Ayushman Bharat was recommended by the National Health Policy 2017, to achieve the vision of Universal Health Coverage (UHC).
 - ✓ This initiative has been designed to meet Sustainable Development Goals (SDGs) and its underlying commitment, which is to "leave no one behind."
- ❖ The National Health Mission (NHM), which includes both the National Rural Health Mission (NRHM) and the National Urban Health Mission (NUHM), reduces the health-care gap between rural and urban

India by expanding access, strengthening infrastructure, and providing essential services to vulnerable populations.

Existing Issues

- ❖ **Global:** The COVID-19 pandemic has revealed that infectious diseases target marginalised and vulnerable groups the most, thus widening the health equity gap.
 - ✓ Climate change poses a serious health risk since it disproportionately impacts low-income and vulnerable people.
 - ✓ The health-care provision is severely hampered by conflicts, which destroy infrastructure, uproot communities, and shut off access to vital medical services.
- ❖ **Indian Scenario:** India is diverse and has wide socioeconomic gaps.
 - ✓ Access to health care in rural areas is significantly less than in metropolitan areas.
 - Social and economic barriers exacerbate this disparity.
 - According to the 2011 Census, urban slums make up over 17% of India's metropolitan areas, and exhibit serious health disparities.
 - Health risks are increased by overcrowding, poor sanitation, and restricted access to clean water.
 - Infectious diseases, such as tuberculosis, are 1.5 times more common in slums than in non-slum areas
 - ✓ Disparities across caste and gender are profound.
 - NFHS-5 (2019-21) data indicates that Scheduled Castes and Scheduled Tribes experience higher child mortality and lower immunisation rates.
 - Additionally, 59% of women in the lowest wealth quintile suffer from anaemia, almost double the rate in the highest quintile, demonstrating the intersection of caste, gender, and economic status in health outcomes.
 - ✓ Non-communicable diseases (NCDs) account for more than 60% of all fatalities in India.
 - A critical shortage of doctors exacerbates these issues, with WHO data indicating only 0.8 doctors per 1,000 people, which is below the advised ratio.
 - Even though over 75% of health-care professionals work in metropolitan regions, which only account for 27% of the population, the shortage is particularly severe in rural areas.

Suggestions and Way Forward

- ❖ Even though access to health care has improved over the past 20 years, there is still much work to be done in rural India.
- ❖ India's health equity issues require a comprehensive approach beyond improvements in health-care facilities to address more extensive socioeconomic determinants of health.
- ❖ To move India toward universal health coverage and a more equitable future, the government, civil society, health-care providers, and communities need to work together.
- ❖ Governments and officials may influence the state of health through funding, creative policies, and laws.
- ❖ Achieving health equity also requires addressing social determinants of health and health disparities.
 - ✓ It involves acknowledging and addressing racism as a threat to public health and the history of unethical practices in public health that lead to inequitable health outcomes.

SOCIAL ISSUES

WOMEN IN LEADERSHIP POSITIONS

Context: Recent LinkedIn's Economic Graph data show that representation of women across the workforce has declined.

Shrinking Workforce

- ❖ India's female workforce participation rate has been steadily declining over the years.
- ❖ In 2004, the women's employment rate peaked at 35%, but by 2022, it had fallen to around 25%.
 - ✓ It remained stable in 2023 but declined to 26.8% in 2024 (based on January data).
- ❖ The Center for Monitoring the Indian Economy (CMIE) uses a more restrictive definition of employment and found that only 10% of working-age Indian women in 2022 were either employed or actively seeking jobs.
- ❖ Currently, there are only 39 million employed women in the workforce compared to 361 million men.
- ❖ The slowdown in fresh hires of women for leadership roles contributed to the stagnation.

Senior Leadership Positions

- ❖ Progress in promoting women to senior and leadership roles has stagnated.
- ❖ The increase in women's share in senior positions was slow: four years for each percentage point increase (2016 – 2019 and 2019 – 2022).
 - ✓ If the 2024 downturn persists, this slow-paced increase will cease.
- ❖ Recent research highlights that India has the third-lowest global representation of women managers — only 8% in management roles, 9% in business management roles, and a mere 2% in CEO positions.

Industry-Specific Insights

- ❖ Sectors with lowest female leadership representation (11% – 14%) are Oil, gas, mining; Construction; Utilities; Wholesale; Manufacturing; Transportation; and Real estate etc;
- ❖ Sectors with moderate representation (15% – 20%): Accommodation and food services, Financial services, Retail, Technology, and Media etc.
- ❖ Sectors with higher representation (22% – 30%): Administrative and support services, Healthcare and hospitals, Consumer services, Government administration, and Education (highest at 30%).

Factors Impacting Progress

- ❖ **Cultural Beliefs and Gender Roles:** Entrenched cultural beliefs play a significant role in perpetuating gender disparities.
 - ✓ Women are often seen as primary caregivers, and societal norms stigmatise them for working outside the home.
- ❖ **National Jobs Crisis:** A national jobs crisis exacerbates the gender gap.
 - ✓ Economic challenges, coupled with limited job opportunities, disproportionately affect women.
 - ✓ The lack of suitable employment options discourages women from seeking work.
- ❖ **Demographic Implications:** India's fast-growing population can be an asset or a liability.
 - ✓ If women are left behind in the workforce, it becomes a demographic liability.
 - ✓ Ensuring women's employment is crucial for sustainable growth.

- ❖ **Unequal Access to Resources:** Women have limited access to networks, skill development, and mentorship.
 - ✓ Organisations must create equitable pathways for women's career advancement.
- ❖ **Pay Gaps and Glass Ceilings:** Unjustifiable pay gaps persist, hindering women's economic empowerment.
 - ✓ Glass ceilings prevent women from reaching leadership positions.
- ❖ **Resume Gaps and Skills Obsolescence:** Many women take career breaks due to family commitments, including child care and homemaking.
 - ✓ These breaks can lead to gaps in their resumes and potential skill obsolescence.
 - ✓ Re-entering the workforce after a break can be challenging, especially when technology and industry practices evolve rapidly.
- ❖ **Lack of Confidence and Stereotypes:** Women often face self-doubt and lack of confidence, which can hinder their pursuit of leadership roles.
 - ✓ Stereotypes about women's abilities and suitability for leadership positions persist, affecting their advancement.
- ❖ **Bias and Discrimination:** Subtle biases and discrimination exist in workplaces, impacting women's career progression.
 - ✓ The 'broken rung' phenomenon refers to the difficulty women face in moving from entry-level to managerial positions.
 - ✓ Gender-based stereotypes can influence performance evaluations, promotions, and opportunities.
- ❖ **Household Responsibilities:** Balancing work and family responsibilities remains a significant challenge.
 - ✓ Women often shoulder a disproportionate share of household chores and caregiving, affecting their availability for work-related commitments.
- ❖ **Lack of Support and Mentorship:** Women benefit from mentorship and sponsorship, but they often lack access to such support.
 - ✓ Organisations need to create formal mentoring programs and provide guidance to aspiring women leaders.

Other Gaps

- ❖ **Enforcement of Regulatory Measures:** Strict enforcement of existing regulations is essential to drive change.
- ❖ **Limited Pool of Women Candidates:** The availability of qualified women for leadership roles remains a challenge.

Solutions and Policy Interventions

- ❖ **Legal Compliance:** Companies Act, 2013 mandates women directors on boards.
 - ✓ Data show that fines were imposed on 507 companies for non-compliance (April 2018 to December 2023), with 90% being listed companies.
- ❖ **Beti Bachao Beti Padhao (BBBP) Scheme:** It focuses on promoting girl-child education and addressing gender-based discrimination.
 - ✓ It aims to create awareness about the importance of educating girls and ensuring their well-being.
- ❖ **MUDRA Loans:** It provides credit specifically for women entrepreneurs. It facilitates financial support for women-led businesses and startups.

- ❖ **Stand-Up India Scheme:** It encourages entrepreneurship among women by providing easy access to financing. It aims to promote self-employment and business ventures led by women.
- ❖ **Mahila Vikas Yojana:** It caters to rural and semi-urban areas. It focuses on empowering women through skill development, livelihood opportunities, and financial inclusion
- ❖ Other interventions like encouraging shared parental leaves and flexible work arrangements; strictly enforcing regulations promoting women's representation on company boards; and investing in skill development and mentorship programs for women are crucial for the overall development and participation of women workforce in the economy.

Conclusion and Way Forward

- ❖ India has witnessed strong women who have held leadership positions and inspired the nation.
- ❖ While progress has been made, there is still much work to be done to empower and elevate women in leadership roles. Organisations, policymakers, and society at large must collaborate to create a more inclusive and equitable environment for women to thrive.
- ❖ From freedom fighters like Maharani Lakshmi Bai to educators like Savitribai Phule and political leaders like Indira Gandhi, their contributions have left a lasting impact on society.
- ❖ Efforts by policymakers and business leaders need to focus on 'women-led development'.

CHILD FOOD POVERTY: NUTRITION DEPRIVATION IN EARLY CHILDHOOD REPORT

Context: UNICEF has released a report Titled "Child Food Poverty: Nutrition Deprivation in Early Childhood".

About the Report

- ❖ It analyses the impacts and causes of dietary deprivation among the world's youngest people in nearly 100 countries, and across income groups.
- ❖ The report focuses on low- and middle-income countries, where most children living in child food poverty reside, and on the implications of child food poverty for undernutrition and poor development.
- ❖ It examines the status, trends, inequities and drivers of child food poverty in early childhood.

Key findings include

- ❖ Globally, one in four children are living in severe child food poverty in early childhood, amounting to 181 million children under 5 years of age.
- ❖ Millions of parents and families are struggling to provide nutritious and diverse foods that young children need to reach their full potential.
- ❖ The global food and nutrition crisis and localized conflicts and climatic shocks are intensifying severe child food poverty, especially in fragile countries.
- ❖ Global efforts are slow in ending Child Food Poverty (CFP).
- ❖ Severe child food poverty affects all regions of the world, but not equally: South Asia and sub-Saharan Africa are home to more than two-thirds (68 per cent) of the 181 million children living in severe child food poverty.

Status of Child Food Poverty in India

- ❖ **Severe Food Poverty:** India is among the 20 countries that account for 65% of the total number of children living in severe child food poverty between 2018-2022, according to a UNICEF report.
- ❖ **Inequities:** While India has reduced the gap in severe CFP between poorer and wealthier households in the last decade, disparities still exist based on socioeconomic status, caste, gender, and geographical location.

- ❖ **Micronutrient Deficiencies:** A significant number of children suffer from micronutrient deficiencies, particularly anemia (iron deficiency), which affects cognitive development and learning abilities.
- ❖ **Zero-Food Children:** A study published in The Lancet Child & Adolescent Health in 2023 found that 19.3% of Indian children under 5 years old experienced zero-food days, meaning they had not consumed any food in a 24-hour period. This figure is the highest among the 92 low- and middle-income countries surveyed.

Impacts

- ❖ **Health Impacts:** CFP is the leading cause of malnutrition in children, which can manifest as stunting (low height for age), wasting (low weight for height), and underweight (low weight for age).
 - ✓ CFP increases the risk of childhood illnesses such as diarrhea, pneumonia, and measles, and can lead to premature death.
- ❖ **Impaired Cognitive Development:** Malnutrition during the critical early years of development can have irreversible effects on brain development, leading to reduced cognitive abilities.
- ❖ **Reduced Productivity:** Malnourished children grow up to be less productive adults with reduced physical and mental capacity, limiting their earning potential and economic contribution to society.
- ❖ **Increased Healthcare Costs:** CFP leads to higher healthcare expenditure for families and the government due to the increased need for medical treatment and hospitalization.
- ❖ **Social Exclusion and Stigma:** Children suffering from CFP and their families may face social exclusion and discrimination, leading to further marginalization.
- ❖ **Loss of Human Capital:** CFP deprives the nation of its most valuable asset – its human capital.
- ❖ **Increased Burden on Healthcare System:** The increased healthcare needs of malnourished children put a strain on the healthcare system, diverting resources from other essential services.

Challenges in Handling CFP in India

- ❖ **Economic Inequality:** The high percentage of the population unable to afford a healthy diet is a root cause of child food poverty.
- ❖ **Inadequate Dietary Intake:** The shift towards processed foods, often lacking essential nutrients, exacerbates the issue.
- ❖ **Poor Sanitation:** The lack of access to proper sanitation facilities increases the risk of infections and diseases, which can further worsen malnutrition and hinder nutrient absorption.
- ❖ **Lack of Health Infrastructure:** The low density of doctors and nurses, especially in rural areas, limits access to healthcare services. This means children suffering from malnutrition may not receive timely diagnosis or treatment.

Recommendations

- ❖ To address child malnutrition governments and partners must invest in actions to improve children's access to diverse and nutritious diets and end severe child food poverty.
- ❖ UNICEF calls on national governments, development and humanitarian partners, donors, civil society and media, academic and research organizations to:
 - ✓ Transform food systems by ensuring food environments make nutritious, diverse and healthy foods the most accessible, affordable and desirable option for feeding young children, and the food and beverage industry complies with policies to protect children from unhealthy foods and beverages.
 - ✓ Leverage health systems to deliver essential nutrition services, including counselling and support on child feeding, to prevent and treat child malnutrition, prioritizing the most vulnerable children.

- ✓ Activate social protection systems to address income poverty in ways that are responsive to the food and nutrition needs of the most vulnerable children and their families, including social transfers to protect children at highest risk of child food poverty.
- ✓ Strengthen data systems to assess the prevalence and severity of child food poverty; detect increases in child food poverty early, including in fragile and humanitarian contexts; and track national and global progress in reducing severe child food poverty.

ARTIFICIAL INTELLIGENCE IN EDUCATION

Context: Technology has always played an important role in education but its current use is more prevalent than ever thanks to the increased availability of smart devices and web-based curriculum.

About

- ❖ A new dimension has been added with advances in the field of Artificial Intelligence. The National Education Policy of 2020 (NEP 2020) recognized the immense potential of AI and recommended its integration into the education system.
- ❖ To increase technology integration in schools, the CBSE in October last year introduced Artificial Intelligence (AI) and the Internet of Things (IoT) in the school curriculum from classes VI to X.
- ❖ AI has the potential to transform education by making it more efficient, effective, and accessible to students worldwide. However, experts say it is crucial to ensure that the use of AI in education is ethical and responsible, and that it complements the work of human teachers rather than replacing them.

Role of Artificial Intelligence (AI) in Education

- ❖ **Personalized learning:** AI can help educators to create personalized learning experiences for students based on their individual needs, abilities, and learning styles. AI can analyze student data and provide recommendations on the type of content, resources, and activities that are best suited for each student.
- ❖ **Adaptive learning:** AI can provide adaptive learning experiences that can adjust the pace and level of difficulty of learning materials based on the student's performance. This ensures that students learn at a pace that is appropriate for their individual needs.
- ❖ **Automated grading:** AI can grade assignments, essays, and exams automatically, freeing up teachers' time to focus on other aspects of teaching. This can also help to reduce grading bias.
- ❖ **Intelligent tutoring:** AI-powered tutoring systems can provide students with personalized support and feedback, helping them to understand difficult concepts and improve their performance.
- ❖ **Data analysis:** AI can analyze large amounts of educational data to identify trends, patterns, and insights that can help educators to improve teaching practices and student outcomes.
- ❖ **Accessibility:** AI-powered tools can help to make education more accessible to students with disabilities. For example, text-to-speech technology can help students with visual impairments to access learning materials.

New Education Policy (NEP) 2020 and Artificial Intelligence (AI)

NEP recognizes the importance of technology, including AI, in education. Here are some of the key points related to AI in the NEP 2020:

- ❖ **Integration of technology:** The NEP 2020 suggests that technology can help to improve the quality of education, enhance access to education, and provide personalized learning experiences.
- ❖ **AI in curriculum:** The NEP 2020 proposes to introduce AI and coding in the school curriculum from class 6 onwards. This is intended to equip students with the necessary skills to participate in the digital economy and prepare them for the jobs of the future.

- ❖ **AI in teacher training:** This is intended to help teachers to use technology effectively in their teaching practices and to keep up with the latest developments in technology.
- ❖ **AI-powered assessment:** The NEP 2020 suggests that AI-powered assessment systems can be used to improve the accuracy and speed of assessment, reduce subjectivity and bias, and provide students with immediate feedback.
- ❖ **National Educational Technology Forum (NETF):** It will serve as a platform for the exchange of ideas, experiences, and best practices related to the use of technology in education. It will also facilitate the development of technology-based solutions for education and provide support for the effective implementation of technology in education.

Issues/Challenges of using AI in Education

While there are many potential benefits of using AI in education, there are also several issues and challenges that need to be addressed such as –

- ❖ **Lack of trust and transparency:** There is a lack of trust and transparency around the use of AI in education, especially when it comes to issues like data privacy and bias in algorithms.
- ❖ **Limited access to technology:** Many students and schools may not have access to the necessary technology to effectively use AI in education which can create a digital divide.
- ❖ **Complexity of implementation:** Implementing AI in education can be complex and requires significant resources, including technical expertise and financial investments. Many schools and educators may not have the resources or expertise to effectively implement and manage AI systems.
- ❖ **Need for teacher training:** Educators need to be trained in how to effectively use AI in their teaching practices. This includes understanding how to interpret data and insights generated by AI systems, as well as how to integrate technology into their teaching practices in a way that enhances student learning.
- ❖ **Ethical concerns:** There are ethical concerns around the use of AI in education, including issues around data privacy, algorithmic bias, and the potential for AI to replace human teachers. It is important to ensure that AI is used in a way that is ethical and aligned with educational values and goals.
- ❖ **Impact on human interaction:** AI has the potential to replace some aspects of human interaction in education, such as grading assignments and providing feedback. While this can save time for educators, it may also reduce the quality of interaction and feedback that students receive.

Way Ahead

- ❖ **Comprehensive Policy Framework:** Develop a comprehensive national policy framework for AI in education, outlining clear guidelines, standards, and ethical considerations. This framework should address issues like data privacy, algorithmic bias, transparency, and accountability.
- ❖ **Investment in Infrastructure and Research:** Allocate substantial resources to develop AI infrastructure, including high-speed internet connectivity, devices, and software for all schools and colleges. Invest in research to understand the impact of AI on learning outcomes and identify best practices for its implementation.
- ❖ **Capacity Building and Teacher Training:** Provide extensive training and professional development programs for teachers to equip them with the necessary skills to effectively integrate AI tools into their teaching practices.
- ❖ **Continuous Evaluation and Improvement:** Establish a robust mechanism for continuous evaluation of AI-powered educational tools and their impact on student learning. Use data-driven insights to identify areas for improvement and adapt AI solutions to meet the evolving needs of the education system.

Conclusion

- ❖ The use of Artificial Intelligence in education is indeed a revolutionary step and it has immense potential to reform the education system if used properly in efficient and ethical manners.

