



INSIGHTSIAS

SIMPLIFYING IAS EXAM PREPARATION

ROGUE WAVES

Rogue waves, defined as waves twice the size of surrounding waves, pose significant threats to ships, coastal infrastructure, and human lives.

CURRENT AFFAIRS 30

JULY 2024

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GENERAL STUDIES – 1

Topics: Modern Indian history from about the middle of the eighteenth century until the present- significant events, personalities, issues.

1. JYOTIBA PHULE

Context:

[Jyotirao Phule was an Indian social reformer](#), writer, and champion of equality for all people, including poor labourers and women. Known as 'Jyotiba,' he was a pioneering figure who boldly challenged the abhorrent practices of untouchability and caste-based discrimination. Phule also fought for women's rights. His legacy as a social reformer endures to this day.

Early Life and Influences

- Born on April 11, 1827, in Pune, Maharashtra, into the Mali caste of gardeners and vegetable farmers.
- His father, Govindrao, was a farmer and flower vendor, and his mother, Chimbai, passed away when Phule was young. Despite financial hardships, Phule's academic potential was recognized by a neighbor who convinced his father to allow him to continue his education.
- Attended the Scottish Mission High School in Pune, where he was introduced to Western ideas of equality and human rights, which deeply influenced his reformist ideology.

[Fight Against Caste Discrimination](#)

- A pivotal moment occurred in 1848 when he was insulted at a Brahmin friend's wedding, which ignited his resolve to challenge the caste system.
- In 1873, Phule founded the Satyashodhak Samaj (Society of Seekers of Truth) aimed at promoting social equality and combating caste oppression. The organization aimed to uplift the lower castes by providing education and empowering them to challenge existing social norms.
- Phule critically examined and opposed the caste system, viewing it as a major barrier to the progressive development of Indian society.
- His work earned him the title of 'Mahatma' in 1888, bestowed by the Maharashtrian social activist Vithalrao Krishnaji Vandeekar.

Advocacy for Women's Rights

- Alongside his wife, Savitribai Phule, he pioneered the cause of women's education in India. In 1848, they established the first school for girls in Pune.
- [Savitribai became India's first female teacher](#), symbolizing the couple's commitment to empowering women through education.
- Phule also founded an orphanage in 1854 to protect vulnerable children and an infanticide prevention center in 1863, providing a safe haven for pregnant widows and their infants.

Literary Contributions and Ideals

- His book "Gulamgiri" (Slavery), published in 1873, critiqued Brahmanical dominance and highlighted the plight of the lower castes. Other significant works include "Shetkarayacha Asud" (The Cultivator's Whipcord) and "Sarvajanik Satyadharma Pustak" (The Book of True Religion for All).
- Phule advocated for [practical and vocational education](#), particularly in agriculture, highlighting his belief in education as a tool for social and economic empowerment.

[Role in Indian Freedom Struggle](#)

- Phule criticized British education policies for neglecting lower castes and economically disadvantaged.
- Promoted self-respect and empowerment among marginalized communities, supporting freedom struggle.
- Influenced future leaders of Indian independence movement, including Dr. B.R. Ambedkar.

Lessons for Today's India and Youth

- Highlights the importance of championing equality and justice in society.
- Emphasizes the value of education in breaking social barriers and fostering economic growth.
- Advocates for women's rights and education, highlighting the need to address gender disparities.
- Demonstrates the impact of social activism and leadership.
- Encourages youth to take on leadership roles in their communities.
- Underlines the importance of interfaith and inter-caste harmony.

Way Forward

- To honor Jyotiba Phule's contributions, it is essential to [integrate his ideas and teachings into modern education systems](#). This can be achieved by incorporating his works into school and college curricula, ensuring that students understand the historical context and ongoing relevance of his struggle against social injustices.
- Encouraging research on Phule's life and work can provide deeper insights into his philosophy and its application in today's society.

Conclusion

Jyotiba Phule's life and work paved the way for social justice and equality, promoting education and upliftment for marginalized communities. His vision remains relevant today, as India grapples with caste discrimination and gender inequality. His legacy demonstrates the power of education and social activism.

Topics: Post-independence consolidation and reorganization within the country.

2. 50TH ANNIVERSARY OF THE EMERGENCY

Context:

On June 25, India marked the 50th anniversary of the Emergency, a 21-month period from 1975 to 1977, during which Prime Minister Indira Gandhi suspended civil liberties, curtailed press freedom, made mass arrests, cancelled elections, and ruled by decree.

What is an “Emergency”?

An **Emergency** refers to legal measures in a country’s **constitution** or laws that enable swift government response to crises like war or rebellion threatening national stability, security, or sovereignty.

Provisions in Constitution:

These are outlined in Articles 352 to 360 under Part XVIII of the Indian Constitution, drawing inspiration from Germany’s Weimar Constitution.

What was a National Emergency?

Emergency in India was a **period of 21 months from 1975 to 1977** declared by the then Prime Minister Mrs Indira Gandhi and officially issued by President Fakhruddin Ali Ahmed under Article 352 of the Constitution of India because of the prevailing “internal disturbances”.

This gave the Prime Minister the **authority to Rule by decree** leading to the suspension of elections and curbing of civil liberties.

National Emergency has been proclaimed three times in India:

- **Indo-China War (1962):** Declared due to “external aggression” during the Sino-Indian War.
- **Indo-Pak War (1971):** Imposed on the grounds of “external aggression” during the Indo-Pakistani War.
- **(1975-1977):** The third and most controversial national emergency was declared due to “internal disturbance” amidst internal political unrest, significantly suspending civil liberties.

Reasons for declaration of Emergency in 1975:

1. **Internal Disturbances:** Political dissent and protests led to internal instability, exemplified by Jayaprakash Narayan’s Sampoorna Kranti.
2. **Electoral Malpractice Allegations:** Allahabad High Court invalidated 1971 election victory in Indira Gandhi vs Raj Narain case.
3. **Economic Challenges:** High inflation, food shortages, labour strikes, post-liberation war hardship, and national emergency.

4. **National Security Threats:** Indira Gandhi’s government cited threats from Cold war and post-liberation war tensions and also some internal sources.

It was criticized as the darkest phase of post-independent India:

1. **Suspension of Civil Liberties:** Fundamental rights like freedom of speech and expression were suspended.
2. **Arbitrary Arrests and Detentions:** Thousands of opposition leaders, activists, and dissidents were detained without trial under the Maintenance of Internal Security Act (MISA).
3. **Human Rights Violations:** Mass sterilization program targeting low-income populations was coercive and unethical.
4. **Centralization of Power:** The 38th and 42nd Amendment curtailed the powers of the judiciary and centralized authority in the executive.
5. **Press Censorship and Information Blackout:** Media outlets faced strict censorship; critical reporting of government actions was banned. Eg: The Indian Express publishing a blank editorial in protest.

Lessons that were learnt and checks and balances put in place to prevent a recurrence:

1. **Constitutional Safeguards:** Janata government introduced 43rd and 44th amendments in 1977 and 1978 to restore the earlier constitution. Eg: Written recommendation of the cabinet for national emergency, “armed rebellion” in place of internal disturbance et al.
2. **Judicial Activism:** Supreme Court’s evolution of the basic structure doctrine led to the strike down of the 39th Amendment and the establishment of judicial review over emergency proclamations. Eg: The landmark Minerva Mills case (1980) established the power of judicial review over proclamations of emergency.
3. **Parliamentary Oversight:** Efforts were made to strengthen parliamentary oversight over the executive branch. Eg: Passage of subsequent amendments by Parliament, Parliamentary committees were empowered.
4. **Ensuring Fair Elections:** Reforms were introduced to make the electoral process more transparent and fairer. Eg: ECI became multi-member body, reforms like Model Code of Conduct were brought in.
5. **Civil Society and Grassroots Mobilization:** The Emergency galvanized civil society, highlighting its role in protecting democracy. Eg: Significance of JP’s Sampoorna Kranti, the post-emergency rise of activist organizations like the People’s Union for Civil Liberties (PUCI).

Conclusion:

The Emergency of 1975-77 serves as a powerful reminder of the need for robust democratic safeguards to prevent the abuse of power. Looking ahead, constant vigilance by citizens, a robust civil society, and strong democratic institutions are essential to prevent a return to such a dark

chapter.

Insta Links:

- [The Big Picture - Today's India and Lessons from Emergency](#)

Mains Link

Q) Under what circumstances can the Financial Emergency be proclaimed by the President of India? What consequences follow when such a declaration remains in force? (UPSC 2018)

Prelims Link:

Q) With reference to the constitution of India, prohibitions or limitations or provisions contained in ordinary laws cannot act as prohibitions or limitations on the constitutional powers under Article 142. It could mean which one of the following? (UPSC 2019)

- The decisions taken by the Election Commission of India while discharging its duties cannot be challenged in any court of law.
- The Supreme Court of India is not constrained in the exercise of its powers by laws made by the parliament.
- In the event of grave financial crises in the country, the President of India can declare Financial Emergency without the counsel from the cabinet.
- State Legislatures cannot make laws on certain matters without the concurrence of the Union legislature.

Ans: (b)

Topics: History of the world will include events from 18th century such as industrial revolution, world wars, redrawing of national boundaries, colonization, decolonization, political philosophies like communism, capitalism, socialism etc.- their forms and effect on the society.

3. AMERICAN DECLARATION OF INDEPENDENCE

Context:

July 4 marked the 248th Independence Day of the United States. It was the day when the Declaration of Independence, the document which marked the **foundation of the US as a union of states liberated from Britain, was signed.**

What was the American War of Independence?

- Also **known as the American Revolutionary War (1775-1783), was a conflict between the thirteen American colonies** and Great Britain.
- The colonies sought to gain independence from British rule due to various grievances, including taxation without representation and a desire for self-governance.
- The war ended with the **Treaty of Paris in 1783**, where Britain recognized the sovereignty of the United States, leading to the establishment of an independent nation.

Circumstances leading up to the American Independence:

Circumstance	Description
<u>Seven Years War</u>	<u>The end of the Seven Years' War in 1763 and the transfer of Canada from France to England</u> removed the fear of French attack from the minds of the Americans. They could now fully focus on countering the British adversities.
Granville Measures	British PM Granville passed a series of Acts affecting American colonies' interests, such as <u>The Sugar Act of 1764, The Stamp Act of 1765, and The Quartering Act.</u> These measures were opposed by colonists who raised the slogan " <u>No Taxation without Representation.</u> "
Townshend Laws	In 1767, British minister Townshend imposed new taxes on glass, paper, tea, paints, etc. Americans protested these measures and boycotted British goods. The protest led to the <u>Boston Massacre, where five Americans were killed by British soldiers.</u>

Boston Tea Party	In 1773, the Tea Act imposed a tax on tea imports, sparking American protests. A group of Americans, <u>dressed as Red Indians, boarded ships and threw tea bundles into the sea at Boston Harbor</u> , an event known as the Boston Tea Party.
Philadelphia Congress	In 1774 and 1775, representatives of American colonies met in Philadelphia. They appealed to the <u>British King to remove trade restrictions and not impose taxes without consent</u> . Their appeal and the Olive Branch Petition were rejected.
Declaration of Independence	A pamphlet titled " <u>Common Sense</u> " advocated against hereditary monarchy and for democratic government, inspiring Americans to fight. On July 4, 1776, the <u>American Declaration of Independence was adopted, emphasizing "Life, Liberty, and Pursuit of Happiness."</u>

Ever wondered?

What was the role of Intellectuals in American Revolution?

