

PATRIOTIC IAS

CURRENT AFFAIRS

BIMONTHLY

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Polity and Governance

1. Fundamental Rights/DPSP/FDs:

1.1. A chance to settle a constitutional clash:

- **Why in news** - The top court has a chance, in Property Owners Association vs State of Maharashtra, to resolve the clash between fundamental rights and Directive Principles of State Policy.
- The case revolves around two crucial questions:
- **What does the term "material resources of the community" in Article 39(b) of the Constitution signify?**
- **Are laws aimed at fulfilling the objective outlined in Article 39(b) immune from challenges based on the fundamental rights to equality and freedom?**
- The second question highlights a conflict between Part III and Part IV of the Constitution.
- Part III focuses on fundamental rights, while Part IV lists Directive Principles of State Policy (DPSP), which are goals for the state to pursue.
- Fundamental rights are enforceable, whereas DPSPs are considered aspirational objectives.
- This tension between the two parts has been a recurring theme in India's constitutional history, particularly evident during the 1970s when amendments were made to exempt certain legislations from judicial review.
- The Supreme Court has repeatedly grappled with clarifying the relationship between fundamental rights and Directive Principles of State Policy (DPSP).
- This issue has been present since the landmark **Kesavananda Bharati vs State of Kerala case in 1973**. Despite attempts to resolve the conflict, the tension between these two parts of the Constitution persists.
- **Initially, the Constitution's text seemed clear: Article 13 stated that laws violating fundamental rights would be void, while Article 37 stated that DPSPs were not enforceable in court but should guide state policy.**
- Early judgments by the Court, such as Mohd. **Hanif Quareshi vs State of Bihar (1958)**, emphasized the importance of both Part III (fundamental rights) and Part IV (DPSP) but asserted that laws should not infringe upon fundamental rights while implementing DPSPs.

The Introduction of Article 31C

- In 1971, the Constitution was amended through the **25th amendment, introducing Article 31C**.
- Article 31C aimed to shield certain laws from judicial review, particularly those related to Article 39(b) and (c) which address securing material resources and preventing wealth concentration.
- **Article 31C stated that laws implementing these directives could not be declared void even if they violated rights conferred by Articles 14 or 19, which include the right to equality and various freedoms like freedom of expression and profession.**
- This meant that laws aimed at securing material resources, such as nationalizing the media, could be immune from legal challenges based on common good or freedom of speech concerns.
- The consequence was that Parliament could enact laws without fear of them being struck down by courts, even if they infringed upon fundamental rights.
- **In the Keshvananda Bharati case, the Supreme Court ruled that amendments violating the Constitution's basic structure would be void.**

- **Justice H.R. Khanna's opinion, with a narrow majority of seven to six, emphasized the principle of judicial review.**
- He found that while the **25th amendment partially violated this principle by forbidding examination of laws related to Articles 39(b) and (c), it was upheld regarding challenges based on Articles 14 and 19.**
- Interestingly, the minority judges, who believed Parliament had unlimited amending power, did not thoroughly assess the 25th amendment's validity.
- Kesavananda's verdict didn't decisively determine if the amendment, in exempting certain laws from fundamental rights challenges, violated the Constitution's basic features.

More changes

- **In 1976, the 42nd amendment to the Indian Constitution expanded Article 31C, extending its protection to laws made in furtherance of any Directive Principle of State Policy (DPSP), not just Articles 39(b) and (c).**
- However, in the **Minerva Mills vs Union of India case in 1980, a five-judge Bench declared this amendment unconstitutional.**
- **Chief Justice Y.V. Chandrachud** emphasized that fundamental rights (Articles 14, 19, and 21) act as a safeguard against unrestricted state power, and the 42nd amendment compromised this balance.
- The ruling raised questions about the status of Article 31C: Does it revert to its original form post-25th amendment, minus the invalidated portions, or does its validity remain uncertain?
- In the **Waman Rao vs Union of India case**, Justice Y.V. Chandrachud upheld the validity of the unamended Article 31C, suggesting that laws made in furtherance of Articles 39(b) and (c) couldn't violate rights under Articles 14 and 19.
- However, this opinion seems flawed as laws aimed at promoting the common good could potentially infringe on liberty, as seen in scenarios like nationalizing the printing press.
- In the **Property Owners case, the Supreme Court will assess the validity of a law allowing a State government board to take control of dilapidated buildings with the consent of at least 70% of residents.**
- The Court will determine if this law aligns with Article 39(b). If it does, the question arises whether the statute can also be scrutinized based on Articles 14 and 19, which protect equality and freedom, respectively.

An opportunity

- Despite previous judgments like Waman Rao and Sanjeev Coke vs Bharat Coking Coal, there's still no definitive analysis from the Supreme Court on **Article 31C introduced by the 25th amendment.**
- Article 31C pertains to laws made in furtherance of Directive Principles of State Policy (DPSP) and their exemption from certain fundamental rights challenges.
- The lack of clarity on Article 31C has led to ongoing conflict between fundamental rights and DPSPs.
- The Property Owners case presents an opportunity for the Supreme Court to resolve this conflict and provide clarity on the constitutionality of Article 31C.
- A decisive ruling in Property Owners could strengthen the Constitution's fundamental guarantees.

2. Constitutional/Statutory/Judicial/Quasi-Judicial Bodies:

2.1 National Human Rights Commission (NHRC):

- **Composition** – chairperson and four other members
- The Chairperson should be a retired Chief Justice of India and members should be serving or retired judges of the Supreme Court, a serving or retired Chief Justice of a High Court and two persons having knowledge or practical experience with respect to human rights.
- Apart from these full-time members, the Commission also **has four ex-officio members**, the Chairpersons of National Commission for Minorities, National Commission for SCs & STs and National Commission for Women.
- **Tenure** - The Chairperson and members hold office for **a term of five years or until they attain the age of 70 years**, whichever is earlier. After their tenure, the Chairperson and members are **not eligible for further employment** under the Central or a State government.

2.2. The BCI (Bar Council of India):

- **Headquarter:** New Delhi
- **Statutory body established under the Advocates Act, 1961.**
- **Prescribes standards** of professional conduct, etiquette, and exercises disciplinary **jurisdiction over the bar.**
- **Sets standards for legal education** and grants recognition to universities whose law degrees qualify students to enrol as advocates upon graduation.
- **Conducts the All India Bar Examination (AIBE)** to award shortlisted candidates the Certificate of Practice (CoP), required to practice law in India.

- **Funds welfare schemes** for economically weaker and physically handicapped advocates.
- **Composition:** The BCI consists of members elected from each state bar council, and the Attorney General of India and the Solicitor General of India who are ex-officio members. The council elects its chairman and vice-chairman for two years from amongst its members.

2.3. The Employees' Provident Fund Organisation (EPFO):

- **Statutory body under the Ministry of Labor and Employment, Government of India.**
- The EPFO came into being with the Employees Provident Fund ordinance that was **passed in 1951-52.**
- **What does the EPFO do?**
- The EPFO administers various schemes for organized sector employees in India, including:
- **Employees' Provident Fund (EPF) Scheme:** This scheme provides retirement savings for employees. Both the employer and the employee **contribute 12% of the employee's basic salary** towards the fund.
- **Employees' Pension Scheme (EPS):** This scheme provides a pension to employees after retirement.
- **Employees' Deposit Linked Insurance (EDLI) Scheme:** This scheme provides insurance coverage to employees in case of their death while in service.
- **Who is eligible for the EPFO schemes?**
- Most employees working in establishments **with 20 or more employees are eligible for the EPFO schemes.**
- There are some exceptions, such as government employees and employees of certain public sector undertakings.
- **How can I access my EPF account?**

- One can access the EPF account online using the Universal Account Number (UAN).
- The UAN is a unique identification number assigned to each employee covered under the EPFO schemes.

2.4. SEBI (Securities and Exchange Board of India):

- **Statutory regulatory body** established by an Act of Parliament, **the SEBI Act of 1992**.
- **Headquarters:** Mumbai, Maharashtra, India
- **Regional Offices:** Delhi, Kolkata, Chennai, Ahmedabad.
- **Purpose and Mandate:** SEBI serves three key purposes in the Indian financial markets:
- **Investor Protection:** Safeguarding the interests of investors who participate in securities markets by ensuring fair practices and transparency.
- **Market Development:** Promoting the development of securities markets, adopting new technologies, and fostering innovation to enhance efficiency.
- **Regulation:** Regulating the operations of stock exchanges, mutual funds, brokers, merchant bankers, portfolio managers, foreign portfolio investors, and other market participants.

2.5. Global Alliance of National Human Rights Institutions (GANHRI):

- It is recognised, and is a trusted partner, of the United Nations.
- It has established strong relationships with the UN Human Rights Office, UNDP and other UN agencies, as well as with other international and regional organisations, NGOs, civil society and academia.
- **Mission:** To unite, promote, and strengthen National Human Rights Institutions (NHRIs) to operate in line with

the Paris Principles and provide leadership in the promotion and protection of human rights.

- **Founded:** 1993 (originally as the International Coordinating Committee of NHRIs).
- **Headquarters:** Geneva, Switzerland.

Structure and Governance

- GANHRI is a membership-based organization with a global reach.
- It has a governance structure that includes a Bureau consisting of 16 A-status NHRIs representing the four regions of GANHRI (Africa, Americas, Asia Pacific, and Europe).
- The UN Human Rights Office acts as the secretariat for GANHRI.

Relationship with the UN

- GANHRI is a unique non-UN body whose internal accreditation system, based on compliance with the Paris Principles, grants access to UN human rights committees.
- It has a close working relationship with the UN Human Rights Office, UNDP, and other UN agencies

3. Center-State Relations:

3.1 Can CM performs his duties when arrested?

- The Constitution does not explicitly address whether a person can continue as Chief Minister while being a remand prisoner.
- **Section 8(3) of the Representation of People Act of 1951** states that an MLA or MP can be disqualified if convicted and sentenced to at least two years in prison. However, Kejriwal has not been convicted in the case yet.
- **However, High Court emphasized that it's essential for the holder of this position to remain accessible and present.**
- The court highlighted **that it's in the national and public interest to ensure that the Chief Minister is not absent or inaccessible for extended or uncertain periods of time.**

3.2 President's Rule (Delhi)

- **President's Rule can be imposed in Delhi under Article 239AB of the Constitution.**
- Delhi's power structure involves a delicate balance between the elected government and the LG appointed by the Central government.
- If Arvind Kejriwal remains in prison, hindering administrative work, the LG can recommend to the President **to invoke Article 239AB, citing "failure of constitutional machinery."**
- **President's Rule under Article 239AB was implemented in Delhi once before, in 2014, after Kejriwal resigned just 49 days into his first tenure as Chief Minister**

3.3 Immunities to Governor/President

- **Article 361 of the Constitution of India deals with immunities granted to the**

President of India and Governor of states, which protect them from criminal proceedings and arrest.

- The article states that the President and Governor **"shall not be answerable** to any court for the exercise and performance of the powers and duties of his office or any act done or purporting to be done by him in the exercise and performance of those powers and duties.
- **Article 361(2) states that a criminal case cannot be initiated against the President and Governor** in the court of law. But, the FIR is registered by the police. So, technically, **police can register an FIR and investigate.**
- Supreme Court has **upheld the immunities** provided to the President and Governors by the Constitutions in the landmark **Rameshwar Prasad v Union of India** case and observed that **"the position in law is that the Governor enjoys complete immunity.**

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4. Laws, Acts, and Rules in News

4.1 The Mediation Act, 2023:

- It is a legislation in India that aims to promote and facilitate mediation for resolving disputes. Here's a summary of the key points:

Objectives

- Promote institutional mediation, pre-litigation mediation, online mediation, and community mediation.
- Enforce domestic mediated settlement agreements.
- Establish a regulatory body for registration of mediators and mediation institutions.

Key Features

- **Application:** The Act applies to commercial and non-commercial disputes.
- **Mediation Agreement:** A written agreement between parties to submit to mediation is required. This can be a clause in a contract or a separate agreement.
- **Pre-Litigation Mediation:** Encourages parties to mediate before going to court.
- **Confidentiality:** Maintains confidentiality of mediation proceedings.
- **Mediator Appointment:** Parties can appoint a mediator themselves or through a mediation service provider.
- **Mediation Council of India:** Established to regulate mediators and mediation institutions.

Benefits

- Faster and more cost-effective dispute resolution compared to litigation.
- Parties have more control over the outcome of the dispute.
- Confidentiality is maintained throughout the process.

4.2. The Insolvency and Bankruptcy Code, 2016 (IBC)

- **Law enacted by the Indian Parliament in 2016.**
- **Consolidated Framework:** It establishes a unified framework for dealing with **insolvency and bankruptcy** for various entities, **including companies, partnership firms, and individuals**.
- **Time-Bound Process:** It aims to resolve insolvency proceedings within a specific timeframe, **typically 180-330 days**, with the possibility of extensions under certain conditions.
- The IBC prioritizes maximizing the value of the debtor's assets for the benefit of all stakeholders, including creditors, employees, and the company itself.
- **Promotes Entrepreneurship:** By providing a mechanism for reviving businesses, the IBC aims to encourage a healthy entrepreneurial ecosystem.
- **Credit Availability:** A more efficient insolvency system fosters trust in the financial markets, leading to easier access to credit for businesses.
- **Stakeholder Balance:** The IBC strives to balance the interests of all stakeholders involved in the insolvency process.

4.3 Rules on Contesting Seats:

- According to the **Representation of the People Act (RPA), 1951**, a candidate can contest from up to **two constituencies** but can hold only one seat if elected from both.
- **Sub-section 33 (7) of the RPA, introduced in 1996**, allows candidates to contest from two seats.
- However, **Section 70 of the same Act** states that a candidate can hold only one seat at a time, requiring a by-election if they win from two seats.
- **Former Chief Election Commissioner N. Gopalaswami** mentioned opposition to candidates contesting from multiple seats due to the need for frequent by-elections.
- Both the **Election Commission of India and the Law Commission proposed further amendments to the RPA to limit candidates to contesting from one seat only.**
- Gopalaswami noted the difficulty in implementing this change, as **politicians are unlikely to support reducing the number of seats a candidate can contest.**
- **To contest in Assembly polls, a person must be a voter in that particular State, but for Lok Sabha elections, a person can be registered as a voter in any constituency in India.**
- However, there are **exceptions in Assam, Lakshadweep, and Sikkim**, where specific residency requirements apply for contesting elections.

4.4. Street Vendors Act:

- The **Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act** came into effect on May 1, 2014, after decades of legal development and advocacy by street vendor movements in India.
- Considered a progressive law, **it aimed to protect the rights and livelihoods of street vendors.**
- Despite its enactment, the Act now faces significant challenges in its implementation.
- Merely passing the law did not guarantee the security and protection of street vendors in Indian cities.
- There have been shortcomings in executing the provisions of the Act effectively.