ONE HEALTH INITIATIVE

Context: India is ahead of several countries in drafting a legal framework to support the implementation of the 'One Health' initiative.

What is One Health?

- ❖ It is an integrated, unifying approach that aims to sustainably balance and optimize the health of people, animals and ecosystems.
- ❖ It recognizes that the health of humans, domestic and wild animals, plants, and the wider environment (including ecosystems) are closely linked and interdependent.

Need of One Health in India

- ❖ **Zoonotic Diseases:** India faces significant challenges from zoonotic diseases such as rabies, leptospirosis, and avian influenza.
 - ✓ These diseases can spread between animals and humans, highlighting the need for integrated surveillance and control measures involving both human and animal health sectors.
- ❖ **Antimicrobial Resistance (AMR):** India has high rates of antimicrobial resistance due to the widespread use of antibiotics in human healthcare, veterinary medicine, and agriculture.
 - ✓ One Health approaches are crucial to mitigate AMR by promoting responsible antibiotic use across all sectors.
- ❖ **Livestock and Agriculture:** Agriculture and livestock farming are major economic sectors in India.
 - ✓ One Health strategies can ensure sustainable agricultural practices that promote animal welfare, reduce disease transmission, and enhance food security.
- ❖ **Emerging Infectious Diseases:** India, like many countries, faces threats from emerging infectious diseases such as COVID-19.
 - ✓ These diseases often originate at the human-animal-environment interface, underscoring the importance of early detection, rapid response, and collaborative efforts between health sectors.

India's Steps

- ❖ The Prime Minister's Science, Technology, and Innovation Advisory Council (PM-STIAC) in its 21st meeting, approved to set up a National One Health Mission with a cross-ministerial effort which will serve to coordinate, support, and integrate all the existing One Health activities in the country and fill gaps where it is appropriate.
- ❖ **Mandate of the Centre for One Health (CoH):** CoH is working in coordination with all stakeholders to promote health and quality of life by undertaking activities necessary for prevention and control of Zoonotic Diseases with "One Health" approach.
- ❖ **G-20:** During India's presidency of the G-20, "One Health" was widely endorsed by all the members to work together in specific areas such as building better surveillance capacity etc.
- ❖ **National Action Plan on Antimicrobial Resistance (NAP-AMR):** India launched the NAP-AMR in 2017 to address antimicrobial resistance across human health, animal health, and environmental sectors.
- ❖ **National Centre for Disease Control (NCDC):** The NCDC plays a key role in disease surveillance and response in India, including zoonotic diseases.
 - ✓ It collaborates with animal health agencies such as the Department of Animal Husbandry, Dairying, and Fisheries (DAHDF).

- ❖ **Integrated Disease Surveillance Programme (IDSP):** IDSP monitors disease outbreaks across India and includes zoonotic diseases in its surveillance efforts, thereby promoting a One Health approach in disease monitoring.

Way Ahead

- ❖ To reap all the advantages of a One Health approach, India should move beyond short-term collaborations and create an integrated, science-based environment.
- ❖ India has combatted several zoonotic diseases and has a robust institutional network for biomedical research, which can lead and operationalize the One Health approach.
- ❖ For One Health Science, it is important to develop databases and models with a consolidated approach of ecologists, field biologists, epidemiologists, and other scientists.
- ❖ Therefore, a nexus of science, social science, indigenous knowledge, and policy at national, state, and local levels can put forward strategies and institutions for the implementation of One Health.



CivilsTap Himachal

INTERNATIONAL

INDIA'S NEIGHBOURHOOD DILEMMAS

Context: According to experts, there are a few dilemmas that India faces in the neighbourhood.

India's Neighbourhood dilemmas

❖ **Anti-India regimes:**

- ✓ The rise of politically anti-India regimes in South Asia such as the one in the Maldives where the new government is effectively asking Indian troops stationed in the island nation to leave.
- ✓ A Khaleda Zia-led government in Bangladesh, planning to contest elections early next year, could also turn out to be ideologically anti-India.

❖ **Growing influence of China:**

- ✓ The second type of dilemma India faces in the neighbourhood is structural, resulting from China's growing influence in South Asia.
 - The growing entanglement of the region's smaller states in the Belt and Road Initiative (BRI) and other Chinese projects.
 - China's desire to settle border disputes with its neighbours (excluding India), as seen in the case of Bhutan, is also a strategy to win over the region.

❖ **India's one-track policy approach:**

- ✓ India's policy stance, according to experts, exhibits a deep-seated status quo bias when it comes to dealing with the region's domestic politics and the multiplicity of actors/power centres therein.
- ✓ However, such a one-track policy generates path-dependencies often alienating other centres of power or opposition leaders.

❖ **Asia minus Pakistan approach:**

- ✓ There has, for some time, been a strong belief in India that South Asia minus Pakistan would be amenable to Indian geopolitical reasoning.
- ✓ It also prompted an attempt to deal proactively with South Asia without Pakistan.
- ✓ However, in retrospect, this policy has not exactly panned out that way India imagined.

❖ **Liability of 'cultural' aspect:**

- ✓ India approached the neighbourhood with the idea that India's special relationship with the region rooted in culture, soft power, history and ethnicity would help the country deal with the neighbourhood better than those without intimate knowledge of the region, for example, China.
- ✓ However, according to experts, India's culture-connect with its neighbours has indeed become a liability in the conduct of foreign policy towards them.

Causes of Rise of China vis-à-vis India

❖ Acting as a 'geopolitical buffer':

- ✓ The aggressive and astounding rise of China has come as a 'geopolitical buffer', for the smaller states in the region.
- ✓ In one of the least interconnected regions in the world, with mostly underdeveloped nations, it is natural that the inhabitants of the region will tilt towards a power with the ability to cater to their material needs.
 - With India's ability to meet those needs being limited, China is that power.

❖ **Culturally easier:**

- ✓ India historically enjoyed unrivalled primacy in the region.

- ✓ Today, the downside of being the resident power in South Asia — with all its attendant cultural, ethnic, refugee and other spillovers — is felt more sharply than being the primary power.
- ✓ China, on the other hand, is the region's non-resident power which benefits from the absence of complications — ethnic, linguistic, religious — arising out of being a resident power.

❖ **Reaching crisis hit regions:**

- ✓ Beijing's outreach to South Asian states when the rest of the international community is unable to reach them — as was the case with Taliban-led Afghanistan, military-ruled Myanmar and crisis-hit Sri Lanka.
- ✓ India does too, but the overall impact of China's outreach is far higher than that of India primarily as a function of deeper pockets.

Suggestions & way ahead

❖ **Acknowledging changing dynamics:**

- ✓ It is time India made a mental switch and acknowledged that South Asia and its balance of power have changed fundamentally.
 - South Asia where India enjoyed primacy no longer exists.
- ✓ India's neighbours and periphery also includes China's influence.
 - Such a realistic and pragmatic framing would help India deal with the reality as it is rather than working with the mental frame of Indian primacy which is long gone.

❖ **Need of more diplomats:**

- ✓ India needs more hands for its diplomatic pursuits.
- ✓ The glaring shortage of sufficient diplomats to implement the foreign policy of a country of 1.4 billion people will prove to be India's single most crucial challenge going forward.
- ✓ The more India's role in world affairs grows, the more the shortage of personnel will be felt by us and others.

❖ **Befriending external actors:**

- ✓ New Delhi must proactively pursue the involvement of friendly external actors in the region.
- ✓ That is the only way to deal with the impending possibility of the region becoming Sino-centric.
- ✓ Dealing with whoever is in power is a good policy, but engaging only those in power could be a bad policy.

❖ **Need of flexible diplomacy:**

- ✓ Indian diplomacy must be flexible enough to engage multiple actors in each of the neighbouring countries.
- ✓ The art of diplomacy is not about hating the anti-India elements in the neighbourhood, but, instead, lessening their anti-India attitude.

US-CHINA TRADE WAR COULD HELP AND HURT INDIA

Context: US President has directed his Trade Representative to increase tariffs on USD 18 billion of imports from China to 'protect' American workers and businesses

US stand

- ❖ It has proposed sharp increases in tariffs on certain steel and aluminium products, semiconductors, electric vehicles, lithium-ion batteries, solar cells, ship-to-shore cranes and medical consumables.
 - ✓ The proposed increases are a part of the US's broader strategy under Section 301 of the Trade Act of 1974.

- ❖ The reasons cited by the US include China's unfair practices relating to technology transfer, intellectual property and innovation and the threats posed by large manufacturing capacities.
- ❖ China is also flooding global markets with artificially low-priced exports.
- ❖ All these impact the American businesses and workers negatively .

China's Response

- ❖ Chinese officials have fiercely promised to retaliate, stressing that this will seriously affect bilateral cooperation with the US.

Impact on Global Economy

- ❖ The trade war between the U.S. and China could hurt the economic prospects across the developing countries .
- ❖ The trade war can have a direct impact on consumer products.
- ❖ The companies may find it difficult to operate with huge taxes and in response to that these will increase their product prices which will put a burden on consumers when they buy any products
- ❖ A trade war could weaken investment, depress spending, unsettle financial markets and slow the global economy.
- ❖ It could also result in other countries raising protectionist barriers.

Repercussions for India

- ❖ **The positives:** Indian exporters need to make the most of opportunities created by the trade war.
 - ✓ Exporters of face masks, syringes and needles, medical gloves and natural graphite are the best places to benefit from the recent round of tariff hikes by the US.
 - ✓ While China is the biggest exporter to the US in these categories, India too has a good presence in the US in these products.
 - ✓ The United States and China are major trade partners of India in international business and can fulfill the huge gap of trade deficit through export.
 - ✓ India can seek more opportunities in the enhancement of information and communication technology, eCommerce, the chemical industry, outsourcing, and the automotive sector.
- ❖ **Negatives**
 - ✓ Indian authorities need to up the ante in checking dumping of low-priced Chinese goods diverted into India, which can negatively impact Indian manufacturing.
 - ✓ With the EU contemplating increasing duties on EV imports from China, there is risk of the latter pushing cheap EVs into India, deterring Indian businesses.
 - ✓ Products slapped with higher US duties such as lithium-ion batteries and semiconductors from China could also be diverted to India.
 - China is already India's biggest trading partner, with India's imports from that country totalling \$101.7 billion in FY24.

Safeguards Available in India

- ❖ India has a process for identifying imports which are priced lower than the selling price in the country of origin with the Directorate General of Trade Remedies levying anti-dumping duty on such products.
 - ✓ But there is delay in accessing and analysing the trade data and taking action.

Conclusion and Way Forward

- ❖ A recent announcement by the US of an increase in tariffs on a range of imports from China could have repercussions on global trade

- ❖ Therefore, the commerce ministry's investigation arm Directorate General of Trade Remedies (DGTR) has to remain vigilant
- ❖ The Centre could consider setting up a department to analyse the trade data on some key imports daily so that action can be expedited.
- ❖ A trade policy with China that bolsters rather than impairs India's recent manufacturing boost deserves attention — especially given India's keenness to be a 'China plus one' hub.

HIGHS AND LOWS OF INDIA-US CONVERGENCE

Context: The assassination attempt on a Sikh separatist in the United States (US) has become a bone of contention between India and the US.

Overview of India and US Bilateral Relations

- ❖ Since India's independence, ties with the United States have weathered the Cold War era distrust and estrangement over India's nuclear program.
 - ✓ Relations have warmed in recent years and cooperation has strengthened across a range of economic and political areas.
- ❖ **Bilateral Trade:** The bilateral trade between the two countries has risen by 72 percent between 2017-18 and 2022-23.
 - ✓ The US accounted for 18 percent of the gross FDI inflows into India during 2021-22, ranking second behind Singapore.
- ❖ **Defense and Security:** India and the US have signed a troika of "foundational pacts" for deep military cooperation, beginning with the Logistics Exchange Memorandum of Agreement (LEMOA) in 2016, followed by the Communications Compatibility and Security Agreement (COMCASA) after the first 2+2 dialogue in 2018, and then the Basic Exchange and Cooperation Agreement (BECA) in 2020.
 - ✓ In 2016, the United States elevated India to a major defense partner.
- ❖ **Space:** Artemis Accords signed by India established a common vision for the future of space exploration for the benefit of all humankind.
- ❖ **Multilateral Cooperation: India** and the United States cooperate closely in multilateral organizations and forums, including the United Nations, G20, International Monetary Fund, World Bank, and World Trade Organization.
 - ✓ Together with Australia and Japan, the United States and India convene as the Quad, a diplomatic network, to promote a free and open Indo-Pacific.
- ❖ **Nuclear Cooperation:** Civil Nuclear Deal was signed in 2005, under the agreement, India agreed to separate its civil and military nuclear facilities and place all its civil resources under International Atomic Energy Agency (IAEA) safeguards.
 - ✓ In exchange, the United States agrees to work toward full civil nuclear cooperation with India.
- ❖ **New initiatives:** Several new initiatives have been announced like GE-HAL deal to manufacture jet engines in India and the initiative on Critical and Emerging Technology (iCET), to bring revolution between the relations of the two nations.

Divergence in relations

- ❖ **Conflicting positions:** India's muted criticism of the Russian invasion of Ukraine in 2022 expectedly led to some frustration in the West, raising questions over India's credibility as a security partner.
- ❖ **Limited Utility:** India's utility to the US in an Indo-Pacific conflict, such as a Chinese invasion or naval blockade of Taiwan, is likely limited.

- ✓ In the event of US military involvement in Taiwan's defense, India would likely avoid entanglement in such a US-China conflict.
- ❖ The US seeks greater alignment from its allies against Russia. While countries like South Korea and Australia have sent military aid to Ukraine, India is viewed by the US and the West as opportunistically buying more oil from Russia amid the war.
- ❖ **Defence Relations with Russia:** The US is concerned about India's acquisition of arms like the S-400 air defense system, as it strengthens Russian power, hinders interoperability and secure communications between US and Indian forces, and prevents sharing of sensitive weapons technologies.

Concerns for India

- ❖ **Dependency on China:** US aid in the Russia-Ukraine war strengthens Ukraine's defense and counter offensives, forcing Russia to rely more on China for support. This diminishes Russian autonomy and potentially its ability to honor defense agreements with India in an India-China conflict.
- ❖ The Russia-Ukraine conflict has shifted the focus of the US away from China, and has, therefore, contributed to considerably eroding the strategic convergence between India and the US.
- ❖ Further, the war in the Middle East has diverted US attention away and Indo-Pacific in general and India, in particular, have suffered neglect.

Concluding remark

- ❖ The India-US ties have come a long way in the last 25 years, and it holds significant importance in shaping the global order of the 21st century. However, looking at it today, the relationship seems hitting a ceiling as the strategic glue in the foundation is coming apart.
- ❖ The strategic convergence of India and the US is because of the common threat posed by China. The more the US focuses on Russia or any other adversary and India focuses on Pakistan, the more their strategic convergence weakens.

BRICS GROUPING AND ITS EXPANSION

Context: The BRICS Ministers of Foreign Affairs/International Relations met in the Russian Federation.

- ❖ Russia took over the chairmanship of BRICS on January 1, 2024.

About

- ❖ The meeting was the first ministerial meeting following BRICS expansion in 2023 when Egypt, Ethiopia, Iran, Saudi Arabia, and the UAE joined Brazil, Russia, India, China, and South Africa as full-fledged BRICS members.
- ❖ The BRICS ministers held a plethora of discussions, including an important one on the enhanced use of local currencies in trade and financial transactions between the BRICS countries.

About BRICS

- ❖ The leaders of BRIC (Brazil, Russia, India, and China) countries met for the first time in St. Petersburg, Russia, on the margins of the G8 Outreach Summit in July 2006.
- ❖ The BRICS group was renamed as BRICS (Brazil, Russia, India, China, South Africa) after South Africa was accepted as a full member at the BRIC Foreign Ministers' meeting in New York in September 2010.
- ❖ BRICS is an important grouping bringing together the major emerging economies from the world.

Main Pillars of BRICS

- ❖ **Political and Security:** Enhancing cooperation on global and regional security matters and reforming the multilateral system to make it more relevant for the 21st century.
 - ✓ Counter-terrorism and its financing remain crucial elements within this domain

- ❖ **Economic and Financial:** Promoting economic growth and development for mutual prosperity through intra-BRICS cooperation in trade, agriculture, infrastructure, SMEs, energy, finance, and banking.
 - ✓ This cooperation aims to promote collaborative approaches for the attainment of Sustainable Development Goals.
- ❖ **Cultural and People-to-People Exchanges:** Enriching intra-BRICS contacts through cultural, academic, youth, sports, and business exchanges.
 - ✓ Regular interactions among parliamentarians and young scientists are part of this effort to build stronger intra-BRICS relationships

Importance

- ❖ BRICS is a testament to the power of collective action and shared vision.
- ❖ The recent expansion promises enhanced economic cooperation, increased geopolitical influence, diversified perspectives, and renewed dynamism within the BRICS framework.
- ❖ The BRICS expansion facilitates market growth by providing access to new markets and trade and investment opportunities.
- ❖ This potential surge in economic activity can enhance economic growth and stability within the group. Diversifying economic interests is critical in mitigating risks and creating a more resilient financial ecosystem.
- ❖ Moreover, including these new members brings fresh perspectives and experiences to the table.

Emerging challenges

- ❖ The BRICS countries still fall short in showing a coherence of purpose, and are still mired by inner contradictions.
- ❖ Continued conflicts in the Middle East and North Africa (MENA) region .
- ❖ Climate change, pandemics, terrorism, and regional conflicts
- ❖ The journey towards a common currency within BRICS faces challenges due to economic disparities, monetary policy complexities, and divergent national priorities.
- ❖ China's economic dominance might spark concerns regarding fair benefit distribution and currency influence

Conclusion and Way Forward

- ❖ BRICS continues to advocate for a more equitable world order, emphasizing equality, mutual respect, and trust.
- ❖ It has evolved from a mere dialogue forum to a significant player on the world stage.
- ❖ Its journey underscores the potential of strategic partnerships in addressing the multifaceted challenges of our times.
- ❖ Challenges undoubtedly exist, but the collective strength and shared objectives make BRICS a platform of immense potential.
- ❖ As it moves forward, BRICS remains committed to playing a pivotal role in global governance, advocating for a balanced and fair international order.
- ❖ The Indian Prime Minister expressed support for BRICS expansion, underlining that India has always advocated for it, believing that including new members will enhance BRICS as an organisation.

INDIA-ITALY STRATEGIC PARTNERSHIP

Context: Prime Minister Narendra Modi met his Italian counterpart with a focus on a free and open Indo-Pacific and India-Middle East-Europe Economic Corridor.

About

- ❖ Both the leaders reviewed the progress of the bilateral strategic partnership and agreed to strengthen cooperation in global fora and multilateral initiatives, including the India-Middle East-Europe Economic Corridor.

