

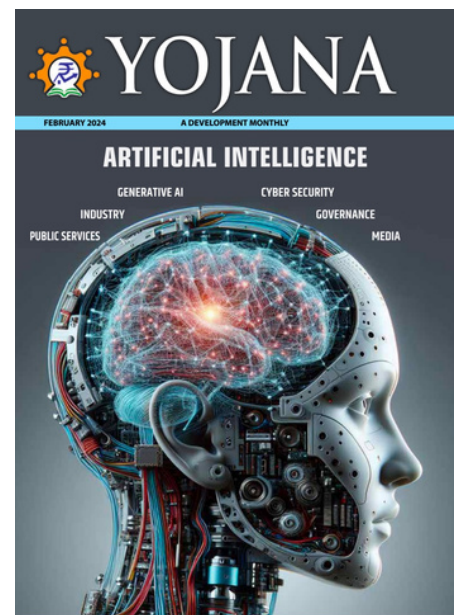
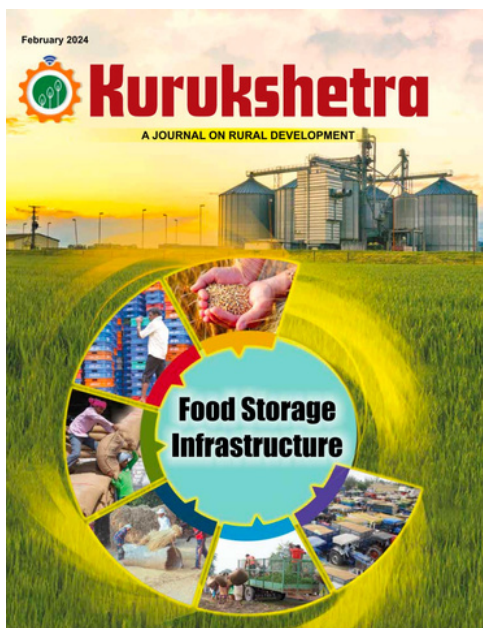
OFFICERS' Pulse

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1) AI in Indian Governance and Public Services

(GS-II: Important Aspects of Governance, Transparency and Accountability, E-governance- applications, models, successes, limitations, and potential; Citizens Charters, Transparency & Accountability and institutional and other measures)

Context

- A recent industry report focusing on Generative AI (GenAI) suggests that **GenAI holds the potential to contribute up to 1.5 trillion dollars to India's GDP by 2030.**
 - Generative AI is a **type of artificial intelligence technology** that can **produce various types of content, including text, imagery, and audio.**
- AI can be harnessed to solve societal challenges in health care, education, and agriculture, build innovative products and services, increase efficiency, elevate competitiveness, and enable economic growth, contributing to an improved quality of life.

India's Approach

- Recognising the transformative potential of AI, the Government of India has undertaken concrete steps to encourage the domestic adoption of AI in a responsible manner and build public trust in the use of this technology, placing the idea of '**AI for All**' at its very core.
- The Government of India's flagship initiative, the **National Programme on Artificial Intelligence (NPAI)**, aims to nurture the building blocks of the domestic AI ecosystem through **four key interventions:**
 - **National Data Management Office (NDMO):** Recognising data

as the foundational element for AI innovation, the NDMO aims to enhance data quality, utilisation, and accessibility, modernising government practices to fully unlock the potential of data and the AI innovation ecosystem.

- **National Centre on AI (NCAI):** NCAI is envisaged as a sector-agnostic entity that identifies AI solutions for public sector problem statements and facilitates their nationwide deployment, aiming to drive large-scale socio-economic transformation.
- **Skilling for AI:** This pillar aims to revamp technical education infrastructure, particularly ITIs and polytechnics by building data labs that can help equip the workforce with AI-ready skills and mitigate the disruptions caused by the accelerated adoption of AI.
- **Responsible AI:** Emphasises the need to address potential biases and discrimination in AI adoption through the development of indigenous tools, guidelines, frameworks etc., and suitable governance mechanisms.
- Large datasets may be utilised to harness the potential of AI to foster data-driven perspectives and **facilitate the effective development and implementation of robust policies and schemes.**
- This shift towards data-driven governance is also **enhancing**

transparency and enabling participatory governance.

Key Government Initiatives Leveraging AI

1. UMANG (Unified Mobile Application for NewAge Governance):

- UMANG serves as a unified platform, offering all Indian citizens a **singular point of access to pan-India e-government services, spanning from central to local government bodies.**
- Launched in 2017, the platform provides access to 1836 vital government services encompassing a wide spectrum of areas such as education, Covid-19 vaccinations, public transport, employment guidance, passport applications, utilities, cybercrime reporting, and more.
- To eliminate technology and language barriers and enhance the long-term adoption of key Government programmes and initiatives, **AI was leveraged to transform UMANG** into a more inclusive solution.

2. DigiYatra:

- The DigiYatra initiative, spearheaded by the **Ministry of Civil Aviation**, marks a revolutionary step towards **leveraging artificial intelligence (AI) to enhance the air travel experience** for citizens.
- DigiYatra is a **biometric-based boarding system** for Indian airports. The DigiYatra initiative, implemented through the **DigiYatra App**, eases entry into airports, security checks, and boarding with a seamless registration process.
- The app uses **facial recognition technology**, where users upload a selfie, enhancing security and expediting the boarding process.

3. Digital India Bhashini:

- Digital India Bhashini (**National Language Translation Mission**) is an initiative launched by the **Ministry of Electronics and Information Technology** that is building **speech-to-speech machine translation systems for various Indian languages and dialects** and evolving a **Unified Language Interface (ULI)**.
- The mission is working towards creating a **'voice-based internet'** that is accessible in vernacular Indian languages and building multilingualism as well by **developing the next generation of 'conversational' government apps and websites.**
- This will enable citizens to **access digital services in their own language**, further increasing digital inclusion and accessibility.

4. Applications of AI in Urban Governance:

- Several government departments across States– including municipal corporations and police, are using image recognition and AI for **near-real-time monitoring of traffic and the infrastructure of the city.**
- These models are also used to **detect traffic infractions**, including overspeeding, rash driving, failure to wear a seatbelt, etc.

5. Applications of AI in Healthcare:

- **DRDO's Centre for Artificial Intelligence and Robotics (CAIR)** has developed **ATMAN AI**, an AI-based Covid detection application software using Chest X-rays (CXR), which can classify the images into normal, Covid-19, and pneumonia classes using a limited number of sample images.
- The **Ministry of Health and Family Welfare** has also implemented projects wherein AI-

based models are being used to **analyse X-Ray and mammography images** to detect tuberculosis and breast cancer.

6. AI-Based Pest Management System:

- **CottonAce**, an **AI-driven early warning system**, is aiding farmers in safeguarding their crops by offering timely, localised advice on pesticide application. Developed by **Wadhvani AI** (independent nonprofit institute), the AI system has undergone successful piloting.

7. AI Applications in Agriculture:

- The **Government of Telangana** has deployed an AI solution that has the capability to **leverage agricultural data and provide actionable inputs that can potentially increase crop yield**.
- The solution is also **enabling landscape monitoring and event detection models** to deliver **valuable information** on crop types, sow and harvest schedules, as well as the identification of water bodies.
- Another AI-based solution **deploys sensors** in crop fields that help **estimate moisture content** in the soil. Mapping it with weather data regarding rains and the stage a crop is in helps make **predictions of the irrigation needed**, and the farmer gets prompts on his mobile phone about when he should be switching on the submersible pump for irrigation and for how long.
- It is estimated that this simple solution can **save up to 42% of water for paddy**.

8. AI-Based Attendance Monitoring (Shiksha Setu):

- The **Government of Assam** has developed a mobile application called '**Shiksha Setu**' for **recording the digital attendance of both students and teachers**.

- The application includes an AI-based facial recognition attendance system, which has been implemented across 44,000 schools in the state.

Concerns

- With these amazing capabilities have also come many concerns about AI.

1. Gender-Bias:

- One widely held concern about AI is whether it **might amplify humanity's worst impulses**.
- Large language models (LLMs) are trained on text from the internet, which reflects some of humanity's best qualities but also some of its worst, including some of our **prejudices, hatreds, and misconceptions**.
- If one asks an LLM after its initial training to fill in the blank. The blank was a CEO, many models would be prone to choosing the word 'man' i.e., The man was a CEO.

2. Job Losses:

- The pace of technological change might outpace the ability of people to reskill and adapt to new job demands, leading to **unemployment and income inequality**.

3. Hallucinations and Misinformation:

- Another concern is that AI can sometimes **'hallucinate' inaccurate information** with complete confidence. It can even invent its own references, sources, and deep fakes that are non-existent.

4. Plagiarised Content:

- LLMs sometimes **output plagiarised content**. If any enterprise uses that in their operations, only they are held accountable when the plagiarism is discovered, not the AI model.

Way Forward

- To overcome these challenges, **India needs a multi-pronged approach:**
- **Building a robust cyber security ecosystem:** This includes strengthening government agencies like CERT-In, promoting public-private partnerships, and fostering collaboration among stakeholders.
- **Investing in AI-powered cyber security solutions:** While AI can be misused, it also holds immense potential for proactive threat detection and response. Investing in research and development of secure AI solutions is crucial.
- **Promoting digital literacy and awareness:** Educating the public about cyber hygiene, online scams, and data privacy practices is essential to build a resilient digital society.
- **Developing a strong legal framework:** India needs robust cyber security laws and regulations to deter cybercrimes, protect critical infrastructure, and ensure data privacy.
- **Investing in cyber security training and skills development:** Addressing the skill shortage by providing training programs and attracting talent to the field is essential for long-term cyber security preparedness.

Conclusion

- As the proliferation of AI in citizen-centric public services accelerates, the imperative for establishing **robust ethical guardrails** becomes increasingly evident to safeguard against potential misuse and ensure responsible deployment.

2) Shaping Sustainable Food Systems with Storage Infrastructure

(GS-III: Major Crops - Cropping Patterns in various parts of the country, - Different Types of Irrigation and Irrigation Systems; Storage, Transport and Marketing of Agricultural Produce and Issues and Related Constraints; E-technology in the aid of farmers)

Context

- It is projected that **India's population will be 1.64 billion by 2047**, of which nearly 0.82 billion will be residing in urban areas. There is a need to **strengthen the storage infrastructure** to meet the food demand of the population and creation of sustainable food system.

Magnitude of Food Wastage

- **India is the second largest food producer** in the world, with an annual production of about 3,100 lakh tonne. However, currently, the country has a **food grain storage capacity of 145 million metric tonnes (MMT) against the total food production of 311 MMT** - leaving a gap of 166 MMT.
- This means the existing storage infrastructure can only **accommodate approximately 47 per cent of the total produce.**
- When compared to the USA and China, which process 65% and 23%, respectively, of their perishables, **India is able to process a meagre 7%, which is quite negligible.**
- A study by the **National Academy of Agricultural Sciences (NAAS)** concludes that **storage is the major cause of post-harvest losses** for all kinds of food in India.
- **Poor systems and techniques of handling, storage, and distribution result in post-harvest losses of around 10-16 per cent for major cereal crops, 26 per cent in the case of wheat, and 34**

per cent in the case of **vegetables and fruits**.

- The **use of scientific storage methods** can reduce these losses to as low as **1%-2%**.

Types of Storage Methods

- At present, several structures ensure the safe storage of grains, ranging from **small metal bins to tall grain elevators/silos**. These storage structures are classified under different categories like **traditional storage structures, improved storage structures, modern storage structures, and farm silos**.
- At any given time, **60-70% of grains** are stored on the farm in **traditional structures** like Kanaja, Kothi, Sanduka, earthen pots, Gummi and Kacheri. However, **indigenous storage structures are not suitable for storing grains for very long periods**.
- The **Shanta Kumar Committee (2015)** has recommended **modernising storage** to ensure enhanced quality of food grains, negligible loss as compared to food grains storage in bag, efficient utilisation of land (silo requires 1/3rd land as compared to conventional storage warehouses), higher operational efficiency, and bring in private investment into the sector.
- **Warehouses or Silos** are used for **bulk storage of grains**. Warehouses are scientific storage structures especially constructed for the protection of the quantity and quality of stored products.

'World's Largest Grain Storage Plan in Cooperative Sector'

- To address the shortage of food grain storage capacity in the country, the Government last year approved the **'World's Largest Grain Storage Plan in**

Cooperative Sector', which has been rolled out as a Pilot Project in different states/UTs of the country.