1. **John Locke**: Advocated for natural rights (life, liberty, property), social contract theory, and government by consent of the governed, influencing the Declaration of Independence and the U.S. Constitution.
2. **Thomas Paine**: Wrote "**Common Sense**," promoting republican government, equality, and the urgency of American independence.
3. **Benjamin Franklin**: Facilitated the exchange of Enlightenment ideas between America and Europe, contributed to the Declaration of Independence, and negotiated the Treaty of Paris.
4. **Montesquieu**: Advocated for separation of powers and influenced the structure of American government through ideas in "**The Spirit of Laws**."

Consequences of the American Revolution:

Political Changes:

1. **Birth of the United States of America**, was acknowledged under the Treaty of Paris (1783).
2. **Replacement of the Articles of Confederation** with the U.S. Constitution (1787), establishing a federal republic with separation of powers.
3. **Introduction of a written constitution**, separation of church and state, and a system of checks and balances.

Geopolitical Changes:

1. **France regained colonies**; Spain recovered Minorca and Florida.
2. **England lost American colonies** and faced increased national debt.
3. Financial strain contributed to the **French monarchy's downfall**, inspiring future revolutions.

Significance:

1. **Inspired European revolutions** and promoted Enlightenment ideals.
2. Demonstrated the feasibility of **overthrowing oppressive regimes**.
3. Promoted ideas of **individual liberty, equality, and democracy globally**.
4. **Influenced future democratic movements** and constitutional developments worldwide.

How the American Revolution impact India?

The American Revolution indirectly impacted India by **inspiring ideas of liberty, democracy, and self-determination**. It set a precedent for challenging colonial rule and sparked discussions on rights and independence among Indian intellectuals. The principles of freedom and resistance against oppression influenced **India's later struggle for independence from British rule in the 20th century**.

Insta Links:

- [American Revolution](#)

Topics: Salient features of Indian Society, Diversity of India.

4. IMPACT OF WAR ON CHILDREN

Context:

A Russian missile strike severely **damaged Ohmatdyt Children's Hospital in Kyiv**, killing two people.

Ethical Issues related with War:

Incidents like these **spark debates on the ethics of war**, questioning whether war is ever justified. Tolstoy viewed war as inherently criminal, while the **'Just War' theory**, supported by texts like the **Mahabharata and thinkers like Aristotle, Cicero, and Augustine**, suggests war can be legitimate under certain conditions. Just War Theory includes:

- **Jus ad bellum:** Just cause, legitimate authority, last resort.
- **Jus in bello:** Ethical conduct during war, protecting civilians, fair treatment of prisoners.
- **Jus post bellum:** Justice after the war.

Ethical Issues Associated with War:

1. Loss of human life, including civilians, women, and children.
2. Degradation of moral equality by dehumanizing the enemy and mistreating prisoners of war.
3. War crimes and atrocities, including genocide and summary executions.
4. Fear of arms races and the use of weapons of mass destruction.

Other recent examples of conflict affecting children:

- **Gazan Crisis:** Majority of children killed during conflict.
- **Syrian Civil War:** Humanitarian crisis affecting millions of children due to displacement, violence, and lack of education and healthcare.
- **Yemen Conflict:** Impacts children through malnutrition, lack of medical care, and violence exposure.
- **Rohingya Crisis:** Persecution and displacement of Rohingya population from Myanmar to Bangladesh.
- **COVID-19 Pandemic:** Lockdowns, school closures, and economic challenges disproportionately impact vulnerable children.
- **Natural Disasters:** Displacement, trauma, and disrupted access to basic necessities.
- **Armed Conflict in Afghanistan:** Displacement, education disruption, and exposure of children to violence.
- **Civil Wars in Africa:** Displacement, food insecurity, and disrupted access to education and healthcare.

Impact of conflict on children:

Aspect	Description
Cycle of Revenge	Children experiencing conflict may harbour resentments and seek retribution.
Resistance to Social Norms	Adolescents exposed to violence may exhibit rebellious behaviour against societal expectations.
Psychological Trauma	Survivors of conflict zones may develop anxiety, depression, and post-traumatic stress disorder (PTSD).
Impact on Education	Children in war zones may face disruptions in schooling, impacting academic performance and future prospects.
Long-term Consequences	Adults who experience violence in childhood may perpetuate violence or struggle with mental health challenges.
Recruitment and Use	Armed groups exploit children by coercing them into combat or support roles, compromising their well-being.
Sexual Violence and Exploitation	Conflict increases the risk of sexual violence, subjecting children to rape, trafficking, and other forms of exploitation.
	Boys continued to be more affected by recruitment and use, killing and maiming, and abduction, while girls were disproportionately affected by conflict-related sexual violence.

India's Success in Protecting Children's Rights:

- **For the first time since 2010, India has been removed from the 2023 United Nations Report on Children and Armed Conflict.**
- This decision reflects the measures taken by the Indian government to safeguard children, particularly addressing previous accusations of recruiting and using boys **in armed groups in Jammu and Kashmir (J&K)**.

Initiatives to Protect Children's Rights

Initiatives	Details
Infrastructure Establishment	Establishment of Child Welfare Committees, Juvenile Justice Boards, and Child Care Homes under the Juvenile Justice Act, 2015 in J&K.
UN-Recommended Measures	Implementation of UN-recommended measures, including training programs for security forces on protecting children. Suspension of pellet guns use in J&K
Enforcement of Acts	Active enforcement of the Juvenile Justice Act, 2015, and the Protection of Children from Sexual Offenses (POCSO) Act, 2012.
Global Conventions Compliance	Compliance with global conventions such as the UN Convention on the Rights of the Child (CRC), additional protocols to the Geneva Conventions, and the Optional Protocol on the involvement of children in armed conflict.
Rome Statute of the International Criminal Court (ICC)	Recognition of recruiting child soldiers as a war crime under the Rome Statute of the International Criminal Court (ICC).
	Recognition of the recruitment and use of child soldiers as one of six "grave violations" by the United Nations.
Indian Legal Framework	India's status as a party to the CRC and accession to the Optional Protocol. Inclusion of most CRC rights in the Indian Constitution. IPC criminalizes the recruitment or use of persons under 18 in hostilities.

About UNCRC:

- The UNCRC, an international agreement established in 1989, outlines 54 articles outlining children's rights and governmental responsibilities.
- The UN-ratified agreement, except for the United States, guarantees children's fundamental rights such as **life, education, protection from abuse, the right to be heard, and parental relationships**.
- **The core principles** include **non-discrimination, the right to life, survival, and development**, the best interests of the child, and respect for the child's views

Way Forward:

- Trauma-Informed Responses to Conflict
- Emphasize understanding past experiences' impact on children.
- Encourage comprehensive approach to trauma in conflicting children.
- Utilize civil society organizations and Child groups.
- Kailash Satyarthi, a Nobel Peace Prize winner, condemns harm in conflict, highlighting Israel-Palestine conflict's profound impact on children.

WHO's INSPIRE strategy against violence on children involves seven key strategies:

Strategy	Description
Implementation and enforcement of laws	Involves enacting and enforcing laws, such as banning violent discipline and restricting access to alcohol and firearms.
Norms and values change	Aims to change societal norms and values, particularly those that condone behaviours like the sexual abuse of girls or aggressive behaviour among boys.
Safe environments	Identifies and addresses specific local causes of violence, often employing strategies like problem-oriented policing.
Parental and caregiver support	Provides training to young, first-time parents to enhance their ability to care for and nurture children effectively.

Income and economic strengthening	Includes initiatives like microfinance and gender equity training to improve economic stability, addressing underlying factors contributing to violence.
Response services provision	Ensures that children exposed to violence have access to effective emergency care and receive appropriate psychosocial support.
Education and life skills	Focuses on promoting school attendance and providing life and social skills training for children, contributing to their overall well-being and resilience.

Conclusion:

Montessori, in “The Secret of Childhood” (1936), emphasized the importance of peaceful childhood circumstances, asserting that major individual and social issues originate from early years and therefore need concerted efforts to shield children from the effects of conflicts.

Insta Links:

- [Children impacted by armed conflict](#)

5. SUPREME COURT TARGETS MEDIA STEREOTYPES OF DIFFERENTLY-ABLED

Context:

The Supreme Court of India, led by Chief Justice D.Y. Chandrachud, has issued a landmark judgment **addressing the portrayal of differently-abled individuals in visual media and films.**

What did the SC say?

The Supreme Court observed that stereotyping differently-abled persons perpetuates discrimination and inequality. The judgment was in response to activist **Nipun Malhotra’s petition** challenging the **portrayal of differently-abled individuals in the film ‘Aankh Micholi.’**

Key features of Guidelines are:

1. **Guidelines for Creators:** Avoid insensitive language; Seek accurate representation of medical conditions;
2. **CBFC and Expert Opinion:** The [Central Board of Film Certification \(CBFC\)](#) must seek the **opinion of experts** on disability before certifying films for screening.
3. **Inclusivity Principle:** Follow the **‘Nothing about us, without us’** principle to ensure inclusivity. Involve differently-abled individuals in statutory committees for decision-making under the Cinematograph Rules.
4. **Diverse Depictions:** Visual media should depict the diverse realities of persons with disabilities, showcasing their challenges, successes, talents, and contributions to society.
5. **Accurate Representation:** Films and visual media content must aim for an accurate representation of medical conditions as much as possible.

What is Stereotyping?

Stereotyping is a specific belief or assumption (thoughts) about individuals based solely on their membership in a group, regardless of their individual characteristics.

Example:

A TV show depicting a character with a physical disability as completely dependent on others, ignoring their potential for independence and self-sufficiency.

Reasons Why Differently-Abled Individuals Are Stereotyped:

1. **Lack of Exposure:** Limited interaction and exposure to differently-abled individuals lead to misconceptions.
2. **Media Portrayals:** Negative or inaccurate representations in films and visual media.
3. **Cultural Myths:** Historical and cultural myths that associate disability with weakness or abnormality.
4. **Educational Gaps:** Insufficient education and awareness about disabilities and the capabilities of differently-abled people.
5. **Social Prejudices:** Deep-rooted societal prejudices and biases.
6. **Medical Model of Disability:** Focus on disability as a personal tragedy or defect, rather than recognizing social

barriers.

7. **Language:** Use of derogatory and insensitive language.
8. **Lack of Advocacy:** Inadequate representation and advocacy for differently-abled individuals in decision-making processes.

Who are Persons with Disabilities?

Persons with disabilities include those with long-term physical, mental, intellectual, or sensory impairments that, in interaction with barriers, hinder their full participation in society (UN CRPD). The [Rights of Persons with Disabilities Act, 2016](#), aligns with this definition and specifies a **“Person with Benchmark Disability”** as having at **least 40% of a specified disability**. The 2016 Act expanded recognized disabilities from 7 to 21, with provisions for the Union Government to add more.

Types of Disabilities

Physical Disability

- **Locomotor Disability**

- (i) Leprosy cured person; (ii) Cerebral Palsy; (iii) Dwarfism; (iv) Muscular Dystrophy; (v) Acid Attack Victims.

- **Visual Impairment**

- (i) Blindness; (ii) Low Vision.

- **Hearing Impairment**

- (i) Deaf; (ii) Hard of Hearing.

- **Speech and Language Disability.**

Intellectual Disability

- (i) Specific Learning Disabilities; (ii) Autism Spectrum Disorder.