India-Italy Strategic Partnership

- ❖ India and Italy elevated their Relations into Strategic Partnership in 2023.
- ❖ Italy is the next country in Europe after France, Germany and The Netherlands, to be taking a keen interest in engagements in the Indo-Pacific region and a gradual upswing in its ties with India is an important part of its recent Indo-Pacific pivot.
- ❖ In 2021, the 'India-Italy-Japan' trilateral was launched, with an aim to work towards the security, stability, prosperity and multilateralism of the Indo-Pacific region.
 - ✓ It is the second trilateral that India has, in the Indo-Pacific region, involving a European country, after the 'India-France-Australia' trilateral.
- ❖ **Global Forums:** Italy joined both the significant initiatives, launched on the margins of the G20 Summit, the 'Global Biofuel Alliance' and the 'India-Middle East-Europe Economic Corridor'.
 - ✓ Italy has also joined the 'International Solar Alliance' (ISA), in 2021, which was the year of the Italian Presidency of G20 and co-Presidency of COP26.
- ❖ **Bilateral trade between India and Italy has substantially increased;** it was estimated at 4.9 billion Euros in 2022, with a 42% growth over 2021.
 - ✓ Italy is the fifth largest trading partner of India in the EU.
 - ✓ Italy, which is looking at supply chain consolidation and diversification in its post-pandemic recovery, sees India as an important partner in the region.
- ❖ The two countries are looking forwards to strengthen cooperation in defence technology, maritime security and space, with similar concerns in maritime domain.
- ❖ **Relations with China:** At the same time, there is also Italy's growing concern about China in the broader European and Indo-Pacific region.
 - ✓ There are reports about Italy's intention to exit China's BRI. In case this happens, it will be a significant policy shift for Italy.
 - ✓ Geopolitical necessities are resulting in Italian policy makers, shaping and reshaping their relationships in Asia.

Way Ahead

- ❖ Recent developments show that there is a renewed interest in the relationship from both sides.
- ❖ India and Italy can leverage their strategic positions in the Indian Ocean and in the Mediterranean, respectively, to promote connectivity, stability, energy security, freedom of navigation in the two maritime geographies, and therefore in the wider Indo-Pacific region.

GULF INTEGRAL PART OF INDIA'S EXTENDED NEIGHBOURHOOD

Context: The Gulf region has become an increasingly important strategic partner of India and an integral part of its 'extended neighbourhood' as per the Italian Institute for International Political Studies (ISPI).

Gulf Region

- ❖ The Gulf Region typically refers to the countries surrounding the Persian Gulf in the Middle East.
- ❖ It includes nations like Saudi Arabia, Kuwait, Bahrain, Qatar, Oman, and the United Arab Emirates (UAE).
- ❖ This region is known for its vast oil reserves, which have significantly influenced global economics and politics.

Gulf Cooperation Council (GCC)

- ❖ It is a political and economic alliance of six Middle Eastern countries—Saudi Arabia, Kuwait, the United Arab Emirates, Qatar, Bahrain, and Oman.
- ❖ It was established in 1981.
- ❖ It aims to achieve unity among its members based on their common objectives and their similar political and cultural identities, which are rooted in Arab and Islamic cultures.
- ❖ Presidency of the council rotates annually.

Importance of Gulf Region for India

- ❖ **Energy Security:** The Gulf countries are major suppliers of crude oil and natural gas to India.
 - ✓ India is highly dependent on Gulf oil for its energy needs, making the region crucial for India's energy security.
- ❖ **Remittance:** Remittances from Indian expatriates working in the Gulf contribute significantly to India's economy.
 - ✓ Remittance is the non-commercial transfer of money by an individual to his/her home country or family.
- ❖ **Security Cooperation:** The Gulf region is strategically important for India's security interests, given its location and influence in the Arabian Sea and Indian Ocean regions.

India's Relations with GCC

- ❖ **Strategic Partnership:** GCC is a major trade and investment partner for India. While India has close economic and political ties with all countries, the strategic partnership exists with only Saudi Arabia, UAE, and Oman.
- ❖ **Energy Security:** GCC contributes to 35% of India's oil imports and 70% of gas imports. India is executing the second phase of its Strategic Petroleum Reserve (SPR). Several GCC countries have expressed their interest in the same.
- ❖ **Trade and Investment:** GCC countries contribute to about one-sixth of India's total trade.
 - ✓ The GCC is India's largest regional bloc trading partner. Trade with the GCC comprised 15.8 percent of India's total trade in FY2022-23, compared to 11.6 percent of total trade with the European Union.
 - ✓ India also has a significant trade deficit with the GCC which is driven by India's dependence on GCC countries for oil and gas imports.
- ❖ **Defence Relations:** India's defence engagements with these countries are gaining significant momentum.
 - ✓ From mere training of security personnel in various military institutes, they have extended ties to other areas, including intelligence sharing, counterterrorism, artificial intelligence, electronic warfare, and cybersecurity.

Conclusion

- ❖ India will likely become an increased 'strategic partner' for the Gulf states.
- ❖ Managing mutual challenges, while focusing on growing political, economic and security interests, will be the key to enabling India-Gulf relations to strengthen and become more ambitious.

STATE VISIT OF THE PRIME MINISTER OF BANGLADESH TO INDIA

Context: The Bangladesh Prime Minister Sheikh Haseena is on a state visit to India.

About

- ❖ The two sides signed key pacts including, increasing rail connectivity, boosting trade and having a 'green partnership'.

- ❖ India and Bangladesh pledged to start negotiations on a comprehensive economic partnership agreement (CEPA); decided to launch a medical e-visa facility for Bangladesh citizens; agreed to send a technical team to discuss Teesta river water-sharing.

Highlights of India Bangladesh Relations

- ❖ **Independence and Liberation War:** India played a crucial role in Bangladesh's independence in 1971, supporting the Bengali nationalist movement against Pakistani rule.
 - ✓ This historic event laid the foundation for strong bilateral ties.
- ❖ **Land Boundary Agreement (LBA):** In 2015, both countries resolved long-standing border issues by exchanging enclaves and simplifying their international border, which had remained unresolved since partition in 1947.
- ❖ **Connectivity:** Five pre-1965 rail links have been rehabilitated between India and Bangladesh.
 - ✓ There are currently three railway trains operating between the two countries – Maitri Express ; Bandhan Express ; and Mitali Express.
 - ✓ The inauguration of Akhaura-Agartala cross-border rail link is a crucial step towards enhancing connectivity of northeastern India with Bangladesh.
- ❖ **Economic Relations:** Bangladesh is India's biggest trade partner in South Asia and India is the second biggest trade partner of Bangladesh in Asia.
 - ✓ India is Bangladesh's largest export destination in Asia, with approx USD 2 billion of Bangladeshi exports to India in FY 2022-23.
 - ✓ In FY 2022-23, the total bilateral trade has been reported as USD 15.9 billion.
- ❖ **Trade Agreements:** The two countries are members of various regional trade agreements such as the Asia Pacific Trade Agreement (APTA), the SAARC Preferential Trade Agreement (SAPTA) and the Agreement on South Asian Free Trade Area (SAFTA) which govern the tariff regimes for trade.
- ❖ **Regional Cooperation:** Both countries are active members of regional organizations like SAARC (South Asian Association for Regional Cooperation) and BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation), promoting regional integration and cooperation.
- ❖ **Various Joint exercises take place between the two countries:**
 - ✓ Exercise Sampriti (Army) and
 - ✓ Exercise Milan (Navy).
- ❖ In the energy sector, Bangladesh imports nearly 2,000 megawatts of electricity from India.

Challenges

- ❖ **Border Issues:** Although the Land Boundary Agreement in 2015 resolved many longstanding border disputes, there are still occasional issues related to border security and illegal crossings that strain relations.
- ❖ **Water Sharing:** Disputes over the sharing of common rivers, such as the Teesta River, remain unresolved.
- ❖ **Rohingya issue:** The Bangladesh government aims for the peaceful repatriation of Rohingyas to Myanmar, but it's talks with the military junta have been unsuccessful so far.
 - ✓ Bangladesh seeks India's cooperation to influence Myanmar, but the government, asserts that it will deport Rohingyas from its mainland.
- ❖ **Trade Imbalance:** While trade between India and Bangladesh has grown significantly, there remains a trade imbalance where India exports more to Bangladesh than it imports.
 - ✓ This led to economic tensions and protectionist measures.
- ❖ **Security Concerns:** Issues related to border security, cross-border smuggling, and occasional incidents involving extremist groups pose security challenges for both countries, requiring continued cooperation and vigilance.

- ❖ **China Factor:** India's concern is the deepening relationship between Bangladesh and China, marked by the substantial Chinese investments in infrastructure in recent years.

Way Ahead

- ❖ India considers Bangladesh a critical ally in the region.
 - ✓ A 4,096-km border, the India-Bangladesh border is the longest land boundary India has with any of its neighbours.
- ❖ Over the years, India and Bangladesh have forged a multifaceted relationship, marked by a shared history, culture, and geographical proximity.
- ❖ The foreign policy alignment between the two nations promises increased collaboration in traditional and new areas, and provides an opportunity for the two countries to address unresolved conflicts.
- ❖ Both the countries are poised to take forward discussions on a FTA to enhance their economic partnership and boost investments

THE STATE OF INDIA-US TIES

Context: The recent visit of the Prime Minister of India to the United States led to a significant development in the field of military aerospace technology. The US administration offered to restart the decade-old plan to transfer jet engine technology to India. This move aims to strengthen bilateral defense ties and enhance India's military capabilities.

Overview of India and US Bilateral Relations

- ❖ Since India's independence, ties with the United States have weathered the Cold War era distrust and estrangement over India's nuclear program.
- ❖ Relations have warmed in recent years and cooperation has strengthened across a range of economic and political areas.
- ❖ **Bilateral Trade:** The bilateral trade between the two countries has risen by 72 percent between 2017-18 and 2022-23.
 - ✓ The US accounted for 18% of the gross FDI inflows into India during 2021-22, ranking second behind Singapore.
- ❖ **Defence and Security:** India and the US have signed a troika of "foundational pacts" for deep military cooperation, beginning with the Logistics Exchange Memorandum of Agreement (LEMOA) in 2016, followed by the Communications Compatibility and Security Agreement (COMCASA) after the first 2+2 dialogue in 2018, and then the Basic Exchange and Cooperation Agreement (BECA) in 2020.
 - ✓ In 2016, the United States elevated India to a major defence partner.
- ❖ **Space:** Artemis Accords signed by India established a common vision for the future of space exploration for the benefit of all humankind.
- ❖ **Multilateral Cooperation:** India and the United States cooperate closely in multilateral organisations and forums, including the United Nations, G20, International Monetary Fund, World Bank, and World Trade Organization.
 - ✓ Together with Australia and Japan, the United States and India convene as the Quad, a diplomatic network, to promote a free and open Indo-Pacific.
- ❖ **Post-Pokhran Turnaround:** Former Prime Minister Atal Bihari Vajpayee's famous Asia Society speech in New York in 1998, hailed India and the US as 'natural allies in the quest for a better future' in the 21st century.
- ❖ **Nuclear Cooperation:** Civil Nuclear Deal was signed in 2005, under the agreement, India agreed to separate its civil and military nuclear facilities and place all its civil resources under International Atomic Energy Agency (IAEA) safeguards.

- ✓ In exchange, the United States agrees to work toward full civil nuclear cooperation with India.
- ❖ **Strategic Trust:** Over the past decade, strategic trust has grown, with foundational agreements, military exercises, and coordination on maritime operations. Shared concerns over China's aggression have brought Delhi and Washington increasingly on the 'same page' internationally.
- ❖ **New initiatives:** Several new initiatives have been announced like GE-HAL deal to manufacture jet engines in India and the initiative on Critical and Emerging Technology (iCET), to bring revolution between the relations of the two nations.

Divergence in Relations

- ❖ **Conflicting positions:** India's muted criticism of the Russian invasion of Ukraine in 2022 expectedly led to some frustration in the West, raising questions over India's credibility as a security partner.
- ❖ **Limited Utility:** India's utility to the US in an Indo-Pacific conflict, such as a Chinese invasion or naval blockade of Taiwan, is likely limited.
 - ✓ In the event of US military involvement in Taiwan's defence, India would likely avoid entanglement in such a US-China conflict.
 - ✓ The US seeks greater alignment from its allies against Russia. While countries like South Korea and Australia have sent military aid to Ukraine, India is viewed by the US and the West as opportunistically buying more oil from Russia amid the war.
- ❖ **Defence Relations with Russia:** The US is concerned about India's acquisition of arms like the S-400 air defence system, as it strengthens Russian power, hinders interoperability and secure communications between US and Indian forces, and prevents sharing of sensitive weapons technologies.

Concerns for India

- ❖ **Strategic Trust and China:** India and the U.S. have made significant strides in strategic cooperation, particularly in countering China's aggression in the Indo-Pacific. However, concerns persist about India's reliance on Russian military imports and its perceived reluctance to unequivocally condemn Russia's actions in Ukraine.
 - ✓ Balancing these interests remains a challenge.
- ❖ **Dependency on China:** US aid in the Russia-Ukraine war strengthens Ukraine's defence and counter offensives, forcing Russia to rely more on China for support.
 - ✓ It diminishes Russian autonomy and potentially its ability to honour defence agreements with India in an India-China conflict.
- ❖ **Democratic Values and Friction:** While the partnership is anchored in shared democratic values, there are areas of friction. The U.S. expresses concerns about India's treatment of minorities, especially Muslims, and its illiberal policies. The revocation of Jammu and Kashmir's special status, the Citizenship Amendment Act, and religious freedom issues have raised eyebrows.
- ❖ **Trade and Structural Agreements:** Despite steady growth in trade, disagreements over critical issues and the lack of structural trade agreements have hindered realising the full potential of the relationship.
 - ✓ Addressing trade challenges and enhancing economic ties is crucial.
- ❖ **Securing Interests and Promoting Values:** The U.S. and India must balance securing their interests with promoting democratic values. India's trajectory as a secular and tolerant nation is closely watched, especially given recent developments.

Conclusion and Way Forward

- ❖ **Multilateral Cooperation:** While bilateral engagement thrives, multilateral cooperation on global conflicts remains a challenge.

- ❖ **Complexities and Priorities:** The future path of U.S.-India relations depend on navigating complexities, fostering trust, and prioritising mutual interests for a stable and prosperous partnership.
- ❖ India-U.S. relationship is at a crucial juncture, with significant potential for growth but also substantial challenges to overcome. As leaders engage once again, they must chart a course that balances ambition with pragmatism, ensuring a robust and enduring partnership.
- ❖ The strategic convergence of India and the US is because of the common threat posed by China. The more the US focuses on Russia or any other adversary and India focuses on Pakistan, the more their strategic convergence weakens.

NEED FOR REFORMS IN UNSC

Context: India has asserted that as the United Nations turns 80 next year, it is “high time” to reform the Security Council.

About the UNSC

- ❖ The United Nations Security Council (UNSC) is one of the principal organs of the United Nations, responsible for maintaining international peace and security.
- ❖ It was established in 1945 as part of the UN Charter and is composed of 15 member states, including five permanent members with veto power—China, France, Russia, the United Kingdom, and the United States—and ten non-permanent members elected for two-year terms by the General Assembly.
- ❖ It is headquartered in New York City.

Need for the Reforms in the UNSC

- ❖ **Current Composition:** The current composition of the Security Council has under-representation and un-representation of key regions.
- ❖ **Inability to Address Conflicts:** The current composition of the council has an inability to address critical conflicts and maintain international peace and security.
- ❖ **Changes in World Order:** The world has undergone a sea change since 1945 and the new realities need to be reflected in the permanent membership.
- ❖ **Veto Power:** Currently, only the five permanent members hold veto powers and through its use have stalled action in the Council to address global challenges and conflicts such as in Ukraine and Gaza.
 - ✓ The remaining 10 nations in the Council are elected to sit as non-permanent members for two-year terms and do not have veto powers.
- ❖ **Legitimacy:** The disproportionate power held by the five permanent members, particularly their veto power lead to a perception of unfairness and lack of legitimacy.

Why India Should Get Permanent Membership of UNSC?

- ❖ **Global Population and Representation:** India is the world’s second-most populous country, representing approximately 18% of the world’s population.
 - ✓ Such demographic significance warrants proportional representation in global decision-making bodies like the UNSC.
- ❖ **Economic Powerhouse:** India has emerged as a major global economic force, ranking among the top economies by GDP (nominal) and GDP (PPP).
 - ✓ Its economic strength contributes significantly to global stability and development, which aligns with the UNSC’s mandate to maintain international peace and security.
- ❖ **Commitment to Peacekeeping:** India has been one of the largest contributors to UN peacekeeping missions, demonstrating its commitment to global peace and security.
- ❖ **Strategic Importance:** India occupies a pivotal geopolitical position in South Asia and the broader Indo-Pacific region.
 - ✓ Its influence extends beyond regional boundaries, making it crucial in addressing global security challenges such as terrorism, climate change, and maritime security.
- ❖ **Democratic Values:** As the world’s largest democracy, India upholds principles of pluralism, tolerance, and inclusivity, which are fundamental to the UN’s ethos.

- ❖ **Support from Member States:** India enjoys broad support from a significant number of UN member states, including influential nations from various regions.
 - ✓ This backing reflects recognition of India's global role and its potential contributions to enhancing the UNSC's capacity to respond to global crises.

Limitations in Introducing the Reforms in UNSC

- ❖ **Veto Power of Permanent Members:** Any reforms to the composition or working methods of the UNSC require the approval of the five permanent members.
 - ✓ These countries have divergent interests and are reluctant to support changes that could diminish their influence within the Council.
- ❖ **Regional Dynamics:** Regional rivalries and geopolitical tensions complicate efforts to reform the Council.
- ❖ **Complexity of the Reform Process:** Amending the UN Charter to enact reforms requires a lengthy and complex process involving ratification by a significant number of member states, making it difficult to enact substantive reforms.
- ❖ **Chinese Opposition:** China being a permanent member blocks the growth of India becoming a Permanent Member.

Way Ahead

- ❖ It is important that both the permanent and non-permanent membership be representative of the world as it is today, not the world as it existed in the wake of the Second World War.
- ❖ Reforms in the UNSC are essential for maintaining its relevance, legitimacy, and effectiveness in addressing the complex security challenges facing the international community in the 21st century.
- ❖ However, achieving consensus on such reforms among the UN's member states remains a challenging and ongoing process.

PANCHSHEEL: 'FIVE PRINCIPLES' OF PEACEFUL COEXISTENCE

Context: Recently, it is observed that China is celebrating the 70th anniversary of the 'Five Principles of Peaceful Coexistence', which India called it as Panchsheel.

About India-China Relations

India and China share a complex history of diplomatic relations, marked by territorial disputes, border tensions, and occasional military clashes.

- ❖ Both countries established diplomatic relations in 1950, making India the first non-socialist bloc country to do so with the People's Republic of China.