Provisions of the law

- Street vendors **make up about 2.5% of any city's population** and play diverse roles in urban life.
- They provide essential daily services like **selling vegetables and food, offering a consistent income source for migrants and the urban poor.**
- Street vendors contribute to making city life affordable by supplying vital goods and food items at reasonable prices.
- They are integral to Indian culture, with iconic street foods like vada pav in Mumbai and dosa in Chennai.
- The Street Vendors Act of 2014 aimed to acknowledge the importance of street vending in cities.
- **The law seeks to protect and regulate street vending, with state-level rules and execution by Urban Local Bodies (ULBs).**
- It defines the roles and responsibilities of vendors and different levels of government clearly.
- The Act commits to accommodating all existing vendors in designated vending zones and issuing vending certificates.
- **It establishes participatory governance through Town Vending Committees (TVCs), where street vendor representatives make up 40% of members.**

- There is a provision for **33% representation of women street vendors in TVCs**.
- TVCs ensure the inclusion of all existing vendors in vending zones and address grievances through mechanisms like **Grievance Redressal Committees chaired by judicial officials**.
- The Act sets a precedent for inclusive and participatory approaches to address street vending needs in cities, theoretically.

Three broad challenges

- **Administrative Challenges:**
 - Increase in harassment and evictions despite protection emphasis.
 - Outdated bureaucratic mindset.
 - Lack of awareness among authorities and vendors.
 - Limited influence of vendor representatives.
- **Governance Challenges:**
 - Weak urban governance mechanisms.
 - Lack of integration with urban governance framework.
 - ULBs lacking powers and capacities.
 - Focus on infrastructure over vendor inclusion.
- **Societal Challenges:**
 - Exclusionary 'world class city' image.
 - Marginalization and stigmatization of vendors.
 - Failure to recognize vendors as economic contributors.
 - Reflective in city designs and policies.

The Way Forward

- **Implementation Support:**
 - Initially requires top-down direction.
 - Ministry of Housing and Urban Affairs can provide management.
 - Decentralization over time for effectiveness.
 - **PM SVANidhi** serves as a positive example.
- **Decentralization Need:**
 - ULBs need capacity enhancement for effective planning.
 - Move from department-led actions to TVC-level deliberations.
 - Amend urban schemes, planning guidelines, and policies to include street vending.
- **New Challenges:**
 - Impact of climate change on vendors.
 - Surge in the number of vendors.
 - Competition from e-commerce.

- Reduced incomes.
- **Creative Use of Provisions:**
 - Utilize Act's welfare provisions creatively.
 - Adapt to meet emerging needs of street vendors.
- **National Urban Livelihood Mission:**
 - Sub-component for street vendors needs to adapt to changing realities.
 - Facilitate innovative measures to address needs.
- **Lessons Learned:**
 - Complex interplay of space, urban workers, and governance.
 - Offers valuable lessons for future law making and implementation.

4.5 Redistribution of Wealth:

- Supreme Court formed nine-judge Bench.
- **Aim: Interpret Directive Principles of State Policy (DPSP).**
- Specifically regarding ownership and control of material resources.

What does the Constitution provide?

- The **Constitution's Preamble** seeks social and economic justice, liberty, and equality for all citizens.
- **Part III of the Constitution outlines fundamental rights, ensuring liberty and equality.**
- **DPSP focuses on achieving social and economic justice.**
- **Unlike fundamental rights, DPSP is not enforceable** in court but is crucial for governance.
- **Article 39(b) and (c) of DPSP aim at economic justice** by distributing material resources for common good and preventing wealth concentration.

What is the historical context?

- Initially, the Constitution guaranteed the **right to property as a fundamental right under Article 19(1)(f)** and required the state to provide compensation for property acquisition under Article 31.
- Land reforms and public asset construction led to amendments curbing property rights due to limited government resources.
- Amendments like **Articles 31A, 31B, and 31C restricted the right to property** for public welfare purposes.
- **Supreme Court cases, including Golak Nath (1967), Kesavananda Bharati (1973), and Minerva Mills (1980), interpreted the balance between fundamental rights and DPSP.**
- The **Keshvananda Bharati case upheld Article 31C** but subjected it to judicial review, emphasizing a harmonious balance between fundamental rights and DPSP.
- In **1978, the 44th Amendment Act removed the right to property as a fundamental right**, making it a **constitutional right under Article 300A** to reduce litigation.

- Private property rights remain important, and state acquisition should be for public purposes with adequate compensation.

What is the current debate?

- Post-independence, **India followed a socialist economic model** with laws for land acquisition and nationalization of key sectors like banking and insurance.
- **High taxes**, such as up to 97% direct taxes, estate duty, and wealth tax, aimed to reduce inequality but stifled growth and led to tax evasion.
- The **1990s saw a shift towards liberalization, globalization, and privatization** to empower market forces and improve efficiency.
- Reforms included repealing the MRTP Act, reducing income tax rates, and abolishing estate duty in 1985 and wealth tax in 2016.
- Market-driven economy led to economic growth and poverty reduction but also increased inequality, with the top 10% owning 65% of wealth and 57% of income.
- **Supreme Court examines whether private resources fall under Article 39(b)** regarding material resources.

Way Forward?

- Inequality is a global issue in liberalized open-market economies, not just in India.
- Government has a duty to protect the interests of poorer classes who rely on state support.
- Past policies like high tax rates, estate duty, and wealth tax didn't achieve desired goals but led to income and wealth concealment.
- Innovation and growth should not be hindered, but benefits must reach all sections, especially the marginalized.
- Policies should be debated and framed according to current economic models.
- The overarching goal remains economic justice for all, as outlined in the Constitution.

International Relations

1. India-Nepal Relations:

Changes under China's shadow

- **Nepal's Prime Minister Pushpa Kamal Dahal 'Prachanda' formed a new coalition with K.P. Sharma Oli, replacing the Nepali Congress.**
- China openly welcomed this alliance, signaling their influence.
- **Nepal's Foreign Minister visited Beijing first, showing a shift away from India.**
- **Nepal agreed to revive cooperation with China's Belt and Road Initiative.**
- High-level military visits suggest closer ties with China.
- There's a rise in ultra-nationalistic, pro-China, and anti-India sentiments in Nepal.
- Past instability in Nepal led to Maoist insurgency and cross-border terrorism.
- India previously had good relations across Nepal's political spectrum.
- China is now actively working against India in Nepal.
- **China may support cross-border terrorism against India, with Pakistan's involvement.**
- India has support from groups like the Quad, but Nepal's instability poses risks.

India's stand

- India has maintained a low profile in Nepal's internal affairs but may face pressure to give advice.
- Decisions like reverting to Hindu identity or restoring the monarchy are for Nepal to make.
- India could offer a development roadmap to excite Nepali consensus and investment.
- High-level Indian attention could bring optimism, stimulate investment, and promote cross-party projects.
- Building on common cultural ties can strengthen the India-Nepal relationship.
- India must handle the "big brother-small brother" dynamic carefully.
- The India-Nepal relationship can be improved with diplomatic finesse and development cooperation.

2. Will R&AW's Overseas Operations affect Ties?

- India's external intelligence agency R&AW, also known as Research and Analysis Wing, made headlines this week.
- Reports emerged from various countries, including the **U.S., Canada, Australia, and Pakistan.**
- The reports alleged that R&AW targeted and killed **Indian-origin Khalistani separatist operatives globally.**
- The agency was purportedly spearheading these actions.
- The **Royal Canadian Mounted Police** arrested and charged three Indian nationals for conspiring in Nijjar's killing and are investigating links to Indian government officials.
- Canadian Prime **Minister Justin Trudeau's statement** suggesting a link to Indian agencies led to diplomatic tensions between Canada and India, resulting in expulsions of diplomats.
- **Australia's ABC reported in 2020 that R&AW operatives were expelled for espionage activities and surveillance of Khalistani separatists.**
- Pakistan's Foreign Ministry reiterated allegations against R&AW agents orchestrating extra-judicial killings on its soil.

- Allegations resurfaced in the U.K. regarding Indian intelligence agents trailing and threatening Khalistani separatist leader Avtar Singh Khanda, who died in June last year.

How has New Delhi reacted?

- The **Ministry of External Affairs has consistently denied that extra-judicial killings** are government policy, dismissing the allegations as unwarranted and unsubstantiated.
- However, discrepancies arise in the government's responses to allegations from different countries:
 - India remained silent on allegations from Australia.
 - It responded with angry denials and punitive measures against Canada.
 - A "**high-level inquiry**" was set up in response to the U.S. indictment.
- Indian leaders, including Prime Minister Modi, have openly acknowledged and endorsed operations targeting terrorists inside Pakistan.
- Indian operations against Khalistani sympathizers have a history, with instances like a **German court sentencing an Indian couple for spying on** Khalistani and Kashmiri activists in 2019.
- Indian officials question why countries like the U.S., Canada, the U.K., and Australia don't take action against vocal Khalistani activists accused of inciting attacks on diplomatic missions and threatening Indian diplomats.

Will there be diplomatic fallout?

- India's ties with countries where alleged operations have occurred, except for Pakistan and now Canada, remain strong.
- **Historical tensions over the Khalistan issue have hindered bilateral visits to Canada by Indian Prime Ministers since 1973.**
- Bilateral ties between India and Pakistan have been severely strained due to issues like cross-border terrorism in Jammu & Kashmir and Punjab.
- Countries like the U.S., the U.K., and Australia are trying to maintain stable ties with India while investigations into the alleged operations are ongoing.
- The **U.S. government has issued statements on the Pannun case and expects accountability from India.**
- U.S. officials visiting India have conveyed a three-step demand: **thorough investigation, public acknowledgment of any wrongdoing, and legal accountability in Indian courts.**
- The trial process in both the Pannun case in the U.S. and the Nijjar case in Canada will be crucial, and testimony from key individuals like Gupta is anticipated.
- Other countries, like the U.S. and Israel, also conduct extra-judicial operations but often cite self-defence under the UN charter.
- Informal rules in intelligence operations include avoiding operations in friendly countries, ensuring no ties to diplomatic missions, and avoiding detection.

3. The paradox of India's Global Rise, its Regional Decline:

- India is experiencing a paradox in its foreign policy where it is globally rising but regionally declining in power.
- The global rise of India is driven by factors such as **economic growth, military capabilities, and a youthful population.**

- India's presence in global institutions like the **G-20** and its participation in multilateral groups like the **Quad and BRICS highlight its geopolitical significance.**
- **Despite not being a member of the UN Security Council, India's global influence is growing,** with increased peer accommodation of its claims to be a significant global power.
- **India's role in the Indo-Pacific region is gaining attention,** as it holds a central position both geographically and strategically.
- **However, regionally, India's power is diminishing relative to China, and it is losing primacy in South Asia due to changes in the region's geopolitics.**

Extraneous Factors

- **This decline is not absolute but comparative,** seen when comparing India's past influence in the region to China's current influence.
- Factors contributing to India's declining influence include the American withdrawal from the region and China's expansion to fill the resulting power vacuum.
- Paradoxically, some factors behind India's global prominence, like increased US interest in accommodating India to counterbalance China, also contribute to its regional decline.
- India's focus on the Indo-Pacific, while gaining global attention, may have diverted attention and resources away from its continental neighbourhood.
- **While India's global rise is driven by absolute power** growth and geopolitical choices of major powers, its regional decline is influenced by dynamics of comparative power and choices made by smaller regional powers.
- **Overlooking the balancing acts** of smaller regional powers in favour of focusing solely on great power balancing could be counterproductive.

The Rise of China and what India must do

- China's rise is the primary factor explaining India's decline in regional influence, despite India's overall increase in power.
- The shift in regional power balance favours China due to its increased presence in South Asia, the US withdrawal from the region, and India's focus on the Indo-Pacific.
- Smaller South Asian nations are adopting various strategies like balancing, bargaining, hedging, and bandwagoning in response to this new power equation.
- India's neighbours see China as a useful hedge against India's influence, contributing to India's diminishing hold on the region.
- To address this challenge, India needs to reassess its traditional conceptions of the region and modernize its approach to maintaining primacy in South Asia.
- Accepting the changed realities of the region and focusing on India's strengths instead of directly competing with China in every aspect is crucial.
- India should craft a new engagement strategy with the region that leverages its traditional strengths and acknowledges the region's evolving dynamics.
- **Reclaiming aspects of India's cultural heritage**
- India faces challenges in its continental strategy but has numerous opportunities in its maritime space.

- Leveraging its maritime advantages in the Indo-Pacific could help compensate for India's continental handicaps.
- India should involve its smaller South Asian neighbors in Indo-Pacific strategic discussions, even if they are not currently significant players in the region.
- **Partnering with countries like Sri Lanka, the Maldives, and Bangladesh as part of the larger Indo-Pacific strategy can help counter China's influence in the region.**
- New Delhi's willingness to view the region **through a non-India centric lens indicates openness to cooperation with external powers in addressing common challenges.**
- **India is no longer uneasy about external powers in its neighborhood, as it was during the Cold War era.**
- There is a desire in New Delhi to **collaborate with external partners in the Indian Ocean and South Asia to tackle shared regional challenges.**
- Utilizing this openness and external engagement can help mitigate the difficulties stemming from India's regional decline.

Tap Soft Power

- New Delhi should **utilize its soft power creatively to maintain influence in the region.**
- Encouraging **informal contacts between political and civil society actors** in India and other South Asian countries can be beneficial.
- Informal conflict management processes should be encouraged in the region, especially **where direct involvement by the Indian state may be hesitant, such as in Myanmar.**
- The contrast between India's global rise and regional decline has significant implications for its global aspirations. It raises the question of whether a country unable to maintain primacy in its surrounding regions can truly be a pivotal power in international politics.

4. International Organizations/Institutions:

4.1 World Economic Forum:

- **The World Economic Forum (WEF)** is an **international non-governmental organization** that facilitates dialogue between top figures in government, business, and civil society. Its mission is to improve the world through public-private cooperation.
- **Founded: 1971 in Cologny, Switzerland, by Klaus Schwab**
- **Headquarters: Cologny, Switzerland**
- **Leadership:**
 - Klaus Schwab, Founder and Executive Chairman
 - Børge Brende, President

Key Activities

- **Annual Meeting in Davos:** The high-profile annual meeting in Davos, Switzerland, is the organization's flagship event. It's a gathering of world leaders in politics, business, academia, and civil society to discuss pressing global issues.
- **Regional and Industry Meetings:** The WEF organizes numerous events throughout the year focused on specific regions or industries.

- **Initiatives and Platforms:** The Forum launches and manages various initiatives and platforms focused on issues like:
 - Climate change
 - The Fourth Industrial Revolution (technologies like AI)
 - Global health
 - Economic development
- **How it Works**
- **Membership Model:** Companies become members of the WEF, providing the primary source of funding for its activities.
- **Partnerships:** The WEF actively collaborates with governments, other international organizations, and civil society groups.
- **The "Spirit of Davos":** The Forum emphasizes a collaborative, multi-stakeholder approach they term the "Spirit of Davos," where diverse actors work together to find solutions.

4.2. World Trade Organization (WTO):

- **Founded:** 1995
- **Purpose:** The WTO is the primary international organization regulating global trade among nations. It aims to ensure a smooth, predictable, and free flow of trade.
- **Membership:** 164 member countries
- **Headquarters:** Geneva, Switzerland
- **Key Functions:**
 - **Negotiating Trade Agreements:** Serves as a forum for WTO members to negotiate and establish multilateral trade rules and agreements.
 - **Settling Trade Disputes:** Provides a dispute settlement mechanism to help member countries resolve trade conflicts in a fair and transparent manner.
 - **Monitoring Trade Policies:** Reviews member countries' trade policies to ensure they adhere to WTO rules and principles.
 - **Capacity Building:** Assists developing and least-developed countries in strengthening their ability to participate in the global trading system.