- The plan entails **creation of various agri infrastructure at the Primary Agricultural Credit Societies (PACS) level**, including setting up decentralised godowns, custom hiring centers, processing units, Fair Price Shops, etc. through convergence of various existing schemes of the Government of India (GoI) under different Ministries.
- The new storage plan is based on the **hub and spoke model**. Of the total 63,000 PACS across the country, 55,767 will function as spokes and will have a grain storage capacity of 1,000 metric tonnes each, while the remaining 7,233 PACS, which will function as hubs, will have a storage capacity of 2,000 MT each.
- The plan will let cooperatives set up **decentralised storage facilities** across the country in a move to **reduce the burden on the Food Corporation of India, cut wastage of farm produce, and help farmers plan their sales better**.
- It will **converge existing schemes** of the Ministry of agriculture and farmers welfare, the Ministry of consumer affairs, food and public distribution, and the Ministry of food processing industries, and it will utilise the funds available under the schemes for this purpose.
- The creation of decentralised storage capacity will range from **500 MT to 2000 MT** at the PACS level.

Way Forward

- Modernisation of post-harvest storage infrastructures, improved warehousing capacity, private sector participation, and hands-on-training on scientific storage

methodology can empower farmers/stakeholders in the management and storage of agricultural commodities.

- The promotion of decentralised local storage system will **reduce the wastage of food grains, strengthen food security, and prevent distress sales by farmers.**
- The increased investment in modernisation of warehousing, logistics, cold chain, food processing, and integrated value chain development can enable the goal of becoming a development nation and achieving the Sustainable Development Goals.

3) Vulnerability of Children in Social Media Platforms:

(GS-I: Effects of Globalization on Indian society)

Context

- The CEOs of global tech giants Meta, X, Snap, TikTok, and Discord attended a US Senate hearing on the companies' failures in protecting children online.
- The hearing, organised by the US Senate's Committee on the Judiciary, focused on online child sexual exploitation, with the CEOs testifying for the first time on this issue.
- This necessitates the need to understand the larger vulnerabilities of children on different social media platforms.

Vulnerabilities of Children:

- **Exposure to Inappropriate Content:** Children may encounter age-inappropriate or explicit content on social media platforms, impacting their emotional well-being and understanding of appropriate behaviour.

- India, despite being the largest market for Meta, has fewer content moderators — both proportionally and in absolute numbers — than the US or Europe.
- **Online Predators:** Social media can be a breeding ground for online predators who may exploit children's innocence and trust, posing as peers or friends to engage in harmful activities.
 - According to the NCRB, **about 28 per cent of the entire minor population has faced some form of sexual abuse**, but many victims do not come forward to register a complaint. Despite this, in 2022 alone, 38,911 child rape and nearly 3,500 cases of sexual exploitation online were reported.
- **Cyberbullying:** Children are vulnerable to cyberbullying, including harassment, threats, and exclusion, which can have severe consequences on their mental health and self-esteem.
- **Addictive Features:** Social media platforms often employ addictive features, leading to excessive screen time and potential negative impacts on children's physical health, sleep patterns, and overall well-being.
- **Privacy Concerns:** Children may not fully understand the privacy implications of sharing personal information online, exposing them to potential identity theft, stalking, or other privacy-related risks.
- **Peer Pressure and Body Image Issues:** Social media can contribute to unrealistic beauty standards, fostering body image insecurities and promoting a culture of comparison, potentially leading to

self-esteem issues and unhealthy behaviours.

- **Impact on Mental Health:** Exposure to cyberbullying, social comparison, and negative online interactions can contribute to mental health issues such as anxiety, depression, and feelings of isolation among children.
- **Inadequate Age Verification:** Despite age restrictions on social media platforms, children may easily create accounts by providing false information, exposing them to age-inappropriate content and interactions.
- **Lack of Digital Literacy:** Many children lack the necessary digital literacy skills to critically evaluate online information, discern fake news, and navigate potential online threats, making them susceptible to misinformation.
- **Unhealthy Online Behaviours:** Social media may encourage unhealthy behaviours such as seeking validation through likes and comments, leading to a potential over-reliance on online affirmation for self-worth.
- **Parental Supervision Challenges:** Parents may struggle to monitor and regulate their children's online activities, especially as children gain more independence and access to devices.
- **Online Challenges and Trends:** Children may participate in harmful online challenges or trends that promote risky behaviour, posing physical or psychological dangers.
- **Commercial Exploitation:** Children may be targeted by advertisers and marketers, leading to potential exploitation and the promotion of material or products that are not suitable for their age group.

- **Impacts on Academic Performance:** Excessive use of social media may lead to distractions, affecting children's concentration and academic performance.

What can be done?

Parents and Guardians:

- **Establish Open Communication:** Foster a trusting relationship with children to encourage them to share their online experiences, concerns, and encounters without fear of punishment.
- **Use Parental Control Tools:** Employ parental control tools and features provided by social media platforms, as well as third-party applications, to monitor and limit children's online activities.
- **Set and Enforce Clear Rules:** Establish guidelines for responsible social media use, including time limits, privacy settings, and appropriate online behaviour. Enforce these rules consistently.
- **Educate Children about Digital literacy and Online Risks:** Provide age-appropriate education on the potential dangers of social media, including exposure to inappropriate content, online predators, and cyberbullying.

Educational Institutions:

- **Integrate Digital Literacy Education:** Incorporate digital literacy education into school curricula to empower students with the skills needed to navigate the online world responsibly.
- **Conduct Cyberbullying Prevention Programs:** Implement programs that educate students about cyberbullying, its consequences, and strategies to prevent and respond to such incidents.
- **Promote Positive Online Behavior:** Encourage positive

online behaviour and digital citizenship through awareness campaigns, workshops, and school policies that address respectful communication.

Social Media Platforms:

- **Implement Stricter Content Moderation:** Enforce robust content moderation policies to identify and remove inappropriate or harmful content promptly, especially content targeting children.
- **Enhance Age Verification Mechanisms:** Strengthen age verification processes to ensure that users are of the appropriate age for the platform, reducing the risk of exposure to age-inappropriate content.
- **Provide Parental Controls and Reporting Tools:** Enhance parental control features on platforms and provide accessible reporting tools for users to report inappropriate content or activities.
- **Participate in Regulatory Discussions:** Actively engage in discussions with regulatory bodies to contribute to the development of effective and balanced regulations that prioritise child safety on digital platforms.
- **Promote Digital Well-Being Features:** Develop and promote features that encourage digital well-being, such as screen time monitoring, reminders for breaks, and tools that support a healthier online experience.

Government and Policymakers:

- **Enact and Enforce Online Child Protection Laws:** Introduce and enforce legislation that specifically addresses online child protection, including measures against cyberbullying, online predation, and exposure to harmful content.

- **Support Digital Literacy Initiatives:** Allocate resources to support digital literacy initiatives in schools and communities, emphasising the importance of responsible online behaviour.
- **Collaborate with Tech Companies:** Work collaboratively with social media platforms to establish and enforce industry-wide standards for child protection, privacy, and responsible online practices.
- **Regular Audits and Assessments:** Conduct regular audits and assessments of social media platforms' safety measures and compliance with child protection regulations.

Conclusion

- Effective regulation of children participation in social media platforms becomes necessary in Indian and Global contexts. Implementation of these measures helps in this direction.

4) Civil War in Myanmar

(GS-II: India and its Neighborhood-Relations)

Context

- In 2021, when the Myanmar military leaders ousted the elected government of Aung San Suu Kyi, they anticipated a resistance movement that would subside in a few months.
- Three years later, the opposition to military rule gains in strength. Ethnic Armed Organisations (EAOs) and the People's Defence Forces control many towns in different parts of the country.
- In 2024, the Arakan Army captured Paletwa in the Chin State which lies on Myanmar's western borders with Bangladesh and India.

- In this situation, studying the impacts of this war on India becomes important.

Impacts on India:

- **Security Concerns:** Instability in Myanmar can **spill over** into northeastern states of India, leading to cross-border tensions and security challenges.
 - **Indian insurgent groups** can use the instability in Myanmar to develop **new bases** in the country.
- **Strategic Concerns:** Increased **Chinese influence** in Myanmar through investments and support to armed groups may raise strategic concerns for India.
 - Allegations of **Chinese funding and military aid** to the **Three Brotherhood alliance**, which is a group of EAOs.
 - Increased Chinese economic presence along Myanmar's Bay of Bengal coast through operationalization of **oil and gas pipelines** and agreements for economic zones and railways.
 - Oil and gas pipeline operationalised from the **Shwe gas fields near Kyaukpyu** in the **Rakhine State to Yunnan province in China**.
 - Renewed efforts to construct a railway line from China's Yunnan to Kyaukpyu via Mandalay as part of the China-Myanmar Economic Corridor (CMEC).
- **Displacement of People:** Conflict-induced displacement of people from Myanmar may lead to refugee influx into Indian states bordering Myanmar, creating ethnic tensions and humanitarian challenges.

- Violence in **Manipur** state is aggravated due to this migration.
- **Impact on Connectivity Projects:** Disruptions or delays in India's connectivity projects, such as the **Kaladan Multimodal Transit Transport Project**, due to security concerns and instability in Myanmar.
 - Perception of security risks may **deter investors** and affect economic ties between India and Myanmar.
- **Trade and Economic Impact:** Disruptions in trade routes and economic activities between northeastern Indian states and Myanmar due to conflict and insecurity.

What can India do?

- **Diplomatic Engagement:** Strengthen diplomatic ties with both the Myanmar government and various ethnic armed groups to promote dialogue and conflict resolution.
 - Engage in **regional diplomacy with neighbouring countries** and international partners to find peaceful solutions to the conflict.
- **Humanitarian Assistance:** Provide humanitarian aid and support to **internally displaced persons (IDPs)** and refugees from Myanmar, demonstrating India's commitment to regional stability and humanitarian principles.
 - Collaborate with **international organisations and NGOs** to deliver aid effectively and address the humanitarian crisis resulting from the conflict.

- **Economic Engagement:** Continue investment in connectivity projects like the Kaladan Multimodal Transit Transport Project, despite challenges, to **strengthen economic ties** with Myanmar and promote regional development.
 - Explore **new economic opportunities** in Myanmar, especially in sectors such as infrastructure, energy, and trade, leveraging India's expertise and resources.
- **Mediation and Conflict Resolution:** Offer to mediate between conflicting parties in Myanmar, leveraging India's experience in conflict resolution and its **neutral stance** in the conflict.
 - Facilitate **peace talks and negotiations** between the Myanmar government and ethnic armed groups to reach a sustainable peace agreement.

Conclusion

- India should develop a comprehensive strategy that integrates diplomatic, security, humanitarian, and economic elements to effectively address the complex challenges posed by this civil war.

5) Student Suicide in India

(GS-II: Issues Relating to Development and Management of Social Sector/Services relating to Health, Education, Human Resources)

Context:

- There were **35,950 deaths by suicide by students between 2019 and 2021**, according to the National Crime Records Bureau (NCRB).
- In elite educational institutions of engineering and management, 122 students committed suicide

between 2014 and 2021, of which 68 were from “lower-caste” communities.

- Given the future role of students in India’s development, examining the reasons for this high number of suicides is important.

Causes for Student Suicides:

- **Academic Pressure and Stress:** The rigorous coaching for entrance examinations to elite Indian institutions of professional education is mentally demanding, contributing to stress and pressure on students.
- **Socio-Economic Factors:** Socio-economic conditions, including lack of access to resources and opportunities, play a significant role in student suicides, particularly among marginalized communities and lower-caste students.
 - It is now the upper-caste middle-income and the lower-caste majority families that often opt for technical or professional courses for their children, these children will be under economic pressures throughout the process.
- **Pressure from Family and Society:** High expectations from family and societal norms regarding academic achievement and career success can create immense pressure on students, leading to feelings of inadequacy and despair, especially when they perceive themselves as unable to meet these expectations.
- **Caste Discrimination:** Discrimination based on caste identity is a significant factor, especially in elite educational institutions where students from lower-caste communities may face systemic bias and prejudice,

leading to feelings of exclusion and hopelessness.

- **Inadequate Support Systems:** Lack of adequate mental health support systems within educational institutions and broader society contributes to the vulnerability of students facing academic or personal challenges.
- **Failure and Stigma:** Societal stigma surrounding failure, particularly in the context of academic performance, can exacerbate feelings of shame and worthlessness among students who perceive themselves as unsuccessful or unable to meet societal expectations.

Government efforts to prevent Student Suicides:

- **Rashtriya Kishor Swasthya Karyakram (RKSK):** RKSK is a comprehensive adolescent health program initiated by the government to address the physical, mental, and emotional health needs of adolescents, including students. The program focuses on promoting positive mental health, preventing substance abuse, and addressing mental health issues early on.
- **National Education Policy (NEP) 2020:** The NEP 2020 emphasises the holistic development of students and aims to reduce academic pressure by promoting experiential learning, critical thinking, and creativity. The policy encourages schools and universities to prioritise students' mental well-being and provide support services for mental health issues.
- **National Mental Health Program (NMHP):** The Indian government launched the NMHP to provide accessible, affordable, and quality mental health care services to all

individuals, including students. This program aims to strengthen mental health infrastructure, promote awareness, and provide support for those in need.