Five Principles of Peaceful Co-existence (aka Panchsheel)

- ❖ These were first formally enunciated in the Agreement on Trade and Intercourse between the Tibet region of China and India signed in 1954.
- ❖ India welcomed Panchsheel, recognizing its alignment with its foreign policy since independence.

Ancient Roots

- ❖ It traces its origin to the Buddhist concept of Pañcaśīla, which describes the five moral vows of Buddhism: abstinence from murder, theft, sexual misconduct, lying, and intoxicants.
- ❖ Confucius, the Chinese philosopher, spoke of harmony amid differences, laying the groundwork for these principles.
- ❖ Panchsheel's modern form emerged in China, bridging ancient wisdom with contemporary international relations.

Key Features

- ❖ **Mutual Respect for Territorial Integrity and Sovereignty:** Both nations committed to respecting each other's territorial boundaries and sovereignty. It emphasised the importance of recognizing each other's rights and boundaries.

- ❖ **Mutual Non-Aggression:** India and China pledged not to engage in aggressive actions against each other. It aimed to prevent armed conflicts and maintain peace.
- ❖ **Mutual Non-Interference:** The two countries agreed not to interfere in each other's internal affairs. It emphasised respect for national autonomy and sovereignty.
- ❖ **Equality and Mutual Benefit:** India and China sought equal treatment and mutual benefits in their interactions. It emphasises fairness and cooperation.
- ❖ **Peaceful Co-existence:** The ultimate goal was peaceful coexistence, fostering an environment where both nations could thrive without conflict.

Relevance

- ❖ Post-Chinese Revolution, the Common Programme adopted most core Panchsheel principles.
- ❖ Panchsheel guided India-China relations and resonated in the North-South dialogue and other global groupings.
 - ✓ Its relevance persists in our ever-changing world.
- ❖ **Collective Security in Asia:** India and China came to the conclusion that it was not through military pacts and alliances but through the Five Principles (Panchsheel) that a system of collective security or collective peace could be established in Asia. They visualised Panchsheel agreements of this type between China and Burma, Burma and India, China and Indonesia, then Indonesia and India etc.

Global Acceptance

- ❖ The Five Principles came to be accepted almost universally by countries and finally by the United Nations Organisation.
- ❖ The United Nations (UN) accepted the Five Principles as a code of conduct in international relations. Later, Yugoslavia, Sweden and India, moved a resolution in the UN containing the Five Principles; it was adopted unanimously.
- ❖ In a series of active and independent international moves, heads of both countries visited countries in Asia, Africa and Europe and signed with most of them agreements embodying the Five Principles.
- ❖ The Asian-African conference held in Bandung accepted the Five Principles, expatiating them into the Ten Principles of Bandung.
- ❖ Panchsheel became the presiding principle of the Asian-African movement for equality and freedom against the prevailing colonial and imperialist domination of the world.
- ❖ The Conference of Non-aligned nations in Belgrade accepted them as the core principles behind the Non Aligned Movement (NAM).

Concerns Related to India and China Relations

- ❖ **Boundary Questions:** Since the 1980s, India and China have sought peaceful resolution of their boundary dispute. Informal summits between leaders, like those in Wuhan (2018) and Chennai (2019), emphasised strategic communication and cooperation.
 - ✓ The unresolved boundary issue remains a point of contention, leading to occasional tensions.
- ❖ **Economic Ties:** Bilateral trade has grown significantly, with China becoming India's largest trading partner in goods. However, economic competition and geopolitical tensions persist.
 - ✓ Both countries vie for influence in South Asia, often competing for regional projects and markets.
- ❖ **Strategic Geopolitics:** South Asia lies at the crossroads of China's Belt and Road Initiative (BRI). The region's proximity to the Indian Ocean and shipping routes is critical for China's oil imports and trade.
 - ✓ South Asia, where land and maritime Silk Roads intersect, plays a crucial role in this initiative.
- ❖ **Infrastructure Investment:** China invests heavily in port development, enhancing connectivity and securing its maritime trade routes.
- ❖ **Military Dimension:** China's military ties with South Asian nations have grown, impacting regional dynamics. Its influence extends through diplomacy, culture, and economic initiatives.

Conclusion and Way Forward

- ❖ India-China relations stand at a critical juncture. Both countries need to focus on Dialogue and Diplomacy, and Conflict Avoidance. Balancing competition and cooperation is essential for regional stability and prosperity, as highlighted at the Wuhan summit.
- ❖ As both nations celebrate 70 years of diplomatic ties, revisiting the spirit of good neighbourliness and friendship remains crucial.
- ❖ Today, the Panchsheel Principles continue to resonate globally. They guide interstate relations, remain relevant in addressing contemporary challenges, and foster peace, sovereignty, and mutual growth.



GENERAL STUDIES 3.

ECONOMY

DEEPENING CROP INSURANCE SCHEMES IN INDIA

Context: Recently, the Press Information Bureau (PIB) disclosed that the penetration and density of crop insurance programmes in India are significantly low amid huge increase in farmer enrolment under the crop insurance programmes.

Deepening Crop Insurance Schemes in India

- ❖ India, with its vast agricultural sector, has always been at the mercy of the monsoons. The unpredictability of weather patterns and the increasing frequency of extreme weather events have made farming a high-risk occupation.
- ❖ To mitigate these risks and protect farmers from potential crop losses, the government has introduced several crop insurance schemes like Pradhan Mantri Fasal Bima Yojana (PMFBY) and Restructured Weather-based Crop Insurance (RWBCIS).

Current State of Crop Insurance in India

- ❖ India has implemented four major crop insurance schemes, most prominent among them is the PMFBY, which is the third-largest crop insurance program globally. Other schemes include the RWBCIS, the Pilot Unified Package Insurance Scheme (UPIS), and the Coconut Palm Insurance Scheme (CPIS).
- ❖ **Increase in Farmer Enrolment:** The scheme witnessed a 27% increase in farmer enrolment from 2022-23, with 42% of non-loanee farmers and 41% of enrolled farmers (56.80 crore) indemnified from 2016-17 to 2023-24.
- ❖ **Low Penetration and Density of PMFBY and RWBCIS:** Despite the phenomenal growth, the penetration and density of PMFBY and Restructured Weather-based Crop Insurance (RWBCIS) programmes are significantly low.
- ❖ **Penetration and Insurance Density Statistics:** Their penetration in terms of gross premium as a percentage of GDP is 0.62%, and insurance density or per capita farmer premium is only ₹2,148.

Performance Analysis of PMFBY and RWBCIS (2016-17 to 2023-24)

- ❖ Uptick in farmer enrolment with a 10% CAGR.
- ❖ The area and sum insured exhibited a negative CAGR of 8.4% and 5.1%, respectively.
- ❖ The claims payout recorded a 5% CAGR, indicating an uptrend from 2022-23.
- ❖ Farmers' share in gross premium was 15%, exhibiting a negative 4.3% CAGR.
- ❖ Insurers settled more than 94% of total claims with a 70% claim-to-premium ratio.

Concerns Raised in Crop Insurance Schemes

- ❖ One of the primary issues is the higher transaction costs of service delivery for small farmers, lack of coordination between insurers, banks, and governments, delays in indemnity payments, and an illiquid reinsurance market.
- ❖ Another challenge is the skewed distribution of these crop insurance schemes.
 - ✓ While PMFBY has been skewed towards loanee farmers (over 50%), RWBCIS is limited to resource-endowed male farmers, and their enrollment and premium payments are insignificant compared to PMFBY.

- ❖ **Inclusion of Farmers in PMFBY and RWBCIS:** PMFBY has been skewed towards loanee farmers (over 50%).
 - ✓ RWBCIS is limited to resource-endowed male farmers, and their enrollment and premium payments are insignificant compared to PMFBY.
- ❖ **Challenges in Service Delivery and Coordination:** Higher transaction costs of service delivery for small farmers.
 - ✓ Lack of coordination between insurers, banks, and governments.
 - ✓ Delays in indemnity payments.
 - ✓ An illiquid reinsurance market affected crop insurance penetration.
- ❖ **Financial Analysis of Insurers' Crop and Weather Insurance Businesses (2018-2022):** The claims or indemnity payments to premium income averaged 92%.
 - ✓ The average underwriting expenses to expected premium income was 36%.
 - ✓ The average combined ratio (indemnity and expense) stood at 128%, which indicates that for every ₹100 earned as premium income, insurers paid out ₹128.

Policy Suggestions

- ❖ To improve the quality and efficacy of insurance service delivery, institutional capacity of program implementation, inclusion, and regulatory oversight, several policy suggestions can be made.
- ❖ A one-size-fits-all approach is not appropriate for crop insurance programs.
 - ✓ PMFBY is a multi-peril yield indemnity insurance, while RWBCIS is a parametric (index) insurance. So, these two programs should not be jointly managed.
- ❖ The agri-reinsurance market and distribution network must be scaled up.
 - ✓ An effective distribution network should be in place to deepen insurance penetration.
- ❖ The government should give more flexibility and freedom to states and farmers in choosing insurance products for risk hedging as per the proneness of the particular state to the specific weather vagary.
- ❖ **Separate Management for Different Insurance Programs: The need for specialised agri(re)insurers and separate management for PMFBY and RWBCIS insurance programs.**
- ❖ **Differential Actuarial Premium Rate (APR):** The importance of having different APRs for different insurance programs to encourage participation from uninsured and risk-averse farmers.
- ❖ **Alternative Risk-Sharing Models:** The implementation of alternative risk-sharing models or a cap-and-cup approach to reduce net subsidy on premiums.
- ❖ **Promotion of Agri-Reinsurance Market:** The need to promote the agri-reinsurance market and create a reinsurance pool for high-value crops.
- ❖ **Effective Distribution Network:** The importance of establishing an effective distribution network to deepen insurance penetration, with a mention of mobile network operators or banking correspondent channels for premium collection and claim settlement.

Conclusion

- ❖ Deepening crop insurance schemes in India is crucial for protecting farmers from the vagaries of weather and market fluctuations.
- ❖ While the government has made significant strides in this direction, there is still a long way to go.
- ❖ By addressing the challenges and implementing the suggested policy measures, India can ensure that its farmers are adequately insured, thereby securing the future of its agricultural sector.
- ❖ Improvements can be made to enhance the quality and efficacy of insurance service delivery, institutional capacity of programme implementation, inclusion, and regulatory oversight.

DIGITAL AGRI MISSION

Context: The Union government will announce a Rs 2,800 crore Digital Agriculture Mission.

About the Mission

- ❖ Digital Agriculture Mission will pave the way for creation of a nationwide farmers registry, crop sown registry, and georeferencing of village maps.
- ❖ A budgetary allocation of Rs 28,00 crore has been made for the mission and it will be rolled out over the next two years (till 2025-26).
- ❖ The launch of the mission was initially planned in 2021-22 but due to Covid-19 outbreak, it could not be rolled out nationally.

Components

- ❖ One of the components of the mission is to create a farmers' registry, in which every farmer will be given a unique ID
- ❖ The mission also envisages a crop sown registry.
 - ✓ This will have a record of crops sown by a farmer on his land.
 - ✓ It will help better planning and estimation of crop production.

Progress

- ❖ **A pilot project has been undertaken across 6 districts** — Farrukhabad in Uttar Pradesh, Beed in Maharashtra, Gandhinagar in Gujarat, Fatehgarh Sahib in Punjab, and Virudhunagar in Tamil Nadu.
 - ✓ Uttar Pradesh and Maharashtra have already started generation of farmers' ID.
 - ✓ The unique farmer ID will allow launch of new value-added services and farmers will be able to avail various government schemes including PM-Kisan and Fasal Bima Yojana through this ID.
 - ✓ It will also enable them to avail financial services like farm loans and insurance.

Importance

- ❖ The adoption of digital technologies can help India to increase agricultural productivity, reduce waste, increase agricultural export, increase farmers' income and improve food and nutrition security.
- ❖ Apart from this, this will help in protecting the environment and sustainable development of the overall agricultural sector.
- ❖ Artificial Intelligence (AI) will be a tool for farmers to detect crop anomalies, predict the weather, analyse soil quality, and provide required solutions
- ❖ Therefore, The Digital Agriculture Mission aims to encourage and speed up projects based on cutting-edge technologies, including AI, blockchain, remote sensing, robots, and drones.

Challenges

- ❖ There is a lack of a centralized repository for agricultural data, posing challenges for startups and organizations developing AI solutions.
- ❖ AI solutions require sensors, mechanization for precision farming and connectivity none of which are viable for a majority of Indian farmers.
- ❖ Finally, concerns of farmer data privacy and safeguards over who can access personal data need to be addressed in the solution architecture.

Other related steps

- ❖ The Union government has also launched AI programmes assisting agriculture and Kisan e-Mitra, an AI-powered chatbot that assists people regarding the PM Kisan Samman Nidhi scheme.
- ❖ The National Pest Surveillance System uses AI to detect crop issues, enabling timely intervention for healthier crops.
- ❖ **Agricultural mechanisation** – During the period from 2014-15 to December, 2023 an amount of Rs 6405.55 crore has been allocated for agricultural mechanisation.
 - ✓ From within the funds of Sub-Mission on Agricultural Mechanization (SMAM),
 - ✓ So far an amount of Rs 141.41 crores have been released towards Kisan drone promotion

- ❖ **National e-Governance Plan in Agriculture (NeGPA):** NeGPA aims to achieve rapid development in India through use of Information & Communication Technology (ICT) for timely access to agriculture related information for the farmers.
- ❖ The launch of the digital platform e-NAM (National Agriculture Market) in 2016 has facilitated the integration of Agriculture Produce Marketing Committees (APMC) mandis and has provided multi-faceted benefits to farmers, farmer-producer organisations (FPOs), buyers, and traders

Conclusion and Way Forward

- ❖ Digital agriculture has excellent potential in India to resolve many of the existing problems that farmers face to realise value and provide strong competition in national and global markets.
- ❖ Its success will depend on policy and legal enablers along with significant public private partnerships.
- ❖ Realising the AI potential requires the establishment of an AI-ready ecosystem equipped with ethical frameworks, robust data-sharing mechanisms, an effective risk management protocols
- ❖ Given the direction that the union and various state governments have taken in recent times along with the booming growth of agri-startups in the country, India is on the right path to transforming its agricultural sector and providing accelerated value to all farmers.

TRAIN ACCIDENTS IN INDIA

Context: Several train accidents have occurred in India over the last decade for multiple reasons, ranging from mechanical failures to human negligence.

India's Worst Train Disasters

- ❖ **2024:** Kanchanjunga Express train accident occurred near Rangapani station in the Katihar Railway Division, ahead of New Jalpaiguri Junction
- ❖ **2023:** Coromandel Express hit a goods train in Balasore after hitting Bengaluru-Howrah Superfast Express, resulting in a tragic triple train crash. Over 300 people were killed, and well over 1,000 were injured.
- ❖ **2016:** At least 146 people died when an Indore-Patna Express train derailed in Uttar Pradesh on 20 November, causing carriages to crash into each other.
- ❖ **2010:** On 28 May, a train derailed and crashed into a freight train about 83 miles west of Kolkata in Bengal, killing 146 and injuring over 200.
- ❖ **2002:** The luxury Rajdhani Express from Calcutta to New Delhi plunged into the swollen Dhabi river, killing at least 120 people.
- ❖ **1999:** On 2 August, 285 people were killed and 312 injured in a collision between two trains in Gaisal, West Bengal.

About

- ❖ Indian Railways is one of the largest rail networks in the world, spanning over 67,000 kilometers and connecting every corner of the country.
 - ✓ It serves as the lifeline of transportation for millions.
- ❖ There has been an average of 44 consequential train accidents every year in the five-year period ending 2022-23 (FY23).

Train Accidents

- ❖ It is an occurrence in the course of working of Railway which does or may affect the safety of the Railway, its engine, rolling stock, permanent way and works, fixed installations, passengers or servant or which affect the safety of others or which does or may cause delay to train or loss to the Railway
- ❖ Despite advancements in technology and infrastructure, these incidents continue to impact passengers, infrastructure, and the overall economy.

Types

- ❖ **Derailments** : where a train goes off the tracks, are the most common.
 - ✓ These can be caused by a variety of factors including track defects, equipment failure, human error, or even sabotage.
- ❖ **Collisions**: It occurs when two or more trains collide on the same track, often due to signal failures or errors in communication between railway personnel.
- ❖ **Level crossing accidents** : It involves collisions between trains and vehicles or pedestrians at rail crossings, highlighting the need for better safety mechanisms at these points.

Impacts

- ❖ **Casualties and hampers functioning** : The impact of train accidents extends beyond immediate casualties and injuries.
 - ✓ Each incident disrupts the smooth operation of the railway network, leading to delays, cancellations, and financial losses.
- ❖ **Trust related issues**: It erodes public trust in the safety of train travel, affecting passenger confidence and ridership.
- ❖ **Economic cost**: the cost of infrastructure damage, compensation payouts, and the investment required for safety upgrades are substantial.
 - ✓ These accidents also have broader implications for industries relying on efficient freight transport, impacting supply chains and logistics

Challenges

- ❖ The vast railway network faces significant challenges when it comes to safety, with train accidents being a recurring concern.
- ❖ The scale of the railway network makes it difficult to monitor and maintain every section of track effectively.
- ❖ Issues such as overcrowded trains, inadequate maintenance, and human error continue to pose significant threats to safety.

Safety Initiatives

- ❖ The Indian Railways has been proactive in implementing safety measures to mitigate the risk of accidents.
 - ✓ This includes regular track inspections, the introduction of modern signaling systems, and the adoption of technology-driven solutions like train collision avoidance systems (TCAS).
- ❖ The Supreme Court directed the Indian government to outline preventive measures, including the 'Kavach' train protection system, following a catastrophic three-train collision in Odisha's Balasore district that claimed nearly 300 lives.
 - ✓ It urged immediate action and sought a detailed plan to bolster railway safety, emphasizing the need for expert evaluation, system enhancements, and the 'Kavach' system's swift implementation to avert future accidents.

Suggestions and Way Forward

- ❖ Continued investment in upgrading tracks, signaling systems, and rolling stock is crucial.
 - ✓ Modernizing aging infrastructure can significantly reduce the risk of accidents.
- ❖ Strengthening safety protocols through better training of railway staff, stricter adherence to operating procedures, and leveraging technology for real-time monitoring and response.
- ❖ Increasing public awareness about railway safety, including rules at level crossings and onboard safety measures, can prevent accidents involving pedestrians and vehicles.

- ❖ Improved coordination between different stakeholders—government agencies, railway authorities, and the public—ensures accountability and timely response to safety issues
- ❖ Encouraging research into innovative safety technologies and practices tailored to Indian conditions can lead to breakthroughs in accident prevention.
- ❖ As India continues to develop the demand for safe and reliable rail transport, It is imperative that safety measures evolve to protect passengers and ensure the continued viability of the railway system.