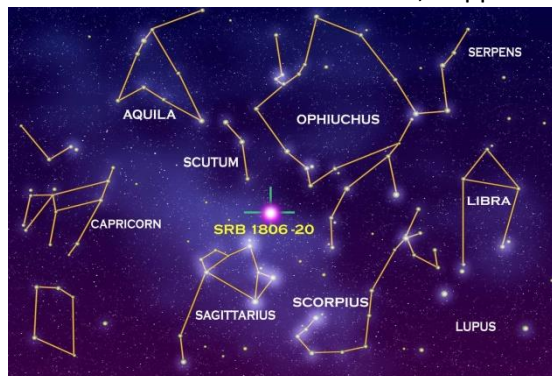
4.3. International Monetary Fund (IMF)

- **Founded:** 1944 (Began operations in 1945)
- **Purpose:** The IMF works to foster global monetary cooperation, ensure financial stability, promote international trade, facilitate high employment and sustainable economic growth, and reduce poverty around the world.
- **Membership:** 190 member countries
- **Headquarters:** Washington D.C., United States
- **Key Functions**
 - **Surveillance:** The IMF monitors the economic and financial health of its member countries and the global economy, highlighting potential risks and advising on policies.
 - **Lending:** Provides financial assistance to member countries facing balance-of-payments problems, helping them restore stability and economic growth.
 - **Capacity Development:** Offers training, technical assistance, and policy advice to member countries to strengthen their institutional capacity and economic management.

Geography & Disaster Management

1. Moon occulting brightest star Antares

- The Indian Institute of Astrophysics (IIA) in Bengaluru filmed the passing of the **moon in front of Antares**, a bright red star **on 27th April**.
- **Occultation**, where the moon hides stars or planets behind it as it orbits the Earth, happen occasionally
- The **last occultation of Antares** visible from India occurred on **February 5 of the same year**.
- The **next occultation** is expected to happen in **June 2027**.
- Antares, also known as **Jyeshtha**, is the brightest star in the **constellation of Scorpius**.



2. Possibility of water ice in polar craters of the moon

- A study by ISRO's Space Applications Centre (SAC), collaborated with researchers from IIT Kanpur, University of Southern California, Jet Propulsion Laboratory, and IIT (ISM) Dhanbad found evidence suggesting an increased likelihood of water ice occurrence in the polar craters of the moon.
- The **amount of sub-surface ice** within the first couple of meters is estimated to **be five to eight times larger** than surface ice in both lunar poles.
- The study indicates that the **northern polar region has approximately twice as much water ice** as the southern polar region.
- **Why this finding is important?** - This study supports ISRO's future plans for in-situ volatile exploration on the moon.

3. Delhi Ridge:

- The Delhi Ridge is a **prominent ridge and a crucial ecological feature located in the National Capital Territory of Delhi**, India. It is an **extension of the Aravalli Range**, one of the oldest mountain ranges in the world, estimated to be **1.5 billion years old**.
- It stretches from **the southeast at Tughlaqabad near the Bhatti mines**, branching out in places and tapering off in the north near Wazirabad on the western bank of the Yamuna river, covering about 35 kilometers.
- It is divided into four zones - Northern Ridge, Southern Ridge, Central Ridge, and South Central Ridge covering roughly 8000 hectares.
- **Ecological Significance:** The ridge **acts as the "Lungs of Delhi"**, providing a vital green cover for the national capital and serving as a critical habitat for flora and fauna.
- The ridge is home to a variety of plant and animal life, including over 400 species of plants, 100 species of birds, and 36 species of mammals. It is an important birding area and a refuge for animals **like leopards, hyenas, and jackals**.

4. Catatumbo lightning: A Torrent of Current:

- Catatumbo lightning is a natural phenomenon that occurs over the Catatumbo River in Venezuela, where lightning strikes almost continuously.
- It primarily happens at the mouth of the Catatumbo River, where it meets Lake Maracaibo, the largest lake in Venezuela.
- **Several factors contribute** to the unique conditions required for Catatumbo lightning, **including warm, moist air from the Caribbean Sea colliding with cooler air descending from the Andes Mountains.**
- This collision **creates towering cumulonimbus clouds** as the warmer air is forced to rise rapidly.
- Strong winds and temperature differentials generate electrical charges within these clouds, leading to the buildup of static electricity.
- When the electrical potential within the clouds becomes too great, it discharges in the form of lightning.

- **Catatumbo lightning**, also known as Everlasting Storm or Relámpago del Catatumbo (which means "Lightning of Catatumbo" in Spanish), is a mesmerizing atmospheric phenomenon that occurs over the mouth of the **Catatumbo River** where it **empties into Lake Maracaibo in Venezuela.**
- Catatumbo translates to "**House of Thunder**" in the language of the Bari people, a very fitting name considering the awe-inspiring electrical spectacle that unfolds here.

Catatumbo lightning:

- Occurs over and around **Lake Maracaibo**, typically over the bog area formed where the **Catatumbo River flows** into the lake.
- Witnessed for **140 to 160 nights a year, lasting up to nine hours each day.**
- Lightning strikes occur at a staggering frequency of 16 to 40 times per minute, making it one of the most active storm areas on Earth.
- The collisions of warm, moist air from the **Caribbean Sea** with cold air masses moving down from the Andes mountains are believed to be the primary cause for this perpetual storm.

5. Freshwater Quest, the likely New Gold Hunt:

- **Freshwater exists under the ocean**, discovered through drilling boreholes and scientific exploration.
- Examples include freshwater discovered off the New Jersey coast and a river under the Black Sea.
- **Only 2.5% of Earth's water is freshwater**, with a tiny fraction in liquid form on the surface.
- The rest of the freshwater is underground, including under the ocean bed.
- Freshwater is a depleting resource, prompting countries to explore and exploit it within their maritime zones.
- **Exploration may extend beyond Exclusive Economic Zones (EEZ)** into the "Area" defined by UNCLOS.
- The "Area" is considered the common heritage of mankind, available for everyone's use and benefit, including future generations.

The Law of the Sea

- While **UNCLOS** is a comprehensive text governing the oceans, customary international law remains important in maritime law.
- **Geneva Conventions on the Law of the Sea, 1958**, cover similar issues as UNCLOS and are based on customary international law.
- **Article 311 of UNCLOS** states that it prevails over the Geneva Conventions for states parties, but non-signatory states do not recognize UNCLOS provisions like **the Exclusive Economic Zone (EEZ) or the "Area" beyond it**.
- The United States is a signatory to the Geneva Conventions but not UNCLOS.
- UNCLOS limits exploration and exploitation of the "Area" to "resources," defined as minerals, including polymetallic nodules, but it's unclear if this covers freshwater.
- The **International Seabed Authority** administers and controls activities in the "Area" under UNCLOS, but there's no specified regulatory body for state parties to the **Geneva Conventions regarding mining and exploration activities in the "Area."**

A Zone of Exploration

- Future conflicts are anticipated to arise over water scarcity and territorial expansion.
- Freshwater is projected to become increasingly scarce and expensive in the coming years.
- The **"Area" under UNCLOS may become a potential zone for freshwater exploration** and extraction.
- Just as oil wells are identified and capped for future use, freshwater wells may be similarly identified and preserved.
- There is a lack of specific legislation governing freshwater exploration beyond national jurisdiction, leading to potential controversies.
- **Developing legislation addressing freshwater exploration in the "Area"** could be a crucial step toward sustainable development goals.
- India has the opportunity to take a leading role in developing such legislation.
- This effort could benefit mankind by addressing water scarcity issues more effectively than proposals for human settlement on Mars and the moon.

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6. Places in News

3.1 Rafah – a Palestinian city in the southern Gaza Strip.

- When Israel **withdrew from the Sinai in 1982**, Rafah was split into a Gazan part and an Egyptian part, dividing families, separated by barbed-wire barriers.

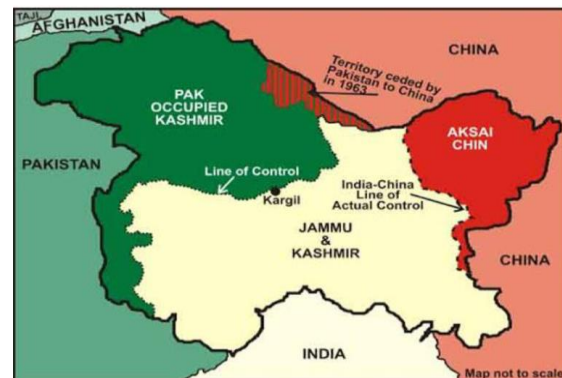


6.2 Shaksgam valley:

- India has protested against China's actions in the **Shaksgam valley of Pakistan-occupied Kashmir**.
- India considers the **Shaksgam valley as part of its territory** and rejects the **China-Pakistan Boundary Agreement of 1963**.
- Recent satellite images indicate Chinese road construction in the lower Shaksgam valley, which has been confirmed by official sources.
- The **Shaksgam valley was ceded by Pakistan to China in 1963**, a year after the India-China war.
- The **Siachen glacier**, located near the Shaksgam valley, is Indian territory situated between China and Pakistan.
- India considers control of the **Siachen glacier critical**, especially after the 2020

standoff between Indian and Chinese troops in eastern Ladakh.

- China's build up and deployment along the **Line of Actual Control** pose a threat to Indian positions in areas like **Depsang and Daulat Beg Oldie**.



5.3. Indo Pacific Region

- The **Indo-Pacific** comprises **40 countries and economies**: Australia, Bangladesh, Bhutan, Brunei, Cambodia, Democratic People's Republic of Korea (DPRK), India, Indonesia, Japan, Laos, Malaysia, Maldives, Mongolia, Myanmar, Nepal, New Zealand, the Pacific Island Countries (14), Pakistan, People's Republic of China (PRC), the Philippines, Republic of Korea (ROK), Singapore, Sri Lanka, Taiwan, Thailand, Timor Leste, and Vietnam.
- 50% of world GDP by 2040
- 50% of global greenhouse gas emissions
- 65% of world's population
- 67% of world's Indigenous peoples
- 37% of the world's poor

5.4. Mount Ruang Volcano

- **Location:** Sangihe Islands, North Sulawesi province, Indonesia.
- **Elevation:** 725 meters (2,378 feet)
- **Type:** Stratovolcano (cone-shaped with multiple layers of hardened lava, ash, and rocks)
- **Recent Activity:** Mount Ruang is one of **Indonesia's most active volcanoes**. It is currently erupting **with frequent ash emissions and occasional lava flows**.
- **Impact:**
 - Disruptions to air travel due to volcanic ash clouds in the vicinity.
 - Periodic evacuations of nearby island communities when activity intensifies.
 - Formation of a lava dome within the summit crater.
 - Volcanic ash clouds affecting aviation.
- **History of Eruptions**
 - Mount Ruang has a long history of frequent eruptions. Documented activity dates back to the 1800s, with significant eruptions in recent decades, including:
 - 2002: Major eruption led to evacuations.
 - 2023-2024: Ongoing eruptive period with several significant events causing ashfall and travel disruptions.



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Society and Social Justice

1. A Livelihood Silenced:

- **Why in News** - With rising threats from gau rakshaks and an unsupportive administration, Rajkot's Dalit cattle skimmers are opting out of their profession.
- **Related Information** - Challenges faced by skimmers include lack of legal recognition, absence of identity cards, and threats from vigilante groups like gau rakshaks.
- The leather godowns in Chamadia Para are difficult to find and are often hidden from view.
- Every part of a dead animal is utilized: hide is sold to traders, **bones are used for gelatine**, and **cow horns are used to make toys and buttons**.
- Meat from dead cattle is sold cheaply in the grey market, serving as a **cheap alternative to chicken and mutton for Dalit households**.
- The area, once bustling with warehouses stocking cattle hides, is now filled with a sense of gloom, with many godowns having shut down.

Why the Decline in the cattle skinning trade?

- Rapid urbanization along NH27, the Rajkot-Ahmedabad highway, has engulfed areas like Sokhada, leading to the construction of a new international airport and other infrastructure projects.
- As part of the 2024 Lok Sabha poll promises, property rates are escalating in areas adjoining the airport, impacting Dalit skimmers who are no longer allowed to skin cattle at Sokhada.
- The Rajkot Municipal Corporation has erected concrete boundary walls at what was once Charm Kund, and gau rakshaks discourage skinning activity in the area.
- Local leaders affiliated with the ruling party are developing plots for parties adjacent to the Sokhada dumping ground, claiming the stink is unacceptable.
- Dalit demands for sheltered facilities at Sokhada dumping ground for hygienic skinning of cattle have been ignored by the ruling party and administration, despite a decade-long fight for their rights.
- **In 2016, five Dalits who skinned dead cows were lynched by 40 gau rakshaks in Mota Samadhiyala village, leading to fear among the community in Diu.**
- Atrocities against Dalits and restrictions on their work are often linked to land control issues.
- Despite efforts to address the issue, such as a 2017 notification for identification cards for cattle skimmers, individuals faced refusal on grounds of potential misuse.

Do You Know?

Uttar Pradesh with the milk production of 31884 tons, stands as the largest milk producing state in India.

The top-5 milk producing states of India are: Uttar Pradesh, Rajasthan, Madhya Pradesh, Gujarat and Andhra Pradesh

What could be followed?

- **The Sarna Code** refers to the religious and cultural practices of certain tribal communities who worship nature.
- These communities have distinct practices separate from mainstream religions like Hinduism, Islam, Christianity, Sikhism, and Jainism.

- **There's a push for official recognition of the Sarna code** to protect the constitutional rights and religious identity of these tribes, especially concerning discussions on a Uniform Civil Code.
- **Recognition of the Sarna code could lead to special policies** to preserve the tribes' unique culture and practices.
- It may set a precedent for recognizing other unique religious and cultural practices, promoting social justice and diversity.

Sarna Code and Tribals

- The Sarna code is practiced by various Adivasi and tribal communities in states like **Jharkhand and other parts of India**.
- Tribes such as the **Santhals, Ho, Munda, Oraon, and Kharia** adhere to the Sarna faith.
- Sarna followers revere nature and engage in animistic practices, worshipping natural elements like trees, mountains, and forests.
- The push for recognizing the Sarna code is important in the context of discussions about a Uniform Civil Code (UCC).
- It acts as a safeguard for the cultural and religious autonomy of these tribes, preserving their identity and heritage.

2. A well-intentioned Study and a Demographic Myth

- **News Around** - The Prime Minister's Economic Advisory Council appears to have revived the debate about the Muslim population growth,

Why the Controversy?

- The **Prime Minister's Economic Advisory Council (PM-EAC) report** concludes that religious minorities in India, including Muslims, are safe and face no discrimination or persecution.
- However, the report's timing, use of outdated data, and failure to highlight certain demographic trends have stirred controversy.
- It notes a significant increase in the share of the Buddhist population but focuses on Muslim population growth.
- Some argue that the report fuels the Hindutva myth of Hindus being in danger of becoming a minority in their own country.
- There's historical reference to Hindus retaining their majority status during so-called Muslim rule in India.
- The report is linked to statements advocating **higher Hindu birth rates to maintain majority status**.
- Currently, **Hindus make up 79.80% of India's population, while Muslims account for 14.23%.**
- Demographers suggest there's no real threat to Hindu majority status, given their overwhelming numerical advantage.