Mental Illness

Chronic Neurological Conditions

- (i) Multiple Sclerosis; (ii) Parkinson's Disease

Blood Disorders

- (i) Haemophilia; (ii) Thalassemia; (iii) Sickle Cell Disease.

Multiple Disabilities including Deaf-Blindness

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Status of Persons with Disabilities in India (2011 Census)

1. **2.21%** of the total population
2. 56% male, 44% female
3. 69% reside in rural areas

Issues Related to Persons with Disability in India

- **Discrimination:** Stigma and lack of understanding hinder full participation, especially for women and girls with disabilities.
- **Health:** Many disabilities are preventable but lack awareness and accessible medical facilities.
- **Education and Employment:** Limited special schools, access, trained teachers, and materials.
- **Political Participation:** Exclusion from political processes, lack of data on disabled populations, inaccessibility of voting processes, and perceived low electorate size.
- **Lax Implementation:** Many buildings remain inaccessible, and quotas for the disabled in government jobs and education remain unfilled.

Provisions for Persons with Disabilities:

Category	Provision
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Constitutional Provisions	Preamble: Secures social justice and equality of opportunity.
	Fundamental Rights: Ensures dignity and fundamental rights to persons with disabilities.
	Directive Principles: Articles 41 and 46 support the right to work, education, public assistance, and the promotion of weaker sections' interests.
	State Subject: Relief of the Disabled (Entry 9, List II) under the Seventh Schedule.
	Eleventh and Twelfth Schedule: Welfare of the Disabled and mentally retarded (Items 26 and 09).
Legal Provisions	Mental Health Act, 2017: Provides mental healthcare and protects the rights of persons with mental illness.
	RPwD Act, 2016: Replaces the 1995 Act, increases reservations for disabled persons in jobs and education, and ensures accessibility in public buildings.
	Rehabilitation Council of India Act, 1992: Regulates services for persons with disabilities and maintains a register of qualified professionals.
	National Trust Act, 1999: Provides welfare for persons with Autism, Cerebral Palsy, Mental Retardation, and Multiple Disabilities.
Welfare Programmes	Accessible India Campaign: This aims to create an accessible environment for PwDs, focusing on the built environment, transportation, and ICT ecosystem.
	Deendayal Disabled Rehabilitation Scheme (DDRS): Provides financial assistance to NGOs for rehabilitation projects for persons with disabilities.
	Assistance to Disabled Persons for Purchase/Fitting of Aids and Appliances (ADIP): Assists in procuring aids and appliances for disabled persons to enhance their rehabilitation and economic potential.
	Indian Sign Language Research and Training Centre: Promotes sign language and develops human resources in the field.
	National Institute of Mental Health Rehabilitation: Focuses on capacity building and community-based rehabilitation for mainstreaming persons with mental illness.
National Policies	National Policy for Persons with Disabilities, 2006: Framework for disability rights.
	Draft Guidelines: Accessibility standards for public exhibition of films for persons with hearing and visual impairments.
Global	Incheon Strategy to "Make the Right Real" for Persons with Disabilities in Asia and the Pacific.
	United Nations Convention on Rights of Persons with Disability
	UN Principles for People with Disabilities
	International Day of Persons with Disabilities

Strategies for Accommodating and Including Persons with Disabilities:

- Accommodation and Inclusion:**
 - Employment:** Ensure equal job opportunities.
 - Social and Political Participation:** Encourage active involvement in social and political decisions.
- Sensitization:**
 - Changing Attitudes:** Adopt the term **"Divyangjan"** to highlight the potential of persons with disabilities.
 - Education Campaigns:** Increase public awareness about the challenges faced by PwDs; Inclusive schools with transition programs to mainstream education.
- Preventive Measures:**
 - Newborn Screening:** Expand the CNS program under **Rashtriya Bal Swasthya Karyakram** for early detection of disabilities. Under this, a **comprehensive clinical examination** is to be performed on all babies, usually within the first **48 hours of life**.
 - Healthcare Access:** Improve care for pregnant mothers and medical facilities in rural areas with union government support.
- Public Policy Interventions:**
 - Budget Allocation:** Increase funding for disabled welfare, similar to gender budgeting.
 - Monitoring:** Implement systems for monitoring and accountability of public funds.
- Community-Based Rehabilitation (CBR):** Ensure people with disabilities can maximize their abilities, access services, and integrate fully into communities.

6. Public Awareness:

- a. **Campaigns:** Run social campaigns to change attitudes towards PwDs.
- b. **Media Representation:** Promote positive portrayals in media (e.g., “Taare Zameen Par” and “Barfi”)

Insta Links:

- [Persons with Disabilities](#)

Prelims Link:

Q. India is home to lakhs of persons with disabilities. What are the benefits available to them under the law? (USPC 2011)

1. Free schooling till the age of 18 years in government run schools.
2. Preferential allotment of land for setting up business.
3. Ramps in public buildings.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

Ans: (d)

Topics: Women and women related issues.

6. GENDER DISCRIMINATION AT THE WORKPLACE

Context:

The [article](#) criticizes Foxconn for not hiring married women due to concerns about family duties and absenteeism.

What are the Issues?

Foxconn, an Apple supplier, reportedly does not hire married women, citing family duties and higher absenteeism as reasons. This highlights a broader issue where women's careers are hindered by traditional gender roles, as they often manage household responsibilities, allowing men to excel at work. Data suggests that [India's Female LFPR has decreased from 30% to 24%](#) in the past two decades, despite an increase in girls' enrolment in Class 10.

Issues with Foxconn's Action

1. **Gender Discrimination:** Excluding married women from employment based on family duties and absenteeism.
2. **Reinforcing Gender Roles:** Perpetuating traditional roles where women are expected to handle household responsibilities.
3. **Inequality in Opportunities:** Denying married women equal access to job opportunities and career advancement.
4. **Workplace Diversity:** Reducing workplace diversity by not hiring a significant segment of the popula-

tion.

5. **Economic Impact:** Limiting married women's financial independence and economic contributions.
6. **Violation of Rights:** Potentially breaching anti-discrimination laws and equal employment rights.
7. **Unfair Assumptions:** Making broad assumptions about married women's work performance without individual assessment.

Other key issues that impact workplace gender inclusivity

- **Cultural Norms and Stereotypes:** Indian society perpetuates **traditional gender roles** where women are expected to **prioritize family over career**.
 - **Example:** The **gender pay gap** in India persists, with women earning 19% less than men, reflecting these biases.
 - **Solution:** **Promote gender-neutral upbringing**, challenge stereotypes through media campaigns, and emphasize equal opportunities.
- **Patriarchal Organizational Structures:** Many workplaces in India maintain **hierarchies dominated by men**, making it challenging for women to ascend to leadership roles.
 - **Example:** A study found that **only 15% of board seats** in NSE-listed companies were held by women in 2021.
 - **Solution:** Implement quotas or targets for female representation in leadership roles and foster mentorship programs.
- **Implicit Bias and Stereotype Threat:** Implicit biases against women persist in performance evaluations and decision-making processes.
 - **Example:** Studies have shown that **women receive less credit for their work** compared to men in similar positions.
 - **Solution:** Implement **unconscious bias training for managers** and use **standardized performance evaluation criteria**.
- **Harassment and Safety Concerns:** Workplace harassment is a major deterrent for women, often going **unreported due to fear of retaliation**.
 - **Example:** The **#MeToo movement** highlighted the widespread prevalence of harassment in Indian workplaces.
 - **Solution:** **Enforce strict anti-harassment policies**, provide safe reporting mechanisms, and sensitize employees through training.
- **Lack of Work-Life Balance:** Balancing work and family responsibilities remains challenging for women due to inadequate support systems.
 - **Example:** **Maternity leave policies** in India are not uniform, leading to disparities.
 - **Solution:** **Encourage flexible working arrangements**, affordable childcare facilities,

and extended parental leave.

- **Education and Skills Gap:** Gender bias in education and vocational training limits women's access to high-paying jobs.
 - **Example:** Women are **underrepresented in STEM fields** and emerging industries.
 - **Solution:** Promote STEM education for girls, offer scholarships, and collaborate with industries for skill development.
- **Cultural Sensitivity Training:** Cultural biases and insensitivity towards diversity often hinder inclusivity.
 - **Example:** **Insensitive comments or practices** can create hostile work environments.
 - **Solution:** **Regular cultural sensitivity training** for employees and management can foster a more inclusive atmosphere.

POSH Act 2013

Context: The Indian Supreme Court has expressed concern over the "sorry state of affairs" in the implementation of the act.

Major Provisions of POSH Act 2013	
Sexual harassment defined	Sexual harassment includes "any one or more" of the following "unwelcome acts or behaviour" committed directly or by implication: • Physical contact and advances • A demand or request for sexual favours • Sexually coloured remarks • Showing pornography • Any other unwelcome physical, verbal, or non-verbal conduct of a sexual nature 
Obligation	Every employer is required to constitute an Internal Complaints Committee (ICC) at each office or branch with 10 or more employees.
Complaint Committees	ICC has powers similar to those of a civil court in respect of summoning and examining any person on oath and requiring the discovery and production of documents.
Members	It needs to have a minimum of four members with at least half of them women and one external member , preferably from an NGO or an association that works for women's empowerment or a person familiar with issues related to sexual harassment, like a lawyer.
Time	The complaint must be made " within three months from the date of the incident ".
Conciliation	The ICC may (at the request of the aggrieved woman) allow the matter to be settled through conciliation (but no monetary settlement allowed)
Punishment	Non-compliance shall be punishable with a fine of up to Rs 50,000 .
Compensation	Compensation is determined based on five aspects : • Suffering and emotional distress caused to the woman • Loss of career opportunity • Her medical expenses • Income and financial status of the respondent • The feasibility of such payment
Domestic Worker	Domestic workers are protected under the Act and have the right to seek redressal from the Local Complaints Committee (LCC)

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Measures to Address the Issue:

Key Recommendations	Description
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Legislation and Enforcement	Strengthen and enforce existing laws related to workplace gender inclusivity, including anti-discrimination and anti-harassment laws.
	Stricter enforcement of laws such as the Sexual Harassment of Women at Workplace (Prevention, Prohibition, and Redressal) Act of 2013 .
	Increase fines and penalties for non-compliance and expedite cases to set deterrent examples.
	In 2017, the Maternity Benefits Amendment Act was passed which increased the stipulated maternity leave period in India from 12 weeks to 26 weeks in organisations that have at least 10 employees.
SC Judgement	The Supreme Court of India declared (in Selina John's case) rules penalizing women employees for getting married as unconstitutional, citing gender discrimination and inequality.
Corporate Initiatives	Encourage companies to adopt inclusive policies, diversity training , and transparent reporting of gender-related data.
	Promote initiatives like the Tata Group's "Second Career Internship Program" for women's re-entry into the workforce.
Women's Networks	Support and promote women's networks within organizations to provide mentorship and networking opportunities.
	Adopt models like " Lean In Circles " to create peer groups for women to support each other's career growth and mentorship.
Media Campaigns	Use media to challenge stereotypes and promote positive portrayals of women in the workplace.
	Draw inspiration from campaigns like Dove's "Real Beauty" to challenge unrealistic standards and depict women as competent professionals.

Collaboration	Encourage partnerships between government, NGOs, and the private sector to create a cohesive approach to gender inclusivity.
	Highlight successful initiatives like the “Mahila Shakti Kendra” collaboration that empowers women through skill development, education, and health-care.

Conclusion

By addressing these dimensions and implementing these strategies, India can foster a workplace environment that **embraces diversity and gender inclusivity**, ensuring that women have **equal opportunities to thrive professionally**.