KAVACH is an indigenously developed ATP system by Research Design and Standards Organisation (RDSO) in collaboration with Indian industry and trials facilitated by South Central Railway to achieve the corporate objective of safety in train operations across Indian Railways. It is a state-of-the-art electronic system of Safety Integrity Level – 4 standards. It is meant to provide protection by preventing trains from passing the signal at Danger (Red) and avoiding collisions. It activates the train braking system automatically if the driver fails to control the train as per the speed restrictions. In addition, it prevents collision between two Locomotives equipped with a functional KAVACH system.

WORLD LAGGING ON SUSTAINABLE DEVELOPMENT GOALS

Context: The recent UN report by the Sustainable Development Solutions Network (SDSN) underscores a critical juncture for global efforts to achieve the Sustainable Development Goals (SDGs) by 2030.

The findings paint a bleak picture, with none of the 17 goals on track, highlighting the need for urgent and comprehensive reforms.

Importance of SDGs

The Sustainable Development Goals (SDGs) are a set of 17 global goals established by the United Nations in 2015. These goals are a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030. They help in:

- ❖ **Poverty Eradication:** SDGs aim to eradicate poverty in all its forms and dimensions, ensuring that everyone has access to basic necessities like food, water, shelter, and healthcare.
- ❖ **Environmental Protection:** SDGs address the pressing environmental challenges facing our planet, including climate change, biodiversity loss, and pollution. They emphasize the need for sustainable practices to conserve natural resources and mitigate environmental degradation.
- ❖ **Social Inclusion:** SDGs promote social inclusion and equality by addressing issues such as gender inequality, discrimination, and social exclusion. They strive to ensure that all people, regardless of their background, have equal opportunities and access to resources.
- ❖ **Economic Growth:** SDGs recognize the importance of sustainable economic growth that is inclusive and equitable. They aim to create decent jobs, promote innovation, and build resilient economies that benefit everyone.
- ❖ **Global Partnership:** SDGs call for global cooperation and partnership to achieve these goals. They emphasize the importance of collaboration between governments, businesses, civil society, and individuals to create a sustainable future for all.
- ❖ **Improved Health and Well-being:** SDGs aim to ensure healthy lives and promote well-being for all at all ages. This includes access to quality healthcare, nutrition, clean water and sanitation.
- ❖ **Reduced Inequalities:** SDGs aim to reduce inequalities within and among countries. This includes addressing disparities in income, wealth, opportunity, and access to resources.

Progress and Challenges

Stagnant Progress: The report reveals that only 16% of SDG targets are progressing well, while the rest show limited progress or regression. This indicates significant challenges in implementing effective policies and achieving tangible outcomes.

Key Areas of Concern: Several SDGs are particularly concerning:

- ❖ **Zero Hunger (SDG 2):** Rising food insecurity and hunger.
- ❖ **Sustainable Cities and Communities (SDG 11):** Inadequate urban planning and infrastructure.
- ❖ **Life Below Water (SDG 14) and Life on Land (SDG 15):** Biodiversity loss and environmental degradation.
- ❖ **Peace, Justice, and Strong Institutions (SDG 16):** Declining press freedom and rising conflicts.

Impact of COVID-19: The pandemic has exacerbated existing challenges, particularly affecting life expectancy (SDG 3) and increasing health disparities. The disruption has also led to setbacks in poverty reduction and education.

Leading and Lagging Nations:

- ❖ **Nordic Countries:** Continue to lead in SDG achievement due to robust social policies and environmental commitments.
- ❖ **BRICS and BRICS+ Countries:** Show some progress but are still behind leading nations.
- ❖ **Least Developed Countries:** Facing significant setbacks, widening the gap since 2015.

Financial Architecture: There is a critical need for reforming global financial systems to provide low and middle-income countries with access to affordable, long-term capital. This is essential for investing in public goods like education (SDG 4).

India's Performance toward achieving various SDGs

- ❖ India's progress towards the Sustainable Development Goals (SDGs) is mixed, with advancements in poverty reduction, renewable energy, economic growth, and gender equality. However, challenges persist in addressing hunger, education quality, clean water access, climate change, and inequality.
- ❖ While initiatives like PMAY, MGNREGA, the PDS, Ayushman Bharat, and Swachh Bharat have shown positive impacts, further efforts are needed to ensure sustainable access to clean water, improve educational quality, reduce healthcare disparities, and mitigate the effects of climate change.
- ❖ India's commitment to the SDGs is evident in its various programs and policies, but the road ahead requires addressing infrastructure gaps, promoting technological innovation, tackling social disparities, and ensuring sustainable urban development.
- ❖ Collaboration between the government, private sector, and civil society is crucial for accelerating progress towards achieving the SDGs by 2030.

Recommendations

- ❖ **Major Overhaul:** The report calls for a major overhaul of the current approach, emphasizing that "business as usual" will not suffice. It proposes a UN 2.0 model to enhance global cooperation and effectiveness.
- ❖ **Reforming Financial Systems:** The report suggests establishing new institutions and implementing global taxation schemes to generate the necessary funds. Shifting priorities towards investments in quality education and sustainable infrastructure.
- ❖ **Multilateralism Index:** The introduction of a new index measuring countries' support for UN-based multilateralism highlights the importance of global cooperation. Countries committed to multilateralism tend to perform better on SDGs.

- ❖ **Food and Land Systems:** The report stresses the need to tackle both undernutrition and rising obesity through sustainable agricultural practices.
- ❖ **FABLE Pathways:** The Future of Agriculture, Biodiversity, Land-use, and Energy pathways include:
 - ✓ Reducing overconsumption and limiting animal-based protein.
 - ✓ Investing in increasing productivity, especially in high-demand areas.
 - ✓ Creating inclusive and transparent monitoring systems to halt deforestation.

Conclusion

The UN report is a clarion call for urgent and comprehensive action to achieve the SDGs. It underscores the need for robust global cooperation, significant financial reforms, and innovative policy solutions. Addressing these challenges is crucial for ensuring a sustainable and equitable future for all. The analysis highlights the interconnectedness of global issues and the importance of collective efforts in overcoming them.



CivilsTap Hlmachal

AGRICULTURE

MILLET PRODUCTION STAGNATES IN INDIA

Context: According to the Reserve Bank of India's annual report for 2023-24, India grapples with stagnation in both acreage and production of millets.

What are Millets?

- ❖ Millets are a group of small grained cereal food crops popularly known as Nutri-cereals.
- ❖ **Varieties:** Multiple varieties of millets are produced such as Pearl Millets, Sorghum, Finger Millet, Foxtail, Kodo, Barnyard, Proso, Little Millet and Pseudo Millets like Buckwheat and Amaranths.

Condition for Millets Cultivation

- ❖ **Climate:** The Millets are grown in tropical as well as subtropical up to an altitude of 2,100 m.
 - ✓ A mean temperature range of 26-29°C during the growth is best for proper development and good crop yield.
- ❖ **Soil:** Millet has wide adaptability to different soil from very poor to very fertile and can tolerate a certain degree of alkalinity.
 - ✓ The best soils are alluvial, loamy and sandy soil with good drainage.

Millet Production in India

- ❖ India is the largest producer of millets in the world. It accounts for almost 80 percent of Asia's and 20 percent of global millet production.
- ❖ India's two varieties of millets namely Pearl Millet (Bajra) and Sorghum (Jowar) together contribute approx 19 per cent in world production in 2020.
- ❖ The major millet producing states in India are Rajasthan, Karnataka, Maharashtra, Uttar Pradesh, Haryana, Gujarat, Madhya Pradesh, Tamil Nadu, Andhra Pradesh and Uttarakhand.

Benefits of Millets

- ❖ **Eco-friendly crops:** Millets can grow on arid lands with minimal inputs and are resilient to changes in climate.
- ❖ **Highly nutritious:** Millets contain 7-12% protein, 2-5% fat, 65-75% carbohydrates and 15-20% dietary fiber.
- ❖ **Health Benefits:** Millets are gluten free and non- allergenic. Millet consumption decreases triglycerides and C- reactive protein, thereby preventing cardiovascular disease.
- ❖ **Reduce import dependence:** They are an ideal solution for countries to increase self-sufficiency and reduce reliance on imported cereal grains.

Reasons for stagnation in millet production India

- ❖ **Low productivity:** India's productivity of millets was 1.4 tonnes per hectare, whereas China's productivity was 3 tonnes/ha, followed by Ethiopia's at 2.5 tonnes, and Russia's 1.5 tonnes.
- ❖ **Low Consumer Demand and Awareness:** Despite their nutritional benefits, there is limited consumer demand which reduces market incentives for farmers to produce millets.
- ❖ **Socio-Economic Factors:** In many regions, millet farming is associated with low-income groups. This socio-economic stigma discourages farmers from growing millets.
- ❖ **Support Schemes Bias:** Government subsidies and support schemes are biased towards major cereals like rice and wheat. Millets receive comparatively less attention and financial support, making them less attractive to farmers.

- ❖ **Environmental Factors:** Millets are often grown in semi-arid regions that are vulnerable to erratic rainfall, prolonged droughts, etc which severely affect millet production.
- ❖ **Inadequate Research and Development:** There has been relatively less investment in R&D for millet compared to other staple crops like rice and wheat. This has resulted in fewer high-yield and disease-resistant varieties of millet being available to farmers.

Steps taken by India to promote millet production

- ❖ **International Year of Millets:** India spearheaded the UN General Assembly Resolution for declaring the year 2023 as the 'International Year of Millets'.
- ❖ **Agri-Infrastructure Fund:** Government is popularizing Agri-Infrastructure Fund Scheme to invite farmers/FPOs/Entrepreneurs to avail the benefit of interest subvention on loans up to 2 crores for setting up primary processing units in millets.
- ❖ **Higher Minimum Support Prices (MSP):** To encourage farmers to take up millet cultivation, higher MSP to Jowar, Bajra and Ragi Has been announced.
- ❖ **Production Linked Incentive Scheme:** The Ministry of Food Processing Industries (MoFPI) has approved the PLI Scheme for Food Processing Industry for Millet-based products for implementation during 2022-23 to 2026-27.

Way Ahead

- ❖ Millets are versatile grains that grow in half the time as wheat and use 70 percent less water than rice, providing a multi-fold benefit.
- ❖ A concentrated campaign to enhance the production and consumption of millets, which are rich in carbs, proteins and vitamins, can change the entire paradigm of the food and health industry globally.

HORTICULTURE PRODUCTION IN INDIA

Context: India's horticulture production in 2023-24 is estimated at approximately 352.23 million tonnes, reflecting a decrease of about 32.51 lakh tonnes (0.91 per cent) compared to the final estimates of 2022-23.

Horticulture Sector in India

- ❖ Horticulture is the science and art of cultivating fruits, vegetables, flowers, and ornamental plants. It encompasses a wide range of activities including plant propagation, production, management, and marketing.
- ❖ The Indian horticulture sector contributes about 33% to the agriculture Gross Value Added (GVA) making a very significant contribution to the Indian economy.
- ❖ At present, India ranks first in the production of a number of crops like Banana, Lime & Lemon, Papaya, Okra, and the second largest producer of vegetables and fruits in the world.

Challenges and Issues Faced by the Sector

- ❖ **Lack of Infrastructure:** Insufficient infrastructure for post-harvest handling, storage, and transportation leads to significant losses of perishable horticultural produce.
- ❖ **Water Management:** Horticulture is water-intensive, and water scarcity or inefficient water management practices affect crop yields and quality.
- ❖ **Pest and Disease Management:** Pests and diseases cause significant damage to horticultural crops, and the misuse of pesticides lead to environmental pollution and health hazards.
- ❖ **Market Linkages:** Limited market linkages and price fluctuations affect farmers' income and discourage investment in horticultural production.

- ❖ **Climate Change:** Erratic weather patterns, including unpredictable rainfall and temperature fluctuations, pose challenges to horticultural production and require adaptation strategies.
- ❖ **Quality Standards and Certification:** Meeting quality standards and obtaining certification for export markets can be challenging for small-scale horticultural producers.

Key Initiatives to Overcome Challenges

- ❖ **It focuses National Horticulture Mission (2005-06):** It aims to promote holistic growth of the horticulture sector by enhancing production, productivity, and quality of horticulture crops. on creating infrastructure, providing technical assistance, and promoting market linkages.
- ❖ **National Horticulture Board (NHB):** It provides financial assistance, technical guidance, and market intelligence to horticulture growers, processors, and exporters to promote production, processing, and marketing of horticultural crops.
 - ✓ Cluster Development Program is a component of the central sector scheme of NHB that aims at leveraging the geographical specialisation of horticulture clusters and promoting integrated and market-led development of pre-production, production, post-harvest, logistics, branding, and marketing activities.
- ❖ **Mission for Integrated Development of Horticulture (MIDH) (2014):** It integrates various horticulture development schemes under one umbrella to provide holistic support for the entire value chain, from pre-production to post-harvest management and marketing.
- ❖ **Rashtriya Krishi Vikas Yojana (RKVY):** It supports states in planning, implementing, and monitoring their horticulture development strategies by providing financial assistance for infrastructure development, capacity building, and other interventions.
- ❖ **Sub-Mission on Agriculture Mechanization (SMAM):** It supports the adoption of mechanisation in horticulture for activities like land preparation, planting, harvesting, and post-harvest management to improve efficiency and reduce labour dependency.

FARM SECTOR IN INDIA AND ASSOCIATED CHALLENGES

Context: Recently, it was observed that the agriculture sector in India faces significant challenges, as India traverses the road to Amrit Kaal.

About

- ❖ India's agriculture sector employs close to 263 million people, making it the world's largest agricultural land. It ranks second globally in terms of agricultural production, with output increasing from USD 87 billion to USD 459 billion in the past 15 years.
 - ✓ The sector's significance lies in its role as a vehicle for inclusive growth, rural income enhancement, and food security.
- ❖ With diminishing agricultural labour in the country, farm mechanisation has become one of the essential components for the growth of sustainable agriculture in India.
 - ✓ The farm machinery industry is expected to grow from ₹9,200 crores in the financial year 2022 to ₹15,000 crores in the financial year 2026.

Key Points about India's Agriculture Sector

- ❖ **Arable Land Resource:** India boasts the second-largest arable land resource globally, covering 20 agro-climatic regions and all 15 major climates found worldwide.
- ❖ **Export Potential:** With exports exceeding \$40.9 billion in 2023, India's agricultural sector is on its way to becoming the food basket of the world.

- ❖ **Growth Trends:** The Indian agriculture sector is projected to grow by 3.5% in FY 2022-23, despite challenges posed by volatile oil prices and geopolitical tensions.
- ❖ **Agro-Innovation and Automation:** India's agricultural sector contributes 18% to the nation's GDP. It is expected to embrace agro-innovation and automation, including the use of technologies like Kisan drones.

Major Challenges in Farm Sectors in India

- ❖ **Climate Change Impact on Agriculture:** The irreversible climate change negatively affects crop production and livelihoods.
 - ✓ Erratic climatic events are already impacting agriculture.
- ❖ **Challenges with the World Trade Organisation (WTO):** The WTO remains unchanged, and India must cope with its inequities.
 - ✓ The US has hindered the dispute-settlement mechanism, making it challenging for Indian politicians to navigate.
- ❖ **Small Land Holdings and Livelihoods:** India's large number of small land holdings (85% of total arable land) limits farmers' ability to earn dignified livelihoods.
- ❖ **Low Food Prices and Unsustainable Farming:** Prioritising low food prices for consumers often leads to artificially depressed farm-gate prices.
 - ✓ It makes farming environmentally unsustainable and economically unviable.
- ❖ **Depleting Aquifers and Water Scarcity:** The insatiable demand for water in agriculture is depleting aquifers.
 - ✓ Extracting water for irrigation may become economically unfeasible in critical food-producing regions.
 - ✓ Drinking water scarcity is already a concern in many parts of the country.

Solutions to Overcome Challenges

- ❖ While limitations and challenges exist, changes are possible with determination, that are shaped by circumstances, not defined by them. Procrastination and policy errors narrow future choices. These include:
- ❖ **Investment in Agricultural Research:** Funding for research and extension services is below inflation. Every rupee invested in research yields significant economic returns.
- ❖ **Reforming Agriculture Markets:** Address unintended consequences in agriculture markets; States prioritise populist measures over long-term investments; Low cereal prices impact farm-gate prices, making farming unviable; and Skewed fertiliser subsidies harm health and the environment.
- ❖ **Public Debt and Financial Flexibility:** Central and state government debt limits long-term planning; and States face potential bankruptcy without a sovereign procedure.
- ❖ **Governance and Accountability:** Inept governance affects agricultural management; and Attitude at the top influences decision-making.
- ❖ **Sustainable Productivity and Inclusivity:** Focus on sustained, broadly shared productivity gains; and Inclusive growth is essential.
- ❖ **Rational Export-Import Policy:** Post-election, the government should formulate a balanced export-import policy that considers both producers and consumers' interests.

Conclusion

- ❖ There is an urgent need to address challenges including Low Productivity and Yield, Infrastructure Gaps, Fragmented Land Holdings, Access to Credit and Insurance, and Climate Change Effects etc

through policy reforms, improved infrastructure, and sustainable practices that can enhance agricultural viability and rural prosperity in India.

IMPERATIVES TO ENHANCE AGRICULTURAL PERFORMANCE IN INDIA

Context: India's agricultural sector, despite its vast acreage, faces challenges in productivity and competitiveness. While foodgrain production reached a record high in 2023, the sector's contribution to GDP has declined due to lagging growth compared to other sectors.

Decline in Agriculture's GDP Share

- ❖ There is a significant decrease in the share of agriculture in India's GDP from 35% in 1990-91 to 15% in 2022-23. This shift underscores the rapid growth of the industrial and service sectors.
- ❖ Despite challenges, India's foodgrain production reached a record high of 3.2 billion tonnes in 2023, reflecting an increase of 140.71 million tonnes from the previous fiscal year.
- ❖ With a population exceeding 1.40 billion, ensuring food security is a pressing concern, necessitating continuous innovation in the agricultural sector.

Key Challenges

- ❖ **Limited Availability of Advanced Crop Nutrition:** India lacks access to tailored crop nutrition due to regulatory constraints and hurdles in the licensing process. This hinders the adoption of innovative fertilizers that could boost productivity.
- ❖ **Subsidized vs. Specialty Fertilizers:** Bulk fertilizers, which are heavily subsidized, often do not meet the targeted nutritional needs of crops, whereas specialty fertilizers face regulatory barriers that limit their market introduction.
- ❖ **Innovation and Efficiency:** The gap in adopting innovative agricultural practices and fertilizers limits the potential for higher yields and competitiveness in global trade.
- ❖ **Subpar Yields:** The lack of advanced fertilizers and regulatory constraints contribute to lower crop yields, affecting farmer incomes and export potential.
- ❖ **Stringent Regulatory Process:** The Fertilizer Control Order (FCO) in India makes the fertilizer registration process lengthy and cumbersome, discouraging innovation and the introduction of new products.