Solutions to reduce Student Suicides:

- **Academic Reform and Stress Reduction:** Reform the academic system to reduce stress and pressure on students, including revising examination and evaluation methods, promoting holistic learning approaches, and reducing the emphasis on high-stakes exams. Encouraging a more balanced and nurturing academic environment can alleviate academic-related stressors.
- **Parental and Community Involvement:** Promote parental and community involvement in supporting student well-being, including initiatives to educate parents about the importance of mental health, providing resources for families to support their children's emotional needs, and fostering partnerships between schools, parents, and communities to create a supportive network for students.
- **Mental Health Support Services:** Establish and strengthen mental health support services within educational institutions, including counselling centres staffed with trained professionals who can provide psychological support and intervention to students in distress.
- **Caste Sensitization and Anti-Discrimination Measures:** Implement caste sensitization programs and anti-discrimination measures within educational institutions to address caste-based discrimination and promote inclusivity and equality among students. Creating a supportive and inclusive environment can help

reduce feelings of marginalisation and exclusion.

- **Awareness and Destigmatization Campaigns:** Conduct awareness campaigns to destigmatize mental health issues and suicide, promoting open discussions and reducing the shame and secrecy surrounding these topics. Education and awareness can help create a supportive environment where students feel comfortable seeking help when needed.
- **Socio-Economic Support Programs:** Implement socio-economic support programs aimed at addressing the root causes of student suicides, including initiatives to improve access to education, reduce financial barriers, and provide opportunities for marginalized communities.

Conclusion

- India's demographic dividend in future depends on the well being of the current student generation. Helping them to cope with the pressures of the educational journey brings benefits to the nation as a whole.

6) Deep Tech

(GS-III: Awareness in the fields of IT, Space, Computers, Robotics, Nano-technology, Bio-technology and issues relating to Intellectual Property Rights)

Context:

- In her Interim Budget speech, Finance Minister Nirmala Sitharaman promised to launch a new scheme to strengthen deep-tech capabilities in the defence sector.

Explanation and Opportunities in India:

- Deep tech refers to **advanced and disruptive technologies**, many of which are still under development, that have the **potential to trigger**

transformative change, and provide solutions for the future.

- The term is used to describe **cutting-edge research in nanotechnology, biotechnology, material sciences, quantum technologies, semiconductors, artificial intelligence, data sciences, robotics, 3D printing**, etc.
- These technologies are expected to play a key role to address complex global challenges like climate change, hunger, epidemics, energy access, mobility, physical and digital infrastructure, and cyber security.
- Advanced capabilities in deep tech are also likely to **enhance productivity and drive economic growth and create jobs** in coming years, and offer competitive advantage to countries with strong foundations in these areas.
- With its large base of relatively high-quality science and engineering manpower and a fairly well-established technology culture, India feels it is well placed to be one of the frontrunners in these areas.
- There is scope to contribute to the development of these technologies, which can ensure early adoption, shares in intellectual property, indigenous know-how, and self-reliance.
- Major associated benefits in terms of spin-off technologies, trained manpower, entrepreneurship and technology exports can accrue as well.

Government Efforts to build an ecosystem:

- Over the past few years, the government has tried to incentivise research in some of these areas by setting up a National Mission on Transformative Mobility and

Battery Storage and, more recently, **a National Quantum Mission.**

- In 2023, a policy framework to create an enabling environment for companies working in these technology areas was finalised.
- **The National Deep Tech Startup Policy (NDTSP)**, piloted by the **Department for Promotion of Industry and Internal Trade and the Office of the Principal Scientific Adviser**, is currently awaiting government approval.
- The policy seeks to address specific challenges faced by technology startups, and to provide them with a platform to compete and collaborate with the best in the world.
- The idea is to create a deep tech startup ecosystem by offering the right incentives to companies that invest time and money in innovation and research.
- More than 10,000 startups working in these technology domains were identified as part of the effort.
- The NDTSP talks about some of the things that need to be done in this regard: **create opportunities for long-term funding; a simplified but stronger intellectual property rights regime; tax incentives; a conducive regulatory framework; development of standards and certifications; nurturing of talent; and linkages between industry, research centres, and educational institutions.**
- One of the key policy recommendations in the NDTSP is to **open up opportunities for long-term funding of research projects.** It acknowledges that most deep tech projects are time- and money-intensive, with relatively high funding requirements.

Conclusion

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- Efforts are being made to create better synergies between industry, research labs, and educational institutions in order to broad-base both research activity and the funds to support it.

7) Neuralink: Opportunities and Concerns

(GS-III: Awareness in the fields of IT, Space, Computers, Robotics, Nano-technology, Bio-technology and issues relating to Intellectual Property Rights)

Context:

- Tech mogul Elon Musk recently announced that the first human implantation of the Neuralink device — called Telepathy — has been achieved and the recovery and initial data collection are in progress and going well.

What is Neuralink?

- Neuralink is a **tech company** founded by Elon Musk that develops **brain-computer interface (BCI) technology.**
- Their flagship product, the **Telepathy device, is a surgically implantable chip with electrodes.** It records neural activity and allows **communication between the brain and external devices like computers.**

Advantages of Neuralink:

- **Medical Applications:** Neuralink has the potential to address **physical and cognitive** limitations, **benefiting individuals with disabilities.**
 - These implants can help in treating neurological disorders like ALS, Parkinson's and conditions such as obesity, autism, depression and schizophrenia.
 - This "for-profit model" of Neuralink is an assurance

that businesses will continue to find incentives in devising technologies that break down accessibility barriers for those with disabilities.

- **Technological Advancement:** BCIs represent a significant technological advancement with potential applications beyond medical use.
 - Neuralink's development pushes the boundaries of what is possible in merging human biology with technology, opening new possibilities for human-computer interaction.
- **Research Opportunities:** The development of Neuralink technology could pave the way for further research and discoveries in neuroscience and brain function.

Concerns with Neuralink:

- **Privacy:** There are concerns about who controls the data collected from users' brains and how it might be exploited. Authorities should ensure that the safety, rights and privacy of study participants take precedence over the efficiency of a new study, at all times.
- **Availability and Transparency of data:** Data from the study should be available to the Public authorities to ensure adherence to the basic tenets of scientific discoveries — replicability and the ability of the raw data to be able to withstand scrutiny from the scientific community.
 - Neuralink has previously refused National Institute of Health (NIH) funding to keep its patented technology secure as federally-funded research comes with more oversight and mandated

requirements of data sharing and transparency.

- While most academia-sponsored clinical trials that happen through major university hospitals in the US need to be registered, this study is not registered.
- The only information available is through an online brochure, which is characteristically minimalistic.
- **Regulation:** Regulation is needed to ensure ethical use and prevent misuse of the technology. Till now, Neuralink has come under any strict regulation of the US government.
- **Accessibility:** The cost of the technology may limit access to those who can afford it, potentially creating inequities.
- **Ethical Use:** Ethical considerations arise regarding the potential for misuse or overuse of BCIs, necessitating careful monitoring and governance.
 - A primary ethical concern is the ownership of the data. There is no clarity on who the recorded data belongs to, which will be decoded to interpret the “intentions” of a person to control a digital device.

Conclusion

Neuralink would serve itself and the world better if it were more open about working of the device and the data it generates.

8) Bilateral Investment Treaties (GS-II: Bilateral, Regional and Global Groupings and Agreements involving India and/or affecting India's interests)

Context

- While presenting the interim Union budget, Finance Minister Nirmala Sitharaman stated that India will be

negotiating Bilateral Investment Treaties (BITs) with its trade partners to boost the inflow of foreign direct investment.

- This announcement comes at a time when India's bilateral treaties have dried up, more so, since the adoption of the **Model BIT in 2016**. This necessitates us to look into the issues with this Model BIT proposed by the Government.

What are BITs?

- BITs are **agreements between two countries for the reciprocal promotion and protection of investments** in each other's territories by individuals and companies.
- The first BIT signed by India was with the UK on March 14, 1994.
- There were many instances where India faced adverse awards in **investor-state disputes**, such as the case involving **Cairn Energy Plc**, leading to significant financial burdens on the government.
- Given the burden that was being levied on the public exchequer, the government was compelled to revisit the 1993 BIT model. This led to the adoption of the 2016 model BIT resulting in the government **terminating 68 of the 74 treaties** it had executed until 2015 with a request to renegotiate terms based on the revised text.

Issues with use of Model BIT, 2016:

- **Revisiting the Model BIT:** The adoption of the 2016 Model BIT was seen as a **reactionary move**, lacking a nuanced approach to encouraging foreign investment. It resulted in the termination of many existing treaties, complicating renegotiations with other countries.
- **Protectionist Measures:** The adoption of the 2016 Model BIT is described as a "knee-jerk

protectionist measure," suggesting that it may not have effectively balanced the interests of foreign investors with those of the Indian government.

- **Absence of Key Doctrines:** The 2016 Model BIT was criticised for omitting well-recognized doctrines of public international law such as "fair and equitable treatment" and "**most favoured nation**," potentially undermining investor protections.
- **Impact on FDI:** The difficulties in renegotiating terms with other countries have led to a decline in Foreign Direct Investment (FDI) inflows into India, impacting the country's economic growth prospects.
- **Contract Enforcement issues:** 2016 Model provided that an investor must exhaust local remedies before taking recourse to international arbitration. India's ranking in ease of contract enforcement is still abysmally low at 163 out of 190 (World Bank-Ease of Doing Business) and this complicates the situation further.
- **Stumbling Blocks in Negotiations:** Negotiations for free trade agreements, such as with the UK, have faced obstacles related to dispute settlement mechanisms, reflecting broader challenges in India's approach to international trade agreements.

Solutions to address these issues:

- **Revisiting Model BIT:** Conduct a thorough review of the 2016 Model BIT to identify areas for improvement, ensuring that it strikes a balance between investor protection and national interest.
- **Flexible Negotiation Approach:** Adopt a more flexible approach to negotiation, taking into account the specific circumstances and

priorities of each trade partner rather than pursuing a one-size-fits-all strategy.

- **Incorporating Key Doctrines:** Reincorporate essential doctrines of public international law, such as "fair and equitable treatment" and "most favoured nation," into the revised BIT model to enhance investor protections and restore confidence.
- **Enhanced Dispute Resolution Mechanisms:** Strengthen dispute resolution mechanisms to provide timely and effective avenues for resolving investment disputes, possibly by establishing specialised arbitration panels or courts.
- **Capacity Building and Expertise Development:** Invest in training programs and capacity building initiatives to develop local expertise in investment arbitration, ensuring that India is well-represented in investor-state disputes and can effectively navigate complex legal issues.
- **Continuous Learning and Adaptation:** Establish mechanisms for continuous learning and adaptation by regularly reviewing and updating BITs to align with evolving global best practices and address emerging challenges.
- **Legal and Regulatory Reforms:** Undertake broader legal and regulatory reforms to improve the investment climate, including streamlining bureaucratic processes, reducing red tape, and enhancing contract enforcement mechanisms.
- **Consultative Approach:** Engage in constructive dialogue and consultations with trade partners to identify mutually beneficial solutions and address potential stumbling blocks in FTA negotiations effectively.

Conclusion

- Robust international trade and stable investments will be critical to India's pursuit of a \$5-trillion economy. A progressive approach to BITs will be an important component to attract and sustain long-term foreign investments.

9) India-UAE Relations-Moving forward in 2024

(GS-II: Effect of Policies and Politics of Developed and Developing Countries on India's interests, Indian Diaspora)

Context

- Prime Minister Narendra Modi recently paid an official visit to the United Arab Emirates (UAE).
- India's relationship with UAE has evolved into becoming one of the most prominent bilateral relationships for New Delhi.