Insta Links:

- [Prevention of sexual harassment or POSH Act](#)

Mains Links:

Q. “Though women in post-Independent India have excelled in various fields, the social attitude towards women and the feminist movement has been patriarchal.” Apart from women’s education and women empowerment schemes, what interventions can help change this milieu?” (UPSC 2021)

Prelims Links:

Which of the following gives the ‘Global Gender Gap Index’ ranking to the countries of the world? (UPSC 2017)

- World Economic Forum
- UN Human Rights Council
- UN Women
- World Health Organization

Ans: A

7. REDEFINING WORK: THE MENSTRUAL LEAVE POLICY DEBATE

Context:

The Supreme Court has emphasized the complexity of mandatory menstrual leave policies and called for a model policy to prevent misuse and hinder women’s workforce participation.

What is a Menstrual leave?

It is a type of leave where a woman may have the option to take paid or unpaid leave from her employment if she is menstruating and is unable to go to work because of this. A study shows 20% of 40% of women experience dysmenorrhea, a menstrual pain condition, affecting 40% of the labour force.

Paid menstrual leave boosts workforce participation and promotes gender inclusivity.:

- Addresses physical and emotional challenges:** Menstrual leave promotes inclusivity and support
- Breaks taboos:** Implementing menstrual leave can reduce stigma and silence, fostering openness.
- Reduces absenteeism:** Paid leave for menstruation-related issues can decrease unplanned sick leaves.
- Increases productivity:** Allowing women to rest and recover during menstruation boosts productivity.
- Improves health and comfort:** Recognizing menstrual health improves employee well-being, job satisfaction, and loyalty.
- Enhances work-life balance:** Helps women manage health without compromising professional responsibilities.

Challenges and considerations for implementation:

- Gender Bias:** Negative perceptions or stigma associated with menstrual leave could discourage women from using it.
- Business Continuity:** Employers may face challenges in managing workforce schedules and ensuring business continuity.
- Economic Impact:** Funding for menstrual leaves may increase hiring costs, similar to the Maternity Benefit Act

2016.

4. **Inadequate Reach:** Period leave policies may not benefit casual women workers in the informal economy.

Ever Wondered?!

What are the global policies on Menstrual Leave?

1. *Taiwan and Zambia: Have policies but face implementation challenges.*
2. *Spain: Introduced paid menstrual leave in 2023, with low uptake due to complex processes and fear of discrimination.*
3. *Indonesia: Offers two-day leave, seldom used due to required medical examinations.*

Draft Menstrual Hygiene Policy:

Suggests flexible hours and support leaves to help all employees and prevent stigma or assumptions about productivity related to menstrual cycles, serving as a starting point for policy discussions.

Government Schemes:

1. **Menstrual hygiene scheme** launched by the Ministry of Health and Family Welfare
2. [Rashtriya Kishore Swasthya Karyakram](#)
3. **SABLA** programme of the Ministry of Women and Child Development
4. National Rural Livelihood Mission of the Ministry of Rural Development
5. Swachh Bharat Mission and Swachh Bharat: **Swachh Vidyalaya (SB:SV)**
6. Guidelines for **Gender Issues in Sanitation, 2017**
7. The National Guidelines on **Menstrual Hygiene Management**
8. **Scheme for Promotion of Menstrual Hygiene** among adolescent girls in the age group of 10-19 years (supported by the National Health Mission)

Way forward:

1. **Clear communication:** Ensure understanding and acceptance of menstrual leave.
2. **Optional use:** Allow women to use menstrual leave at their discretion.
 - a. **E.g. Zomato has a 10-day paid period of leave per year.**
3. **Holistic approach:** Integrate menstrual leave with other health and wellness initiatives, such as providing access to **sanitary products, comfortable rest areas, and health education programs.**
4. **Monitoring and evaluation:** Regularly assess policy's impact on workforce participation, employee well-being, and organizational culture.
5. **Inclusive policies:** Menstrual leave should be part of a broader effort to promote gender inclusivity, including policies on maternity leave, paternity leave, **flexible working hours, and other supportive measures.**

Conclusion

- Policies should not only benefit formal workforce but **also informal sector women, where 90% of them are involved.**
- Given all these apprehensions, we need to **find a balance between creating space for women to seek period leave** when required and ensuring **that it doesn't become another ground for employers to favour men over women.**

Insta Links:

- [Demand for paid Menstrual leave and Gender Equality](#)

Mains Links:

Q. What are the continued challenges for women in India against time and space? (UPSC 2019)

Q. Male membership needs to be encouraged in order to make women's organisations free from gender bias. Comment. (UPSC 2013)

Topics: Population and associated issues, poverty and developmental issues.

8. THE NOT YOUNG

Context:

The proportion of older persons in the total population will increase from 6 percent in 2011 to 20.8 percent in 2050.

What is the Demographic Transition and Demographic Dividend?

- A demographic shift refers to a change in the composition of a population over time.
- This change can occur due to various factors such as changes in birth and death rates, migration patterns, and changes in social and economic conditions.
- A demographic dividend is a phenomenon that occurs when a country's population structure shifts from having a high proportion of dependents (children and elderly) to having a higher proportion of working-age adults.
- This change in population structure can result in economic growth and development if the country invests in its human capital and creates conditions for productive employment.

Demographic changes in India:

- In 1941, male life expectancy was about 56 years; only 50% of boys survived to age 28.
 - Today, life expectancy for men is 69 years, and nearly 50% live to see the ripe old age of 75.
- Total Fertility Rate fell from 7(five point seven) in 1950 to 2.1(two point one)in 2019.
- With four children: The chance of not having a son was barely 6%, but with two children, it grew to 25%.
 - Social norms and patrilocal kinship patterns combined with lack of financial security reinforce a preference for sons.
- The India Human Development Survey (IHDS) found that:
 - 85% of women respondents expected to rely on their sons for old age support
 - 11% expected support from their daughters.
- Parents who want to ensure that they have at least one son among their one or two child families, resorted to sex-selective abortion, and, in some cases, the neglect of sick daughters.
- The number of girls per 100 boys, ages under five dropped from 96 to 91 between 1950 and 2019.

Demographic distribution:

- **Most states in the southern region and select northern states** such as **Himachal Pradesh** and **Punjab** reported a higher share of **elderly population** than the national average in **2021**.
 - This gap is expected to widen by **2036**.
- **East and South Asian societies:** rapidity of ageing compared to the experience of Western countries.
- **The magnitude of the increase in the proportion of older persons** witnessed over a hundred years in the West has occurred in a mere **20-30 years in South and East Asia**.

Challenges associated with increasing elderly population(middle and low-middle-income countries)

- **Inadequate social protection** for the elderly, including pensions, access to health and social-care services.
- **Rapid changes in family structures**, with the spread of nuclear families.

Steps taken by East Asian countries:

- **They have integrated health and social care** through financial investments, including a variety of insurance schemes
- **They have strengthened** these institutions at the community level.

Challenges for India:

- **Unlike the East and South East Asian countries**, India does not have a universal public pension scheme, health insurance or social-care provisioning
- **India has some health insurance and social welfare schemes** targeted only at older persons below the poverty line.
- **Available macro data and a few micro studies** highlight inequalities in the availability, accessibility, affordability and acceptability of the services and support needed by older persons.
- **Access to government health insurance like the Ayushman Bharat Programme** is seen as being limited to those below the poverty line.
- **Government insurance programmes like the Central Government Health Scheme (CGHS)** or the Employment State Insurance Scheme (ESIS) cover only government employees and those in the organized sector.

- **Older persons face difficulties in claiming insurance** due to long processing times, claim deductions and rejections.

What steps need to be taken?

- **Assess the supply side in terms of social protection**, insurance schemes, and health and social-care institutions.
- **Given the fractured landscape of financing and provisioning** of the required services.
 - **Define the ecosystem of care** and then offer a guide to policy planning.

Different surveys:

- **Longitudinal Ageing Survey in India (LASI):** Those above **60 years** suffer from multiple morbidities due to non-communicable diseases that include diabetes, hypertension and cardiovascular conditions.
 - **It highlights the variations in the social determinants** of the health and well-being of older persons.
 - **Geographical location, class, caste and gender, work and pensions** are important determinants for perceived quality of life.
 - **A large proportion of older persons**, especially those who continue to work and that too in the unorganized sector, are ineligible for pension or other forms of income support.
- **The Helpage India Report 2024, 'Ageing in India: Exploring Preparedness and Response to Care Challenges':** It carried out across 10 states and 20 cities
 - **It highlights the gaps in access to financial security**, health and social care.
 - **The cross-sectional survey** covered Tier I and Tier II cities.
 - **Its findings highlight the poor coverage of social pensions**, which were largely skewed to the middle classes in government service.
 - **Older persons reportedly felt financially insecure** and were dependent on their family members for support.
- **Both the LASI survey and the Helpage India Report** highlight the burden of multiple morbidities due to one or more Non-Communicable Diseases (NCDs).

Way Forward

- **As the disease burden increases with age**, the ability to manage activities of daily living reduces.
 - **The elderly require both physical and emotional support** that is mostly provided by family members.
 - **Given the changes in family structure in urban areas**, the stress of caregiving falls on women in the household.
 - **In households where adult children** have migrated for work, older persons often live on their own.
- **Institutional support outside the realm of family and home-based care**, in the form of retirement communities and long-term and end-of-life care, is poorly developed in India in the public, private and non-profit sectors.
- **The upper-middle class and the rich** are able to access the newly emerging retirement communities that provide a range of services for health and social care.
 - **The problem is acute** for the lower-middle class and the urban and rural poor.
- **Public policy must unpackage the multiple axes of inequalities** in access to financial security, health and social care of older persons.
- **As India becomes an aging society** there are significant gaps in access to pensions, health services and social care for older persons that need to be addressed.
- **As the country seeks to encash the "demographic dividend"** it must pay attention to healthy ageing.

GENERAL STUDIES – 2

Topics: Functions and responsibilities of the Union and the States, issues and challenges pertaining to the federal structure, devolution of powers and finances up to local levels and challenges therein.

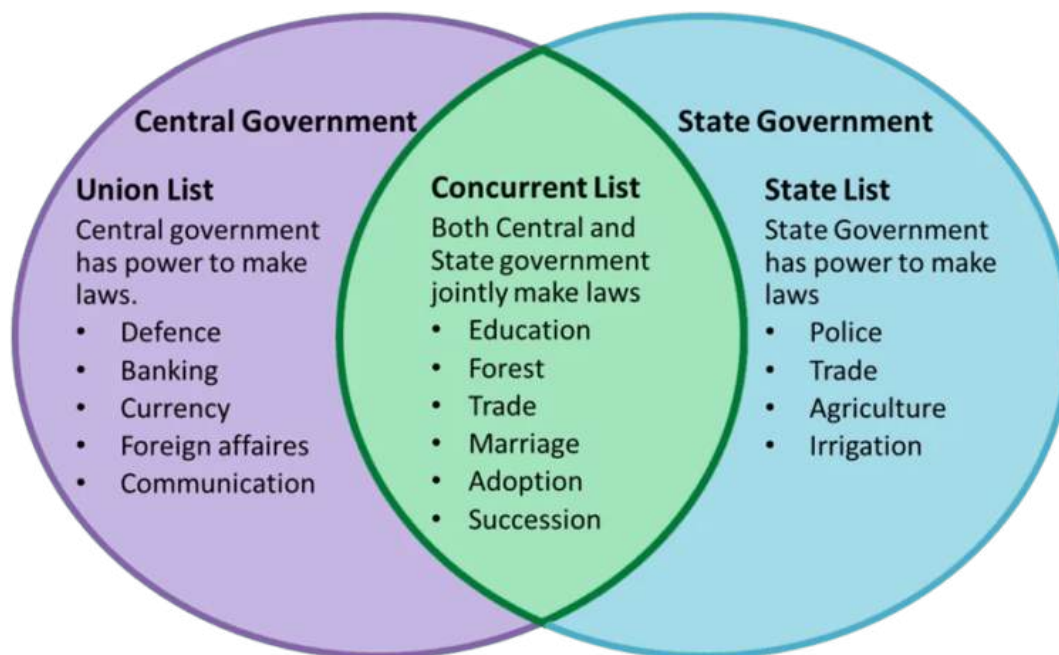
1. DEMAND OF RESTORING 'EDUCATION' TO THE STATE LIST

Context:

The [article](#) discusses whether should **education** be brought back to the **State list**.