Government Reforms and Initiatives

- ❖ **National Trade Facilitation Action Plan (NTFAP) 2017-2020:** While primarily focused on cross-border trade, this initiative indirectly contributes to agricultural efficiency by improving import/export processes for agricultural inputs and products.
- ❖ **2014 Guidelines for Water-Soluble Fertilizers:** This reform demonstrates the government's willingness to streamline regulations and promote innovation in the fertilizer sector. It reduced approval times for new water-soluble fertilizers to less than 60 days, leading to increased fertigation and better crop quality.
- ❖ **Digital Registration Processes:** Efforts to digitize applications for fertilizer registration to streamline processes and ensure quicker approvals, facilitating the introduction of innovative products.

Way Ahead

- ❖ **Micro-nutrient Coated Fertilizers:** Incorporating micronutrients into bulk fertilizers can enhance efficiency and reduce subsidy reliance.
- ❖ **Streamlined Regulatory Framework:** Establishing general specifications for fertilizers with minimum nutrient and maximum contaminant levels can expedite the approval process for innovative products.

- ❖ **Digitalization of Registration Process:** Online applications and faster approvals can streamline the introduction of new fertilizers.
- ❖ **Learning from Success Stories:** Emulating the 2014 guidelines for water-soluble fertilizers, which reduced approval times and boosted fertigation acreage, can be a model for further reforms.
- ❖ **Investment in Research and Development:** Allocate resources to develop new fertilizer formulations tailored to Indian soil and crop needs.

Conclusion

- ❖ Reforming the fertilizer registration process and promoting innovative solutions are crucial for enhancing agricultural productivity, empowering farmers, and ensuring sustainable growth in the sector.
- ❖ By streamlining regulations, incentivizing research, and embracing digital solutions, India can unlock its agricultural potential and achieve greater competitiveness in global markets.



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CONSERVATION

URBAN INDIA'S WATER CHALLENGES

Context: Recently, it was observed as reduced river flows and falling water tables have made the summer harsher in several parts of the country.

About the Water Crisis in India

- ❖ India's water crisis is a complex issue that stems from multiple factors. Rapid urbanisation, industrialization, and unsustainable agricultural practices contribute to increasing water demand.
- ❖ Climate change exacerbates the situation, causing erratic rainfall patterns and affecting water sources.
 - ✓ Inefficient water management, inadequate infrastructure, and pollution also play a role, making water scarcity a pressing concern.

Status of Water Crisis in India

- ❖ **High Water Stress:** India has about 18% of the world's population but only 4% of the world's water resources (NITI Aayog Report), making it among the most water stressed in the world.
- ❖ **Low per capita water availability:** The average per capita water availability for 2031 has been assessed to be 1367 cubic metres. Per capita annual freshwater availability in 2021 was lower than the Falkenmark Water Stress Indicator threshold.
- ❖ **Groundwater:** It is vital for India's agriculture, industry and population needs. Groundwater is a primary irrigation source, crucial for food security.
 - ✓ Around 30% of India's freshwater is stored as groundwater, mostly in aquifers — bodies of permeable rock and sediment — below the Earth's surface.
 - ✓ With more than 60% of irrigated agriculture and 85% of drinking water supplies dependent on it, groundwater is a vital resource.
 - ✓ In rural areas, groundwater is a primary source of drinking water through community wells and boreholes.
 - ✓ Industries depend on it, particularly where surface water is scarce.
- ❖ **Uneven Distribution:** Monsoon rains are crucial, and erratic rainfall patterns worsen water stress in many regions.
- ❖ **Strained Access:** Millions lack access to safe drinking water, relying on polluted sources or struggling to afford clean water.
- ❖ **Widening gap between water demand and availability:** Rapid urbanisation and industrialisation are taking a heavy toll on the overall water demand scenario.

Root Causes of the Water Crisis

- ❖ The water crisis in India is rooted in a combination of factors, including overexploitation of groundwater, inadequate rainwater harvesting, and mismanagement of water resources. Pollution of water bodies and inefficient agricultural irrigation methods further exacerbate the issue, leading to reduced water availability and quality. These include:
 - ❖ **Rising Demand and Overexploitation:** Population growth and rapid urbanisation put immense pressure on water resources. Excessive groundwater extraction for agriculture and industry depletes aquifers faster than they can be replenished.

- ✓ For example, Bengaluru has undergone unplanned urbanisation. In 1800, the city had 1,452 interconnected water bodies and about 80% green cover. However, this has drastically changed due to development and growth.
- ❖ **Pollution and Poor Infrastructure:** Industrial waste and agricultural runoff contaminate surface water sources, making them unfit for consumption. Leakages in pipes and canals waste precious water, further straining supplies.
 - ✓ According to the WHO, Iron was found in water supplied to 30% or 19,720 rural Indian households (Lok Sabha 2017). Arsenic was found in the drinking water source of 21% of such households.
 - ✓ Iron is known to cause respiratory system haemorrhage when mixed with drinking water.
- ❖ **Climate Change:** Unpredictable weather patterns disrupt monsoons and exacerbate water scarcity.
 - ✓ Karnataka experienced an early start to the season with a drought in Bengaluru, while Delhi faced a water emergency due to high temperatures.
- ❖ **Data Gaps and Emergency Responses:** Data on per capita water availability is unclear, leading to reactive measures during shortages. The government should prioritise water conservation, reuse, and recycling initiatives.
- ❖ **Lack of Coordination and Ineffective Plans:** There's minimal coordination between departments handling water resources, and existing water-sharing arrangements fail during shortages. Rainwater harvesting plans are not effectively implemented.

Measures to Overcome Water Scarcity in India

- ❖ **Jal Shakti Abhiyan (JSA):** It aims to improve water availability, including groundwater conditions in water-stressed blocks across 256 districts.
- ❖ **Jal Jeevan Mission (JJM):** It has been working to provide every rural household with potable water through tap connections.
 - ✓ The mission addresses SDG target 6.1 which focuses on achieving universal and equitable access to safe and affordable drinking water for all by 2030.
- ❖ **National Water Mission (NWM):** Established under the National Action Plan on Climate Change, NWM focuses on the conservation and management of water as a national resource.
- ❖ **Atal Bhujal Yojna & Mission Amrit Sarovar:** These schemes focus on constructing water bodies and promoting rainwater harvesting.
- ❖ **Catchment Scale-Based Approach:** Emphasises linking water reallocation with development and infrastructure investment for integrated water management.
- ❖ **Pradhan Mantri Krishi Sinchayee Yojana (PMKSY):** It is a centrally sponsored scheme (core scheme) launched in 2015. The centre- state share will be on ration 75:25 (90:10 for north-eastern region and hilly states)
 - ✓ Accelerated Irrigation Benefit Programme (AIBP) that aims to provide Central Loan Assistance (CLA) to major and medium irrigation projects that were in an advanced stage of completion to achieve the targeted potential, ultimately resulting in saving water and improving efficiency.
- ❖ **National Aquifer Mapping and Management Programme (NAQUIM):** Under NAQUIM, groundwater aquifers have been mapped and management plans have been made for 80% of the country.
- ❖ **Bureau of Water Use Efficiency (BWUE):** It will be a facilitator for the promotion of improving water use efficiency across various sectors namely irrigation, drinking water supply, power generation, industries, etc., in the country.

- ❖ **Local Measures:** Activists and experts have been working on bottom-up schemes to revive local water bodies, demonstrating significant change at the community level.

Way Ahead

- ❖ The water crisis demands immediate and collective action. By adopting sustainable practices, promoting water conservation, and investing in infrastructure, India can mitigate the crisis and ensure a water-secure future.
- ❖ **Need for Long-Term Water Policy:** Government has focused on tap water connections, but aquifer health is overlooked. A comprehensive policy is needed to address water shortages and prevent conflicts.
- ❖ **Agricultural Water Management Initiatives:** Programs like Sahi Fasal Campaign and Pradhan Mantri Krishi Sinchayee Yojana promote efficient water use in agriculture, but broader demand-side management is necessary.



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POPULATION

AN AGEING INDIA: THE MAGNITUDE AND THE MULTITUDE

Context: The ageing phenomenon is the most notable experience of the 21st century with remarkable improvement in human longevity complemented by the lowest levels of reproduction.

About the Ageing Population in India

- ❖ India is experiencing a significant demographic shift, with its elderly population projected to double by 2050. The current elderly population of 153 million (aged 60 and above) is expected to reach a staggering 347 million by 2050.
- ❖ According to the United Nations Population Fund's India Ageing Report 2023, the percentage of the elderly population in India is estimated to grow from 10.5% in 2022 to 20.8% by 2050.
 - ✓ It represents a rise from 14.9 crore to an estimated 34.7 crore individuals aged 60 and above.
 - ✓ It aims to surpass the number of children (aged 0 to 15 years) by 2046, indicating a reversal in the age structure that has historically been dominated by a young populace.
- ❖ The National Commission on Population Report (2020) estimated it to be at 41%, and by 2050, and projected to make up over 20% of the total population.
- ❖ The India Ageing Report 2023 provides a comprehensive review of the living conditions and welfare of older individuals in India, leveraging data from various sources including the Longitudinal Ageing Survey in India (LASI), Census of India, and Population Projections by the Government of India.
 - ✓ According to it, the decadal growth rate of the elderly population of India is currently estimated to be at 41%, and the percentage of the elderly population in the country is projected to double to 20.8% of the total population by 2050.
 - ✓ Further, the sex ratio (females per 1,000 males) among the elderly has been climbing steadily since 1991, with the ratio in the general population stagnating.
- ❖ According to Census 2011, India has 104 million older people (60+ years), constituting 8.6% of total population. Amongst the elderly (60+), females outnumber males.

Projected Elderly Population Growth

- ❖ **Population Estimate:** 319 million by mid-century.
- ❖ **Growth Rate:** Approximately 3% annually (predominantly be female with a sex ratio of 1,065 females per 1,000 males).

Demographics of the Elderly

- ❖ **Gender Ratio:** Predominantly female with 1,065 females per thousand males.
- ❖ **Widowhood:** 54% of elderly women will be widows.
- ❖ **Living Alone:** 6% of elderly men and 9% of elderly women live alone.
- ❖ **Rural Elderly:** 70% residing in rural areas.

Associated Challenges

- ❖ The above demographic shift poses challenges for policy-making, healthcare, and social security systems as they adapt to cater to an increasingly older population. It highlights the need for a robust framework for elderly care and support systems in India.
- ❖ **Providing Care:** HelpAge India found that the physical challenges in providing care, along with financial security to the elderly are reported by around 29% of caregivers, with female caregivers reporting more difficulties.

- ❖ **Feminisation and Ruralisation:** These are notable aspects that require attention, as policies must be tailored to address the unique needs of elderly women and those living in rural areas.
- ❖ **Ageing and Health:** Increase in longevity and decline of joint family and breakdown in social fabric pushes seniors into loneliness and neglect.
 - ✓ Poor Health Reports: A quarter of the elderly report poor health.
 - ✓ Chronic Diseases: 75% suffer from one or more chronic conditions.
 - ✓ Disabilities: 40% of those aged 45 and above have disabilities.
 - ✓ Diabetes and Cancer: High prevalence among the elderly in India.
 - ✓ Mental Ailments: 20% aged above 45 report issues, mainly depression.
 - ✓ Abuse Reports: 5% report abuse, with higher frequency in rural women.
- ❖ **Nutrition Challenges:** Instances of smaller meal portions, skipped meals, and hunger without eating.
- ❖ **Vulnerabilities in Indian Elderly**
 - ✓ **Daily Living Activities:** 20% face restrictions;
 - ✓ **Multi-morbidity:** Health issues are common.
 - ✓ **Poverty:** Financial struggles are widespread.
 - ✓ **Income Absence:** Lack of regular earnings.
- ❖ **State Variations and LASI Report:** The Longitudinal Ageing Survey of India highlights disparities across states. Compared with southern and western India, central and northeastern regions have the younger group of States as indicated by the ageing index.
- ❖ **Limited Scheme Awareness:** Government Schemes like IGNOAPS, IGNWPS, and Annapurna have limited reach.
- ❖ **Welfare Provisioning:** However, there are legal and concessional measures in place, but there is an awareness gap (low awareness of existing welfare laws and schemes, and awareness of legal rights and concessions)
 - ✓ **Maintenance and Welfare Act:** Only 12% aware of the Act of 2007.
 - ✓ **Concessional Awareness:** 28% know about concessions for the elderly.

Related Initiatives

- ❖ **Statutory Provisions:** The National Policy on Older Persons 1999, Maintenance and Welfare of Parents and Senior Citizens Act, 2007 and National Policy for Senior Citizens 2011, provide the legal framework for supporting the needs of seniors.
- ❖ NITI Aayog has released the SDG India Index and Dashboard 2020–21, which tracks progress on various indicators aligned with the National Indicator Framework (NIF).
 - ✓ It aims to refine and improve outcomes and impacts for all States and UTs in India.
- ❖ Inclusive Policies, Programmes, and Schemes like National Programme for Health Care of the Elderly, the National Social Assistance Programme (NSAP), the Maintenance and Welfare of Senior Citizens Act, 2007 and the (Amendment) Bill, Atal Vayo Abhyuday Yojana' (AVYAY), and Elderline (a national helpline), among others.
 - ✓ The National Programme for Health Care of Elderly and Health and Wellness Centres under the Ayushman Bharat programme provide dedicated healthcare to elderly at primary health care settings.
 - ✓ It was a frontrunner in addressing the concerns of the elderly through its National Policy on Older Persons (NPOP) in 1999, three years before the Madrid International Plan of Action on Ageing (MIPPA).

Further Approaches

- ❖ Inclusion Principles (Essential for addressing vulnerabilities) like Social Security Measures; and Life Course Perspective;
- ❖ Preparatory Measures (Importance of planning for later life stages) like focusing beyond Financial Independence for ensuring health and productivity in extended lifespans; Evaluation of Ageing; and Individual Focus (Current evaluations prioritise personal attributes over life conditions)
- ❖ **Need for Social Agency**
 - ✓ Movement Creation: Essential to empower the vulnerable elderly group.
 - ✓ Institutional Innovation: Shift perception from liability to asset.
 - ✓ Transformational Focus: Youth mobility, digitalisation, and social inclusion.
- ❖ **Health Care: Catering** specialised health care services to the special needs of seniors and the elderly. For example, geriatric health care, long-term care facilities – particularly as children find themselves abroad with parents back in India, and medical professionals trained to address the issues of the elderly.
- ❖ **Fostering Positive Intergenerational Bonding:** Building specific and planned bridges can enrich society by facilitating the exchange of knowledge, skills, wisdom, experiences, and perspectives needed to drive a rapid tooling-up of the younger generation.
 - ✓ It could also address the issue of social isolation that ails many elderly.
- ❖ **Investing in the silver economy:** The silver economy is a rapidly growing sector that encompasses a wide range of goods and services, such as insurance, pensions and banking and investments, and travel and tourism that are specifically targeted at older people who have adequate savings and assets.
 - ✓ It opens a vast window and space for India's start-ups and disruptors to provide accessible, cost effective and inclusive solutions catering to the specific needs of older persons.
- ❖ **Strengthening the data system on ageing populations:** The availability of accurate and current data enables governments and organisations to tailor services and programmes to the specific needs of older individuals by aiding in identifying trends, forecasting demands, and assessing the impact of ageing on various sectors, from health care to social services.

Conclusion

- ❖ As India prepares for this demographic transition, it is imperative to focus on creating an inclusive society that values the contributions of its elderly citizens while providing them with the support and care they deserve.
- ❖ Since the 1990s, the Indian economy has grown ten times and by 2027 it is expected to become the world's third largest economy. A lot of that additional wealth will be generated by those who are working now and who will become senior citizens by 2050.
- ❖ It is precisely the right moment for India to not only focus on reaping the benefits of Demographic Dividend through its hefty youth population but to also embrace the concept of Silver Dividend'.

DEMOGRAPHY

UN REPORT REVEALS RECORD 120 MILLION PEOPLE DISPLACED GLOBALLY

Context: A record 120 million people were living in a forcibly displaced status globally from the beginning of 2023 through May 2024, according to the Global Trends report by the United Nations Refugee Agency (UNHCR).

Key Findings

- ❖ **Record Displacement:** The number of forcibly displaced individuals rose to 120 million by May 2024, a nearly 10% increase from 2022, representing about 1.5% of the global population.
- ❖ **Notable Statistics:** At the end of 2023, 117.3 million people were forcibly displaced.
 - ✓ Fighting in Sudan caused over 6 million people to flee by December 2023.
 - ✓ In Gaza, up to 1.7 million people, or over 75% of the population, have been displaced.
 - ✓ There are around 6 million Palestinian refugees under the UNRWA mandate, with 1.6 million in the Gaza Strip.
- ❖ **Global Distribution:** Contrary to common perception, 75% of refugees and migrants move to low and middle-income countries.
- ❖ **Asylum Applications:** Half of all new asylum applications in 2023 were filed in five countries, with the US receiving the most (1.2 million), followed by Germany (329,100), Egypt, Spain, and Canada.
- ❖ **Causes:** Major drivers include persecution, conflict, violence, human rights violations, and public order disturbances. Conflict, in particular, remains a significant factor, with the ongoing situation in Sudan and the war in Gaza cited as major causes of displacement.
- ❖ **Other Affected Regions:** Myanmar, Afghanistan, Ukraine, the Democratic Republic of the Congo, Somalia, Haiti, Syria, and Armenia are also significant sources of displaced people.
- ❖ **Impact of Climate Change:** Climate-related hazards significantly impact displacement trends, with extreme weather events exacerbating the vulnerabilities of displaced populations.
- ❖ Implications of Displacement & Migrations Around the World
- ❖ **Negative Implications:**
 - ✓ **Humanitarian Crisis:** Displacement often leads to immense human suffering, loss of life, trauma, and the erosion of basic human rights. Refugees and migrants face vulnerability to exploitation, abuse, and discrimination.
 - ✓ **Economic Strain:** Host countries, especially those with limited resources, may struggle to provide adequate services and infrastructure for large numbers of newcomers. This can strain public resources and social systems.
 - ✓ **Social Tension:** Large-scale migration can sometimes lead to social tensions, xenophobia, and discrimination in host communities. Integrating newcomers can be a challenge, requiring careful planning and resources.
 - ✓ **Political Instability:** Displacement and migration can exacerbate political tensions and conflicts, both in countries of origin and destination.
- ❖ **Positive Implications:**
 - ✓ **Economic Growth:** Migrants can contribute to economic growth in host countries by filling labor shortages, starting businesses, and paying taxes.
 - ✓ **Cultural Enrichment:** Migration can lead to cultural exchange and diversity, enriching societies with new perspectives, ideas, and traditions.
 - ✓ **Skills and Knowledge Transfer:** Migrants often bring valuable skills and knowledge that can benefit host countries in various sectors.
 - ✓ **Demographic Balance:** In some cases, migration can help address demographic challenges, such as aging populations.