Pillars of Relationship:

- **Climate Initiatives:** The convergence of ideas on global climate issues too was clear when Mr. Modi was in Dubai for the COP28 climate summit.
 - Both India and the UAE **co-launched the Global Green Credit Initiative**. Apart from this initiative, the countries have cooperated through International Solar Alliance, Joint Working Group on Renewable Energy.
- **Economic and Trade Relations:** Bilateral trade **grew to \$85 billion in 2022-23**, making the UAE **India's third-largest trading partner and India's second-largest export destination**. The UAE is also the **fourth-largest overall investor in India**.
 - The **India-UAE Comprehensive Economic Partnership Agreement (CEPA)**, signed in 2022 in a

- record time of 88 days**, aims to increase trade in services to \$115 billion in five years.
- On February 1, 2024, the Indian government also approved the signing and ratification of a **bilateral investment treaty with the UAE**, which would significantly boost bilateral economic engagement, especially manufacturing and foreign direct investment.
 - Evolving from purely transactional to strategic, with a focus on **leveraging Gulf capital for India's economic growth**, particularly in sectors like green energy and technology.
 - **Bharat Mart**, a key initiative of Dubai-based DP World and India's Ministry of Commerce and Industry to boost exports of Indian Micro, Small and Medium Enterprises by providing them retail, warehousing and logistics facilities in Dubai's Jebel Ali Free Zone Area. This will allow Indian manufacturers to showcase their products and access buyers and markets in Iran, Central Asia, Africa and the Middle East.
 - **Fintech** is yet another area of mutual convergence. The **RuPay card**, a key component of India's Digital Public Infrastructure (DPI), has been accepted in the UAE since August 2019, while from July 2023, the **rupee was being accepted for transactions at Dubai's airports**.
- India and the UAE also operationalised a **rupee-dirham settlement system** when, in August 2023, the Indian Oil Corporation made a rupee payment to the Abu Dhabi National Oil Company **for crude oil imports**.
- **Energy security:** The UAE is also India's trusted partner in energy security, being the **only nation** from the region which has **strategic oil reserves stored in India**.
 - An agreement was signed in **Indian Strategic Petroleum Reserves Ltd (ISPRL)** and the **Abu Dhabi National Oil Company** to invest in the strategic crude oil storage facility in Mangaluru with an initial investment of \$400 million.
 - **Diplomatic relations and Mutual Recognitions:** Both countries have often gone out of their way to make exceptions for each other.
 - When the UAE hosted the **Organisation of Islamic Countries (OIC) Foreign Ministers' meeting** in 2019, it invited India's External Affairs Minister (the late) Sushma Swaraj as a keynote speaker/guest of honour despite protests from some nations, including Pakistan.
 - During his visit to the UAE in August 2019, Mr. Modi was conferred the **UAE's top civilian honour, the Order of Zayed**.
 - The UAE was one of few nations specially invited for the G-20 summit, in September 2023, under India's G-20 presidency.

- Prime Minister Narendra Modi recognised that developing a **personal connection with the emirs** was key to advancing the ties with the region. The Gulf monarchs value personal ties at the leadership level and are ready to calibrate their national policies based on mutual trust and political give and take.
- **Strategic Relations:** Both countries are in close coordination and a part of a number of important groupings such as the **I2U2 or the West Asian Quad** comprising India, Israel, the United States and the UAE.
 - The UAE is also part of the **India-Middle East-Europe Economic Corridor (IMEEC)** infrastructure project that was signed during the G-20 summit in Delhi. The corridor aims to connect India to Europe across the Arabian peninsula, and is a potential rival to China's Belt and Road Initiative.
 - Proactive relations with UAE and the greater Gulf region by coming out of the obsession of their **relations with Pakistan**. At present, India has replaced Pakistan as a prominent South Asian partner of Arab countries.
 - Expansion of **collaboration in counter-terrorism** and untapped potential in defence cooperation, with Gulf countries looking to India for regional security provision.
- India's close relations with the UAE ensures India to **navigate the regional rivalries** and maintain a

working relationship with different parties in the region.

- Eg: **Saudi Arabia-Iran; Israel-Arab nations**, etc.

Conclusion

Over the years, the relations between the countries have grown stronger on a comprehensive ground covering various aspects. While India recognises and values the UAE's role in the region, the UAE too is cognisant of the 'global leadership' role that India is set to acquire. Both countries recognise that this privileged strategic partnership is only set to grow stronger in the years ahead.

10) Rising Human Animal Conflicts in Kerala

(GS-III: Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment)

Context:

- Wayanad is on the boil after a radio-collared wild elephant chased a 47-year-old man and trampled him to death, inside a gated property in a residential area. This calls for an inquiry into the specific reasons for human animal conflict in the region.

Background:

- **Wayanad**, which boasts of a **forest cover of 36.48 per cent**, has lost 41 lives to elephant attacks and seven to tiger attacks over the last decade.
- Its geographical location plays a role in this. The district's forests are a part of a greater forested area comprising **Nagarhole Tiger Reserve, Bandipur National Park, and BR Tiger Reserve in Karnataka, and Mudumalai Tiger Reserve and Sathyamangalam Forest in Tamil Nadu**.
- Wild animals, especially elephants and tigers, traverse state borders in search for food.

Reasons for increasing conflicts:

- **Cultivation of alien plants** like acacia, mangium and eucalyptus on a commercial scale. With 30,000 hectares of forest land in Kerala being used for cultivation of these species, animals are deprived of their natural habitat and food sources.
- **Declining water resources** in forests due to water-guzzling commercial species. Elephants are among the worst-affected species due to this.
- **Invasive species** such as lantana, mikania and senna, planted by forest department over decades, have also hindered growth of natural vegetation in forests.
- **Slow process of regeneration of forests:** While the Kerala forest department banned the cultivation of acacia and eucalyptus in forest tracts in 2018, the process of regenerating natural forests, such that animals do not face shortage of food and water, will take time.
- **Changing agri-practices** lure animals to farmland also responsible for drawing animals, which do not find enough fodder in their habitats, out of forests.
 - In recent years, owing to poor returns and high wage costs, more and more farmland is being left unattended. This makes them ideal targets for wildlife looking to snack on bananas and pineapples, among the most cultivated crops in the region.
- **Out migration of people:** Increase in wildlife attacks has further pushed people to safer settlements away from their farms. This further entices animals to raid estates neighbouring forests.
- **Adoption of animal husbandry:** The crisis in Kerala's farm sector has also driven many towards animal husbandry.
 - In Wayanad particularly, the dairy sector has emerged as a lifeline for villagers. But **domesticated animals are also prime targets for tigers** and other carnivores, especially older animals less capable of hunting in the wild.
- **Human activities** in fringe areas such as waste disposal near forested areas, fragmentation of animal habitats due to wanton construction, and increased human presence in and around animal habitat also contribute to increasing animal-human conflict in Kerala.

Measures to reduce conflicts:

- **Physical Barriers:** Constructing barriers such as elephant-proof trenches, stone walls, and solar-powered electric fencing can help prevent animals from entering human settlements.
 - **Natural Barriers:** To keep elephants at a safe distance from their farms and homes, some African villagers have turned to two unlikely, all-natural solutions: **bees and hot peppers.** Elephants dislike the chemical capsaicin found in chilli peppers, prompting. In addition to a spice aversion, elephants are also terrified of bees.
- **Eco-Restoration:** Rehabilitating degraded habitats and restoring natural vegetation can provide alternative food and shelter for wildlife, reducing their need to encroach on human areas.

- **Land-Use Planning:** Proper zoning of land and managing human settlements to minimise conflicts with wildlife can be effective. This includes identifying **buffer zones** between human and wildlife habitats.
- **Crop Protection:** Implementing techniques like **crop diversification**, use of deterrents, and installing scare devices can protect crops from wildlife damage, reducing the incentive for animals to enter farmlands.
- **Community Engagement:** Involving local communities in conservation efforts through measures like **Joint Forest Management (JFM) Program**, raising awareness about wildlife behaviour, and promoting coexistence through education and outreach programs can foster tolerance and understanding.
- **Early Warning Systems:** Developing and implementing systems to alert communities about approaching wildlife can help prevent conflicts and allow timely evacuation if necessary.
- **Wildlife Corridor Conservation:** Protecting and maintaining wildlife corridors that allow **animals to move freely** between habitats can reduce conflicts by providing alternative routes for wildlife movement.
- **Livestock Protection:** Providing secure **enclosures** and employing guard animals or herders can help protect livestock from predators, reducing retaliatory killings of wild animals.
- **Conflict Resolution:** Establishing **rapid response teams** equipped to handle conflicts, including trained personnel to safely tranquillise and relocate animals, can mitigate

conflicts and prevent human casualties.

- **Policy and Regulation:** Enforcing laws and regulations related to wildlife protection, land use, and waste management can help address underlying causes of conflicts and promote sustainable coexistence between humans and animals.

Conclusion

- Overall, the human-animal conflict in Kerala underscores the need for comprehensive and innovative strategies to mitigate risks to both humans and wildlife while addressing the root causes of the problem.

11) Reimagining India's Economic Future - High-Skill Services Approach

(GS-II: Issues Relating to Development and Management of Social Sector/Services relating to Health, Education, Human Resources)

Context:

- A book by former RBI Governor Raghuram Rajan and Rohit Lamba offers an unconventional perspective. They propose India not to focus on manufacturing-led growth but on high-skill, services-driven growth.

Benefits of High Skill services driven growth:

- **Job Creation:** High-skill services, such as information technology, finance, consulting, and research, have the potential to create a significant number of jobs. These jobs often require specialised skills and qualifications, thereby offering employment opportunities for educated individuals.
- **Higher Wages:** Jobs in high-skill services sectors typically command higher wages compared to traditional low-skill jobs in

agriculture or manufacturing. This can contribute to increased income levels and improved living standards for workers.

- **Technology Transfer and Innovation:** High-skill services sectors are often at the forefront of technological innovation and knowledge creation. By promoting these sectors, countries can facilitate technology transfer, knowledge spillovers, and the adoption of best practices, which can drive productivity growth and enhance competitiveness across the economy.
- **Diversification of the Economy:** Investing in high-skill services can help diversify the economy away from traditional sectors like agriculture and manufacturing. This diversification can make the economy more resilient to external shocks and less dependent on volatile commodity prices.
- **Global Competitiveness:** Developing a strong high-skill services sector can enhance a country's global competitiveness. It can attract foreign investment, facilitate trade in services, and position the country as a hub for innovation and talent, thereby boosting its international standing.
- **Human Capital Development:** The high-skill services approach requires investments in education and training to develop a skilled workforce. This can lead to the accumulation of human capital, which is essential for long-term economic growth and development.

Critiques of this approach:

- **Inequality:** The benefits of high-skill services tend to **accrue to a small segment of the population**, exacerbating income inequality. This can widen the gap between

urban and rural areas and between different socioeconomic groups.

- **Mismatch between Skill Demand and Supply:** There may be a mismatch between the skills demanded by the high-skill services sector and those possessed by the workforce. This could lead to unemployment or underemployment, particularly among less educated individuals.
- **Shortcomings in education:** More focus on higher education has led to neglect of mass school education, creating a deeply unequal human capital landscape.
- **Infrastructure Challenges:** Adequate infrastructure, such as reliable internet connectivity and power supply, is crucial for the functioning of high-skill services industries. However, infrastructure deficiencies in many parts of India may impede the growth of these sectors.
- **Dependency on External Factors:** The growth of high-skill services in India is influenced by external factors such as global economic conditions, technological advancements, and changes in international trade policies. Foreign direct investment fails to diffuse technology widely, and a cultural devaluation of certain occupations impedes innovation.

Conclusion

High Skill Services approach along with renewed focus on high end manufacturing can help India in sustaining its growth momentum.

12) Governor's Customary Address

(GS-II: Functions and Responsibilities of the Union and the States, Issues and Challenges Pertaining to the Federal Structure, Devolution of Powers and

Finances up to Local Levels and Challenges Therein)

Context:

- The Governor of Tamil Nadu stopped reading the customary address and left the assembly at the start of the Budget session in the Tamil Nadu State Legislative Assembly.
- This event calls for delving deeper into this particular practice.

Background:

- Customary addresses are given by the **President and the Governors at the first session of the year in the Parliament and the State Legislatures respectively.**
- The speeches or addresses of the Head of State for these occasions, following British practice, are drafted by the government of the day.
- They are **not written by the President of India or Governor, but only read out by them.** The drafts for these are received in their offices generally very close to the event and require them to be gone through against a tight time frame.

Reasons for conflict in this event:

- **Political Differences:** If the Governor belongs to a different political party than the ruling party in the state government, there may be disagreements regarding the content and priorities outlined in the address.
- **Perceived Bias:** The Governor may perceive the text of the address as biased against the Central government or favouring certain political interests, leading to friction and mistrust.
- **Contentious Issues:** The Governor's address may touch upon contentious issues such as governance, administration, or policies that are at odds with the

stance of the state government, leading to conflicts over the proposed agenda or initiatives.

- **Executive vs. Constitutional Role:** Conflicts may arise due to differing interpretations of the Governor's role as a representative of the central government versus their constitutional duties to act as a neutral arbiter and guardian of the state's interests.
- **Disputes Over Protocol:** Disagreements may occur over procedural matters such as the timing, format, or protocol surrounding the delivery of the address, leading to tensions between the Governor's office and the state government.
- **Power Struggles:** Conflicts may stem from broader power struggles between the Governor and the state government, especially if there are attempts to assert authority or influence over governance decisions or legislative processes.
- **Communication Breakdown:** Poor communication or lack of coordination between the Governor's office and the state government can exacerbate tensions and misunderstandings regarding the content and delivery of the customary address.

An Innovative Solution- British Model:

- The British model of Presidential address, often referred to as the "**Throne Speech**," is a concise and formal speech delivered by the reigning monarch at the opening of Parliament or immediately after a general election.
- Unlike the lengthy addresses common in some other countries, the Throne Speech typically outlines the broad policy objectives and legislative agenda of the government for the upcoming

parliamentary session. It **avoids excessive details**.