What is a State List?

The **State List** is a category under **the 7th Schedule of the Constitution of India** that enumerates **subjects on which individual State Governments have the exclusive power** to legislate. These subjects include areas such as **police, public health, agriculture, and local governance**. This division of powers ensures that states can manage and address local issues effectively without interference from the central government. Currently, **Education is under the concurrent List**.



Background on Education Listing:

- Pre-Independence:** Under the **Government of India Act, 1935**, education was under the Provincial Legislative List.
- Post-Independence:** Initially, education was on the State List of the Seventh Schedule.
- 1976 Change:** The **42nd Constitutional Amendment**, following the **Swaran Singh Committee's recommendation**, moved education to the Concurrent List without explicit reasons.
- The **44th Constitutional Amendment** attempted to revert some of these changes but was not fully implemented.

Education Should Be on the State List

- Original Design:** Initially in the constitution, **education was a state matter**, as local governments are better suited to address educational needs.
- Will Restore Federal Balance:** The 42nd Amendment shifted education to the Concurrent List, undermining federalism. Returning it to the State List would restore the intended balance of power.
- State-Specific Policies:** States can tailor education to their unique cultural and socio-economic contexts, improving literacy and educational outcomes.
- Resource Allocation:** States fund 85% of education expenses and should control their investments.
- Merit Determination:** Centralized exams like **NEET** do not reflect diverse student potential. States need flexibility in admission criteria.
- Accountability:** State control ensures better accountability for educational quality.
- Policy Conflicts:** Central policies often clash with state policies, causing inefficiencies. State control would reduce these conflicts.

Education should remain on the Concurrent List:

Reason	Explanation
Ensuring Minimum Standards and Equity	Keeping education concurrent allows the Centre to monitor implementation, ensuring disadvantaged sections have access to quality education .
Standardisation of Skills and Employability	A standardised national curriculum ensures graduates have skills required by a pan-India job market, as highlighted by FICCI.
	A concurrent list facilitates this by establishing a common framework while allowing states to tailor vocational training.

Addressing National Concerns and Emergencies	A concurrent list allows the Centre to develop curricula for national challenges like climate change while accommodating state-specific concerns.
National Integration and Mobility	A common educational framework fosters national integration and cultural exchange, as emphasized by the Kothari Commission (1964-66)
	A concurrent list allows the Centre to set core standards while states adapt them to local contexts , promoting unity and diversity.
Poor Status of Primary Education	States have shown poor governance in primary education , as highlighted by the ASER 2023 Report. Most rural kids of 14-18 can't do Class 3 math, and over 25% can't read.
Regulation of National Institutions	The Centre can regulate institutions like IITs and AIIMS to maintain high standards.

International Practices:

Country	Education Governance
U.S.	State and local governments set overall educational standards and supervise colleges and universities. The federal education department focuses on policies for financial aid.
Canada	Education is managed by the provinces.
Germany	Legislative powers for education reside with states (landers).
South Africa	National departments manage schools and higher education, with provinces implementing national policies and addressing local educational needs.

The way forward and Conclusion:

Focus on "Collaborative Federalism" as suggested by [the Kothari Commission \(1964-66\)](#) to ensure national standards with state flexibility. Implement **outcome-based funding** as recommended by NITI Aayog. Promote **decentralized school management** per the Right to Education Act (RTE) 2009. Reform teacher training and transfer policies based on the [TSR Subramanian Committee Report \(2009\)](#). Develop standardized national assessments with state-specific benchmarks.

Insta Links:

1. [Issues related to Education Sector](#)

Mains links:

Q. Discuss the main objectives of Population Education and point out the measures to achieve them in India in detail. (UPSC 2021)

Q. How have digital initiatives in India contributed to the functioning of the education system in the country? Elaborate on your answer. (UPSC 2020)

Prelims Links:

Q. Which of the following provisions of the Constitution does India have a bearing on Education? (UPSC 2012)

1. Directive Principles of State Policy
2. Rural and Urban Local Bodies
3. Fifth Schedule
4. Sixth Schedule
5. Seventh Schedule

Select the correct answer using the codes given below:

- (a) 1 and 2 only
- (b) 3, 4 and 5 only
- (c) 1, 2 and 5 only
- (d) 1, 2, 3, 4 and 5

Ans: (d)

2. CENTRE AMENDS RULES TO BROADEN THE ADMINISTRATIVE ROLE OF J&K L-G

Context:

The Ministry of Home Affairs (MHA) has amended rules to expand the administrative role of the [Lieutenant Governor](#) (L-G)

of Jammu and Kashmir (J&K), aiming to streamline governance and enhance efficiency.

Key Amendments recently:

1. **Enhanced Administrative Powers:** The L-G now has greater authority in administrative matters, including appointments, transfers, and postings of senior officials.
2. **Increased Control Over Departments:** The L-G will have more direct oversight over key departments such as Public Works, Education, and Health.
3. **Financial Decisions:** The L-G has been granted expanded powers in financial matters, including sanctioning of funds and approval of development projects.

Ever Wondered?
What is the status of Jammu & Kashmir after Article 370?

- No dual citizenship
- Central laws can directly apply
- No separate laws for J & K
- Indian citizens from other states can buy land & property
- No two flags
- Elections every five years
- Centre can declare financial emergency under Article 360

IN BRIEF: UT OF JAMMU & KASHMIR AND LADAKH

GOVERNMENT OF INDIA ON AUGUST 5 REVOKED ARTICLE 370 OF THE INDIAN CONSTITUTION BY WAY OF A PRESIDENTIAL ORDER.



UT of J&K with Assembly

AREA
1,01,387 square km

POPULATION
1,25,41,302

UT of Ladakh without Assembly

AREA
59,196 square km
(most of it is over 9,000 feet above sea level)

POPULATION
2.74 lakh

Areas and populations to change as the new UT boundaries are drawn. UT: Union Territories.

JAMMU & KASHMIR AFTER ARTICLE 370 IS REVOKED:

■ No dual citizenship ■ Central laws can directly apply ■ No separate laws for J&K ■ Indian citizens from	■ other states can buy land & property ■ No two flags ■ Elections every five years ■ Centre can declare	■ financial emergency under Article 360 ■ Police will be managed by the Centre
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IANS GRAPHICS

- Police will be managed by the centre.

Implication :

- **Centralization of Power:** The amendments centralise more administrative power with the L-G, **undermining federal principles and reducing the role of the elected government** that will be formed through upcoming elections.
- **Efficiency in Governance:** Proponents argue that these changes will lead to **more efficient and streamlined governance**, improving service delivery and development outcomes.

Conclusion:

The amendments reflect the Centre's intent to ensure more direct control over J&K's administration, which is seen as a measure to enhance governance and development. However, **the balance between centralised authority and democratic governance remains a critical area of concern.**

Insta Link:

[Rules for administration in the Union Territory of Jammu and Kashmir](#)

Prelim link:

Q. Which one of the following suggested that the Governor should be an eminent person from outside the State and should be a detached figure without intense political links or should not have taken part in politics in the recent past? (UPSC-CSE 2019)

- a) First Administrative Reforms Commission (1966)
- b) Rajmannar Committee (1969)
- c) Sarkaria Commission (1983)
- d) National Commission to Review the Working of the Constitution (2000)

Answer: C

Mains Link: [With the new rules, the CM of J&K has been reduced to an ornamental figure. Discuss.](#)

Topics: Structure, organization and functioning of the Executive and the Judiciary; Ministries and Departments of the Government; pressure groups and formal/informal associations and their role in the Polity.

3. SC AGREES TO LIST PETITIONS ON MONEY BILL ROUTE

Context:

Chief Justice of India D.Y. Chandrachud agreed to **list petitions challenging the Money Bill route taken by the Centre**. This issue was referred to a **seven-judge Bench** in 2019 by a **five-judge Bench led by Chief Justice Ranjan Gogoi**.

Money Bills and Financial Bills:

Any bill related to revenue or expenditure is a **Financial Bill**.

A **Money Bill** is a specific type of Finance Bill that deals only with matters specified under **Article 110(1)** and deals with **taxes, borrowing, expenditure**, etc. It can only be introduced in the Lok Sabha and must be certified by the Speaker.

All Money bills are Financial bills but all Financial bills are not Money bills

About Article 110:

- Article 110(1):** A Bill is deemed to be a Money Bill if it deals only with matters specified in **Article 110(1)(a) to (g)** — taxation, borrowing by the government, and appropriation of money from the Consolidated Fund of India, among others.
- Article 110(1)(g):** Adds that “any matter incidental to any of the matters specified in **Articles 110(1)(a)-(f)**” can also be a Money Bill.
- Article 110(3):** “If any question arises whether a Bill is a Money Bill or not, the decision of the Speaker of the House of the People thereon shall be final.

For a comparison between Money and Finance Bills: [Click Here](#)

Recent controversies regarding Money Bill:

Controversies	Details
Circumventing the Rajya Sabha	Passing contentious amendments as a Money Bill allows the government to bypass the Rajya Sabha, undermining the bicameral nature of Parliament .
Reduced Legislative Scrutiny	The Rajya Sabha's bypass reduces opportunities for comprehensive debate and oversight , diminishing additional scrutiny.
Violation of Article 110	Concerns exist that certain amendments labelled as Money Bills do not adhere strictly to Article 110 , which specifies what constitutes a Money Bill.
Speaker's Certification	The Speaker of the Lok Sabha certifies a bill as a Money Bill under Article 110, a decision not subject to judicial review , raising concerns about potential misuse to circumvent legislative processes.
Aadhaar Act Controversy	The Aadhaar Act, 2016, classified as a Money Bill , sparked controversy. The Supreme Court upheld its constitutionality , but Justice Chandrachud dissented, calling it an “abuse of the constitutional process” .
Finance Act, 2017 Concerns	The Finance Act, 2017 included amendments unrelated to Article 110 subjects. A five-judge Bench referred the Money Bill aspect to a larger seven-judge Bench in 2019 .
PMLA Amendments	Amendments to the PMLA passed as Money Bills gave the Enforcement Directorate extensive powers. The Supreme Court upheld these amendments' legality but left the Money Bill question to the seven-judge Bench.
Limited Role of Rajya Sabha	Classification as a Money Bill restricts the Rajya Sabha to only recommending changes , without the power to amend or reject the bill.

Potential consequences of misclassifying Money Bills:

- Undermining Bicameralism:** Example: The Finance Act of 2017 altered appointments to key judicial tribunals without Rajya Sabha input.
- Erosion of Checks and Balances:** Example: Amendments to the Prevention of Money Laundering Act (PMLA) were

passed, granting broad powers to the Enforcement Directorate.