The Rhetoric, Veiled and Otherwise

- Some leaders use polarizing tactics, citing '**population jihad**', suggesting India might become an Islamic state.
- This rhetoric has historical roots; over a century ago, a book called 'A Dying Race' raised fears of Hindu population decline, similar to indigenous populations in New Zealand.

- The **book admitted there was no actual decrease in Hindu numbers, but questioned whether fertility rates alone should determine a group's status.**
- Higher fertility rates are often linked
- Assessing a group's well-being should consider education, social, and economic conditions, as well as representation in the power structure.
- The Union Finance Minister cited India's growing Muslim population as evidence of their well-being, contrasting them favourably with Muslims in Pakistan.
- India is the **world's second-largest Muslim country after Indonesia, and by 2050, it will have the largest populations of both Hindus and Muslims.**
- Indian Muslims enjoy greater rights compared to religious minorities in Muslim-majority countries in South Asia.
- The Finance Minister's statement underscores the relative well-being of Indian Muslims compared to Muslims elsewhere.

A look at population data

- Population growth is not the sole parameter to judge a group's status; **high fertility rates can indicate educational, social, and economic backwardness.**
- Muslim fertility rates have declined sharply due to increasing literacy rates.
- **Census data from 2001 to 2011 shows a decline in both Muslim and Hindu population growth rates.**
- **Muslim Total Fertility Rate (TFR) is close to the replacement rate,** indicating stabilization.
- Demographers predict Muslim population to stabilize at 18.8% by the end of the century, while Hindus will retain majority status.
- **UN Population Fund** notes India's population growth is stabilizing, with many states **achieving fertility rates below replacement level.**
- Bihar has the highest fertility rates, higher than some southern states with larger Muslim populations.
- **Claims of alarming Muslim population growth in Assam are not supported by data; Assam's population growth is similar to the national average.**
- Private member's bills to regulate population have been introduced but not favored by the government.
- Uttar Pradesh and Assam proposed population control bills, but demographers oppose coercive measures to control population growth.

Coercion is counterproductive

- **The National Population Policy, 2000 under Atal Bihari Vajpayee's** government focused on socio-cultural factors like age at marriage, education, and health.
- **India, as a signatory to international covenants like ICCPR,** must adhere to international norms on population control.
- The UN Human Rights Committee prohibits compulsory or coercive population control policies.
- The Modi government acknowledged in a Supreme Court affidavit that coercion in family planning is counterproductive.
- To address population concerns, emphasis should be on education and economic empowerment, particularly of Muslim girls.

- Policies promoting Muslim education and empowerment should not be seen as appeasement, as they can help address higher fertility rates in the community.

Who are Minorities?

- The term minorities is **not defined** in the constitution
- **Central Government notifies minority** communities at the national level in consultation with various stakeholders **under Section 2 (c) of National Commission for Minorities(NCM), Act, 1992.**
- The **six communities** notified as minority communities under **Section 2(c) of the NCM Act, 1992 are Christians, Sikhs, Muslims, Buddhists, Parsis and Jains.** Notification of any community specific to a State as minority community with in a State comes under the purview of the State concerned.
- The **Article 29 and 30 of the Constitution** provide for protection of interest of minorities which includes **linguistic minorities** also.
- The working definition followed by the Commissioner for linguistic minorities is as follows:-
“Linguistic Minorities are group or collectivities of individuals residing in the territory of India or any part thereof having a distinct language or script of their own.
- The **linguistic minorities are therefore identified by the respective States/UTs.**

3. Clearing the confusion over ‘Saptapadi’:

Why in news?

- A recent Supreme Court judgment only reiterated what a plain reading of a Section of the Hindu Marriage Act tells us
- There's a misunderstanding regarding a recent Supreme Court judgment in the case of **Dolly Rani v Manish Kumar Chanchal.**
- Some believe the judgment implies that a Hindu marriage is not valid if the Saptapadi ceremony is not performed.
- However, the **Court did not explicitly state this**, nor did it discuss other ceremonies that could validate the marriage.
- The judgment also did not consider customary practices where simple ceremonies like exchanging garlands are sufficient.
- Additionally, it did not address the amendment to the **Hindu Marriage Act, 1955** in Tamil Nadu, which introduced the "**suya mariyadhai**" form of marriage through Section 7(a).

The Case before the Court

- The case involves a transfer petition filed by the wife to move her husband's divorce petition from Muzaffarpur, Bihar, to Ranchi, Jharkhand.
- Both parties jointly applied under **Section 142 of the Constitution** to declare their marriage invalid.
- They claimed they were engaged to be married on March 7, 2021, but obtained a marriage certificate on July 7, 2021, from Vadik Jankalyan Samiti (Regd) due to circumstances.
- They **sought registration under Uttar Pradesh Registration Rules, 2017, and received a 'Certificate of Registration of Marriage'.**
- Despite plans for a Hindu marriage ceremony, differences arose between them, leading to the husband filing for divorce.
- **The parties admitted there was no Hindu marriage between them, so the marriage certificate had no significance.**

- They requested the court to declare that no marriage took place and allow them to live independently, using the common legal remedy of a decree of jactitation of marriage.
- The **Hindu Marriage Act only requires a Hindu marriage to be solemnised according to customary rites and ceremonies.**
- **Saptapadi, the seven-step ritual, is not universally practised among all Hindu denominations.**
- The Act states that if Saptapadi is included, the marriage becomes complete and binding with the seventh step.
- The **Court clarified that Saptapadi is not the only form of marriage solemnisation**, reiterating that marriage ceremonies must follow applicable customs or usage.

Previous Judgments

- The case reiterates existing law regarding marriage solemnisation under the Hindu Marriage Act.
- Registration alone cannot solemnise a marriage; it must follow a ceremony.
- **Tamil Nadu passed an amendment in 1967 simplifying marriage ceremonies, allowing marriages without a priest.**
- **In S. Nagalingam v. Sivagami (2001), the Madras High Court ruled that a valid marriage can occur without a priest if parties declare themselves as spouses and perform a ceremony like garlanding or exchanging rings.**
- **Ilavarasan v The Superintendent of Police and Others (2023)** upheld this decision and disagreed with a previous ruling in Balakrishnan v The Inspector of Police (2014) that deemed secretive marriages invalid.
- The Court argued that requiring public solemnisation could endanger couples and violate their rights under Article 21 of the Constitution.
- **In Ilavarasan, the marriage occurred in a lawyer's chamber, which the Court clarified couldn't be considered a matrimonial establishment.**
- However, if lawyers acted as witnesses in their personal capacity, their role was valid.

4. Missions and Schemes in News:

4.1 An overview of the Smart Cities Mission:

What are Smart Cities?

- The term "**Smart City**" became popular after the 2009 financial crash.
- It refers to cities designed with advanced technology and infrastructure integration.
- The **NDA-1 government aimed to adapt to global changes through urban renewal programs like JNNURM.**
- **The Smart Cities Mission (SCM) was launched in June 2015** as a flagship program.
- Under the SCM, **100 cities were selected** for development over **five years**.
- However, the **mission didn't clearly define what makes a city "smart."**
- It acknowledged that there's no universal definition and varies depending on factors like development level and resident aspirations.
- Different cities and countries have different interpretations of what makes a city "smart."

What was the SCM?

- The Smart Cities Mission (SCM) **had two main aspects: area-based development and pan-city solutions.**
- **Area-based development** included redevelopment, retrofitting, and Greenfield projects.

- **Pan-city solutions** focused on ICT and included e-governance, waste management, water management, energy management, urban mobility, and skill development.
- **Around ₹2 lakh crore was allocated for the mission**, with public-private partnerships (PPP) being important.
- Originally scheduled to be completed in 2020, the mission was extended twice until June 2024.
- A new governance model was adopted for the mission, bypassing existing city governance models.
- An SPV (special purpose vehicle) led by a bureaucrat or representative of an MNC was created under the Companies Act.
- The elected council had a limited role in the governance structure.

What is the status of the SCM?

- According to **the Urban Ministry's** dashboard, there's **been a decrease in the total outlay of projects sanctioned under the Smart Cities Mission (SCM)**.
- The expected **outlay was ₹2 lakh crore, but it has fallen to ₹1,67,875 crore, which is 16% less**.
- The SCM grant has funded 5,533 completed projects worth ₹65,063 crore, while 921 projects worth ₹21,000 crore are still ongoing.
- Around **400 projects undertaken by 10 cities are unlikely to meet the extended deadline of June 2024**.
- Only a small portion, less than 5%, of funding has come through the public-private partnership (PPP) route.

Where did the SCM falter?

- The **selection of 100 cities for the Smart Cities Mission (SCM)** was flawed due to diverse urban realities.
- The **scheme didn't consider the dynamic nature of urbanization in India**, unlike static urban environments in the West.
- The **SCM became exclusionary**, with only 1% of a city's area selected for development.
- **Example:** Chandigarh spent its SCM funds on various projects in one area, neglecting other parts of the city.
- Reports by McKinsey suggest that \$1.2 trillion is needed for Indian cities to be liveable by 2030.
- The allocated ₹1,67,875 crore for SCM is insufficient, amounting to less than \$20 billion over nine years.
- This represents only 0.027% of the total urban development requirement in India.
- The **Special Purpose Vehicle (SPV) model for smart cities wasn't aligned with the 74th Constitutional Amendment**, leading to governance structure objections.
- Critics argue **the design was too top-down**, with towns receiving disproportionate project funding.
- **Urban India has over 49% of its population living in slums**, and SCM projects led to displacement and disruption of urban commons.
- SCM projects have also **contributed to increased urban flooding** by disrupting water channels and contours in some towns.

4.2 The Pradhan Mantri Awas Yojana (PMAY):

- It is a **flagship initiative of the Indian Government** that aims to achieve **"Housing for All"** by **2024**.
- It caters to **both rural and urban areas with two sub-schemes**:
 - Pradhan Mantri Awas Yojana (Gramin) for rural housing and
 - Pradhan Mantri Awas Yojana (Urban) for urban housing.

The Pradhan Mantri Awas Yojana (Gramin) (PMAY-G):

- **Formerly known as Indira Awas Yojana**, is a social welfare program launched by the **Government of India in 2016**.
- It aims to provide pucca (permanent) houses with basic amenities to eligible rural households living below the poverty line.

Key Information:

- Launched: April 1, 2016
- Ministry: Ministry of Rural Development
- Target: Rural households below the poverty line
- Benefit: Financial assistance to construct a pucca houses

Goal:

The primary goal of PMAY-G is to achieve "Housing for All" by 2024.

Eligibility:

The eligibility criteria for PMAY-G are determined by the government and may vary slightly depending on the state. Here's a general guideline:

- Applicant must belong to a rural household.
- Must be identified as living below the poverty line (BPL) by the government.
- Should not have a pucca house already.
- Priority is given to households with women members, people with disabilities, SC/ST communities, and homeless households.

Benefits:

PMAY-G provides financial assistance in instalments to eligible beneficiaries for constructing a pucca house. The current amount varies depending on the house type and geographical location.

Pradhan Mantri Awas Yojana-Urban (PMAY-U):

- It is a flagship initiative **launched in 25th June 2015** by the Government of India to provide affordable "pucca" (permanent) houses to all eligible urban households by **2 slum redevelopment and credit-linked subsidy**.
- The mission was **initially set for completion by 2022, but has now been extended to December 31, 2024**.

Who is eligible for PMAY-U?

The PMAY-U scheme targets the following beneficiaries:

- **Economically Weaker Section (EWS)**: This category receives complete assistance under the scheme for acquiring a house.
- **Low-Income Group (LIG)**: LIG beneficiaries are eligible for benefits under the Credit Linked Subsidy Scheme (CLSS).
- **Middle-Income Group (MIG I and II)**: Similar to LIG, MIG categories can avail benefits through CLSS.

Key features of PMAY-U:

- **Four verticals for implementation**:
 - Beneficiary Led Construction/Enhancement (BLC)
 - Affordable Housing in Partnership (AHP)
 - In-situ Slum Redevelopment (ISSR)
 - Credit Linked Subsidy Scheme (CLSS)
- **Credit Linked Subsidy Scheme (CLSS)**: This component offers interest rate subvention on home loans to eligible beneficiaries from LIG and MIG categories.
- **Affordable Rental Housing Complexes (ARHCs)**: A sub-scheme under PMAY-U that provides easy access to affordable rental housing for urban migrants/poor near their workplaces.

4.3 The Jawaharlal Nehru National Urban Renewal Mission (JNNURM):

- It was a large-scale **initiative launched by the Government of India in 2005** to improve urban infrastructure and governance in Indian cities.
- **Launched**: December 3, 2005
- **Goal**: Encourage reforms and fast-track planned development of identified cities
- **Focus areas**: Efficiency in urban infrastructure and service delivery, community participation, accountability of local bodies

- **Investment:** Over \$20 billion over seven years
- **Components:**
 - **Sub-mission 1:** Urban Infrastructure & Governance (UIDG)
 - **Sub-mission 2:** Basic Services to the Urban Poor (BSUP)

Objectives of JNNURM

- The JNNURM aimed to create "economically productive, efficient, equitable and responsive cities":
- Upgrading social and economic infrastructure in cities
- Providing basic services to the urban poor
- Strengthening municipal governance through reforms

Achievements of JNNURM:

- The JNNURM mission is credited with significant improvements in urban infrastructure across India. Some of its achievements include:
- Improved water supply, sanitation, and solid waste management systems in many cities
- Investment in slum improvement programs
- Increased focus on urban planning and development

Current Status:

- The JNNURM mission was succeeded by the Atal Mission for Rejuvenation and Urban Transformation (AMRUT) in 2015. While JNNURM is not an active mission anymore, its legacy continues to shape urban development policies in India.

5. Health:

5.1 Make EPI an 'Essential Programme on Immunisation'

- The year 2024 marks 50 years since the launch of the **Expanded Programme on Immunization (EPI) by the World Health Organization (WHO) in 1974.**
- **EPI was initiated as the eradication of smallpox virus** was nearing, aiming to utilize existing immunization infrastructure to expand vaccine benefits globally.
- Almost every country in the world initiated its national immunization program following the EPI announcement.
- **India launched its EPI in 1978, later renamed the Universal Immunization Programme (UIP) in 1985.**
- This year also marks two decades since India conducted the last nationwide independent field evaluation of the UIP in collaboration with international experts.
- This milestone presents an opportunity to assess progress and plan for the future of immunization.
- **Globally and in India, significant progress has been made in immunization impact and vaccine availability.**
- **In 1974, there were vaccines for six diseases; now, there are vaccines for 13 universally recommended diseases, with 17 additional vaccines recommended for specific contexts.**

- Ongoing research aims to develop vaccines against nearly 125 pathogens, including diseases prevalent in low- and middle-income countries.

A Success Story

- Over the years, there has been a significant increase in global immunization coverage, with around **84% of children receiving three doses of DPT (Diphtheria, Pertussis, Tetanus) vaccines by 2022.**
- **Smallpox has been eradicated, polio eliminated from most countries,** and many vaccine-preventable diseases have nearly disappeared.
- **In India, immunization coverage has been steadily increasing, with 76% of children receiving recommended vaccines in 2019-21.**
- Studies have shown that vaccines have saved millions of lives and prevented billions of hospital visits and hospitalizations since the launch of the Expanded Programme on Immunization (EPI).
- **Economically, vaccines are highly cost-effective interventions, with every dollar spent on vaccination programs resulting in a seven to 11-fold return.**
- Immunization programs in low- and middle-income countries, including India, have been successful, often achieving greater coverage than other health programs.
- Despite the success, challenges persist, as evidenced by a decline in childhood immunization coverage globally in 2021.
- **In 2022, an estimated 14.3 million children globally did not receive any recommended vaccine, while 6.2 million were only partially immunized.**
- While vaccination coverage has improved in India over the years, there are **still inequalities in coverage based on geography, socio-economic status,** and other factors that require urgent interventions.