- Overall, the British model of Presidential address exemplifies a **balance between ceremonial tradition and practical governance**, providing a concise yet comprehensive overview of the government's agenda.
- **Former President R. Venkataraman** had proposed this model to the Union Government during his tenure but it was not taken up.

Conclusion

- Since political polarisation between the Centre which appoints Governors and the State which elects the Chief Minister is set to accelerate in the visualisable future, a way out has to be found. President Venkataraman's suggested solution gives us that way out.

13) Electoral Funding

(GS-II: Structure, Organization and Functioning of the Executive and the Judiciary—Ministries and Departments of the Government; Pressure Groups and Formal/Informal Associations and their Role in the Polity)

Context:

- The question of the funding of political parties goes to the heart of India's democracy.
- In the United States, elections revolve around the campaign machinery of individual candidates. But in India, like in most other parliamentary systems, parties are central to electoral politics.
- Thus, the primary focus of the campaign finance framework in India needs to be parties, not individual candidates.
- The **Supreme Court's judgement to strike down the electoral bond scheme** as unconstitutional raises

questions about the issues associated with the broader electoral funding problem.

Problems with Electoral funding in India:

- **Lack of Transparency:** Political parties often receive donations through undisclosed channels, such as cash contributions during political rallies or events, making it challenging to trace the true origins of funding.
 - The Electoral bonds scheme was struck down by the Supreme Court on concerns of transparency.
- **Influence of Black Money:** Illicit funds, including black money generated through illegal activities like corruption, tax evasion, or organised crime, can find their way into election campaigns. Allegations of politicians distributing cash, liquor, and other inducements to voters, suggesting the influence of black money in elections has become norm in all elections.
- **Loopholes in Regulations:** Existing laws and regulations contain loopholes that allow parties to circumvent donation limits and disclosure requirements. One such loophole is the **use of electoral trusts**, which are entities set up to collect and distribute donations to political parties.
 - **Amendments to the Companies Act (2013)** which accompanied the creation of electoral bonds allowed even a loss making company to buy electoral bonds. This could have led to creation of shell companies for the sole purpose of electoral funding. This amendment has been nullified by the Supreme Court now and reverted

back to the old rules which set a **cap on corporate funding of 7.5% of the average profit of the last three years.**

- **Influence of Corporates:** Corporate entities often make significant contributions to political parties, potentially influencing policy decisions in their favour. Critics argue that such donations create a conflict of interest, as parties may be inclined to prioritise the interests of their corporate donors over those of the general public.
- **Inadequate Enforcement:** The powers with the **Election Commission of India** are often insufficient oversight and accountability mechanisms to monitor election spending and ensure compliance with funding regulations, leading to abuses and misconduct. For instance, political parties frequently fail to submit accurate financial reports or disclose donations promptly, yet face minimal repercussions for non-compliance. This **lack of enforcement** undermines accountability and transparency in the electoral process.
- **Cash Transactions:** Cash transactions in electoral funding are prevalent, making it difficult to track and regulate donations effectively.
- **Foreign Funding:** There are concerns about the influence of foreign funding on Indian elections, with regulations often being insufficient to prevent such interference..
- **Role of Criminal Elements:** Criminal elements may use electoral funding to gain influence and further their own interests, undermining the democratic

process and public trust in governance. For instance, in some regions, there have been instances of politicians with criminal backgrounds using their financial resources to finance their election campaigns, raising concerns about the nexus between crime and politics.

Solutions to cleanse Political funding:

- **Implement Transparent Donation Reporting:** Adopt a comprehensive system where political parties are mandated to disclose all donations received, including the identities of donors and the amounts contributed. Drawing from international best practices, such as those seen in countries like **Canada** and the **United Kingdom**, this approach would enhance transparency and accountability in electoral funding.
- **Enforce Stricter Donation Limits:** Enforce stricter limits on the amount of money individuals, corporations, and other entities can donate to political parties by capping donations, India can mitigate the undue influence of wealthy donors and prevent the concentration of power in a few hands.
- **Public Funding for Political Parties:** Adopt a system of public financing for political parties, inspired by models seen in countries like Sweden and Norway. This approach would allocate government funds to parties based on their electoral performance, reducing their reliance on private donations and diminishing the influence of special interest groups.
- **Regulation on Corporate Donations:** Follow the example set by countries like Belgium and South Korea by prohibiting direct corporate donations to political

parties. Instead, encourage individual donations from employees or shareholders to promote transparency and prevent undue corporate influence in the political process.

- **Strengthen Enforcement Mechanisms:** Establish an independent regulatory body, modelled after successful oversight agencies in countries like the United States, tasked with monitoring and overseeing electoral funding activities. Strengthening enforcement mechanisms would ensure compliance with electoral funding regulations and deter illicit practices.
- **Limit Cash Transactions:** Implement restrictions on cash transactions in electoral funding by promoting electronic payment systems for donations above a certain threshold, India can track contributions more effectively and reduce the risk of black money infiltrating the electoral process.
- **Increase Public Awareness** campaigns to educate citizens about the importance of transparent and accountable electoral funding practices. Empowering citizens to demand transparency from political parties and hold them accountable for their funding sources is essential for a healthy democracy.
- **Promote Grassroots Funding:** Encourage political parties to diversify their funding sources by relying more on grassroots fundraising efforts. Taking inspiration from successful grassroots fundraising campaigns in countries like the United States, India can foster greater engagement with ordinary citizens

and reduce parties' dependence on large donors.

Conclusion

- Cleansing of electoral funding is important for reducing the role of money power in the electoral process. This can make the country more representative with fairer elections.

14) Farmer Protests- Need for focus on interest of Producers

(GS-III: Major Crops - Cropping Patterns in various parts of the country, - Different Types of Irrigation and Irrigation Systems; Storage, Transport and Marketing of Agricultural Produce and Issues and Related Constraints; E-technology in the aid of farmers)

Context:

- Farmers, largely from Punjab, are protesting on Delhi's borders.
- Agricultural scientist Ashok Gulati opines that the real issue behind farmer's protests is that farmers basically want significantly higher incomes.
- Gulati was a former chairman of the Commission for Agricultural Costs and Prices(CACP), the advisory body of the Government of India on food supplies and pricing policies.

Demands of the Farmers:

- The farmers' main demand is to make **minimum support prices (MSPs) legally binding** and fixing of MSPs according to the so-called **Swaminathan formula**.
- This formula suggested **50 per cent profit over comprehensive cost**, often referred to as **Cost C2**.
- This cost concept includes not only all the paid-out costs of farmers and imputed value of family labour (**Cost A2+FL**), but also **imputed rent on owned land and imputed interest on owned capital**.
- At present, the government sets MSP at **1.5 times the Cost of**

Production (CoP), where CoP is A2+FL.

- So, if the current formula is replaced by Cost C2 plus 50 percent margin, in most crops covered under MSP regime, the **MSPs will go up by 25 to 30 per cent.**
- The farmers have some other demands including **loan waivers, pension** for farmers and agricultural labourers, a **minimum wage rate of Rs 700/day** and allowing **MGNREGA** workers to work on farmers' fields.

Possible Impacts on accepting these demands:

- **Budgetary Strain:** Accepting farmers' demands, particularly those related to implementing the Swaminathan formula and making MSPs legally binding, could lead to increased government spending on agricultural subsidies and support programs. This could strain fiscal resources, potentially impacting allocations for other sectors such as education, healthcare, or infrastructure development.
- **Inflationary Pressure:** Implementing higher MSPs and other demands may lead to increased food prices, contributing to overall inflation. This could affect consumers' purchasing power and lead to a rise in the cost of living, especially for lower-income households.
- **Environmental Concerns:** Cropping area under the common MSP crops rice and wheat will increase leading to **increased water and fertiliser usage.** This could affect not only the quality of the **soil but also of the water bodies and ecosystem** dependent on it.
- **Market Dynamics:** Changes in MSPs and agricultural policies could impact market dynamics,

influencing investment patterns, **cropping choices, and supply chain operations.** This could lead to adjustments in the behaviour of farmers, traders, and consumers, potentially affecting market stability and competitiveness.

- **Economic Competitiveness:** The acceptance of farmers' demands could affect the competitiveness of Indian agricultural products in both domestic and international markets. Higher MSPs may lead to increased production costs, potentially **impacting exports and trade balances.**
- **Long-term Sustainability:** The impact of accepting farmers' demands should be assessed in terms of long-term sustainability. It's essential to consider whether the proposed measures would contribute to the overall resilience and viability of the agricultural sector in the face of evolving economic, environmental, and social challenges.
- **Policy Precedents:** Accepting farmers' demands may set precedents for future negotiations and demands from other sectors. It could influence the government's approach to policy making and its stance on issues related to agricultural pricing, subsidies, and support mechanisms.

Sustainable Suggestions- Focus on Producers:

- **Focus on Livestock, Fisheries, and Horticulture:** It would be interesting to note that the biggest agricultural produce of India is milk, and its value exceeds the value of paddy, wheat, all pulses, and sugarcane combined.
 - Livestock and horticulture together constitute more than 50 per cent of agri-

- produce, and they have been **growing without any MSP**.
- In fact, their **growth is much higher (5 to 8 per cent)** than the growth in cereals (1.8 per cent) over the **last two decades**.
 - Recognizing the potential of these sectors in enhancing farm incomes, a shift towards a well-integrated value chain approach is essential.
 - Models like the **Amul model** in milk production or **vertically integrated poultry** sectors can serve as examples.
- **Investing in Productivity and Market Access:** Augmenting productivity through investments in agricultural research and development (R&D) and irrigation infrastructure is crucial. Additionally, facilitating access to both domestic and international markets can increase farmers' income streams.
 - **Removing Trade Barriers** and Eliminating bans on agri-exports, lifting stocking limits on private trade, and revisiting subsidy policies can contribute to higher farm incomes.
 - **Subsidy Reorientation:** This entire gamut of subsidy policies needs a re-visit and reorientation where **75 per cent could be geared towards producers** in the form of a price stabilisation fund or policies like PM-Kisan, and only 25 per cent goes to well targeted vulnerable consumers.
 - The food subsidy of Rs 2.12 trillion and even the fertiliser subsidy of Rs 1.88 trillion (RE of FY24) is a pass on to consumers as it keeps the costs and thus MSP prices low.
 - Out of roughly Rs 47 trillion, subsidies in the agri-food space account for about Rs 5 trillion, of which 80 per cent is geared towards consumers to keep food prices low.
 - **Price Deficiency Payments (PDP)** systems through which the Central Government pays the difference between the MSP assured and the market price at which the produce was sold by the farmer.
 - This system does not put pressure on the Government to procure all the farm produce, does not distort the market, increase formalisation of the farm business and encourages State governments to create adequate infrastructure for farm marketing.
 - **Balanced Policy Making:** Policymakers must strive for a balanced approach that considers the interests of both producers and consumers. **Rational policy making**, devoid of political or emotional influence, is essential for ensuring sustainable improvements in farm incomes.

Conclusion

- Policy makers, in negotiating with the farmers, should ensure that both producers and consumers are given priority. Sustainable production methods of diverse crops at a profit to farmers and economical availability to the consumers should be the goals.

15) Empowering Single Women in India:

(GS-I: Role of Women and Women's Organization, Population and Associated Issues, Poverty and

Developmental issues, Urbanization, their problems and their remedies)

Context:

- An unmarried woman has approached the Supreme Court seeking the right to have a child through surrogacy as a single woman.
- This case has brought the interest on the problems faced by single women in India and solutions which can address these problems.

Problems faced by single women in India:

- **Social Stigma and Negative Stereotypes:** Single women encounter societal judgement and stereotypes regarding their marital status and desire for motherhood, often facing **assumptions of immaturity or selfishness.**
- **Safety and Security Concerns:** Single women in India often grapple with safety concerns, particularly in public spaces. They may face **harassment, stalking, and violence**, which can severely impact their mobility and sense of security. Additionally, the lack of effective legal recourse and societal attitudes that blame the victim can exacerbate these challenges.
- **Limited Access to Housing:** Securing safe and affordable housing can be difficult for single women, especially those who are financially disadvantaged or lack familial support. Discrimination from landlords and societal norms that **prioritise married couples as tenants** can further complicate their search for suitable accommodation.
- **Social Isolation and Loneliness:** Single women may experience social isolation and loneliness, particularly if they do not conform to traditional family structures. They may lack **social support**

networks and face difficulties in building meaningful relationships outside of marriage. This isolation can have detrimental effects on their mental health and well-being.