3. **Constitutional Violations:** Misclassification may breach **Article 110** of the Constitution, which defines Money Bills' scope.
4. **Concentration of Executive Power:** Example: The **Finance Act of 2017** potentially extended executive control over judicial tribunals by altering selection committee compositions.
5. **Political Manipulation:** Encourages the ruling party to misuse the Money Bill route to pass controversial laws without sufficient opposition debate.
 - a. **Example:** Critics argue that contentious amendments are dressed up as Money Bills to avoid Rajya Sabha rejection.

Conclusion:

Misclassifying Money Bills undermines legislative scrutiny and leads to executive overreach, emphasizing the **need for strict adherence to legislative processes** to maintain the integrity of governance.

Insta Links:

[What are money Bills?](#)

Mains links:

Q. How does a money bill differ from a financial Bill? Analyze whether the process of classifying a bill as a money bill needs to change. (250 words)

Prelims Link:

Q1. Regarding the Money Bill, which of the following statements is not correct? (UPSC 2018)

- (a) A bill shall be deemed to be a Money Bill if it contains only provisions relating to the imposition, abolition, remission, alteration or regulation of any tax.
- (b) A Money Bill has provisions for the custody of the Consolidated Fund of India or the Contingency Fund of India.
- (c) A Money Bill is concerned with the appropriation of money out of the Contingency Fund of India.
- (d) A Money Bill deals with the regulation of borrowing of money or giving of any guarantee by the Government of India.

Ans: (c)

Q2. What will follow if a Money Bill is substantially amended by the Rajya Sabha? (UPSC 2013)

- (a) The Lok Sabha may still proceed with the Bill, accepting or not accepting the recommendations of the Rajya Sabha.
- (b) The Lok Sabha cannot consider the Bill further.
- (c) The Lok Sabha may send the Bill to the Rajya Sabha for reconsideration.
- (d) The President may call a joint sitting to pass the Bill.

Ans: (a)

[Topics: Appointment to various Constitutional posts, powers, functions and responsibilities of various Constitutional Bodies.](#)

[ers, functions and responsibilities of various Constitutional Bodies.](#)

4. AGENDA FOR THE 16TH FINANCE COMMISSION

Context:

The [16th Finance Commission \(FC\)](#) focuses on the devolution of the consolidated fund, with a mandate to support panchayats and municipalities as per [Article 280 and the 73rd and 74th constitutional amendments](#).

What is a Finance Commission?

The Finance Commission in India is a **constitutional body established under Article 280 of the Indian Constitution**. Its primary function is to recommend the distribution of financial resources between the central government and the state governments. **The Fifteenth Finance Commission constituted on 27th November 2017**, made recommendations covering six years from 1st April 2020 through its Interim and Final Reports. These recommendations are valid **up to the financial year 2025-26**.

About 16th FC:

The Government of India, **under Article 280(1) of the Constitution**, established the **Sixteenth Finance Commission, with Dr. Arvind Panagariya**, former Vice-Chairman of NITI Aayog and Professor at Columbia University, as its chairman.

Major Terms of Reference for the 16th Finance Commission:

- **Division of Tax Proceeds:** Recommend tax distribution between Union and States, including State shares.
- **Principles for Grants-in-Aid:** Establish principles for grants from the Consolidated Fund of India to States, particularly under Article 275.
- **Enhancing State Funds for Local Bodies:** Suggest measures to boost State funds for Panchayats and Municipalities, based on State Finance Commission recommendations.
- **Evaluation of Disaster Management Financing:** Review and recommend improvements for disaster management funding under the Disaster Management Act, 2005.

Recommendations that can be made by the 16th Finance Commission for Local bodies:

1. **Revisit 15th FC's Principles:**
 - Enhance property tax collection linked to state GST.
 - Improve maintenance of accounts.
 - Allocate resources for pollution mitigation.
 - Focus on primary health care, solid waste management, and drinking water.
2. **Recognize Urbanization Dynamics:**

- Acknowledge India's dynamic urbanization.
- Ensure intergovernmental transfers to urban areas are at least doubled.

Insta Links:

- [16th Finance Commission](#)

Mains Link:

Q. Discuss the recommendations of the 13th Finance Commission which have been a departure from the previous commissions for strengthening the local government finances. (UPSC 2013)

Prelims Link:

Q. Consider the following: (UPSC 2023)

1. Demographic performance
2. Forest and ecology
3. Governance reforms
4. Stable government
5. Tax and fiscal efforts

For the horizontal tax devolution, the Fifteenth Finance Commission used how many of the above as criteria other than population area and income distance?

- (a) Only two
- (b) Only three
- (c) Only four
- (d) All five

Ans: (b)

Topics: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

5. SMART CITIES MISSION EXTENDED TILL 2025

Context:

The Smart Cities Mission has received an extension until March 31, 2025, following an appeal by the Chief Minister of Telangana A Revanth Reddy.

About SCM:

The SCM (Smart Cities mission) was launched in 2015, with the expressed objective of promoting cities that provide **core infrastructure** and give a **decent quality of life** to their citizens. A clean and **sustainable environment** and the application of '**smart**' solutions were the promises made.

The six fundamental principles on which the concept of Smart Cities is based are:



Objectives of SCM:

The Smart Cities Mission aims to **enhance urban life by focusing on core infrastructure, sustainability, and smart solutions**. It seeks to create replicable models for compact, inclusive development, acting as a beacon for other cities to follow. The mission sets **examples for both local and national replication**, catalyzing the development of smart cities across regions in India.

City-wise Progress Report as of December 2023:

1. **Madurai:** Completed 100% of projects.
2. **56 cities:** Completed over 80% of work.
3. **Lagging behind:** 14 cities at 50% progress or below.
4. **Lagging cities primarily from the northeast, Union Territories, and hilly areas.** Examples include Gangtok, Atal Nagar, Shillong, Silvasa, Itanagar, Puducherry, Saharanpur, and Port Blair with completion percentages ranging from 16% to 39%.

Achievements of SCM:

1. **Digital Transformation:** Implementation of smart technologies for efficient governance and service delivery, such as Integrated Command and Control Centres (ICCCs) in all 100 Smart Cities.
2. **Alignment with Sustainable Development Goals (SDGs):** Over 70% of projects align with UN SDGs, particularly SDG11 (inclusive, safe, resilient, and sustainable cities).
3. **Infrastructure Development:** Improvement of urban mobility through metro lines, BRTS, and pedestrian-friendly pathways.

Smart Cities Mission Success Stories:

1. **Ahmedabad:** Sensor-based water network monitoring increased supply by 50 MLD.
2. **Indore:** Gravity-based network prevented 205 MLD of untreated sewage from entering water bodies.
3. **Visakhapatnam:** Mudasarlova Reservoir Floating Solar Plant generated 3,613 MWh annually, preventing over 3,000 tonnes of CO₂ emissions.

Issues with the SCM:

1. **Behind deadlines:** As per the recent mission director's statement, the SCM has completed only about 66% of the projects. Protests and criticisms have been laid against many SCM projects like Warangal and Ludhiana SCMs.
2. **Challenges in Project Management and Implementation:** Frequent changes and dropping of projects, insufficient financial progress, and varying physical progress among cities.
3. **Lack of integrated monitoring mechanism and cross-city learning.** Insufficient emphasis on core infrastructure projects like social infrastructure and smart energy.
4. **Governance and Capacity Issues:** Frequent transfer of Smart City CEOs, undefined governance structure, and monitoring capacity.
5. **Mission Deadline Extension:** The current phase was originally set to conclude by June 2023, but was extended until June 2024 to complete pending projects.
6. **Funding Challenges:**
7. **Less funds received:** Some regions, including Lakshadweep, Daman and Diu, Puducherry, and Port Blair, received less than 50% of pledged central funds. **Only 28 cities received 100% of their share** from states/ULBs, with funds released below 60% in 14 cities.
8. **Fund utilization:** The SCM has been taking in more funds against the current progress and has utilized 90% of the funds (while completing only 66% of the projects)
9. **Failure in Fundraising Mechanisms:** Only 6% of projects are funded through Public-Private Partnerships (PPPs), with about 50 cities unable to generate any funding through this avenue.
10. **Ineffective Advisory Forum Meetings:** State-level advisory forum meetings are irregular, with an average of 1-8 meetings in the first five years. Some cities, like Amravati and Imphal, had no meetings.
11. **Absence of Master Plans:** Master plans, crucial for urban development, are absent in 65% of recognized urban entities, according to a report by NITI Ayog.
12. **Low capacity of local bodies:** The functionaries

at local bodies are of inadequate strength and lack the skills to implement the scheme

13. **Scarcity of land within the central part of cities** and other prime locations where the scheme is to come up

Recommendations of the parliamentary committee:

1. **Union ministry to lead the master plan** for Greenfield development.
2. **Implement fixed tenure for CEOs** of Smart Cities' Special Purpose Vehicles (SPVs).
3. **Conduct third-party assessments** of Smart Cities Mission (SCM) projects.
4. **Launch Phase II of SCM** covering more cities, utilizing SPVs' experience.
5. **Focus more on Pan City projects**, emphasizing technology-driven solutions for holistic development.
6. There is a need to **protect digital infrastructure from misuse and cyber-attacks**, ensuring privacy rights.
7. **Leverage the expertise gained by Special Purpose Vehicles (SPVs)** and expand the role of **Integrated Command and Control Centres (ICCCs)** in providing various city services.
8. **International Collaboration:** E.g., India is supporting the **Gelephu Smart City Project** in Bhutan, while also seeking lessons from Singapore Smart City.

Conclusion

The foremost idea of smartness in smart cities should be to **make cities resource-neutral or resource-positive**. This means that the city should **collect and process all the aftermaths of consumption** within the city or consume resources within its ability to **replace or regenerate**. This needs attention across all micro sectors to bring forth a **holistic change and 'smartness' to cities**.

Insta Links:

- [Smart Cities Mission](#)

Mains Links:

With a brief background of the quality of urban life in India, introduce the objectives and strategy of the 'Smart City Programme.' (UPSC 2016)

6. THREE CRIMINAL LAWS BECOME EFFECTIVE FROM JULY 1

Context: Three new criminal laws—**Bharatiya Nyaya Sanhita**, **Bharatiya Nagarik Suraksha Sanhita**, and **Bharatiya Sakshya Adhinyam**—replacing colonial-era laws, came into effect on July 1, 2024.

About [Three Criminal Laws:](#)

Reforms in Indian Criminal Law

Provisions	Bharatiya Nyaya Sanhita Bill 2023	Bharatiya Nagarik Suraksha Sanhita Bill 2023	Bharatiya Sakshya Bill 2023
Replaces	Indian Penal Code, 1860	Criminal Procedure Code, 1973	Indian Evidence Act, 1872
Focus	Reflects Indian ethos, justice-oriented	Enhances citizens' protection	Modernizes evidence presentation
Sections	356 sections (replacing 511)	533 sections (160 changed)	170 sections (23 changed)
Women and Children	A separate chapter dedicated to them; New offence: false promise of marriage, Employment etc.; Initiating children into crime made punishable.	Sexual intercourse on false promise of marriage, employment, etc., is a new offence.	
Digital Integration	Expanded definition of documents; Address newer crimes, cyber offences	Digitization of processes	Accepted documents include electronic and digital records, video recordings, emails, etc.
Speedy Trials	Summary trials, time limits	Trial expedited; 90-day window for investigation after chargesheet filing; Witness protection scheme to be made by states; Bail after serving 1/3rd of the maximum sentence for first-time offenders.	Video recording of search and seizure operations by the police
Victim Support	Compulsory status updates of victim support	Protection, timely information	Video recording of search and seizure operations by the police
Terrorism and Organized Crime	New definitions of Terrorism for 1 st time; Armed rebellion, separatist activities, organized crimes, etc.; Mob lynching made an offence explicitly	Harsher provisions against gangs	Define and address organized crimes
Fugitive FIR	Zero FIR, e-FIR introduced	Trials for fugitives in absentia	Mandatory digitization of FIR, chargesheets; Mandatory use of Forensic services for offences punishable with 7 or more years
Sedition Law	Repealed		

Exception: Section **106(2)** of the **Bharatiya Nyaya Sanhita (BNS)**, which provides for punishment in hit-and-run cases, has been **put on hold**.