From Childhood Focus to Life Course

- **Vaccines have always been available for individuals of all age groups, including adults, since the first vaccine against smallpox in 1798.**
- Early vaccines like anti-rabies, cholera, and typhoid were primarily for adults, demonstrating that vaccines were intended for all age groups.
- **Children have been prioritized for vaccination due to their vulnerability to vaccine-preventable diseases and limited vaccine supply and resources in the past.**
- With increased vaccine coverage for children, vaccine-preventable diseases are becoming more common in the adult population, necessitating a focus on adult and elderly vaccination.
- Government policies should expand immunization coverage to include adults and the elderly, following the example of many countries.
- Policies should provide recommended vaccines for adults and the elderly free of charge at government facilities, as vaccines are highly cost-effective.
- The National Technical Advisory Group on Immunization (NTAGI) should provide recommendations on adult and elderly vaccination to increase coverage.
- **Addressing myths and misconceptions about vaccines is crucial to combat vaccine hesitancy, requiring proactive communication and education efforts by the government and reliable sources.**

- Professional associations of doctors, including community medicine experts, family physicians, and paediatricians, should increase awareness about vaccines among adults and the elderly.
- Physicians treating patients with any disease should take the opportunity to educate them about vaccines.
- Medical colleges and research institutions should conduct studies to understand the burden of diseases in the adult population in India.
- Introduction of new vaccines in national programs has been shown to increase coverage of existing vaccines, suggesting that expanding adult and elderly vaccination may improve coverage with childhood vaccines and reduce vaccine inequities.
- **India's Universal Immunization Programme (UIP)** has made significant progress, warranting another independent national-level review involving key partners and international experts.
- **In late 2023, India launched a pilot initiative of adult BCG vaccination as part of efforts to combat tuberculosis (TB).**
- **The COVID-19 vaccination of the adult population has raised awareness about the importance and benefits of adult vaccination.**
- This presents an opportune moment to expand the immunization program to focus on zero-dose children, address vaccine coverage inequities, and offer vaccines to adults and the elderly.
- It is time to make the Expanded Programme on Immunization (EPI) an 'Essential Program on Immunization' as it celebrates 50 years of existence.

Mission Indradhanush:

- Mission Indradhanush (MI) was **launched in December 2014** and aims at increasing the **full immunization coverage to children to 90%.**
- Under this drive focus is given on pockets of low immunization coverage and hard to reach areas where the proportion of unvaccinated and partially vaccinated children is highest.
- **A total of six phases of Mission Indradhanush have been completed** covering 554 districts across the country.
- It was also identified as **one of the flagship schemes under Gram Swaraj Abhiyan** (16,850 villages across 541 districts) and **Extended Gram Swaraj Abhiyan** (48,929 villages across 117 aspirational districts).
- While the first two phases of Mission Indradhanush resulted in 6.7% increase in full immunization coverage in a year, a recent survey carried out in 190 districts covered in Intensified Mission Indradhanush (5th phase of Mission Indradhanush) shows 18.5% points increase in full immunization coverage as compared to NFHS-4 survey carried out in 2015-16.

Economy

1. Investment Models:

1.1 Hybrid Annuity Model:

- It is a **Public-Private Partnership (PPP)** model used for financing, constructing, and operating infrastructure projects in India, particularly in the road sector.
- **It combines features of two other PPP models: Build Operate Transfer (Toll) (BOT) Annuity and Engineering, Procurement, and Construction (EPC).**

Key Features of HAM

- **Sharing of project cost:** The **government bears** a portion of the **upfront construction cost (typically 40%)** disbursed in instalments linked to milestones achieved during construction. The **private developer finances the remaining 60%** – a combination of their equity and debt.
- **Annuity payments:** After project completion, the **government makes semi-annual fixed annuity payments** to the developer for the concession period (typically 30 years) to compensate for the remaining project cost and operation and maintenance (O&M) expenses.
- **Toll collection:** The **government is responsible for toll collection** on the highway and **does not share it with the developer.**
- **Selection of Developer:** Developers are **selected through a transparent bidding process** based on the **Net Present Value (NPV) of their quoted project cost** and O&M expenses over the concession period.

Benefits of HAM

- **Reduced government financial burden:** By sharing the upfront cost, HAM reduces the immediate financial burden on the government compared to solely funding the project.
- **Increased private sector participation:** The model attracts private developers by offering a combination of assured returns through annuities and the opportunity to recover their investment.
- **Faster project completion:** Timely milestone-based payments incentivize developers to complete construction quickly.
- **Transfer of risk:** The government bears the risk of traffic fluctuations and toll collection efficiency.

Here are some related pictures you can find on a web search but I can't directly display them:

- A picture of a highway under construction in India.
- A graph illustrating the project cost sharing between the government and the developer in HAM.
- A chart outlining the key features of the HAM model.

2. Index of Industrial Production (IIP):

The Index of Industrial Production (IIP) is a measure of short-term changes in the volume of production of a basket of industrial products in India. It essentially tracks the growth of various **sectors within the Indian economy**, including:

- Mining

- Electricity
- Manufacturing

The IIP is published monthly by the National Statistical Office (NSO), a department under the MoSPI (Ministry of Statistics and Program Implementation), six weeks after the reference month ends.

Why is IIP important?

- The IIP is a crucial indicator of the health of the Indian industrial sector. It provides insights into economic trends, helps formulate policies, and monitors the performance of various industries. By analysing the IIP, economists and policymakers can gauge:
 - Industrial growth rate
 - Performance of specific sectors
 - Production level fluctuations
 - Impact of government policies

Base Year and Coverage

- The IIP has a base year, which is a reference point against which production changes are measured. The current base year for the IIP is 2011-2012, which means that the production level in that year is assigned an index of 100. The IIP covers a wide range of industrial products, categorized into:
 - Broad sectors: Mining, Manufacturing, and Electricity
 - Use-based sectors: Basic Goods, Capital Goods, and Intermediate Goods

Eight Core Industries

- While the IIP covers a broad spectrum, a particular focus is given to eight core industries that are critical for infrastructural development. These eight core industries, along with their weightage in the IIP, are:
 - Refinery Products (17.92%)
 - Electricity (15.22%)
 - Steel (11.64%)
 - Coal (4.35%)
 - Crude Oil (4.12%)
 - Natural Gas (2.68%)
 - Cement (2.44%)
 - Fertilizers (1.89%)

3. The European Free Trade Association (EFTA):

- It is a regional intergovernmental organization that promotes free trade and economic integration among its member states. **It was established in 1960** to create a free trade area in Europe, functioning alongside the European Union (EU).
- **Member States**
 - EFTA currently has four member countries:
 - **Iceland**

- Liechtenstein
- Norway
- Switzerland

Key Functions

- **Free Trade Agreements:** EFTA has established a vast network of Free Trade Agreements (FTAs) with over 60 countries and territories worldwide, including the European Union. These FTAs eliminate or reduce tariffs and other trade barriers between EFTA and its trading partners.
- **Economic Cooperation:** EFTA fosters economic cooperation among its members through various initiatives, including facilitating the movement of goods, services, and people.
- **Single Market Participation:** Although not members of the EU's customs union, all EFTA members participate in the European Single Market, granting them access to the free movement of goods, services, people, and capital within the European Economic Area (EEA).
- **Schengen Area:** All EFTA members are also part of the Schengen Area, which allows for passport-free travel between member states.

Governance

- The **highest governing body of EFTA is the EFTA Council**, which meets at the ambassadorial level eight times a year and at the ministerial level twice a year. The organization's headquarters are located in Geneva, Switzerland, with offices in Brussels and Luxembourg.

EFTA vs. EU

- The key difference between EFTA and the EU lies in their level of integration. While EFTA focuses on free trade, the EU constitutes a political and economic union with deeper integration, including a common currency (Euro), a customs union, and closer cooperation on various policy areas.

4. Taxes in News:

4.1 Inheritance Tax:

- Inheritance tax is a one-time tax levied on intergenerational transfers of wealth.
- It targets individuals with high wealth exceeding a certain threshold.
- Implemented effectively, these taxes reduce wealth concentration and promote productive investments.
- Inherited wealth often involves no effort from descendants, raising questions of fairness.
- Critics argue inheritance tax may discourage innovation, but innovation remains vital for competitiveness.
- Revenue from inheritance tax can fund a range of innovations.
- Japan has a high inheritance tax rate of up to 55%.
- India had an estates duty, a form of inheritance tax, from 1953 to 1985, which was effective in reducing wealth concentration.

4.2 Land Value Tax:

- The land value tax (LVT) taxes **the rental value of land**, regardless of the property built on it.

- This tax is paid by the landowner, not the tenants.
- **Land is a natural resource** and is not affected by changes in taxes, making LVT a reliable source of revenue.
- **LVT can help redistribute wealth**, particularly in regions where land ownership perpetuates feudal caste relations in rural areas or fosters political-builder connections in urban settings.
- Unlike labor, which can be influenced by taxes, land remains constant, making LVT efficient for generating revenue and addressing societal inequalities.

4.3. Wealth Tax:

- An annual tax levied **on an individual's or household's net wealth above a certain threshold**. Net wealth typically includes **assets like real estate, financial holdings, vehicles, and other valuable possessions**.
- **Current Global Status:** Wealth taxes are relatively uncommon. Only a few countries, such as Norway, Spain, and Switzerland, currently implement them.
- **Historical Use in India:** India had a wealth tax from 1957 to 2015 when it was abolished.

4.4 Cess:

- **Definition:** A tax **levied on top of the existing tax liability** for a **specific purpose**. The collected revenue must be used only for that stated purpose.
- **Purpose:** Introduced to raise funds for specific government programs or developments, often related to social welfare, infrastructure, or environmental protection.
- **Examples:**
 - Education Cess
 - Health Cess
 - Swachh Bharat Cess
 - Krishi Kalyan Cess

4.5. Surcharge:

- **Definition:** An additional **tax levied on top of the existing tax liability**. Unlike cess, the collected revenue **goes into the general government fund and can be used for any purpose**.
- **Purpose:** Usually imposed to raise additional revenue or as a temporary measure to meet fiscal needs. Often targets higher-income groups.
- **Examples:**
 - Income Tax Surcharge (for high-income taxpayers)
 - Corporate Surcharge

5. Make the poor richer without making the rich poorer

Why in news?

- **Prime Minister Narendra Modi has accused the Congress party of promising wealth redistribution** in its manifesto, but there's no mention of it in the document.
- This sparked a debate on inequality in India and globally, with economic disparity growing significantly over the past two decades.
- Politicizing this issue detracts from finding real solutions to bridge the wealth gap.
- Bridging the gap can be achieved by either making the rich poorer, making the poor richer, or both.

- The concept of "**Pareto Optimum**" suggests that improving one person's situation may worsen another's, which is relevant in developed nations with slow growth.
- However, developing nations with faster growth rates have more options for addressing inequality, presenting a fundamental difference in ideological approaches.

'Fix the system'

- The idea of a **wealth tax, aimed at extracting from the super-rich to aid the poor, is rooted in a 'zero-sum' approach to reducing economic disparity.**
- Taxing wealth acquired through unfair means conflates the process with the outcome, suggesting a need to fix the system rather than targeting wealth directly.
- **An inheritance tax**, while morally appealing, may not significantly impact economic inequality and could deter investments.
- India's economic growth is essential for expanding the overall economic pie, requiring investment, which aggressive taxation policies may hinder.
- India's inequality stems from skewed economic growth and taxation, leading to jobless growth where GDP expansion doesn't translate into jobs and prosperity for the majority.
- To address this, there's a need to rebalance the **capital-labor skew through labor-focused policy incentives**, as seen in some promises in the Congress manifesto, such as **the right to apprenticeship for youth and employment-linked incentive** schemes for corporates.
- India's inequality is exacerbated by an imbalance in taxation, where the common person pays more taxes compared to corporates.
- **Out of every 100 rupees collected in taxes, 64 rupees come from the poor and middle class** through indirect (GST) and income taxes, while only 36 rupees come from rich corporates.
- This leads to the poor and common person facing a double burden of being excluded from economic growth gains and taxed more than corporates.

What needs to be done?

- It can be address by **an overhaul of India's taxation structure**, including simpler and lower GST rates and a new direct tax code.
- **Social security nets through welfare programs** are crucial to support the poor until they benefit from economic growth.
- Funding for welfare programs can come from faster growth, higher tax buoyancy, and efficient welfare delivery without penalizing the rich.
- A **pragmatic approach to reducing the rich-poor gap involves maximizing economic growth**, minimizing unemployment, lowering tax burdens for the common person, and providing a safety net for the poor.
- This requires a **delicate balance of labor market incentives, welfare safety nets**, and attracting investments.

Conclusion: Punitive taxation of the rich to benefit the poor is not considered practical, wise, or desirable. Instead, India can reduce inequality by focusing on making the poor richer without necessarily making the rich poorer.

Pareto optimality, or Pareto efficiency, is a concept in economics that refers to a situation where **no improvement can be made to one person's situation without making someone else worse off**. It is a state of affairs where resources are allocated in the most efficient way possible, given the preferences of all individuals involved.

- The **Pareto frontier illustrates** the different combinations of two objectives that can be achieved without making anyone worse off.
- Any point on the curve is considered **Pareto optimal**, while points below the curve are considered inefficient.

Pareto optimality:

- It is a theoretical concept, and in practice, it can be difficult to achieve a truly Pareto optimal outcome.
- Pareto optimality **does not imply equality or fairness**. It is simply a way of identifying the most efficient allocation of resources.

The concept of Pareto optimality is used in many different fields, including economics, political science, and engineering.

6. Purchasing Manager's Index

- **Economic Indicator:** PMI is a composite indicator that measures the **health of a country's manufacturing sector**. It's based on surveys conducted among **purchasing managers** in manufacturing companies.
- PMI includes five sub-indices:
 - New orders
 - Production levels
 - Employment
 - Supplier deliveries
 - Inventories
- **Interpretation:**
- **PMI above 50** indicates expansion in the manufacturing sector.
- **PMI below 50** indicates contraction in the sector.
- **PMI = 50** suggests no change.
- PMI is widely followed by economists, investors, and policymakers as a **leading indicator of overall economic activity**.

7. India's Online Gaming Sector:

- The Prime Minister aims to position India as a leading global gaming hub.
- He spent a day engaging with seven top gamers in April 2024 to understand the gaming industry's trajectory and challenges.
- The discussion focused on **distinguishing skill gaming from gambling** to establish a conducive regulatory environment.
- **Online gaming is integral to the Digital India initiative**, highlighting its importance.
- Key takeaways included the **potential of Indian mythology-based games, promoting women's participation, fostering innovation, and addressing perceptions of gaming as a career in India**

Rapid growth

- The online gaming industry in India has experienced rapid growth, with a **Compound Annual Growth Rate (CAGR) of 28% between FY20 and FY23**.