- **Systemic Discrimination in Legislation:** Laws and policies surrounding reproductive rights tend to disadvantage single women, such as the lack of acknowledgment of single status in abortion laws, leading to difficulties in accessing safe abortions.
 - **Legal Restrictions on Surrogacy and Reproductive Choices:** The **Surrogacy (Regulation) Act 2021**, permits only married couples or only a woman who is a **widow or divorcee between the age of 35 to 45 years** to have children through surrogacy.
 - It does not allow a single, never-married woman to use surrogacy for having children.
- **Challenges in Parenthood Rights:** Single women may face obstacles in asserting their rights as parents, including issues related to custody, adoption, and the societal expectation of having a partner for raising children.

Measures which can help Single women:

- **Legal Reforms and Enforcement:** Implement and enforce laws that protect the rights of single women, including laws against discrimination, harassment, and violence.
 - Strengthen **legal mechanisms** to ensure swift and effective justice for victims of gender-based violence.
 - Additionally, introduce policies that safeguard

single **women's rights to inheritance**, property ownership, and access to resources.

- **Social Support Networks and Community Programs:** Establish community-based support networks and initiatives specifically tailored to the needs of single women.
 - Create **safe spaces** where they can access social support, counselling, and skill-building workshops.
 - Foster **peer-to-peer networks** that facilitate solidarity, mentorship, and mutual assistance among single women.
- **Education and Awareness Campaigns:** Launch educational campaigns to challenge societal stereotypes and promote gender equality.
 - Raise awareness about the rights and challenges faced by single women, including issues such as safety, financial independence, and social stigma.
 - Integrate gender-sensitive education into school curricula and community outreach programs to foster a more inclusive and equitable society.
- **Housing and Urban Planning Reforms:** Implement policies to ensure affordable and safe housing options for single women.
 - Encourage the development of women-centric housing complexes equipped with security measures and support services.
 - Address discrimination in the housing sector by enforcing laws that prohibit landlords from denying

accommodation based on marital status or gender.

Conclusion

- By adopting these solutions and fostering collaboration between government agencies, civil society organisations, and local communities, it is possible to create a more supportive and inclusive environment for single women in India.

16) Transforming Indian agriculture through Horticulture

(GS-III: Major Crops - Cropping Patterns in various parts of the country, - Different Types of Irrigation and Irrigation Systems; Storage, Transport and Marketing of Agricultural Produce and Issues and Related Constraints; E-technology in the aid of farmers)

Definition

- Horticulture encompasses the commercial cultivation of fruits, vegetables, flowers, and ornamental plants.
- It involves practices such as planting, nurturing, and managing crops for commercial or aesthetic purposes, emphasising sustainable and specialised techniques.
- In the event of the Farmer's protest, different avenues to give assured and enhanced income to the farmers are explored. Horticulture gives good hope in this direction.

Opportunities provided by Horticulture:

- **Increased Income Potential:** Horticulture offers Indian farmers the opportunity to earn higher and more stable incomes compared to traditional field crops, due to higher value and demand for fruits, vegetables, and ornamental plants.
- **Long term demand:** As we look ahead to 2030 and beyond, the focus of the Indian diet is shifting from mere calorie security to a

nutrition-secure mindset, leading to an increase in per capita consumption of Fruit and Vegetables (F&V).

- **Diversification of Crops:** Farmers can diversify their crop portfolio by integrating horticulture alongside traditional crops, reducing risks associated with market fluctuations and climate variability.
- **Year-round Revenue Streams:** Unlike seasonal field crops, horticultural produce often allows for year-round harvesting and sales, providing farmers with a more consistent and steady income stream throughout the year.
- **Access to Value-added Markets:** Horticulture enables farmers to access value-added markets such as export markets and food processing industries, creating opportunities for higher profitability and economic growth.

Challenges in adoption of Horticulture:

- **Inadequate Knowledge and Training:** Many Indian farmers lack adequate knowledge and training in horticultural practices, including crop management, pest control, and post-harvest handling, hindering their ability to successfully adopt these techniques.
- **Limited Access to Quality Inputs:** Access to high-quality **seeds, fertilisers, pesticides,** and other inputs required for horticulture is often limited in rural areas, leading to decreased productivity and profitability for farmers.
- **Market Instability:** Farmers may face challenges in accessing stable and lucrative markets for their horticultural produce, leading to price fluctuations and income uncertainties.
- **Climate Vulnerability:** Horticulture is highly sensitive to

climate variability, including extreme weather events such as droughts, floods, and unseasonal rainfall, which can damage crops and disrupt production cycles.

- **Land Fragmentation:** Small landholdings and fragmented land ownership patterns prevalent among Indian farmers can make it challenging to adopt horticultural practices that require larger areas of land for cultivation.
- **Infrastructure Deficiencies:** F&V products are susceptible to high wastage. Inadequate **storage, transportation, and market linkages,** can impede the adoption and success of horticulture by Indian farmers.
- **Pest and Disease Management:** Horticultural crops are often susceptible to a wide range of pests and diseases, and farmers may lack access to effective and affordable pest management solutions, leading to yield losses.
- **Financial Constraints:** The initial investment required for establishing horticultural crops, such as land preparation, planting materials, and infrastructure development, can be prohibitive for many smallholder farmers, limiting their ability to adopt these practices.

Ways to improve Horticulture adoption:

- **Government efforts: Mission for Integrated Development of Horticulture (MIDH):** It is a Centrally Sponsored Scheme for the holistic growth of the horticulture sector covering fruits, vegetables, root & tuber crops, mushrooms, spices, flowers, aromatic plants, coconut, cashew, cocoa and bamboo.
 - **Rashtriya Krishi Vikas Yojana** gives support for

vulnerable farmers in developing horticultural crops.

- **Subsidies and Financial Support:** Provide financial support to farmers for the adoption of horticultural practices, like high-quality seeds, fertilisers, pesticides, and equipment.
 - Affordability and accessibility of quality inputs round the year will be helpful.
 - Additionally, introduce low-interest loans and credit facilities tailored specifically for horticulture development.
- **Infrastructure Development:** Invest in the development of essential infrastructure for horticulture, such as irrigation systems, cold storage facilities, transportation networks, and market infrastructure.
 - Adoption of solar-powered equipment, water conservation, diversified cropping, and bio-based inputs contribute to sustainability.
- **Innovations and research:**
 - Seed innovations, including high-quality hybrids, can enhance shelf life and productivity.
 - Integrated farming models show promise for climate-resilient agriculture.
 - Allocate resources for research and development initiatives focused on developing high-yielding and climate-resilient horticultural varieties suitable for the particular agro-climatic conditions.

- **Market Linkages and Price Stabilization Measures:** Facilitate market linkages for farmers by establishing **farmer-producer organisations (FPOs), cooperatives, and agri-business partnerships.**

- Implement price stabilisation measures such as Price Deficiency Payment(PDP) and market intelligence systems to ensure fair prices for horticultural produce and reduce market volatility.

Conclusion

- Multi-stakeholder partnership, among farmers, government, customers, industry, academia/research need to be strengthened to achieve holistic growth in the sector. As the nation charts its course to become a global F&V hub, the journey will be marked by collaborative efforts and a shared commitment to drive real income and livelihood growth for India's smallholder farmers.

17) Dependency Syndrome

(GS-II: Functions and Responsibilities of the Union and the States, Issues and Challenges Pertaining to the Federal Structure, Devolution of Powers and Finances up to Local Levels and Challenges Therein)

Definition:

- Dependency syndrome refers to a situation where local self-governing (LSG) bodies, like Panchayati Raj institutions, **rely heavily on external sources of funding**, particularly **grants from central and state governments**, rather than generating their own revenue through local taxation and other means.
- Recent report by the **Reserve Bank of India on the finances of**

Panchayati Raj Institutions for 2022-23 says that Panchayats earn only 1% of the revenue through taxes”, with the rest being raised as grants from the State and Centre.

- It specifically points out that **80% of the revenue is from the Centre and 15 % from the States.**
- This is an eye-opener for the proponents of decentralisation as the net result is that the revenue raised by panchayats is meagre even after 30 years of devolution initiatives.

Reasons for meagre own revenue generation by LSGs:

- **Limited Administrative Capacity:** Many LSGs lack the administrative capacity to implement effective revenue generation strategies. This includes deficiencies in personnel, training, and technology needed to assess, collect, and manage revenue efficiently.
- **Inadequate Legal Framework:** LSGs often operate within legal frameworks that constrain their authority to levy taxes or generate revenue from various sources.
- **Reluctance of State Governments:** 73rd amendment has given the State Legislatures, the responsibility of creating laws to widen the **own source of revenue (OSR)** of LSGs. These legislations vary widely between states and very few states have given broader powers to LSGs.
 - In Kerala, the average revenue raised by each panchayat was over ₹60 lakh in 2022-23 and on the other hand it was less than ₹6 lakh in Andhra Pradesh, Haryana, Mizoram, Punjab, and Uttarakhand.
- **Low Compliance and Enforcement:** Weak enforcement mechanisms and low compliance

levels contribute to poor revenue collection. Inadequate monitoring, lax enforcement of tax laws, and widespread tax evasion diminish the effectiveness of revenue generation efforts.

- **Dependence on Intergovernmental Transfers:** LSGs heavily rely on intergovernmental transfers, such as grants from central or state governments, through the Finance Commission.

- In 2022-23, each panchayat earned just ₹21,000(National average) as its own tax revenue and ₹73,000 as non-tax revenue. In contrast, each panchayat earned about ₹17 lakh as grants from the Central government and more than ₹3.25 lakh as grants from the State governments.

- **Political Considerations:** Elected representatives may **prioritise short-term political gains over long-term fiscal sustainability**, leading to reluctance in imposing taxes or fees that could be unpopular among constituents.

Ways to improve revenue raising capability of LSGs:

- **Legislative backing at the State level:** A comprehensive law should be created in all states based on best practices from states like Kerala should be created. Such a law can empower LSGs with greater fiscal autonomy and authority to levy taxes and fees.
- **Capacity Building and Training:** Provide comprehensive capacity-building programs and training for **elected representatives and officials** to enhance their skills in revenue assessment, collection, financial management, and enforcement. This includes training

on modern tax administration techniques, financial planning, and budget management.

- **Technology Adoption:** Embrace **technology-driven solutions** such as digital payment systems, online tax filing platforms, Geographic Information System (GIS) mapping for property tax assessment, and data analytics for revenue forecasting and compliance monitoring. Leveraging technology can improve efficiency, transparency, and accountability in revenue administration.
- **Public Awareness to reduce Political considerations:** Launch public awareness campaigns to **educate citizens about the importance of contributing to local revenue generation** and the benefits of investing in local development initiatives.
- **Participation of Citizens:** Encourage citizen participation in budgeting processes, public consultations on tax policies, and community-driven revenue generation projects.
- **Economic Development Initiatives:** Implement economic development initiatives to diversify the local economy and stimulate growth, thereby expanding the tax base and generating additional revenue. This may include promoting entrepreneurship, supporting small and medium-sized enterprises (SMEs), attracting investment, and developing infrastructure to attract tourism and industries.
- **Performance-Based Incentives:** Introduce performance-based incentive mechanisms to reward LSGs that demonstrate effective revenue generation and financial management practices. This can lead to a healthy competition

among various LSGs, leading to excellence.

Conclusion

- **Mahatma Gandhi** envisaged India's villages as "**Mini Republics**". This dream of the father of the nation can come true only when the LSGs have adequate power and responsibility. Coming out of dependency syndrome is one step in that goal.

18) Financial Devolution

(GS-II: Functions and Responsibilities of the Union and the States, Issues and Challenges Pertaining to the Federal Structure, Devolution of Powers and Finances up to Local Levels and Challenges Therein)

Context:

- Recently various Opposition-ruled States especially from south India have claimed that they have not been receiving their fair share as per the present scheme of financial devolution.
- They have raised issues about their less than proportionate share of receipt in tax revenue when compared to their contribution towards tax collection.

What is a divisible pool of taxes?

- **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.**
- This division is based on the **recommendation of the Finance Commission (FC)** that is constituted every five years as per the terms of **Article 280**.

- The divisible pool, however, does not include cess and surcharge that are levied by the Centre. .

What is 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 which is Haryana. 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.
- 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 neglected when it comes to distribution of resources.
- **Cess and Surcharges** collected by the Union government is estimated at **around 23%** of its gross tax receipts for 2024-25, which **does not form part of the divisible pool and hence not shared with the States.**
 - Cess like the GST compensation cess is for the repayment of loans taken to compensate States for the shortfall in tax collection due to GST implementation for the period 2017-22. Some of these amounts are also used for centrally sponsored schemes that benefit the States.
 - However, the States have no control over these components.
- **Contribution vs Getting back:** The amount each State gets back for every rupee they contribute to Central taxes shows steep variation.
 - It can be seen that industrially developed States received much less than a rupee for every rupee they contributed as against States like Uttar Pradesh and Bihar.
 - This is partly due to the fact that many corporations are headquartered in these State capitals where they would remit their direct taxes. However, this variation can also be attributed to the difference

What are the issues?

in GST collection among various States.