The positive aspects of the proposed criminal law reforms (Bharatiya Nyaya Sanhita and Bharatiya Nagarik Suraksha Sanhita.):

- Modernization of Criminal Justice System:** E.g., using e-FIR, Zero FIR, new cyber offences, and modernised evidence collection.
- Update of Outdated Laws**
- Stringent Provisions for Women and Children:** The Bharatiya Nyaya Sanhita (BNS) has dedicated a separate chapter to these matters and introduced new forms of offence.
 - Sexual intercourse with a minor wife** has been brought under the ambit of rape.
- Innovations:** Innovations such as trial in absentia and the introduction of community service as a penalty for minor offences are noteworthy.
- Gender Inclusivity:** The reforms have reviewed language for gender neutrality and replaced outdated terms such as 'insanity' with 'mental illness.'
- Specific Definitions and Offenses:** The act defines and addresses offences like terrorism, organized crime, mob lynching, and negligent acts, adding new dimensions to criminal law.
- Protection for Victims:** protection and rights of victims, including provisions related to victims' participation, and rights.
- Expedited Justice:** Eg., Requirement for judgments to be given within 30 days after the trial concludes and limitations on adjournments.

Steps being taken to implement the three laws:

- Operational training:** The Bar Council of India mandates new laws in university curricula from 2024-25.
- Publicity/awareness campaign:** BPR&D coordinates efforts for a coordinated publicity campaign through the Inter-Ministerial Group.
- Tech upgradation:** NCRB modified the CCTNS application for tech compatibility, including FIR registration; NIC developed applications like eSakshya, NyayShruti, and eSummon for crime scene documentation, judicial hearings, and electronic court summons.
- Capacity building:** BPR&D developed 13 training modules for police, prisons, prosecutors, judicial officers, forensic experts, and central police organizations.

What more needs to be done:

- Bail Reform:** Implement Law Commission's 268th Report (2017) to reduce undertrial detention and ensure bail as the norm (**SC in Balchand v. State of Rajasthan, 1978**).
- Victim and Witness Protection:** Implement the Witness Protection Scheme (2018) with proper funding and oversight as recommended by the **Malimath Committee (2003)**.
- Revamping Fast-Track Courts:** Assign dedicated judges, improve infrastructure, set binding time-lines, and introduce case management systems.
- Combating Criminalization of Politics:** Establish an institution to tackle political criminalization and take decisive action as suggested by the **Vohra Committee (1993)**.
- Legal Aid Reform:** Increase funding and create performance-based incentives for legal aid providers.
- AI in Case Management:** Integrate AI for case management, scheduling, and pretrial risk assessment.
- Prison Administration Reform:** Implement mandatory segregation of undertrials, convicts, and first-time offenders, enforce national health insurance schemes in prisons, following the **Justice Amitava Roy Committee recommendations**.
- Gender Sensitization:** Mandatory training for judicial officers on gender sensitivity.
- Victim-Centric Justice:** Provide comprehensive victim support services.
- Promoting Restorative Justice:** Focus on healing harm caused by crime as recommended by the **Madhav Menon Committee (2007)**.

Insta Links:

- [India's Criminal Justice System](#)

Mains Link:

Q. We are witnessing increasing instances of sexual violence against women in the country. Despite existing legal provisions against it, the number of such incidences is on the rise. Suggest some innovative measures to tackle this menace. (UPSC 2014)

Q. Mob violence is emerging as a serious law and order problem in India. By giving suitable examples, analyze the causes and consequences of such violence. (UPSC 2015)

7. MAHARASHTRA'S 2024 BILL: A NEW FRONT AGAINST URBAN NAXALISM

Context:

The Maharashtra government introduced the **Maharashtra Special Public Security Bill, 2024**, to combat **urban Naxalism**, proposing severe penalties for individuals supporting Naxal-affiliated organizations, including indirect members.

What is Urban Naxalism?

- It refers to the presence and **activities of Naxalites or CPI (Maoist) in urban areas**.
- As per the Maoist strategy, urban areas are crucial for **providing cadres, leadership, and logistical support** for the people's war.
- The key objectives are **mobilizing masses, building a united front, and military tasks**.
- Activities include maintaining safe houses, providing logistics, and recruiting youth and workers.

Key provisions of the Maharashtra Special Public Security Bill 2024

Key Provisions	Details
Purpose and Scope	Combat the increasing threat of Naxalism, especially in urban areas through Naxal-affiliated organizations.
Declaration of Unlawful Organizations	The state can declare an organization as " unlawful ". An advisory board of three qualified individuals (current/former/qualified High Court judges) will review such decisions.
Definition of Unlawful Activities	Activities threatening public order, peace, and tranquillity. Interference with law administration and public servants. Violence, vandalism, use of firearms, explosives, and disruption of transportation. Encouraging disobedience to law and institutions. Collecting funds or goods for unlawful activities.
Cognizable and Non-bailable Offences	All offences under this law are cognizable and non-bailable and will be investigated by a police officer not below the rank of a Sub-Inspector.

Punishments	• Members of Unlawful Organizations: Imprisonment up to 3 years and fines up to Rs 3 lakh. • Non-members Contributing or Aiding Unlawful Organizations: Imprisonment up to 2 years and fines up to Rs 2 lakh. • Management or Promotion of Unlawful Organizations: Imprisonment up to 3 years and fines up to Rs 3 lakh. • Committing, Abetting, or Planning Unlawful Activities: Imprisonment up to 7 years and fines up to Rs 5 lakh.
Seizure and Forfeiture	If an organisation has been declared unlawful, the District Magistrate or Commissioner of Police can notify and take possession of any place used for its activities. The government can forfeit money and assets intended for unlawful organizations.
Legal Review	An advisory board must review the declaration of unlawful organizations within six weeks and submit a report within three months. The high court can review government actions through revision petitions.

Issues with the Bill:

- **Vague Definitions:** Sections 2(f)(i) to (vii) have vague definitions of "unlawful activities," prone to misuse and arbitrary interpretation.
- **Overriding Powers:** Section 9 grants draconian powers to the District Magistrate and Commissioner of Police, potentially impacting residents' rights.
- **Broad Scope:** The bill's broad definition of "unlawful" actions could stifle press freedom and public dissent, criminalizing activities that are essential for democratic discourse.
- **Misuse Potential:** Concerns raised about potential misuse against journalists reporting on sensitive issues like socio-economic disparities or governmental failures.
- **Lack of Public Scrutiny:** The bill was introduced without prior consultation, raising questions about transparency and the democratic process.
- **Constitutional Concerns:** The bill's provisions are repressive, unconstitutional, and overly broad, undermining civil liberties.

Way Forward:

- Conduct **public consultations and seek expert feedback**.
- **Ensure transparency** by making draft bills **accessible for**

public scrutiny.

- **Incorporate safeguards to fundamental rights** like freedom of expression and dissent.
- **Strengthen judicial oversight** to **prevent misuse of law enforcement powers.**
- **Balance security imperatives and civil liberties** to effectively target unlawful activities **without infringing on constitutional rights.**

Conclusion:

The **Maharashtra Urban Naxal Bill 2024** aims to address urban Naxalism but faces criticism for potentially infringing on civil liberties and stifling dissent. Proponents see it as essential for maintaining public order and security. Its implementation and impact will spark ongoing debate over balancing security measures with fundamental rights.

Insta Links:

- [RSTV: THE BIG PICTURE- TACKLING NAXAL THREAT](#)

8. SC JUDGMENT ON THE MUSLIM WOMEN'S RIGHT TO MAINTENANCE

Context:

The recent Supreme Court judgment in “**Mohd Abdul Samad vs The State of Telangana**” has affirmed that the **Muslim Women Act of 1986** does not override the rights of divorced **Muslim women to claim maintenance under Section 125 of the CrPC.**

What was the issue about?

A Muslim man challenged an order to pay maintenance to his divorced wife under **Section 125 of the CrPC.** He argued that the **Muslim Women Act of 1986**, which has **special rules for maintenance**, should override **Section 125.**

What does Section 125 of the CrPC say?

Section 125 of the CrPC mandates that a **Magistrate can order a person with sufficient means to pay monthly maintenance to:**

1. His wife, if she cannot maintain herself.
2. His minor child (legitimate or illegitimate) is unable to maintain itself.
3. His adult children with physical or mental disabilities are unable to maintain themselves.
4. His father or mother, if they cannot maintain themselves.

What is the Muslim Women (Protection of Rights on Divorce) Act, 1986?

- Muslim Women's Rights Act of 1985 was enacted to **safeguard the rights of Muslim women post-Shah Bano case.**
- Ensures fair **maintenance for divorced Muslim**

women during iddat period.

- **Addresses mahr (Dower) payment and** the return of properties received at the time of marriage.
- **Allows divorced couples to choose to be governed by Sections 125 to 128 of CrPC, 1973**, if they declare so jointly or separately at the first hearing of the application.
- **Reaffirms 2009 Shabana Bano case**, allowing **maintenance claim under Section 125 of CrPC post-iddat period**, regardless of religious affiliation.

What does the Supreme Court say?

SC affirmed Section 125 CrPC applies universally to all women, not just married ones, and **Muslim women** can seek maintenance under **Section 125 CrPC despite the 1986 Act.**

Significance of SC decision:

1. **Affirms equality: and non-discrimination**, especially for divorced Muslim women seeking maintenance.
2. **Financial Empowerment:** The Supreme Court stressed the **importance of financial empowerment for women** who lack independent income.
3. **Right to Maintenance:** The Court affirmed that divorced Muslim women, including those divorced through triple talaq (which has been declared void and criminalized), **retain the right to seek maintenance under Section 125 CrPC**, reinforcing the principle of equitable treatment under Indian law.

It is important for women to have the right to maintenance:

- Ensures financial independence for women.
- Provides social security, especially during divorce or separation, reducing vulnerability to poverty and homelessness.
- Upholds gender equality, providing equal access to resources.
- Offers legal protection for women facing economic hardship.
- Supports child welfare, ensuring adequate parental support.
- Promotes women's dignity and well-being by recognizing their right to financial support, irrespective of marital status.

Insta Links:

1. [Insights into Editorial: Beyond talaq: On Muslim divorce bill](#)
2. [Plea in SC against uniform civil law on divorce and alimony](#)

Mains Link:

Q. Customs and traditions suppress reason leading to obscurantism. Do you agree? (UPSC 2020)

Prelims Link:

Q. Which Article of the Constitution of India safeguards one's right to marry the person of one's choice? (UPSC 2019)

- (a) Article 19
- (b) Article 21
- (c) Article 25
- (d) Article 29

Ans: (b)

9. THE KARNATAKA STATE EMPLOYMENT OF LOCAL CANDIDATES IN INDUSTRIES, FACTORIES, AND OTHER ESTABLISHMENTS BILL, 2024

Context: The Karnataka State Employment of Local Candidates in Industries, Factories, and Other Establishments Bill, 2024 has sparked controversy since its cabinet approval on July 15, 2024.