- Projections suggest further growth to **₹33,243 crore by FY28, maintaining a 15% CAGR.**
- This sector attracts significant foreign and domestic investments and creates both direct and indirect employment opportunities.
- Leveraging India's IT capabilities, the gaming industry holds significant potential for the country.
- **Despite global gaming industry revenues exceeding \$300 billion in 2021, India's online gaming segment only contributes 1.1% to global online gaming revenue, indicating substantial room for growth.**
- Online gaming **presents a multi-billion-dollar opportunity for Indian startups and aligns with the goal of achieving a \$1 trillion digital economy.**
- Positive developments include **the establishment of a task force by the Ministry of Information and Broadcasting and the designation of the Ministry of Electronics and Information Technology as the nodal ministry.**
- **Introduction of regulations such as the IT (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021, and clarification on tax deduction at source on winnings provide clarity and certainty for online gaming start-ups.**
- These measures contribute to fostering innovation driven by young Indians in the online gaming industry

Issues that need scrutiny

- Despite the **presence of self-regulatory bodies within the IT Rules of 2021**, their effective implementation is pending, undermining their intended impact on regulating the online gaming industry.
- Self-regulation plays a crucial role in an industry driven by innovation and rapidly evolving technology.
- **NITI Aayog's discussion paper** proposed a self-regulatory model for the online fantasy gaming sector, with a self-regulatory organization at its forefront.
- Recent revisions in taxation have raised concerns for the industry, particularly startups, as the **Goods and Services Tax (GST) Council decided to impose a 28% tax rate on the total face value of bets**, effective from October 1, 2023.
- Previously, online gaming firms in India were subjected to an 18% GST rate since the introduction of the indirect tax system in July 2017.
- **While the higher tax rate has initially boosted tax revenue for the government**, it poses sustainability concerns for the industry in the long term and may impact job creation in this sector

Soft Power

- **India has the opportunity to become a leading global gaming hub by addressing existing deficiencies in the industry.**
- Leveraging India's rich cultural heritage, including stories, legends, and folklore, can attract both domestic and international **audiences to games inspired by Indian mythology.**
- Efforts are underway to encourage the participation of women in the gaming industry, promoting diversity and inclusivity.
- As perceptions about gaming as a career option change, India can benefit from a growing pool of talented individuals driving innovation in the gaming landscape.

- India is on the brink of a transformative era in the gaming industry, and **by creating an enabling environment for skill gaming and capitalizing on cultural narratives**, it can realize its vision of a \$1 trillion digital economy and shape the future of global gaming.

8. India is now Third largest producer of Solar Power

- In 2023, **India surpassed Japan to become the world's third-highest producer of solar power**.
- India generated **113 billion units (BU) of solar power in 2023**, while Japan produced 110 BU.
- However, **in terms of installed power capacity** (including renewable and non-renewable sources), **India ranks fifth globally with 73 gigawatts (GW), while Japan ranks third with 83 GW**.
- The discrepancy between installed capacity and actual power produced is due to fluctuations in power demand and local circumstances.
- Data from NITI Ayog indicates that **solar power constitutes 18% of India's total installed electricity capacity of 442 GW**, but it only contributes 6.66% to the actual power produced.
- Japan's power demand decreased by 2% in 2023, allowing India to overtake it in solar power production.
- China is the world's leading producer of solar power**, generating 584 billion units (BU) in 2024, more than the combined output of the next four countries: United States, Japan, Germany, and India.
- In 2023, China contributed significantly to the expansion of renewable energy, accounting for 51% of the additional global solar generation and 60% of new global wind generation.
- When combined with nuclear power, low-carbon sources accounted for almost 40% of global electricity generation in 2023.

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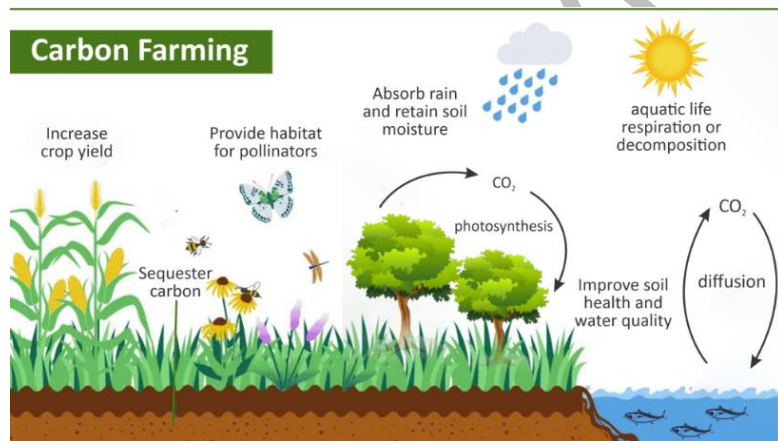
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Environment

1. What is Carbon Farming?

- Carbon is an essential element found in all living organisms and many minerals.
- It plays a crucial role in various processes on Earth, including photosynthesis, respiration, and the carbon cycle.
- Farming involves activities like cultivating land, growing crops, and raising livestock for food, fiber, fuel, or other resources.
- **Carbon farming combines farming practices with regenerative agricultural techniques aimed at restoring ecosystem health and improving agricultural productivity.**
- It focuses on enhancing carbon storage in agricultural landscapes and reducing greenhouse gas emissions to mitigate climate change.
- Carbon farming practices can help address soil degradation, water scarcity, and challenges related to climate variability.



How can Carbon Farming Help?

- Rotational grazing is a simple form of carbon farming that involves moving livestock between different pasture areas.
- Other carbon farming practices include agroforestry, conservation agriculture, integrated nutrient management, agro-ecology, livestock management, and land restoration.
- Agroforestry practices like silvopasture and alley cropping involve planting trees and shrubs alongside crops or pasture to sequester carbon and diversify farm income.
- Conservation agriculture techniques such as zero tillage, crop rotation, cover cropping, and crop residue management help minimize soil disturbance and increase organic content in soil.
- Integrated nutrient management involves using organic fertilizers and compost to promote soil fertility and reduce emissions.
- Agro-ecological approaches like crop diversification and intercropping contribute to ecosystem resilience.
- Livestock management strategies like rotational grazing, optimizing feed quality, and managing animal waste can reduce methane emissions and increase carbon storage in pasture lands.

What are the Challenges to Carbon Farming?

- The effectiveness of carbon farming depends on various factors such as geographical location, soil type, crop selection, water availability, biodiversity, and farm size.

- Regions with **long growing seasons, sufficient rainfall, and irrigation are best suited for carbon farming** as they provide optimal conditions for carbon sequestration through vegetation growth.
- Practices like **agroforestry and conservation agriculture may be particularly effective in regions with adequate rainfall and fertile soil.**
- Carbon farming can be challenging in hot and dry areas with limited water availability, where water is prioritized for drinking and washing needs.
- Limited water availability can hinder plant growth and restrict the potential for carbon sequestration through photosynthesis.
- Some carbon farming practices, like cover cropping, may not be viable in arid environments due to additional water demands.
- **The selection of plant species is crucial, as not all species trap and store carbon equally effectively.** Fast-growing trees and deep-rooted perennial grasses are generally better at carbon sequestration.
- Financial assistance may be necessary for farmers, especially in developing countries like India, to overcome the costs associated with implementing carbon farming practices.
- Addressing these challenges is essential to realize the full potential of carbon farming as a strategy to combat climate change

What are some Carbon Farming Schemes Worldwide?

- Carbon trading in agriculture has gained importance globally, especially in countries like the U.S., Australia, New Zealand, and Canada, where voluntary carbon markets have emerged.
- Initiatives such as the Chicago Climate Exchange and the Carbon Farming Initiative in Australia aim to incentivize carbon mitigation activities in agriculture.
- Practices like **no-till farming and reforestation are examples of activities promoted through carbon trading to reduce carbon emissions.**
- **Kenya's Agricultural Carbon Project, supported by the World Bank,** showcases the potential of carbon farming to address climate mitigation, adaptation, and food security challenges in economically developing countries.
- The **'4 per 1000' initiative, launched during the COP21 climate talks in 2015 in Paris, emphasizes the role of carbon sinks in mitigating greenhouse gas emissions.**
- Managing the remaining carbon budget of approximately 390 billion tonnes wisely is crucial as the oceans and atmosphere approach their saturation points with carbon

What are the Opportunities in India?

- As climate change becomes more severe, agricultural practices that are resilient to climate impacts and reduce emissions are crucial.
- Grassroots initiatives and research in India show that organic farming can effectively sequester carbon, providing economic benefits.
- Agro-ecological practices in India have the potential to generate \$63 billion in value from approximately 170 million hectares of arable land.
- **Farmers adopting sustainable agricultural practices could receive annual payments of around ₹5,000-6,000 per acre for providing climate services.**

- **Regions like the Indo-Gangetic plains and the Deccan Plateau are well-suited for carbon farming, while the Himalayan region and coastal areas face challenges.**
- Carbon credit systems can incentivize farmers by providing additional income through environmental services.
- **Agricultural soils have the capacity to absorb 3-8 billion tonnes of CO₂-equivalent annually over 20-30 years, contributing to climate stabilization.**
- Scaling up carbon farming requires addressing challenges such as **limited awareness, inadequate policy support, technological barriers, and creating an enabling adoption environment.**
- **Promoting carbon farming in India can help mitigate climate change, improve soil health, enhance biodiversity, and create economic opportunities for farmers.**

2. Microbes, not Fossil fuels, produced most new Methane:

- A research team focused on the concentration of methane in the atmosphere from 2019 to 2020. They observed that methane concentration increased until the 1990s, stabilized briefly, then began rising again around 2007.
- **Recent estimates suggest that atmospheric methane concentration is three times higher today compared to 300 years ago.**
- The researchers are investigating the source of this increased methane concentration in the atmosphere.
- Research suggests that **microbes, rather than the burning of fossil fuels, are the primary sources of methane in the atmosphere.**

Evolving Understanding

- **Methane is the second most prevalent human-caused greenhouse gas after carbon dioxide (CO₂), but it has a stronger warming effect on the planet.**
- Over a century, methane's global warming potential is **28 times greater than CO₂**, and even higher over shorter periods like two decades.
- Until recently, policymakers did not prioritize methane emissions in efforts to address global warming.
- In 2021, member countries launched the '**Global Methane Pledge**' at the **U.N. climate talks** to reduce methane emissions and mitigate global warming.
- Our understanding of methane emissions is still developing.

The Sources of Methane

- Methane emissions come from various sources, categorized as biogenic and thermogenic.

Do You Know?

- **Carbon-13 is a key indicator used to distinguish between methane from biological sources and methane from thermogenic sources.**
- **Methane from biological sources typically contains fewer carbon-13 atoms compared to methane from thermogenic sources.**

- **Thermogenic** methane is released when fossil fuels like natural gas or oil are extracted from deep within the earth's crust.
- Biogenic methane originates from microbial activity, particularly from archaea called methanogens.
- **Methanogens** thrive in oxygen-depleted environments such as animal digestive tracts, wetlands, rice paddies, landfills, and lake and ocean sediments.

Global Methane Assessment: 2030 Baseline Report

Why in News?

Recently, the Global Methane Assessment: 2030 Baseline Report was launched at the Climate and Clean Air Ministerial Meeting at COP27, highlighting that Methane emissions are going to rise by 5-13% by 2030.

Key Highlights

- Methane levels in the atmosphere in 2021 recorded the highest at 1908 ppb.
- Amount of methane in the atmosphere is 260% of pre-industrial levels.
- Current annual Methane emissions from human activities are 350-390 million tonnes and responsible for about 45% net warming.
- Agriculture & fossil fuel energy sectors are dominant in methane emissions.
- Current targeted measures will reduce emissions by about 45%, by 2030.

Efforts to Curb Methane Emissions

- Global Methane Pledge (COP 26) targets cutting Methane emissions by 45 % (at 2020 levels) and reduction of warming by at least 0.2°C between 2040 and 2070.
 - India is not a member of Global Methane pledge initiative.
- Methane Alert and Response System (MARS): At CoP27, the UN launched the MARS to track methane emissions.
- MethaneSAT: A satellite that will track methane leakage is to be launched.
- The International Energy Forum (IEF) launched the IEF Methane Initiative in June 2021 to develop a methane emissions measurement methodology.

About Methane

- Methane (CH₄) is the principal component of natural gas.
- It is responsible for over 25 % of global warming.
- It is a powerful greenhouse gas with life-span of 20 years.
- Global Warming Potential over 80 times of CO₂.
- India is among the top 5 methane emitters in the world.



- **Methanogens** convert organic matter into methane as part of the global carbon cycle, which is essential for natural ecosystems.
- Human activities like **agriculture, dairy farming, and fossil fuel production** have increased methane emissions beyond natural levels.
- **Both biogenic and thermogenic activities produce different isotopes of methane.**
- Tracking these isotopes helps identify the sources of methane emissions and their relative contributions to atmospheric methane levels.

3. This is the year to get the Sustainable Development Goals back on Track:

- The United Nations summit on Sustainable Development Goals (SDG) took **place in New York on September 18-19**.
- The purpose of the summit was to **evaluate progress made towards** achieving the SDGs.
- The **Agenda-2030, adopted by the UN General Assembly in 2015, outlines 17 SDGs with 169 specific targets to be achieved by 2030**.
- These goals cover various aspects of sustainable development, including **poverty alleviation, gender equality, environmental protection, and access to education and healthcare**.
- While the **SDG program is not legally binding**, all countries have committed to working towards these goals as sustainable development is considered a global effort.
- The summit provided an opportunity for countries to review their efforts, share successes and challenges, and identify areas for improvement in achieving the SDGs.

Slow progress

- Progress towards achieving the Sustainable Development Goals (SDGs) is falling short.
- The **COVID-19 pandemic and other global crises have worsened the situation**.
- There's concern about slow progress and lack of attention to environmental goals.
- The current approach to pursuing SDGs is criticized for **not considering their integrated nature**.
- Failure to balance human well-being and environmental health may lead to accelerated environmental degradation.
- The **UN SDG Report 2023 suggests urgent action in five key areas**.
- World leaders have reaffirmed commitments to achieve SDGs by 2030, but their effectiveness on the ground is uncertain.



Results that Deserve Deliberation

- **A team of 64 scholars analysed 3,000 studies to assess the political impact of the Sustainable Development Goals (SDGs) on poverty eradication, social justice, and environmental protection.**
- Published in Nature Sustainability, September 2022, led by Professor Frank Biermann of Utrecht University, Netherlands.
- **Examined five dimensions: global governance, domestic political systems, institutional integration, inclusiveness, and ecological protection.**
- Concluded that SDGs **mainly had discursive effects with limited normative and institutional reforms.**
- Found little evidence that global goal-setting directly impacted national and local politics.
- Emphasized the importance of a systemic approach to realize the transformative potential of the 2030 Agenda.
- **The "Future is Now" UN report (2019)** suggests identifying entry points to address multiple SDGs simultaneously.
- Advocates for maximizing co-benefits while managing trade-offs in sustainable development actions.
- **Recommends leveraging governance, economy, individual and collective action, and science and technology.**
- **Calls for partnerships and collaborations to implement integrated pathways tailored to local needs and priorities.**

An Important Year

- **In 2024, elections will take place in at least 64 countries worldwide.**
- These countries represent both developed and developing nations.
- The elections involve nearly half of the world's population, totalling 49%.
- It's crucial for newly elected governments to consider sustainability and adjust their national policies accordingly.
- Sustainability should be a key focus for governments as they shape their agendas and policies.
- **Aligning national policies with sustainability goals can contribute to long-term environmental, social, and economic well-being.**
- Addressing sustainability issues is essential for ensuring a better future for current and future generations.