Treaties and Programs

- ❖ **1951 Refugee Convention:** The cornerstone of international refugee law, defining who is a refugee and outlining their rights and the obligations of states to protect them.

- ❖ **Global Compact on Refugees (GCR):** A framework for more predictable and equitable responsibility-sharing among states in responding to refugee situations.
- ❖ **Global Compact for Safe, Orderly and Regular Migration (GCM):** A non-binding agreement that aims to improve cooperation on international migration.
- ❖ **UNHCR (United Nations High Commissioner for Refugees):** The UN agency responsible for protecting and assisting refugees worldwide.
- ❖ **IOM (International Organization for Migration):** The UN agency that provides services and advice on migration to governments and migrants.

Way Ahead

- ❖ **Conflict Prevention and Resolution:** Addressing the root causes of displacement, such as conflict, persecution, and human rights abuses, is crucial to prevent future crises.
- ❖ **Humanitarian Aid:** Providing immediate assistance to displaced populations, including food, shelter, healthcare, and protection, is essential to save lives and alleviate suffering.
- ❖ **Sustainable Development:** Investing in development programs in countries of origin can create economic opportunities and improve living conditions, reducing the incentives for people to migrate.
- ❖ **Legal Pathways and Protection:** Expanding legal pathways for migration, such as resettlement programs and work visas, can provide safer and more orderly alternatives to irregular migration. Strengthening legal protections for refugees and asylum seekers is also vital.



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INFRASTRUCTURE

INDIAN RAILWAYS AND SAFETY CHALLENGES

Context: The issue of Indian Railway safety is once again under scrutiny following a recent incident where a freight train collided with a passenger train near Siliguri in West Bengal. This incident, along with last year's tragic Balasore train accident, underscores the pressing need for comprehensive reforms and enhanced safety protocols to safeguard passengers and prevent such devastating accidents in the future.

Train Accidents in India

- ❖ It is an occurrence in the course of working of Railway which does or may affect the safety of the Railway, its engine, rolling stock, permanent way and works, fixed installations, passengers or servant or which affect the safety of others or which does or may cause delay to train or loss to the Railway.
- ❖ Despite advancements in technology and infrastructure, these incidents continue to impact passengers, infrastructure, and the overall economy.
- ❖ There has been an average of 44 consequential train accidents every year in the five-year period ending 2022-23 (FY23).

Types of Accidents

- ❖ **Derailments:** where a train goes off the tracks, are the most common. These can be caused by a variety of factors including track defects, equipment failure, human error, or even sabotage.
- ❖ **Collisions:** It occurs when two or more trains collide on the same track, often due to signal failures or errors in communication between railway personnel.
- ❖ **Level Crossing Accidents:** It involves collisions between trains and vehicles or pedestrians at rail crossings, highlighting the need for better safety mechanisms at these points.
- ❖ **Accident type in Indian Railways:** The accident type occurred in Indian Railways over the years following the trend: Derailment > Level crossing accidents > Collisions > Fire in trains > Miscellaneous accidents.

Impacts of Train Accidents

- ❖ **Casualties and hampers functioning:** The impact of train accidents extends beyond immediate casualties and injuries.
 - ✓ Each incident disrupts the smooth operation of the railway network, leading to delays, cancellations, and financial losses.
- ❖ **Trust related issues:** It erodes public trust in the safety of train travel, affecting passenger confidence and ridership.
- ❖ **Economic cost:** the cost of infrastructure damage, compensation payouts, and the investment required for safety upgrades are substantial.
 - ✓ These accidents also have broader implications for industries relying on efficient freight transport, impacting supply chains and logistics

Safety Challenges Faced by Indian Railways

- ❖ **Unmanned Level Crossings:** Closing unmanned level crossings remains a priority. These crossings pose a significant risk to both passengers and train crew. Focused measures to eliminate them have improved safety, but continued vigilance is essential.
- ❖ **Track Maintenance:** Emphasising track maintenance has led to a reduction in accidents. However, maintaining thousands of kilometres of tracks across diverse terrains remains a formidable task. Regular inspections, timely repairs, and modern technology are crucial.

- ❖ **Communication and Information Management:** Effective communication during emergencies is vital. The recent accident involving the GFCJ container train highlighted the need for accurate and timely information dissemination. Premature statements can create confusion and hinder investigations.
- ❖ **Overstaffing and Workload:** Indian Railways, like many government entities, is overstaffed. However, safety-critical roles, such as loco crew and station managers, require continuous attention. Addressing vacancies and reducing long working hours for locomotive pilots is essential.
- ❖ **Near Misses and Management Failure:** Investigating whether similar near misses are common in the affected section will reveal management effectiveness.
 - ✓ AI-enabled applications can enhance safety post mortems and provide actionable alerts by analysing digital data.

Safety Improvements

- ❖ **Digital Data Management and AI:** Extensive digital data from station data loggers and microprocessors on locomotives and trains can be effectively managed by AI, filtering out irregularities.
 - ✓ Implementing AI-driven predictive maintenance can help prevent accidents.
- ❖ **Track Maintenance:** Focused measures like closing unmanned level crossings have improved safety. Regular track maintenance remains essential to prevent derailments and accidents.
- ❖ **Traffic Demands vs. Safety:** Balancing increasing traffic demands with safety requirements is a challenge. Ensuring timely maintenance without compromising safety is vital.
- ❖ **Reducing Accidents:** Urgent steps are needed to fill vacancies and reduce long working hours for locomotive pilots.
 - Analysing accident patterns and implementing targeted safety measures can help.

Steps Taken To Minimise Rail Accidents

- ❖ **Safety System Implementation:** The adoption of Kavach, an indigenous collision prevention system, has faced challenges in terms of efficacy and speed of implementation.
 - ✓ While Kavach matures, considering installing ETCS Level II in important sections could be a pragmatic approach.
 - ✓ Priority Areas for Kavach: The CRS report from the Vizianagaram train accident emphasised implementing Kavach in Automatic Signalling territories prone to collisions.
 - ✓ Prioritising trunk routes and Automatic Signalling territories for Kavach installation (at a rate of 4,000 to 5,000 km/year) is achievable.
- ❖ **Mission Zero Accident:** In the Railway Budget 2016-17, Mission Zero Accident was one of the Missions announced, comprising of the two sub-missions:
 - ✓ Elimination of unmanned level crossings over broad gauge in the next 3-4 years. Currently, all unmanned level crossings on Broad Gauge have already been eliminated in 2019.
 - ✓ **Train Collision Avoidance System (TCAS):** To prevent collisions and signal passing at danger by the Loco Pilot through developing an indigenous technology and also to increase throughput by increasing average sectional speed on Indian Railways (IR). It has been installed on Lingampalli – Vikarabad – Wadi and Vikarabad – Bidar sections (250 Route km) on South Central Railway. Further, the system is under implementation on 1199 Route Km on South Central Railway.
- ❖ **Rashtriya Rail Sanraksha Kosh Fund:** The fund has been created in 2017-18 with a corpus of 1 lakh crore, as a non-lapsable fund, over a period of five years for critical safety related works.

- ❖ **Refresher Course to Officers:** Over 300,000 non-gazetted officers across the country have been trained through a refresher course to address lapses by railway staff through skills enhancement.
- ❖ Safety category staff is also given training in Disaster Management with emphasis on Relief, Rescue and Rehabilitation (3'R's), Threat Perception and Emergency Response, Fighting and use of fire Extinguishers and First Aid.
- ❖ Fog PASS Device, a Global Positioning System (GPS) based hand held portable device, is used. It serves as an aid for the crew during foggy weather through audio visual alarm, whenever any landmark comes within the geo-fence range.
- ❖ Recommendations of the CAG Report: Development of a strong monitoring mechanism to ensure timely implementation of maintenance activities by adopting fully mechanised methods of track maintenance and improved technologies.
 - ✓ Railway administration must follow the guiding principles for deployment of RRSK funds.
 - ✓ Indian Railway may prepare the Detailed Outcome Framework for each item of safety work.

Suggestions and Way Forward

- ❖ Continued investment in upgrading tracks, signalling systems, and rolling stock is crucial.
 - ✓ Modernising ageing infrastructure can significantly reduce the risk of accidents.
- ❖ Strengthening safety protocols through better training of railway staff, stricter adherence to operating procedures, and leveraging technology for real-time monitoring and response.
- ❖ Increasing public awareness about railway safety, including rules at level crossings and onboard safety measures, can prevent accidents involving pedestrians and vehicles.
- ❖ Improved coordination between different stakeholders—government agencies, railway authorities, and the public—ensures accountability and timely response to safety issues
- ❖ Encouraging research into innovative safety technologies and practices tailored to Indian conditions can lead to breakthroughs in accident prevention.

As India continues to develop the demand for safe and reliable rail transport ,It is imperative that safety measures evolve to protect passengers and ensure the continued viability of the railway system.

SCIENCE AND TECHNOLOGY

TRADITIONAL MEDICINE RESEARCH IN INDIA

Context

- ❖ Recently, the World Health Organization (WHO) has designated the National Institute of Indian Medical Heritage, Hyderabad as a WHO Collaborating Centre for 'Fundamental and Literary Research in Traditional Medicine'.

About the Traditional Medicine in India

- ❖ India has a rich heritage of traditional medicine that includes Ayurveda, Yoga, Naturopathy, Unani, Siddha, Sowa Rigpa, and Homeopathy.
- ❖ **Practices**
 - ✓ Ayurveda and Yoga are practised widely across the country.
 - ✓ The Siddha system is followed predominantly in Tamil Nadu and Kerala.
 - ✓ The Sowa-Rigpa system is practised mainly in Leh-Ladakh and Himalayan regions such as Sikkim, Arunachal Pradesh, Darjeeling, Lahaul & Spiti.
- ❖ These systems have been integrated into the national healthcare system with institutionalised education and research councils.
- ❖ WHO describes traditional medicine as the total sum of the "knowledge, skills and practises indigenous and different cultures have used over time to maintain health and prevent, diagnose and treat physical and mental illness.

Related Efforts by WHO

- ❖ It has established the WHO Global Centre for Traditional Medicine in India to harness their potential through modern science and technology.
- ❖ **WHO Collaborating Centre:** In India, there are approximately 58 WHO Collaborating Centres spanning various disciplines of biomedicine and allied sciences.
 - ✓ The National Institute of Indian Medical Heritage (NIIMH), Hyderabad ranks as the third WHO Collaborating Centre in the domain of Traditional Medicine, following the Institute for Teaching & Research in Ayurveda, Jamnagar, and the Morarji Desai National Institute of Yoga (MDNIY), New Delhi.

Efforts made by India

- ❖ India has established a separate Ministry of AYUSH (Ayurveda, Yoga & Naturopathy, Unani, Siddha, and Homoeopathy) to promote holistic health and well-being.
 - ✓ It oversees the growth and development of traditional Indian medicines and Homoeopathy with the objective of making accessible, safe, effective, and quality medicines available to the public.
- ❖ **Digital Initiatives and Portals**
 - ✓ **AMAR Portal:** Catalogues Ayush manuscripts, with digitised content available.
 - ✓ **SAHI Portal:** Displays medico-historical artefacts.
 - ✓ **e-Books of Ayush:** Digital versions of classical textbooks.
 - ✓ **NAMASTE Portal:** Morbidity statistics from hospitals.
 - ✓ **Ayush Research Portal:** Indexes published Ayush research articles.
- ❖ **Collections and Publications**
 - ✓ Manuscripts and Library: Over 500 physical manuscripts, rare books from the 15th century AD.
 - ✓ Journal: Publishes the Journal of Indian Medical Heritage.

SPACE

INDIA'S SPACE ECONOMY

Context: The Government said that the country's share in the global space economy is projected to increase fourfold by 2030 compared to 2021.

About India's Space economy

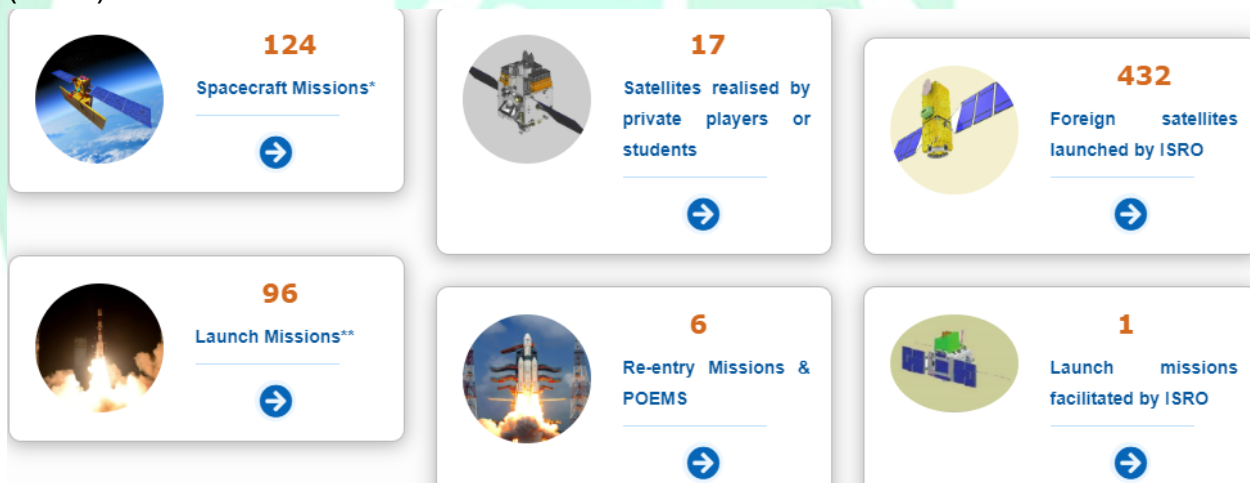
- ❖ India has proven itself as a trailblazer in space exploration from the humble beginnings of transporting rocket parts on bullock carts to the proud achievement of launching a record number of satellites in a single mission.

Present Status

- ❖ A report by the World Economic Forum and McKinsey estimates the size of the global space industry to be \$630 Bn in 2023. It is expected to grow 9% per annum and reach \$1.8 Tn by 2035.
 - ✓ India's space economy, valued at \$8.4 Bn in 2023, currently accounts for 2-3% of the global space economy.
 - ✓ India so far earned 174 Million US Dollars from the launching of the foreign satellites; out of these \$174 million, as much as \$157 million have been earned only in the last nine years.

Importance and Achievements

- ❖ ISRO has established itself as a reliable player in the global satellite launch market through its Polar Satellite Launch Vehicle (PSLV) and the more powerful Geosynchronous Satellite Launch Vehicle (GSLV) series.



- ❖ India has made significant strides in cutting-edge technologies, as evidenced by successful missions like Chandrayaan-3, Aditya-L1, and XpoSat.
- ❖ With the Mars Orbiter Mission or the Mangalyaan 2013, India became the 1st nation to reach Martian orbit in its first attempt.
- ❖ India's Space Technology is virtually touching every person's life, with application of Space Technology in different sectors like Disaster Management, SVAMITVA, PM Gati Shakti, Infrastructure such as Railways, Highways & Smart Cities, Agriculture, Water Mapping, Telemedicine and Robotic Surgery.
- ❖ The Indian Regional Navigation Satellite System (IRNSS), also known as NavIC, provides accurate positioning information over India and the surrounding region.

Upcoming missions

- ❖ The Indian Space Research Organisation (Isro) will launch the Gaganyaan mission in 2025.
- ❖ ISRO is planning a mission to study Venus, focusing on its surface and atmosphere, which could provide valuable scientific data.

- ❖ NISAR is a joint Earth-observing mission between NASA and the Indian Space Research Organization (ISRO).
 - a. NISAR will be the first radar of its kind in space to systematically map Earth

Challenges

- ❖ The Indian Space Research Organisation (ISRO) operates on a limited budget compared to other major space agencies.
 - ✓ This restricts the scale and pace of its space missions and satellite launches.
- ❖ The infrastructure for manufacturing and testing satellites and components is not as extensive or advanced as in countries like the USA or European nations.
- ❖ Regulatory frameworks and bureaucratic processes can hinder private sector growth and innovation.
- ❖ Indian companies and ISRO face challenges in competing on a global scale due to resource constraints and technology gaps.

Initiatives

- ❖ The government has announced the Indian Space Policy 2023, which enables end-to-end participation of Non-Governmental Entities (NGEs) in all domains of Space activities.
- ❖ The Indian National Space Promotion and Authorization Centre or IN-SPACe was created to support private sector participation in space activities.
- ❖ Today India has nearly 200 private Space Startups after opening up of the sector while the earlier ones have even turned entrepreneurs.
- ❖ There has been an investment of over Rs.1,000 crore by private Space Startups in the current financial year from April to December 2023.
- ❖ New Space India Limited (NSIL), serving as the commercial arm of ISRO under DoS, helps NGEs commercialise their space technologies and platforms
- ❖ **Amendment to the FDI policy** : 100 percent Foreign Direct Investment has been allowed for manufacturing and operation of satellites, satellite data products and ground segment and user segment, out of which up to 74 per cent will be through the automatic route and government approval will be required for investment beyond 74 per cent.

Conclusion and way ahead

- ❖ India's space sector is at a pivotal juncture and by harnessing the collective potential of ISRO, NSIL, IN-SPACe, and its thriving startup ecosystem, India can not only become a major player in the global space economy but also unlock transformative applications for its citizens and the world.
- ❖ Much of the success of India's space economy shall depend on government support and guidance as space tech entrepreneurs take their initial steps of private participation in the space sector.
- ❖ With strategic investments in infrastructure and manufacturing, alongside fostering innovation and education, India can achieve its goal of a US\$44 billion space economy by 2033, enhancing its position as a global leader in space technology and services.

ENVIRONMENT

BIOLOGICAL DIVERSITY (AMENDMENT) ACT, 2023

Context: The 2023 amendments to India’s Biological Diversity Act of 2002 has caused a debate concerning biodiversity protection and India’s responsibilities as a signatory to the Kunming-Montreal framework.

Background

- ❖ In 2022, at the United Nations Biodiversity Conference, countries all over the world adopted the Kunming-Montreal framework to enhance biodiversity protection and conservation.
- ❖ The countries adopted calls to protect 30 percent of all ecosystems by 2030, to protect biodiversity and genetic diversity and ensure fair and equitable sharing of benefits of traditional knowledge with the local and indigenous communities that steward this knowledge.