- **Decreasing share in divisible pool of some states:** The percentage share in the divisible pool of taxes has been reducing for southern States over the last six FCs.
 - This is attributable to the higher weightage being given for equity (income gap) and needs (population, area and forest) than efficiency (demographic performance and tax effort).
- **Grant in Aids:** Grants-in-aid as per the recommendation of the FC varies among various States.
 - As per the 15th FC, there are revenue deficit, sector-specific and State-specific grants given to various States as well as grants to local bodies that are given based on population and area of States.

What can be the way forward?

- **Role of FC:** The FC and its recommendations are meant to assess the imbalance and propose a fair sharing mechanism.
- **Reforms in Cess and surcharges:** 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.
- **Expansion of Efficiency criteria:** 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**.
- **A comprehensive organisation:** 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.

Conclusion

- 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.

19) Regional benches of Supreme Court

(GS-II: Structure, Organization and Functioning of the Executive and the Judiciary—Ministries and Departments of the Government; Pressure Groups and Formal/Informal Associations and their Role in the Polity)

Definition:

- Regional benches in the Supreme Court of India refer to the establishment of **additional court locations outside of the principal bench in Delhi**, with the aim of decentralising the appellate jurisdiction of the Supreme Court.
- These regional benches would hear appeals from specific regions of the country, thus reducing the burden on the main court in Delhi and

providing greater accessibility to justice for litigants across the nation.

- **The 229th Report of the Law Commission(2009)** has recommended creation of 4 regional benches of the Supreme Court at **Delhi, Chennai or Hyderabad, Mumbai and Kolkata for hearing non constitutional cases.**

Advantages of having regional benches:

- **Improved Access to Justice:** Regional benches would make the Supreme Court more **accessible to individuals residing in different parts of the country**, reducing the need for litigants to travel long distances to Delhi.
 - This would particularly benefit those from remote or economically disadvantaged regions who may face challenges in accessing legal representation and court proceedings.
- **Reduction of Caseload:** At present, around **80000 cases are pending** before the Supreme Court. Regional benches can help alleviate the overwhelming caseload burdening the main court in Delhi.
 - This redistribution of cases would lead to more efficient case management, faster disposal of appeals, and ultimately, a reduction in case backlog, thereby enhancing the overall efficiency of the judicial system.
- **Geographical Representation:** Regional benches would ensure that legal disputes from **diverse regions of the country** are heard by judges familiar with the local socio-cultural and legal nuances.

- This can lead to more contextually informed decisions, promote regional diversity in judicial proceedings, and enhance the legitimacy and acceptance of court rulings among different communities.

- **Promotion of Legal Talent:** Establishing regional benches would create opportunities for legal professionals, including lawyers and judges, in various parts of India.

- This decentralisation can lead to the growth of legal infrastructure and vibrant Bars, the emergence of vibrant legal communities in different regions, and the nurturing of local legal talent, ultimately enriching the legal profession and promoting legal literacy nationwide.

Possible Issues with creation of Regional benches:

- **Conflicting Precedents:** Regional benches may lead to divergent interpretations of laws and conflicting precedents across different regions, thereby **undermining the consistency and coherence of the legal system.**
 - Resolving such conflicts could pose challenges and may require additional mechanisms for judicial coordination and harmonisation.
- **Infrastructure and Resource Constraints:** Establishing regional benches would necessitate significant investment in infrastructure, including court facilities, administrative support, and housing for judges.

- Ensuring adequate resources and staffing for these new locations could strain the judiciary's budget and administrative capacity, particularly in less developed regions.
- **Logistical Complexity:** Managing a decentralised system with multiple regional benches would introduce logistical complexities in case management, scheduling, and coordination among judges, lawyers, and litigants.
 - Coordinating hearings, transferring case records, and ensuring consistent procedural standards across different locations may present logistical challenges.
- **Potential for Regionalism and Bias:** Regional benches may inadvertently foster regionalism and biases in judicial decision-making, as judges may be influenced by local politics, interests, or sentiments.
 - This could undermine the impartiality and neutrality of the judiciary, raising concerns about fair and equitable justice delivery.

Conclusion

- A Centralised Coordination Mechanism to oversee regional benches can help mitigate potential conflicts and ensure consistency in legal interpretation and decision-making. This mechanism could involve regular communication, coordination meetings, and the exchange of precedents and judgments among regional benches to promote uniformity in jurisprudence. Such a mechanism should be ensured before setting up regional benches of the Supreme Court.

20) India- Middle East Economic Corridor

(GS-II: Bilateral, Regional and Global Groupings and Agreements involving India and/or affecting India's interests)

Context:

- As the Red Sea crisis enters its fourth month, global supply chains are increasingly grappling with inflated freights, delayed vessel schedules, and product shortages. It has once again brought to the fore the vulnerabilities of global supply chains, highlighting the need to revisit alternate routes for global trade.
- At this juncture, the study about the relevance of IMEC becomes necessary.

What is IMEC?



- On the sidelines of the G20 Leaders' Summit (Sept. 2023), Leaders of India, European Union, France, Germany, Italy, Saudi Arabia, UAE and US announced an MOU committing to work together to develop a new India-Middle East-Europe Economic Corridor (IMEC).
- The IMEC will comprise **two separate corridors**,
 - **the east corridor connecting India to the Gulf and**
 - **the northern corridor connecting the Gulf to Europe.**

- The corridor will provide reliable and cost-effective **cross-border ship to rail transit networks to supplement existing maritime routes.**
- It intends to increase efficiency, reduce costs, secure regional supply chains, increase trade accessibility, enhance economic cooperation, generate jobs and lower greenhouse gas emission, resulting in a transformative **integration of Asia, Europe and the Middle East (West Asia).**

Current status of IMEC- Challenges:

- **Lack of Committed investments:** Apart from the MoUs, there have not been any investments or operations regarding the corridor.
- **Multi nation transit:** Multiple Countries are involved which can make the cross border movement of cargo slow and tedious.
- **Israel-Palestine conflict** has put a pause on the normalisation of Arab-Israel relations which is a key element of the multi-nation initiative.
- **Vulnerability of the Strait of Hormuz:** The entire trade of the IMEC architecture flows through the Strait of Hormuz and with Iran's proximity and control over the strait, the risk of disruptions remain very high.

How can the IMEC be made viable?

- **Quantification of economic costs and benefits:** An empirical study on the economic benefits of the corridor needs to be conducted.
 - The corridor is estimated to cut the journey time from India to Europe by 40% and slash transit costs by 30%.
 - However, there are speculations that **multiple handling of cargo and multi-nation transit** would

increase carriage and compliance costs.

- Therefore, it is critical to quantify the economic advantages of the corridor to attract more stakeholders.
- **Inclusion of Oman:** The Strait of Hormuz problem can be avoided by including Oman in the IMEC architecture and keeping the supply chain away from Iran's reach.
- **Financial Support systems:** A robust financial framework needs to be in place. Since there are **no binding financial commitments** on any of the signatories of the corridor, investments will have to be attracted from governments, international organisations, and private sector entities.
- **A comprehensive multi-nation operational framework** is needed. As the corridor involves facilitating trade across **different legal systems**, a multi-national framework is necessary.
 - A forum for the corridor needs to be constituted to undertake the aforementioned activities.

Conclusion

- As global supply chains are battling delayed shipments and rising costs, China is actively projecting China-Europe freight trains, which are part of the Belt and Road Initiative (BRI), as an alternate route. This situation makes IMEC more relevant to India than any other country.

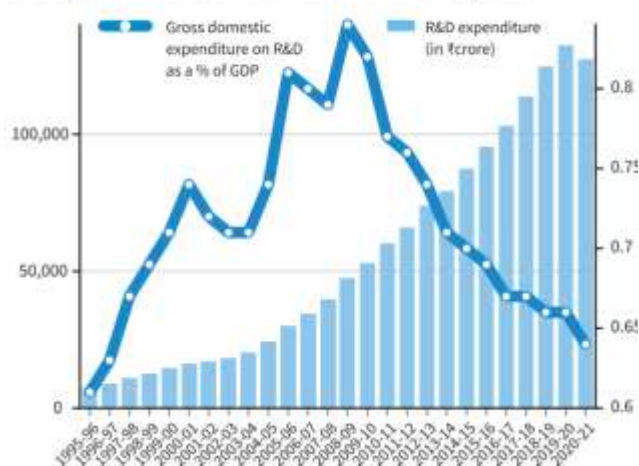
21) India's Research and Development expenditure

(GS-II: Achievements of Indians in Science & Technology; Indigenization of Technology and Developing New Technology)

Context

- India's R&D expenditure as a percentage of GDP is relatively low compared to other countries. In the recent past, India's research and development (R&D) expenditure has dropped to the current 0.64% of GDP from 0.8% in 2008-2009 and **0.7% in 2017-2018**, while most developed countries spend between 2% to 4% of their respective GDPs.

Chart 1 : The chart shows the year-wise national expenditure on R&D in ₹ crore (left axis) and the gross domestic expenditure on R&D as a share of GDP (right axis)



surveys, should be pursued vigorously

- **Encourage Private Sector Participation:** India should create a conducive environment for private sector investment in R&D. This could involve offering tax incentives, streamlining regulatory processes, and ensuring protection of intellectual property rights.
- **Establish Clear Regulatory Framework:** Ambiguities in regulatory processes can deter private investment in R&D. India should work on creating clear and predictable regulatory frameworks to boost investor confidence.
- **Capacity Building:** Strengthening bureaucratic capacity within government agencies is crucial for efficient evaluation, allocation, and monitoring of R&D funds. This includes streamlining processes for grant disbursements and ensuring timely execution of projects.
- **Implement Anusandhan National Research Foundation:** The delay in implementing the Anusandhan National Research Foundation needs to be addressed, and the remaining budget from private sources should be raised as planned. This foundation could potentially address some of the financial challenges in R&D.
- **Enhance Budget Utilisation:** Efforts should be made to improve the utilisation of allocated R&D funds. This requires effective planning, implementation strategies, and monitoring mechanisms to ensure optimal utilisation of resources.
- **Political Will and Prioritization:** There needs to be a strong political will to prioritise R&D spending as a critical driver of India's development journey. This prioritisation should be reflected

not only within science and technology ministries but also in the Ministry of Finance.

- **Incentivize Foreign Direct Investment (FDI):** Relaxation of FDI norms in R&D-intensive sectors can attract foreign investment and technological expertise, contributing to India's R&D ecosystem.

Conclusion

- Implementing these measures, can help India to achieve sustainable funding for science and technology, thereby accelerating its journey towards becoming a science power by 2047.

22) Early Childhood Care and Education

(GS-II: Issues Relating to Development and Management of Social Sector/Services relating to Health, Education, Human Resources)

Context

- Early childhood care and education (ECCE) encompasses **nurturing, education, and support provided to children from birth to around six years old**, crucial for their holistic development and future success.

Need of ECCE:

- **Foundation for Lifelong Learning:** ECCE lays the groundwork for future academic success by fostering cognitive, social, emotional, and physical development in children.
- **Promotes Equity:** Access to quality ECCE can help mitigate disparities by providing all children, regardless of socioeconomic background, with a strong start in life.
- **Enhances Social Skills:** Early interaction with peers and caregivers in ECCE settings helps children develop essential social

skills like cooperation, empathy, and communication.

- Nobel Laureate Heckman's Perry Preschool study found that children who received high quality ECCE grew into less violent adults — stronger socio-emotional skills built early might even help prevent later student suicides
- **Prepares for School:** ECCE programs prepare children for formal schooling by instilling routines, basic literacy and numeracy skills, and a love for learning.
- **Supports Economic Development:** Investing in ECCE yields long-term economic benefits by producing a skilled workforce, reducing healthcare and social costs, and fostering innovation and productivity.

Measures to improve the quality of ECCE:

- **Research and Evidence-Based Policy:** Conduct systematic research in the Indian context to understand the impact of ECCE interventions, including the Anganwadi system, on child development outcomes and the macroeconomic implications. Utilise evidence-based findings to inform policy decisions and allocate resources effectively.
- **Investment in Infrastructure:** Allocate resources towards improving infrastructure in ECCE centres, ensuring they have safe, stimulating, and child-friendly environments conducive to learning and development.
- **Teacher Training and Capacity Building:** Provide comprehensive training and professional development opportunities for ECCE educators to enhance their

skills in child development, teaching methodologies, and classroom management.

- **Curriculum Enhancement:** Develop and implement a culturally relevant and age-appropriate curriculum that focuses on holistic child development, including cognitive, social, emotional, and physical domains.
- **Monitoring and Evaluation:** Establish robust monitoring and evaluation mechanisms to assess the quality and effectiveness of ECCE programs, including regular assessments of child outcomes, teacher performance evaluations, and feedback mechanisms for continuous improvement.