4. Environment Impact Assessment:

- **EIA is a decision-making tool to assess all kinds of impacts on the environment** due to proposed economic activities such as development projects, eg. Infrastructure, highways, railways, mining, hydropower, etc. which impact the air, water, and the soil along with impacting the health of humans and other living organisms.
- It looks for mitigating those impacts with the help of **Environment Management Plans.**
- **EIA is based on the principle of Sustainable development** where protection of the environment together with socio-economic development shall take place.
- **Environmental Impact Assessment or EIA is the process or study which**

- predicts the effect of a proposed industrial/infrastructural project on the environment.
- prevents the proposed activity/project from being approved without proper oversight or taking adverse consequences into account
- compares various alternatives for a project and
- seeks to identify the one which represents the best combination of economic and environmental costs and benefits.
- **Under the existing 2006 law, projects are categorized into categories A and B.**
- All projects in **category A need to undergo the process of EIA.**
- **Category B projects are further classified into categories B1 and B2, on the basis of their scope and potential impact.**
- **Only the projects under B2 are exempted from the cumbersome process.**
- **Stages of EIA:**



- **Screening:**
- Projects are divided into 2 categories:
- **Category A:** It includes big-size projects like hydropower projects. All such projects are approved by the Central EIA authority. This authority is under MoEFCC.
- **Category B:** It includes smaller projects. eg. Tanneries, chemical factories, etc.
- **Category B is further divided into B1 and B2.** EIA study is mandatory for B1 projects. Projects under B2 are exempted from EIA Study.
- All category B projects are approved by the State EIA authority. This authority is under MoEFCC. **Screening is required for category B Projects only.**
- **Scoping:**
- A detailed term of reference for the proposed project is determined. The scope of the EIA study is determined. Based on Terms of Reference (ToR), a preliminary study will be conducted and an EIA report will be prepared.

- This report will be prepared by a third-party EIA consultant. Third-party EIA consultant is paid by the project developer. These EIA Consultants are certified to do this work. The certification is by the MoEFCC.
- **Public consultation/Public hearing:**
- A public hearing is conducted on the EIA report which is prepared by the consultant on behalf of the project developer.
- Here local communities affected by the project are invited to participate. This is done by the district administration. There is an advertisement of the venue and time of the public consultation and it is given by the district administration.
- This public hearing is conducted under the supervision of State Pollution Control Board/ or CPCB in case of UT. A video recording of the hearing, with the written opinion of participating people, is taken for final review by the concerned authority. Some projects are exempted from Public hearing.
- **Appraisal:**
- It refers to the review of the EIA report along with all documents of the public hearing. Based on the approval of EAC, the project is either approved or rejected.
- When the project is approved, the **project shall start within 2 years of approval**. Otherwise, the approval will be cancelled and the entire process should be repeated again.

5. Other Short News:

5.1 Plastic Treaty:

- UN Member States endorsed a historic resolution at the UN Environment Assembly (**UNEA-5**) **today in Nairobi to End Plastic Pollution** and forge an international legally binding **agreement by 2024**
- Activist and environmentalist groups are disappointed with the outcome of the Global Plastics Treaty negotiations in Ottawa, Canada.
- The next meeting, expected to be the final one, is scheduled for November **2024 in Busan, South Korea.**
- **India's Stand** - India **opposed restrictions on primary plastic** polymers, arguing that production reductions exceed the scope of UNEA resolutions.
- India acknowledged the chemicals used in plastic manufacturing but highlighted that some are already subject to prohibition or regulation.

Facts about Plastic Production, impact, etc.

- Plastic Production – 2 million tonnes in 1950 to 380 million tonnes in 2017 and is expected to double by 2040.
- Impact on Health – fertility, hormonal, metabolic and neurological activity.
- By 2050, GHGs emissions from Plastic would account for 15% of the total emissions.
- 11 million tonnes of plastic waste flow into oceans, this may triple by 2040.
- More than 800 marine and coastal species affected by plastic pollution.

5.2 Demand for Animal Protection Bill by June:

- **The Prevention of Cruelty to Animals (PCA) Act (1960)** is the primary law in India that criminalizes cruelty toward animals.
- In 1954, **Rukmini Devi Arundale** advocated for replacing the outdated PCA Act (1890) with a new law.
- Arundale emphasized India's responsibility to lead by example in practicing ahimsa (non-violence) due to its cultural emphasis on the concept.
- The current Prevention of Cruelty to Animals (PCA) Act has several shortcomings that hinder its effectiveness.

5.3. Exotic Species:

- Exotic species are the **alien species** which are also known by other names like **invasive species, non-indigenous species or bioinvaders**, like -
- **Acacia Mearnsii** (black wattle), eucalyptus, and **West Indian Lantana** (kongini).

5.4. Maldharis Pastoralists: Guardians of the Herds:

- Maldharis are a unique community of pastoralists found primarily in Gujarat, Rajasthan, Maharashtra, and Madhya Pradesh, India.

Science and Technology

1. Understanding the science behind Magnetic Resonance Imaging (MRI):

- Magnetic resonance imaging (MRI) is a non-invasive medical imaging technique used to look inside the human body.
- The techniques underlying MRI were developed in the early 1970s.
- **Paul Lauterbur and Peter Mansfield** further refined these techniques in the late 1970s, making them commercially viable.
- Their contributions to MRI earned them the **Nobel Prize in Medicine in 2003**.
- MRI has become an indispensable tool in modern medical diagnostics, allowing for detailed **imaging of internal body structures without the need for surgery**.

What is Magnetic Resonance Imaging?

- Magnetic Resonance Imaging (MRI) is a diagnostic procedure used to **obtain images of soft tissues in the body**.
- **Soft tissues are those that haven't become hardened through calcification**.
- MRI is non-invasive and widely used to **image various parts of the body**, including the **brain, cardiovascular system, spinal cord, joints, muscles, liver, and arteries**.
- It's particularly important in diagnosing and treating certain cancers like prostate and rectal cancer, and in tracking neurological conditions such as **Alzheimer's, dementia, epilepsy, and stroke**.
- Researchers also **use MRI to study changes in blood flow to understand brain activity, a method known as functional MRI**.
- However, individuals with embedded metallic objects or implants, like shrapnel or pacemakers, **may not be able to undergo MRI scans due to the strong magnetic fields used**.
- Even having a credit card with a magnetic strip in the pocket during an MRI can cause it to be **wiped clean due to the magnetic fields**.

How does MRI work?

- An MRI procedure creates images of body **parts using the hydrogen atoms present in those parts**.
- Hydrogen atoms **consist of a single proton with one electron spinning around it**.
- These atoms are abundant in fat and water, which are found throughout the body.
- The MRI machine comprises four essential components, resembling a giant doughnut.
- **The central hole, called the bore, is where the person being scanned is inserted**.
- Inside the doughnut is a powerful superconducting magnet that generates a strong and stable magnetic field around the body.
- When the body part to be scanned is positioned at the center of the bore, the magnetic field is activated.
- The **magnetic field causes the spin axes of hydrogen atoms in the body part to align along its direction**.
- A small population of atoms may remain unmatched, pointing in different directions.

- A device emits a radiofrequency pulse at the scanned area, causing the excess atoms to absorb the radiation and become excited.
- When the pulse ends, these atoms release the absorbed energy and return to their original states.
- The frequency of the pulse the excess atoms absorb is called the Larmor frequency, determined by the magnetic field strength and tissue type.
- A detector receives the emitted signals and sends them to a computer, which reconstructs two- or three-dimensional images of the body part.

What are the pros of MRI?

- **After the main magnetic field is activated in an MRI machine, three smaller magnets produce weaker magnetic fields that are about 80 times weaker than the main field.**
- **These smaller fields have gradients, meaning they are not uniform, which helps highlight specific portions of the body to be scanned.**
- By turning the gradient magnets on and off in specific sequences, the MRI machine can scan portions as narrow as a few millimetres wide without requiring the individual to move inside the machine.
- The machine can scan different parts of the body without the need for the person being scanned to change positions.
- MRI scans can practically image the body from various useful directions and in very small increments due to the machine's design and magnet organization.
- When excess atoms emit absorbed energy

What are the cons of MRI?

- MRI machines are expensive, ranging from a few tens of lakhs to several crores depending on specifications like magnetic field strength and imaging quality.
- Diagnostic facilities pass on these costs to patients, making MRI scans costly, often priced at ₹10,000 or more each.
- Patients may require multiple MRI scans, further increasing the financial burden, especially for those without insurance.
- Patients must remain still during MRI scans, which can last tens of minutes. Any movement can distort the image and necessitate a repeat scan.
- Claustrophobic individuals may find the confined space of the MRI machine uncomfortable, although some "open-bore" MRI designs can alleviate this issue.
- **MRI machines generate a magnetic field of at least 1 tesla using superconducting wire coils cooled with liquid helium.**
- Maintaining the superconducting setup is energy-intensive and expensive.
- The switching of heavy currents within the machine, particularly in the gradient coils, produces loud noises during operation, which can be uncomfortable for patients.

2. The Judiciary's shadow over Standard Essential Patents (SEP)

- India is facing a potential crisis regarding technology companies and their use of 'standard essential patents' (SEP).

- These patents cover technologies adopted as "standards" by industries like telecom.
- **Examples** of such standards include **CDMA, GSM, and LTE** in the telecom sector.
- Standards ensure that different brands of cellular phones can work together.
- For instance, **once GSM became a standard**, all phone manufacturers had to make their handsets compatible with GSM.
- This **issue affects India's efforts to build a domestic manufacturing industry** for cellular phones.
- The **regulation of SEPs has largely been left to the judiciary**, but they haven't fully addressed the problem.

CDMA (Code Division Multiple Access)

- **Technology:** Based on **spread spectrum technology**, where multiple users share the same frequency band by using unique codes to separate their signals.
- **Key Features:**
 - Enhanced call quality and security due to code-based signal separation.
 - Historically associated with networks offered by carriers like Verizon and Sprint (in the US).
- **Status:** While still in use in some legacy networks, CDMA is primarily considered a 2G and 3G technology and is largely being phased out as carriers upgrade to 4G and 5G technologies.

GSM (Global System for Mobile Communications)

- **Technology:** Based on TDMA (Time Division Multiple Access), where users share the same frequency but are assigned different timeslots for transmission.
- **Key features:**
 - Widespread global adoption, especially in Europe.
 - Use of SIM (Subscriber Identity Module) cards for easy interchangeability between devices.
 - Basis for 2G and early 3G networks.
- **Status:** Much like CDMA, GSM represents a legacy technology. Many older phones supported GSM networks, but it's being increasingly replaced by LTE and 5G.

LTE (Long-Term Evolution)

- **Technology:** Designed as a true 4G technology, using OFDMA (Orthogonal Frequency Division Multiple Access) and SC-FDMA (Single-carrier FDMA) for efficient data transmission.
- **Key features:**
 - Significantly higher speeds and lower latency (response time) compared to CDMA and GSM.
 - Support for voice over LTE (VoLTE) for improved voice quality.
 - Backbone of modern 4G networks worldwide.
- **Status:** LTE is the dominant cellular technology globally. While upgrades to 5G are ongoing, LTE remains central to infrastructure and will continue to play a significant role.

Important Notes:

- **Changing Landscape:** Most phones today focus on LTE and 5G compatibility, rendering standalone CDMA and GSM capabilities less common.

Carrier Differences: Specific CDMA/GSM carrier networks in the past gradually migrated towards LTE, sometimes affecting the choice of phones consumers could use.

3. Space Technology and Discoveries:

3.1 What is the Boeing Starliner?

- Starliner is a spacecraft designed to transport astronauts in space.
- It is launched into space by a rocket.
- **Starliner consists of two main parts:** the crew capsule and the service module.
- The **crew capsule is where the astronauts stay during the journey** and can survive re-entry to return to Earth.

- The **service module contains essential equipment and systems for astronauts to survive in space, such as air and temperature control, water supply, and sanitation.**

What is Starliner's purpose?

- Since being awarded NASA contracts, SpaceX has conducted 13 missions to the International Space Station (ISS) using its Dragon crew capsule.
- The **Dragon crew capsule can accommodate up to seven astronauts.**
- Assuming Starliner's crewed test flight is successful, SpaceX and Boeing will alternate launching astronauts to the ISS.
- Each crew's expedition to the ISS lasts up to six months.
- This arrangement will continue until the ISS is decommissioned in the next decade.
- **SpaceX's Dragon capsule became operational in 2020, Russia's Soyuz rocket and capsule** were the only means of ferrying astronauts to and from the ISS.
- NASA shut down its **Space Shuttle program in 2011**, leaving a gap until commercial crew vehicles like Dragon and Starliner became available.

3.2 ISRO finds proof of enhanced possibility of water ice in polar craters of the Moon:

- Indian space scientists, including those from ISRO's Space Applications Centre (SAC), collaborated with researchers from IIT Kanpur, University of Southern California, Jet Propulsion Laboratory, and IIT (ISM) Dhanbad.
- Their study found evidence **suggesting an increased likelihood of water ice occurrence** in the polar craters of the moon.
- The amount of sub-surface ice within the first couple of meters is **estimated to be five to eight times larger than surface ice in both lunar poles.**
- Drilling on the moon to access this ice for sampling or excavation is deemed essential for future missions and sustained human presence.
- The study indicates that the northern polar region has approximately twice as much water ice as the southern polar region.
- It confirms the hypothesis that sub-surface water ice in lunar poles originates from out-gassing during volcanism in the Umbrian period.
- The distribution of water ice is influenced by mare volcanism and preferential impact cratering.
- Accurate knowledge of water ice distribution and depth in lunar poles is crucial for selecting future landing and sampling sites for missions exploring lunar volatiles.
- This study supports ISRO's future plans for in-situ volatile exploration on the moon.

4. Other Short News:

4.1 Folds and faults: On Alpha Fold 3:

- Proteins are essential molecules in the body, but misfolded ones can lead to diseases.
- The protein-folding problem, a mystery in biology, refers to how proteins fold into specific shapes.

- DeepMind, a subsidiary of Google, developed AlphaFold, an AI tool to predict protein shapes, in 2018, and later introduced AlphaFold 2.
- AlphaFold 3, the latest version, boasts nearly 80% accuracy in predicting protein shapes, along with modelling DNA, RNA, ligands, and modifications.
- While AlphaFold is revolutionary, it cannot explain why proteins fold in certain ways, leaving this task to human scientists.
- The impact of AlphaFold on drug discovery remains uncertain as it doesn't guarantee success in human clinical trials.
- Access to AlphaFold 3 is limited, and its inner workings are not publicly available, raising concerns about transparency and accessibility.
- DeepMind should consider alternative revenue models to ensure wider access to AlphaFold 3, given its significance in healthcare and reliance on publicly funded research for its development.