Amendments under scrutiny

- ❖ Under the original 2002 Act, approvals from the National Biodiversity Authority (NBA) were required before applying for intellectual property rights (IPR) related to biological resources.
 - ✓ The 2023 amendments have eased this requirement, no longer mandating approval from the National Biodiversity Authority for IPR, but only requiring them to be registered with the authority before granting approvals – raising concerns about possible resource overexploitation.
- ❖ The exemption of codified traditional knowledge from the benefit-sharing mechanism and stringent regulatory oversight has also raised further concerns.
 - ✓ These changes undermine the principle of fair and equitable benefit-sharing, which is central to both the original Act and Nagoya Protocol.
- ❖ By allowing AYUSH practitioners and related industries to access biological resources without prior approval, the amendments open the door to commercial exploitation without adequate compensation to local communities that hold traditional knowledge.
- ❖ Decriminalization of offenses: Previously, violations could result in imprisonment and fines, however the amendments now replace imprisonment with civil penalties.

Nagoya Protocol

- ❖ The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (ABS) is a supplementary agreement to the Convention on Biological Diversity (CBD).
- ❖ It provides a transparent legal framework for the effective implementation of one of the three objectives of the CBD: the fair and equitable sharing of benefits arising out of the utilization of genetic resources.
- ❖ It was adopted in 2010 in Nagoya, Japan and entered into force in 2014.

What are the Concerns?

- ❖ The amendments could lead to false claims about the cultivation of bio-resources and potential manipulation by businesses.
- ❖ It is argued that without stringent oversight, there could be widespread misuse and exploitation of local resources, adversely affecting both biodiversity and the livelihoods of local communities dependent on these resources.

- ❖ In the North East, where traditional knowledge about medicinal plants and ecological management is profound, this change could exacerbate existing socio-economic disparities and contribute to cultural erosion.
- ❖ Strengthening monitoring systems
- ❖ The amendments strengthen the role of Biodiversity Management Committees (BMCs) by clarifying their functions and mandating their establishment in rural and urban areas.
- ❖ The new provisions also place a stronger emphasis on monitoring biological resources derived from foreign countries, ensuring compliance with international agreements like the Nagoya Protocol.

Way Ahead

- ❖ It is crucial that the regulatory changes are implemented with strong safeguards, robust monitoring, and active involvement of local communities to ensure that biodiversity conservation and sustainable development go hand in hand.
- ❖ Balancing economic development with conservation and equitable benefit-sharing will be essential to safeguard India's rich biological heritage for future generations.

STATE OF GLOBAL AIR REPORT 2024

Context: As per the State of Global Air Report 2024, Air pollution has caused 8.1 million deaths around the world in 2021.

Key Highlights of the Report

- ❖ More than 90 percent of these global air pollution deaths – 7.8 million people – are attributed to PM2.5 air pollution, including from ambient PM2.5 and household air pollution.
- ❖ China and India account for more than half of the global burden at 2.3 and 2.1 million deaths respectively.
- ❖ Air pollution was the second leading risk factor for death among children under 5 in 2021, after malnutrition.
- ❖ The report states that 489,000 deaths globally were attributable to ozone exposure in 2021.
- ❖ 99% of the world's population lives in places with unhealthy levels of PM2.5 pollution.
- ❖ Air pollution is considered to be one of the biggest killers globally, second only to high blood pressure.

Scenario in India

- ❖ India and China account for 55% of the global burden deaths due to air pollution.
- ❖ Indians are also exposed to high levels of ozone. Short-term exposure to ozone has been linked to exacerbation of asthma and other respiratory symptoms while long term exposure is linked to Chronic Obstructive Pulmonary Disease — a condition where the lungs remain inflamed obstructing the airflow.

Air Pollution

- ❖ **When harmful substances (pollutants)** – particles, gases, or matter – are released into the air and reduce its quality, the air is polluted.
- ❖ **Common air pollutants include:** Particulate Matter (PM), Nitrogen Dioxide (NO₂), Sulfur Dioxide (SO₂), Ozone (O₃), Carbon Monoxide (CO), Volatile Organic Compounds (VOCs), Lead etc.
- ❖ **Source:** These pollutants can originate from natural sources such as volcanic eruptions and wildfires, but human activities such as industrial production, transportation, agriculture, and residential heating are significant contributors to air pollution.
- ❖ **Concerns:**
 - ✓ **Health Related:** Respiratory issues, cardiovascular problems, reduced lung function.

- ✓ **Environmental:** Ecosystem damage, Biodiversity loss, Water pollution, climate change, crop damage.
- ✓ **Healthcare Costs:** The health impacts of air pollution result in increased healthcare costs, including expenses related to the treatment of respiratory and cardiovascular diseases.

Steps Taken by Government of India to combat Air Pollution

- ❖ **National Clean Air Programme (NCAP):** Launched in 2019, NCAP is a comprehensive initiative with the goal of reducing air pollution in identified cities and regions across India.
 - ✓ The program focuses on improving air quality monitoring, implementing stricter emission standards, and promoting public awareness.
- ❖ **Bharat Stage VI (BS-VI) Emission Standards:** The government implemented BS-VI emission standards for vehicles nationwide in 2020.
 - ✓ These standards aim to reduce vehicular emissions by mandating the use of cleaner fuel and more advanced emission control technologies.
- ❖ **Pradhan Mantri Ujjwala Yojana (PMUY):** The PMUY scheme aims to provide clean cooking fuel to households by promoting the use of liquefied petroleum gas (LPG) as an alternative to traditional biomass-based cooking methods.
- ❖ **FAME (Faster Adoption and Manufacturing of Hybrid and Electric Vehicles) Scheme:** The FAME scheme promotes the adoption of electric and hybrid vehicles to reduce air pollution caused by vehicular emissions.
 - ✓ Incentives are provided to both manufacturers and consumers to encourage the use of electric vehicles.
- ❖ **Green Initiatives for Sustainable Habitat (GRIHA):** GRIHA is an initiative to promote sustainable and environmentally friendly practices in the construction and operation of buildings.
 - ✓ It encourages the use of energy-efficient technologies and materials to reduce pollution.
- ❖ **Waste Management Programs:** Proper waste management is crucial to prevent the burning of waste, which contributes to air pollution.
 - ✓ Various waste management initiatives, including the Swachh Bharat Abhiyan, aim to address solid waste issues and promote cleaner disposal methods.
- ❖ **Commission for Air Quality Management:** The Commission has been set up for Air Quality Management in the National Capital Region and Adjoining Areas for better coordination, research, identification, and resolution of problems surrounding the air quality index.

HINDU KUSH HIMALAYA SNOW UPDATE

Context: The International Centre for Integrated Mountain Development (ICIMOD) has released the snow update Hindu Kush Himalaya between 2003 to 2024.

Snow Persistence

- ❖ Snow persistence is the fraction of time snow is on the ground. When this snow melts, it provides water to people and ecosystems.
- ❖ In the river basins of the Hindu Kush Himalaya (HKH), snowmelt is the biggest source of water in the streams.
- ❖ Overall, it contributes 23% of the runoff to the region's 12 major river basins every year.

Hindu Kush Himalaya

- ❖ The HKH mountains extend around 3,500 km over eight countries — Afghanistan, Bangladesh, Bhutan, China, India, Nepal, Myanmar, and Pakistan.

- ✓ These mountains are also called the “**water towers of Asia**” because they are the origins of 10 crucial river systems on the continent — Amu Darya, Indus, Ganga, Brahmaputra, Irrawaddy, Salween, Mekong, Yangtze, Yellow river, and Tarim.
- ✓ These river basins provide water to almost one-fourth of the world’s population and are a significant freshwater source for 240 million people in the HKH region.

Status of Snow Persistence

- ❖ **Ganga River Basin:** The Ganga river basin noted its lowest snow persistence in 22 years, 17% below the long-term historical average (also known as ‘normal’).
- ❖ **Brahmaputra Basin:** Snow persistence in the Brahmaputra basin was 14.6% below normal in 2024.
- ❖ In the Indus river basin, snow persistence fell 23.3% below normal this year although this was offset by excesses in parts of the lower altitudes.
- ❖ Outside India, the basin of the Amu Darya river — which flows through Central Asia — recorded its lowest snow persistence in 2024: 28.2% below normal.
 - ✓ The Helmand river, an important source of drinking water for Iran and Afghanistan, was almost 32% below normal in 2024.
 - ✓ Persistence in the part where the Mekong river originates in the Himalaya was only slightly below normal this time. (This river’s delta is Vietnam’s “rice bowl”.)
- ❖ The persistence of snow in China’s Yellow River basin exceeded the normal value by 20.2% in 2024.
 - ✓ In the Yellow river basin, the East Asian winter monsoon brings cold, dry air from Siberia and Mongolia.
 - ✓ When this cold air mass interacts with moist air from other regions, particularly the Pacific Ocean, it can result in snowfall over the higher altitudes of the upper Yellow River basin.

Reasons for the Lower Persistence

- ❖ The primary reason for the lower persistence in 2024 was weak western disturbances.
 - ✓ Western disturbances are low-pressure systems that originate over the Mediterranean Sea, the Caspian, and the Black Seas and bring rain and snow to the HKH region in winter.
 - ✓ The region where these storms originate experienced persistently high sea-surface temperatures.
 - ✓ This disruption weakened and delayed the arrival of the western disturbance, resulting in reduced winter precipitation and snowfall in the HKH region.
- ❖ Due to changing climate and global warming, this pattern is becoming increasingly unstable.

Way Ahead

- ❖ In the long term reforestation with native tree species can help the ground retain more snow.
- ❖ Better weather forecasting and early warning systems can also help local communities prepare for impending water stress.
- ❖ Improving water infrastructure and developing policies for protecting areas receiving snowfall are important for long-term change.
- ❖ Communities’ involvement in local, national level decision-making and promoting regional cooperation are vital for comprehensive solutions for the sustainability of snow.

SIGHT PROGRAMME OF THE NATIONAL GREEN HYDROGEN MISSION (NGHM)

Context: Government enhanced allocation for the Fertilizer Sector under SIGHT Programme of the National Green Hydrogen Mission (NGHM).

About National Green Hydrogen Mission (NGHM)

- ❖ The Union Cabinet has approved the National Green Hydrogen Mission in January in 2023 and the initial outlay for the Mission is Rs.19,744 crore, including an outlay of Rs.17,490 crore for the SIGHT programme, Rs.1,466 crore for pilot projects, Rs.400 crore for R&D, and Rs. 388 crores towards other Mission components.

The Mission will result in the following likely outcomes by 2030:

- ❖ Development of green hydrogen production capacity of at least 5 MMT (Million Metric Tonne) per annum with an associated renewable energy capacity addition of about 125 GW in the country
- ❖ Over Rs. Eight lakh crores in total investments
- ❖ Creation of over Six lakh jobs
- ❖ Cumulative reduction in fossil fuel imports over Rs. One lakh crore
- ❖ Abatement of nearly 50 MMT of annual greenhouse gas emissions

Latest Developments

- ❖ Under the Mission, MNRE had issued the Scheme Guidelines for implementation of SIGHT Programme – Component II: Incentive for Procurement of Green Ammonia Production (under Mode2A) of the NGHM in January 2024.
 - ✓ Mode 2A caters to the requirements of the fertilizer sector.
 - ✓ As per the said Guidelines, the capacity available for bidding under Tranche I of Mode 2A was 5,50,000 tonnes per annum of Green Ammonia.
- ❖ This is a significant step towards demand creation of Green Hydrogen and its derivatives in the country.

Importance

- ❖ It will contribute to India's goal to become Aatmanirbhar (self-reliant) through clean energy and serve as an inspiration for the global Clean Energy Transition.
- ❖ It will lead to significant decarbonization of the economy, reduced dependence on fossil fuel imports, and enable India to assume technology and market leadership in Green Hydrogen.

GROWTH AND DEVELOPMENT OF HIMALAYAN REGION

Context: The Indian Himalayan Region (IHR) is known as India's "water tower" and is critical for providing essential ecosystem services. However, there's a dissonance between the region's special development needs and the current development model, leading to potential economic ruin due to resource exploitation.

Importance of Himalayas

The Himalayas, a majestic mountain range spanning over 2,400 km, hold immense ecological, economic, and cultural significance for India and the wider South Asian region.

- ❖ **Climate Regulation:** The Himalayas act as a barrier against cold winds from Central Asia, ensuring a milder climate in the Indian subcontinent. They also influence the monsoon patterns, bringing vital rainfall for agriculture.
- ❖ **Water Source:** They are the source of major rivers like the Ganges, Indus, and Brahmaputra, providing water for irrigation, hydropower, and domestic use to millions of people.
- ❖ **Biodiversity Hotspot:** The Himalayas are home to a diverse range of flora and fauna, including rare and endangered species like the snow leopard and red panda, contributing to global biodiversity.
- ❖ **Natural Resources:** The mountains are rich in minerals, forests, and medicinal plants, providing livelihoods and resources for local communities.
- ❖ **Tourism and Recreation:** The Himalayas attract tourists from around the world, contributing to the local economy and promoting cultural exchange. They also offer opportunities for adventure sports and spiritual retreats.

- ❖ **Spiritual Significance:** The Himalayas hold immense spiritual significance for Hindus, Buddhists, and Jains, with numerous pilgrimage sites and monasteries dotting the landscape.
- ❖ **Disaster Mitigation:** The Himalayas act as a natural barrier against extreme weather events, reducing the impact of cyclones and storms on the Indian subcontinent. However, they are also prone to earthquakes and landslides, necessitating careful development and disaster preparedness.
- ❖ **Strategic Importance:** The Himalayas play a crucial role in India's national security, serving as a natural buffer against potential threats from neighboring countries.

Threats to Himalayas Region

The Himalayas, a vital ecological and socioeconomic region, face numerous threats that endanger their delicate balance and the well-being of millions who depend on them.

- ❖ **Climate Change:** Rising temperatures are causing rapid glacial melt, altering water availability downstream and increasing the risk of floods and droughts. Unpredictable weather patterns are impacting agriculture and livelihoods in the region.
- ❖ **Natural Disasters:** The Himalayas are prone to earthquakes, landslides, and flash floods, exacerbated by climate change and human activities like deforestation and infrastructure development. These disasters cause significant loss of life and property.
- ❖ **Unplanned Development:** The current development practices, such as the proliferation of hydroelectric power stations and reckless road widening in the IHR, are in stark contrast to this ecocentric approach.
 - ✓ A post-disaster assessment by the National Disaster Management Authority of the 2023 Himachal Pradesh floods pointed out that rampant construction in violation of norms, especially on river beds and floodplains, contributed significantly to the disaster.
- ❖ **Deforestation:** The clearing of forests for agriculture, timber, and development projects disrupts ecosystems, increases soil erosion, and contributes to climate change.
- ❖ **Overgrazing:** Uncontrolled grazing by livestock degrades grasslands, leading to soil erosion and reduced water retention capacity.
- ❖ **Pollution:** Tourism and pilgrimage activities generate significant waste, polluting water bodies and impacting the fragile mountain ecosystem.
- ❖ **Invasive Species:** Introduction of non-native species threatens native biodiversity and disrupts ecological balance.
- ❖ **Geopolitical Tensions:** Border disputes and political instability in the region can hinder conservation efforts and sustainable development.

Role of Judiciary in Safeguarding Critical Himalayas

The Supreme Court, in various cases including *State of Telangana vs. Mohd. Abdul Qasim and Ashok Kumar Raghav vs. Union of India*, has underscored the importance of sustainable development, recognizing the intersectionality of human rights, the right to development, and the right to adapt to climate change. The Court has stressed that sustainable infrastructure, resilient to climate impacts, is crucial for equality and equity.

Judiciary has played a crucial role in safeguarding the fragile Himalayan ecosystem through various interventions and landmark judgments.

- ❖ **Environmental Impact Assessment (EIA):** The judiciary has consistently emphasized the importance of rigorous EIA before approving development projects in the Himalayas. It has often intervened to halt or modify projects that could cause irreversible damage to the environment.

- ❖ **Sustainable Development:** The courts have upheld the principle of sustainable development, emphasizing the need to balance economic growth with environmental conservation. They have stressed the importance of long-term ecological sustainability over short-term economic gains.
- ❖ **Protection of Forests and Wildlife:** The judiciary has issued orders to protect forests, wildlife habitats, and endangered species in the Himalayas. It has also taken action against illegal mining, deforestation, and poaching activities.
- ❖ **Regulation of Tourism:** The courts have intervened to regulate tourism in ecologically sensitive areas, imposing restrictions on construction and vehicular traffic to minimize environmental impact.
- ❖ **Public Interest Litigation (PIL):** The judiciary has actively entertained PILs filed by environmental activists and concerned citizens, providing a platform for them to raise concerns about environmental degradation in the Himalayas.
- ❖ **Enforcement of Environmental Laws:** The courts have played a crucial role in enforcing environmental laws and regulations, holding violators accountable and imposing penalties.
- ❖ **Recognition of Rights of Nature:** In some landmark judgments, the judiciary has recognized the intrinsic value of nature and the rights of rivers and ecosystems, paving the way for a more ecocentric approach to development.
- ❖ **Promoting Community Participation:** The courts have emphasized the importance of involving local communities in decision-making processes related to development projects in the Himalayas, ensuring their voices are heard and their concerns addressed.

Steps/ Initiatives Taken

- ❖ **National Mission for Sustaining the Himalayan Ecosystem (NMSHE):** Launched under the National Action Plan on Climate Change, NMSHE aims to understand climate change impacts on the Himalayas and develop adaptation strategies. It focuses on areas like water security, biodiversity conservation, and livelihood enhancement.
- ❖ **SECURE Himalaya Project:** Funded by the Global Environment Facility and implemented by the Indian government and UNDP, this project focuses on conserving snow leopards and their habitats, promoting sustainable livelihoods, and strengthening enforcement in the high Himalayan ecosystems.
- ❖ **National Green Tribunal (NGT):** The NGT has been instrumental in enforcing environmental laws and regulations in the Himalayas. It has passed several landmark judgments to protect forests, rivers, and wildlife in the region.
- ❖ **State-Level Initiatives:** Various Himalayan states have their own conservation programs and policies, such as the Sikkim Biodiversity Conservation and Forest Management Project and the Uttarakhand Action Plan on Climate Change.

Way Ahead

- ❖ **Integrated Approach:** A holistic approach integrating conservation, sustainable development, and disaster risk reduction is essential for safeguarding the Himalayas.
- ❖ **Strengthening Governance:** Improving governance mechanisms, enhancing enforcement of environmental laws, and promoting transparency are crucial for effective conservation.
- ❖ **Climate Action:** Urgent action is needed to address climate change, the most significant threat to the Himalayas. This includes reducing greenhouse gas emissions, promoting renewable energy, and adapting to the changing climate.
- ❖ **Empowering Local Communities:** Empowering local communities to manage their resources and participate in decision-making is key to sustainable conservation in the Himalayas.

Conclusion

- ❖ For true progress, development planning must incorporate disaster management to prevent and build resilience against natural hazards. Development and disaster resilience must go hand-in-hand, with

planning, policy, and action aligned in an integrated approach involving all stakeholders, including policymakers, planners, the scientific community, and local communities.



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