Conclusion

The path from developing to developed countries is paved with human development investment, and the earlier it is the better. If we want India's women to work and India's children to thrive, investing in ECCE is the way forward.

23) Rare Diseases

(GS-II: Welfare Schemes for Vulnerable Sections of the population by the Centre and States and the Performance of these Schemes; Mechanisms, Laws, Institutions and Bodies constituted for the Protection and Betterment of these Vulnerable Sections)

Context:

- Rare Diseases day, the last day of February every year is consecrated to support crores of individuals who, because of their rare medical conditions, have long been neglected and stigmatised.

Definition:

- Rare diseases refer to medical conditions that affect a small percentage of the population, typically fewer than 1 in 1,000 individuals. Despite their low prevalence, these disorders

collectively impact millions worldwide.

Problems in treating rare diseases:

- **No proper definition:** The **National Policy for Rare Diseases (NPRD)** does not define 'rare diseases', a problem which the policy attributes to a lack of sufficient data.
- **Delayed Diagnosis:** Lack of awareness and expertise often leads to delayed diagnosis, causing prolonged suffering and uncertainty for patients.
- **Limited Treatment Options:** Less than 50% of the 450-odd rare diseases identified in India are treatable. Treatments approved by the Drugs Controller General of India are available for just about 20 rare diseases and can be availed only from Centres of Excellence (CoEs).
- **Financial Constraints:** High costs of treatment and limited insurance coverage make accessing specialised care and medications difficult for patients and their families.
- **Unequal Access to Care:** Disparities in healthcare infrastructure and resources result in unequal access to specialised centres and expertise across different regions of the country.
 - CoEs are few (12), unevenly distributed, and uncoordinated, late diagnosis, inadequate therapies and lack of timely availability are the norm
- **Insufficient Funding:** The Budget's allocation for rare diseases, although increasing over the years, remains low at ₹93 crore for 2023-2024, with previous years having seen reductions of up to 75% from the Budget Estimate stage to the Revised Estimates and

an even worse reduction of 90% in actual expenditure.

- Under the NPRD guidelines, up to ₹50 lakh is allowed per patient, which will be disbursed to the concerned CoE. As chronic rare diseases usually require lifelong management and therapy, this amount is woefully inadequate. Consequently, the CoEs are wary of beginning any treatment that they may need to suspend later, leaving them vulnerable to judicial action from patients and their kin.
- **Lack of Coordination:** Fragmented healthcare systems and inadequate coordination among healthcare providers impede comprehensive care for rare disease patients.
- **Regulatory Hurdles:** Regulatory barriers, such as complex approval processes and limited availability of orphan drugs, hinder the development and accessibility of treatments for rare diseases.

Solutions to reduce rare disease burden:

- **What can the Government do?**
 - It is imperative for the Central government to frame a standard definition of rare disease and increase budgetary outlays.
 - The government must incentivise domestic manufacturers under the Production-Linked Incentive Scheme, reduce clinical trial requirements in appropriate cases, and look into options such as repurposed drugs and bulk-import.
 - Drug affordability can be increased by complete

waiving of GST for all life saving drugs.

- **Increased Awareness and Education:** Implement nationwide campaigns to raise awareness among healthcare professionals, policymakers, and the public about rare diseases, their symptoms, and available resources for diagnosis and treatment.
- **Specialized Centers of Excellence:** Establish more Centers of Excellence (CoEs) across the country equipped with expertise in diagnosing and treating rare diseases, ensuring equitable access to specialised care for all patients.
- **Financial Support and Insurance Coverage:** Expand financial assistance programs and insurance coverage to alleviate the financial burden on patients and families, making essential treatments and medications more accessible.
- **Research and Drug Development:** Allocate additional funding for research and drug development initiatives focused on rare diseases, incentivizing domestic manufacturers and streamlining regulatory processes to expedite the approval of orphan drugs.
- **Collaboration and Coordination:** Foster collaboration among healthcare providers, researchers, pharmaceutical companies, and government agencies to improve coordination and knowledge-sharing, enhancing the effectiveness of rare disease management strategies nationwide.

Conclusion

- These steps can significantly improve the management and treatment of rare diseases in India, providing much-needed relief to millions of individuals and their

families affected by these conditions.

24) Where is the snow?

(GS-III: Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment)

Context

- **Dry winters** across Himalayan states are indicative of disastrous consequences on **crop production** and **livelihoods** of people.
- The **Western Disturbance**, which is responsible for the winter rainfall in northwest India, has been weakening.

Western Disturbances

- **Western Disturbances** are **cyclonic storms** that form over **land**, and they occur mostly in the **Mediterranean region** due to a temperature gradient caused by the **mixing of warm air from the tropics and cold air from the northern polar regions**.
- It is a **non-monsoonal precipitation pattern** driven by the **westerlies**.
- The **moisture** in these storms usually originates over the **Mediterranean Sea, the Caspian Sea and the Black Sea**.
- Western disturbances are more frequent and strong in the **winter season**.

Indian Context

- While the storm systems occur throughout the year, they travel to India mostly between December and April because the trajectory of the **subtropical westerly jet stream**, which transports them, shifts during the **winter months** to the **rim** of the **Himalayas**.
- For the rest of the year, the jet stream travels from above the **Himalayas** to the **Tibetan Plateau** and **China**.

- The **trajectory** of the jet stream changes as per the **position** of the **Sun**.
- The jet stream appears over **northern India** in October after the **withdrawal of monsoon** and shifts progressively southwards in the winter months.
- It reaches its southernmost position in February and moves out of the subcontinent after May.

Factors influencing western disturbances

- **El Nino and La Nina**
 - For the past three years, the world has been in a La Niña phase (cooling of ocean surface temperature in the Pacific Ocean).
 - It **weakens the temperature gradient** for the formation of Western Disturbances as it reduces the temperature of the **hot tropical air**.
 - Western disturbances are generally **weaker** during the **La Niña**, which produces a **drier winter**, while during **El Niño**, they are more **intense**.
- **Northern Oscillation**
 - It is a random fluctuation of air pressure over the **North Atlantic Ocean** due to a **high-pressure region** above the **Azores Islands** and a **low-pressure region** over **Iceland**.
 - It is currently in a **negative phase** and it reduces the **frequency** and **intensity** of **Western Disturbances**.
- **Subtropical westerly jet stream**
 - It is the **wind system** which brings Western Disturbances to India.
 - The jet stream is **shifting northwards** during

winters, which reduces **winter precipitation** in northwest and central India, and southwards during summers, increasing the chances of extreme **rainfall events**.

Impact of western disturbances on India

- They bring moderate to heavy rain in **low-lying areas** and **heavy snow** to **mountainous areas** of the Indian Subcontinent.
- They bring **pre-monsoon showers** and **winters** in **Northwest India**.
- They are primarily important for the cultivation of **Rabi crops**.
- Western Disturbances are also the primary source of snowfall that replenishes the **Himalayan glaciers** during winter.
- They can also cause extreme weather events like **floods, flash floods, landslides, dust storms, hail storms**, and **cold waves**, causing damage to life and property.

Conclusion

- In the upcoming years it is essential to strengthen **monitoring systems** and **weather forecast models**.
- There is also a need to build **disaster resilient infrastructure** to withstand climate change calamities in the near future.

25) What Ails the Hills

(GS-III: Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment)

Context

- Himalayan states require **comprehensive development plans** to tackle the threats posed by **population pressure** caused by **tourism** and **waste generation**.

Indian Himalayan Region (IHR)

- The IHR is susceptible to calamities like **landslides** and **earthquakes**

as it is formed due to the collision of **Indian** and **Eurasian plates**, and the northward movement of the former puts continuous stress on the **rocks**, rendering them weak and prone to **natural calamities**.

- The ecologically sensitive **Himalayan Region** is witnessing further degradation caused by increased **population pressure** on land.
- Infrastructure projects have increased the incidences of **man-animal conflict** and have altered the **flow of rivers**.
- **Water shortages** and **poor sanitation facilities** have increased **out of pocket expenditure** amongst poor families in the Himalayan Region.

Impact of drying up of springs

- Himalayan springs form the **base flow of rivers** such as the **Ganga**, **Yamuna**, and **Brahmaputra**. **Drying up** of springs will cause the **base flow** of the river channels to **drop**, especially during **summer**.
- **Acute water stress** in the IHR affects the **livelihood** of **mountain communities** dependent on **spring water**.
- The drying springs will further add to the **work burden** of **women** since they are forced to manually carry water from springs during the **lean season**.

Impact of mass tourism in IHR

- **Tourism** in the region is **greater** during **summer** than the **winter**, which translates to **greater anthropogenic pressure** on existing **infrastructure** and local resources during the hotter months.
- The **higher density** of native and floating populations in IHR leads to more generation of **solid waste**, **ambient air pollution**, **water pollution**, and **deforestation**.

- In winter, the influx of people and vehicles and other allied activities also contributes to the shift seen in **snowfall** and **melting patterns** due to **climate change-related impacts**.
- As a consequence of all these adverse pressures, **local communities** and **resources** of the **Himalayan region** are at **great risk**.

Combating Pollution

- IHR generates a large amount of **solid waste**, much of which is **biodegradable** in nature. It is suggested to use **microbial bio-composting**.
- **Psychrophilic** and **mesophilic bacteria** which grow in moderate to cold conditions can be used to break down the **biodegradable waste** into **bio-compost**.
- Air pollution in the region can be addressed by creating **green belts** using locally available **tree species** that can help remove pollutants suspended in the air.
- Introducing **electric vehicles**, and using **non-conventional energy sources** like **solar**, **geothermal**, and **wind power** can be implemented to combat **regional-level ambient air pollution**.

Need of sound planning in IHR

- There is a need to understand the **effect of slope**, **drainage** and **cover** (high vegetation and forest land) on the stress that an area can take, based on which regions fit or unfit for construction can be determined.
- With rise in extreme weather events like floods and landslides, **Projections** and **simulations** are needed to **gauge climate exposure** and map **vulnerable areas**.
- **Development regulations** in **hilly areas** should take into consideration, mainstreaming **risk-**

likelihood and **cumulative impact assessments**.

Conclusion

- Any **sustainable approach** undertaken to protect and preserve the pristine Himalayan ecosystem should involve the **participation of local communities**.
- There is a need to encourage **skill** and **capacity-building programs** to spread awareness among different **stakeholders** on sustainable and economic solutions to threats posed by **mass tourism** in the IHR.

Model Questions

1. Critically examine the potential applications of AI in enhancing efficiency, transparency, and citizen participation in Indian governance.
2. Discuss the importance of modern storage technologies in reducing food spoilage in India.
3. Rising use of social media by children creates new avenues of vulnerabilities. Explain the issue and provide practical suggestions to address it.
4. Prolonged internal tensions in Myanmar can lead to problems for India. Elaborate.
5. In recent years, National Crime Records Bureau (NCRB) reports show the rising numbers of student suicide in India. Identify the causes and suggest solutions to address this problem.
6. Define Deep tech. What benefits can India reap from this sector?
7. The novel concept of Neuralink has both likes and dislikes. Examine.
8. India has been entangled in the problem of creating Bilateral Investment treaties with different countries. Explain with suitable steps which can help in solving the problem.
9. Year after year India and UAE strengthen their robust relationship. Justify.
10. Man-Animal conflicts are a cause of concern for both people and animals. Elaborate.
11. Focus on High Skill Services (HSS) can help accelerate India's development journey. Critically Examine.
12. In recent years, many state Governors in India are in news due to conflicts with the elected State Governments. Examine the reasons for these conflicts and give ways to solve them.
13. Cleansing of Electoral funding has been a problem in India in the last few decades. Explain with suitable solutions.

14. Farmer protests have grown to be a concern in different states of the country. What pushes farmers to protest? Propose few practical solutions to help the farmers.
15. Elaborate on the hurdles which a single woman has to cross in Indian society.
16. Explain the role of Horticulture in improving the agricultural landscape in India.
17. Define Dependency Syndrome in Indian governance setup. Examine its causative factors and provide valid solutions to address them.
18. Many states in India had recently raised the concern of not receiving their fair share in the financial devolution by the Union Government. Analyse.
19. Critically examine the recommendation to create regional benches of the Supreme Court to ensure faster justice delivery.
20. Elaborate on the idea of India-Middle East-Europe Corridor (IMEC) and its viability.
21. Research and Development Expenditure of India as a percent of GDP is very less when compared to countries like USA and China. Even this expenditure is marred with different issues. Explain.
22. Explain the need of Early Childhood Care and Education (ECCE) in India's developmental process.
23. Discuss the problems of patients affected by rare diseases and suggest some solutions to address the problems.
24. What are the impacts of weakening of western disturbances on the Indian subcontinent?
25. While throwing light on the impacts of mass tourism in the Indian Himalayan region, analyze the need for sustainable and sound planning to allow the IHR to preserve its pristine nature.