4.2. West Nile fever case in Kerala:

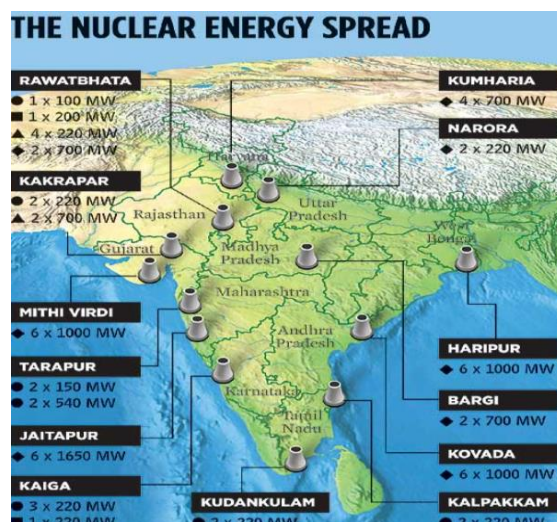
- **WNF is a mosquito-borne illness caused by the West Nile virus (WNV).** The virus is spread to humans by the bite of an infected mosquito.
- **Transmission:** Spread by infected mosquitoes
- **Symptoms:**
 - 80% of infected people have no symptoms.
 - 20% of infected people experience flu-like symptoms including fever, headache, body aches, joint pains, vomiting, diarrhoea, or rash.
- Less than 1% of infected people develop a serious illness affecting the central nervous system, which can include high fever, headache, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, vision loss, numbness and paralysis.
- **Treatment:** There is no specific treatment for West Nile fever, but supportive care can help alleviate symptoms.
- **Prevention:** There is no vaccine to prevent West Nile fever. Mosquito bite prevention is the key to reducing your risk.

4.3. The Indian Patent Act and Its Challenges

- **Section 3(d):** This provision in the Indian Patent Act has been hailed for preventing "evergreening" of pharmaceutical patents but has also faced criticism for setting a strict patentability standard pharmaceutical drug.
- **Compulsory Licensing:** India has provisions for compulsory licensing (**allowing generic production without the patent holder's consent under certain circumstances**) to address public health needs. Balancing this with innovation incentives is an ongoing debate.
- **Enforcement: Challenges** persist in enforcement of patent rights, with issues like infringement and counterfeiting.

4.4. Nuclear Energy

- **Nuclear power plant in Jaitapur**
- **Location:** Madban village, Ratnagiri district, Maharashtra, India.
- **Operator:** Nuclear Power Corporation of India Limited (**NPCIL**), a government-owned company.
- **Technology Partner:** Électricité de France (**EDF**), a French energy company.
- **Capacity** - European Pressurized Reactors (EPRs) with a combined capacity of 9,900 MW.



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Website : patrioticias.in

Internal Security

1. Indian Defence University:

- Thucydides, an ancient Greek thinker, is quoted as saying that a nation that separates its scholars from its warriors will have its thinking done by cowards and its fighting done by fools.
- This quote emphasizes the **importance of integrating academic rigor and strategic thinking into military institutions.**
- Many nations, including India's neighbors like Pakistan and China, have established defense universities to promote academic excellence within their armed forces.
- Pakistan reportedly has two universities dedicated to its armed forces, while China has three, with more than 60 other universities in China having military and security connections.
- However, India lacks a dedicated defense university despite the need for one being long overdue.
- **The absence of an Indian Defense University (IDU) raises concerns about the country's ability to enhance strategic thinking and academic rigor within its armed forces.**

Professional Military Education

- The **nature of war remains constant, but its character is constantly changing**, necessitating a focus on military education.
- Military officers need academic preparation to address current and future security challenges, especially in dynamic and chaotic environments like Europe and West Asia.
- Military officers are expected to produce results despite uncertain initial information and rapidly changing circumstances.
- A well-constructed **Professional Military Education (PME)** continuum empowers officers to handle complex challenges throughout their careers.
- The evolution of PME in the U.S. is relevant to India's aims of theaterization.
- The **Goldwater-Nichols Defense Reorganization Act of 1986** in the U.S. brought significant structural reforms.
- 'Ike' Skelton played a crucial role in reforming military education in the U.S. armed forces through a report to the U.S. Congress.
- Skelton's report recommended focusing educational institutions on specific learning objectives, enhancing the quality of faculty, establishing a two-phased system for joint officer education, and forming an Institute for National Strategic Studies at National Defense University, among other things.

Slow progress

- **The idea of establishing a Defence Services University in India was first proposed by the Chiefs of Staff Committee in 1967.**
- **In 1982**, a Study Group emphasized the need for an apex educational body for the armed forces, leading to the concept of the Indian Defence University (IDU).
- **Following the Kargil conflict, a committee chaired by Dr. K. Subrahmanyam was formed to examine the establishment of the IDU.**
- Based on the committee's recommendations, 'in principle' approval was given in May 2010 to establish **the IDU in Gurgaon.**

- Despite initial optimism, progress on setting up the IDU has been slow.
- **India's armed forces have several world-class training and education institutions, but they lack an integrated Professional Military Education (PME) framework.**
- Affiliations with universities for degree courses are not seen as the optimal solution for the armed forces' educational needs.
- **The IDU aims to address these shortcomings by providing a central institution of higher military learning with a qualified faculty comprising academicians and serving/retired officers.**
- The university's curriculum would **cover various subjects relevant to national security and defense, integrating theory with practice.**
- Different colleges and institutions under the IDU's governance would offer diverse subjects in sciences and humanities related to defense and security.

An idea whose time has come

- The establishment of the Indian Defence University (IDU) has been delayed despite its long-overdue realization.
- Some experts have suggested that the **Rashtriya Raksha University (RRU) in Gujarat** could fulfill the need for the IDU. However, this argument is flawed.
- The comparison between the IDU and RRU is like comparing apples and oranges because their objectives and curricula differ significantly.
- **The RRU Act does not specify education related to 'defence' in its objectives, and its curriculum is not solely focused on military requirements for war management and execution of plans.**
- Delays in commissioning the IDU come at the cost of defense preparedness, strategic culture, and inter-service integration.

The Rashtriya Raksha University (RRU) is a premier institution dedicated to education and training in the field of national security, police studies, and crime management. Here's a breakdown of its key features based on official sources:

- **Establishment:** Established in 2020 through the Rashtriya Raksha University Act, 2020
- **Location:** Gandhinagar, Gujarat, India
- **Vision and Mission:** **Vision:** To be a world-class center for excellence in national security, police studies, and crime management.
- **Mission:** To impart world-class education and training to develop highly skilled and professional human resources for national security, police, and allied fields.

Academics:

- Offers undergraduate, postgraduate, doctoral, and diploma programs in various specializations related to:
 - Police Administration
 - Criminology and Criminal Justice
 - Cyber Security
 - Forensic Science
 - Internal Security
 - Disaster Management
 - Legal Studies (focusing on security law)

Significance:

- First university in India solely dedicated to police and security studies.
- Focuses on interdisciplinary learning and research to address contemporary security challenges.

- Aims to bridge the gap between theory and practice by providing practical training and exposure to real-world scenarios.

2. Prevention of Money Laundering Act (PMLA) in 2002

- India used FATF recommendations to formulate its own legislation, resulting in the **Prevention of Money Laundering Act (PMLA) in 2002.**
- The PMLA primarily targeted the laundering of drug money, reflecting the focus of UN resolutions and FATF recommendations.
- The **Act contained offenses outlined in the Indian Penal Code (IPC) and the Narcotic Drugs and Psychotropic Substances Act, 1985.**
- The **PMLA evolved over time through amendments, deviating from its original focus on drug money laundering.**
- The Prevention of Money Laundering Act (PMLA) targets the laundering of "crime proceeds," which includes funds derived from criminal activities.
- Individuals involved directly in the crime, as well as those who participate in the laundering process later on, can be held accountable under this law.
- However, the **PMLA now includes a wide range of offenses in its schedule that go beyond its original purpose, extending to crimes unrelated to drug money laundering.**
- Despite its expanded scope, the fundamental objective of the PMLA remains rooted in addressing the significant threat posed by the laundering of illicit funds from the international drug trade, which has the potential to destabilize the global economy and compromise national sovereignty.

The PMLA's enactment

- The **Prevention of Money Laundering Act (PMLA) was enacted by India's Parliament under Article 253, which allows laws to implement international conventions.**
- **Article 253 restricts such laws to the subject matter of the international decision, as specified in Item 13 of the Union list of the Constitution.**
- Originally, the PMLA focused on combating money laundering related to drug trafficking, as per the UN resolution.
- However, amendments to the PMLA expanded its scope, including offenses beyond drug-related crimes, such as those listed in the Indian Penal Code (IPC) or covered by special laws.
- For example, the **Prevention of Corruption Act, 1988, aimed at addressing corruption among public servants, was added to the PMLA's schedule in 2009.**
- Under the PMLA, **accused individuals are presumed guilty until proven innocent**, contrary to the fundamental principle of Anglo-Saxon jurisprudence.
- **Bail provisions in the PMLA make it difficult for accused individuals to obtain bail**, as judges can only grant bail if they are convinced of the accused's innocence, leading to prolonged detention without trial.

The Bail Provision

- The bail provision of the **Prevention of Money Laundering Act (PMLA) Act, Section 45**, has significant political implications in present-day India.

- It was initially deemed unconstitutional by a two-judge Bench of the Supreme Court in **Nikesh Tarachand Shah vs Union of India (2018)** for violating Article 14 and Article 21.
- However, Parliament swiftly reinstated this provision with amendments, **which was later upheld by a three-judge Bench led by Justice A.M. Khanwilkar in Vijay Madanlal Choudhary vs Union of India (2022).**
- The Supreme Court ruled that this provision is reasonable and aligns with the objectives of the PMLA Act, which aims to combat money laundering and safeguard the economy from destabilization.
- Despite the Act's original purpose, it includes less serious offenses in its schedule, a decision considered within the legislative policy domain.
- The **current judicial approach to bail in PMLA cases** is seen as technical, with a departure from the perspective laid out **by Justice V.R. Krishna Iyer in 1978.**
- Justice Iyer emphasized the importance of personal liberty under Article 21 of the Constitution and urged a cautious and judicial exercise of curial power concerning bail decisions.
- The evolution of the Supreme Court's stance on bail from Justice Iyer to Justice Khanwilkar reflects a significant journey.

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Miscellaneous

1. Vyjayanthimala, Chiranjeevi, Hormusji N. Cama receive Padma awards:

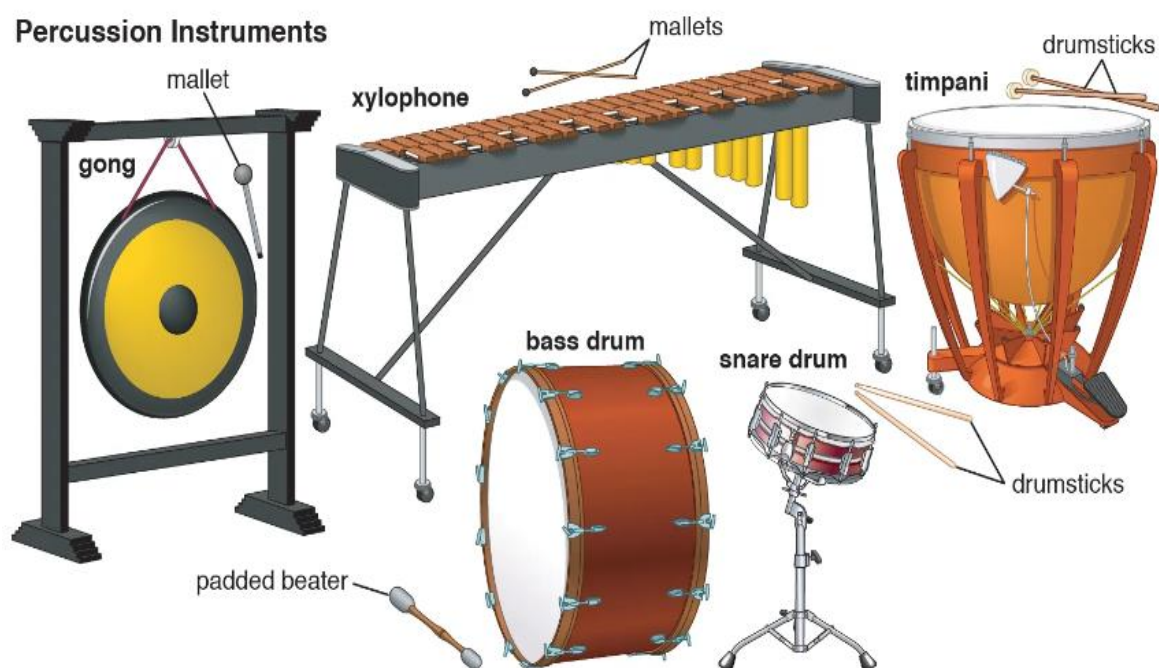
- President Droupadi Murmu conferred Padma awards to several eminent individuals.
- Recipients included actors Vyjayanthimala Bali and Konidela Chiranjeevi, the late M. Fathima Beevi (the first woman judge of the Supreme Court), and Mumbai Samachar owner Hormusji N. Cama.
- Ladakh's spiritual leader Togdan Rinpoche and Tamil actor 'Captain' Vijayakant were honoured posthumously.
- BJP leader O. Rajagopal and Kundan Vyas, group editor and CEO of Gujarati newspaper Janmabhoomi, were also awarded.
- Ms. Bali and Mr. Chiranjeevi received the Padma Vibhushan, while others were given the Padma Bhushan.
- Family members of some recipients received the awards on their behalf.
- Vice-President Jagdeep Dhankhar, Prime Minister Narendra Modi, and Union Home Minister Amit Shah were present at the ceremony.
- Padma Bhushan awardees included eminent cardiologist Ashwin Balachand Mehta and former Union Minister Satyabrata Mookherjee.
- Padma Shri awardees included unsung heroes like Parbati Baruah, India's first woman elephant mahout known as "Hasti Kanya".

2. Sangeeth Sivan, a filmmaker, passed away at the age of 65 in Mumbai.

- His film **"Yodha" (1992) in Malayalam** cinema was highly acclaimed and had high repeat watch value.
- "Yodha" was influenced by Hollywood film "The Golden Child" but had original humor and memorable performances.

3. **Membranophones:** These instruments have a stretched membrane, or drumhead, that vibrates to produce sound. Examples of membranophones include drums, timpani, bongos, and djembes.

Percussion Instruments



- **Idiophones:** These instruments produce sound when their entire body vibrates. Examples of idiophones include cymbals, bells, gongs, woodblocks, and triangles. Percussion instruments can be played in a variety of ways, including with sticks, mallets, hands, or even feet. They are used in a wide range of musical styles, from classical and jazz to rock and pop.

Here are some other interesting facts about percussion instruments:

- The word "percussion" comes from the Latin word "percutere," which means "to strike."
- The oldest known percussion instruments are drums, which have been found in archaeological sites dating back to around 6,000 BCE.
- Percussion instruments play an important role in many cultures, and are often used in religious ceremonies and rituals.
- The percussion section of a symphony orchestra typically includes timpani, snare drum, bass drum, cymbals, and triangle.
- A percussionist is a musician who plays percussion instruments.

4. **Appointments:**

- Vice-Admiral Krishna Swaminathan assumed the role of Vice Chief of the Indian Navy.
- Vice-Admiral Swaminathan joined the Navy on July 1, 1987, specializing in communication and electronic warfare