Provisions of Karnataka Employment Bill, 2024:

Provisions	Details
Reservation Percentages	50% of management jobs and 70% of non-management jobs must be reserved for local residents.
Definition of 'Local Candidate'	Must be born in Karnataka and domi-ciled there for 15 years
	Capable of speaking, reading, and writing Kannada.
	Secondary school certification in Kannada or passing a proficiency test conducted by the Nodal Agency .
Relaxation Clause	Industries lacking sufficient local candidates can apply for relaxation, however, reservations for locals must be:
	Not less than 25% for management roles.
	Not less than 50% for non-management roles.
Penalties for Non-compliance	Rs. 10,000 to Rs. 25,000 penalty for violations. Daily penalty for continued non-compliance
Compliance Reporting	Companies must report compliance to the nodal agency.

Previous cases of similar bills in other states:

Earlier, **several states such as Haryana, Andhra Pradesh etc.** have enacted similar legislation to ensure reservation for locals in the private sector. The Act enacted by Haryana was **declared unconstitutional by the Punjab and Haryana High Court** as it violated **Part III (Fundamental rights) and the constitutional morality principle**.

Why states are pushing for local Reservations in the Private Sector?

- Job Creation:** The private sector is the **largest source of employment**, making reservation a tool for social justice.
- Son of Soil:** There's a belief that jobs created within a state should prioritize its residents.
- Government Support:** Given benefits like tax breaks and loans, the private sector can be encouraged to adopt affirmative action policies.
- Socio-economic Development:** To promote socio-economic development by ensuring locals benefit from local industries.
- Cultural and Language Preservation:** To preserve local culture and language by promoting employment of people who are familiar with local customs and languages.

6. **Political Considerations:** To fulfil political promises and aspirations of local populations.
7. **Addressing Migration:** To mitigate the need for migration of local talent to other states in search of job opportunities.
8. **Balanced Regional Development:** To promote balanced regional development by encouraging local industries to hire from the local workforce.
9. **Supporting Local Businesses:** To support local businesses and industries by ensuring a skilled local workforce is available.
10. **Reducing Dependency:** To reduce dependency on non-local or migrant labour and encourage self-sufficiency in employment.

Issues with the local Reservation in Private sector:

Cons	Explanation
Can Trigger Exodus of Investors	Local job reservations may lead to an exodus of domestic and multinational investors, especially in sectors like auto and IT that rely on highly skilled manpower. E.g., Haryana witnessed a 30% drop in investment, leading to a decline in its ranking among states in terms of new investment.
Affect Existing Industries	The focus on the "son of the soil" and reservation policies can adversely affect existing industries in the state.
Extreme Talent Crunch	Imposing reservations on gig and platform jobs can reduce the availability of skilled individuals.
Constitutional and Legal Issues	It is beyond the power of states to create laws that provide this provision for public employment under Article 16(3). 75% reservation also goes beyond the reservation limit for SC/ST. Public Employment (Requirement as to Residence) Act, 1957: A few exceptions were made for Andhra Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, and West Bengal. Violation of Article 19: Previously, the Punjab High Court had criticized the reservation in private sector law for imposing excessive control on private employers, creating an "Inspector Raj," and impairing individuals' rights under Article 19(1)(g) of the Constitution. Conclusion: What is more important for states is to focus on skill development and education to provide ample job opportunities, fostering competition in the free market. While local reservations may offer short-term gains, they could hinder long-term economic development and national unity.
Promotes Regionalism	Local job reservation policies pose threats to unity in diversity, potentially creating local divisions.
Undermines Merit system	They undermine the merit system, affect economic efficiency, and may lead to a shortage of qualified workers, impacting economic development.
Promotes Vote Bank Politics among states	

What does the Constitution Say?

The Constitution of India **guarantees freedom of movement and consequently** employment within India through several provisions.

1. **Article 14** provides for equality before the law irrespective of place of birth.
2. **Article 15** guards against discrimination based on place of birth.
3. **Article 16** guarantees no birthplace-based discrimination in public employment.
4. **Article 19** ensures that citizens can move freely throughout the territory of India.

Prelims Links:

Consider the following statements: (UPSC 2023)

Statement-I : The Supreme Court of India has held in some judgements that the reservation policies made under Article 16(4) of the Constitution of India would be limited by Article 335 for maintenance of efficiency of administration.

Statement-II : Article 335 of the Constitution of India defines the term 'efficiency of administration'.

Which one of the following is correct in respect of the above statements?

(a) Both Statement-I and Statement-II are correct and State-

ment-II is the correct explanation for Statement-I

- (b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I
 (c) Statement-I is correct but Statement-II is incorrect
 (d) Statement-I is incorrect but Statement-II is correct

10. SUPREME COURT VERDICT ON STATES' RIGHT TO TAX MINERAL-RICH LANDS

Context:

The Supreme Court ruled that States have the **unlimited right to tax mining lands and quarries**, independent of the **Parliament's Mines and Minerals (Development and Regulation) Act of 1957**.

1. **The 8:1 judgment, led by Chief Justice D.Y. Chandrachud**, affirmed that State Legislatures' power to tax is derived from the Constitution and is essential for their revenue generation.

Background of the Case

In 1989, a seven-judge Bench ruled that the Centre holds primary authority over mining regulation under the **Mines and Minerals (Development and Regulation) Act, 1957**, and **Entry 54 of the Union List**. States could only **collect royalties, not impose additional taxes, as royalties were classified as taxes**.

In 2004, a five-judge Bench suggested there might have been a **typographical error in the 1989 ruling, indicating that royalties were not a tax**. This discrepancy led to the current nine-judge review.

What did SC decide now?

1. **State Taxation Authority:** The power to tax mineral rights is enumerated in Entry 50 of List II (State List), and **Parliament cannot use its residuary power** with respect to this subject matter.
 - i. While **Parliament can impose limitations on states' mineral taxation** via laws, the MMDRA has no specific provision imposing such limitations.
2. **Regulatory Power:** Entry 54 of List I (Union List) pertain to the Union's power over minerals and is regulatory, not inclusive of taxing authority.
3. **Definition of "Land":** The term "land" in Entry 49 of List II includes mineral-bearing lands, granting states the competence to tax such lands.
4. **Overruling 1989 Judgment:** The court overruled its 1989 judgment and held **that royalty is not within the nature of a tax** and does not come under the MMDRA.
5. **Clarification on Taxing Authority:** The ruling clarifies that the power to impose taxes on mineral rights resides solely with the states, while Parliament may only impose limitations to prevent hindrances to mineral development.
6. **Ensuring Non-Obstruction:** Parliament can set constraints on how states levy taxes on mineral rights to ensure mineral development is not obstructed, but cannot impose taxes directly.

What was the dissenting opinion of one of the judges?

- **Dissenting Opinion:** One of the 9 bench judges, warned that allowing states to levy taxes on mineral rights might lead to attempts to impose taxes on lands and buildings under Entry 49 of List II, potentially **disrupting the federal system and uniformity in mineral pricing and development**.
- **Economic Consequences:** States levying taxes on minerals could lead to legal uncertainty and adverse economic consequences, impacting metal development in India.

Difference between Royalty and a Tax:

Aspect	Royalty	Tax
Origin	Originates from an agreement between parties.	Imposed under a statutory power without reference to any special benefit conferred on the payer.
Nature	Compensation is paid for the rights and privileges enjoyed by the grantee.	Enforced by law and does not require the taxpayer's consent.
Relationship	Direct relationship with the benefit or privilege conferred upon the grantee.	Imposed for public purposes without any specific benefit to the payer.

Specificity	Specific to the agreement and often linked to the exploitation of resources or usage of a privilege.	Part of the common burden is borne by all citizens, not linked to any specific privilege or benefit.
Quid Pro Quo	Involves a quid pro quo arrangement.	Does not involve a quid pro quo arrangement.
Mandatory Nature	Payment is linked to a specific benefit or privilege, and the arrangement is contractual.	Payment is mandatory and not linked to any specific privilege or benefit.
Precedents	Hingir-Rampur Coal Co. Ltd. vs. State of Orissa (1961) , State of West Bengal vs. Kes- oram Industries Ltd. (2004)	State of Himachal Pradesh vs. Gujarat Ambuja Cement Ltd. (2005), Jindal Stainless Ltd. vs. the State of Haryana (2017)

About the MMDRA Act:

Aspect	Details
What is MMDRA, 1957?	It is pivotal legislation in India governing the mining sector, undergoing multiple amendments for alignment with national economic and security interests.
Primary Objectives	Develop the mining industry, ensure mineral conservation, and bring transparency and efficiency to mineral exploitation.
2015 Amend- ment	Introduced key reforms such as the auction method, DMF, NMET, and penalties for illegal mining activities.
	Auction Method: Mandated auctioning of mineral concessions to enhance transparency in allocation.
	District Mineral Foundation (DMF): Established to benefit areas and people affected by mining.
	National Mineral Exploration Trust (NMET): Created to boost mineral exploration activities.
	Penalties for Illegal Mining: Implemented stringent penalties to curb illegal mining activities.
2021 Amend- ment	Removed the distinction between captive and merchant mines ; ensured all private-sector mineral concessions were granted through auctions.
	Captive Mines: Operated by companies to produce minerals exclusively for their own use, with the ability to sell up to 50% of their annual mineral production in the open market.
	Merchant Mines: Operated to produce minerals for sale in the open market.
2023 Amend- ment	Aimed to strengthen exploration and extraction of critical minerals essential for India's economic development and national security.
	Key Amendments of 2023: Removed 6 minerals from the list of 12 atomic minerals limited to exploration by State agencies, empowered the government to exclusively auction mineral concessions for critical minerals.
	Exploration Licenses: Introduced to attract foreign direct investment and engage junior mining companies in exploring deep-seated and critical minerals.
	Focus: Reducing dependence on imports and encouraging private sector involvement to expedite exploration and mining of critical minerals.
	Importance of Certain Minerals: Recognized the importance of minerals like lithium, graphite, cobalt, titanium, and rare earth elements for future technologies and India's commitment to energy transition and net-zero emissions by 2070.
	Central Government's Role: Empowered to exclusively auction mining leases and composite licences for certain critical minerals.
	State Governments' Role: Granted the mining lease or composite licence after auctions conducted by the Central government.
	Removal of Certain Minerals: Removed certain minerals from the list of atomic minerals such as lithium, beryllium, titanium, etc.

Insta Links:

2. [Amendment to Mines and Minerals \(Development and Regulation\) Act](#)
3. [Offshore Areas Mineral \(Development and Regulation\) Amendment Bill, 2023](#)

Mains Links:

- Q. Despite India being one of the countries of Gondwanaland, its mining industry contributes much less to its Gross Domestic Product (GDP) in percentage. Discuss. (UPSC 2021)
- Q. "In spite of adverse environmental impact, coal mining is still inevitable for development". Discuss (UPSC 2021)

Topics: Welfare schemes for vulnerable sections of the population by the Centre and States and the performance of these schemes.

11. SOCIAL SECURITY TO VULNERABLE SECTIONS

Context:

Karnataka has introduced **new social security and welfare rules for unorganized transportation workers** (under Karnataka Motor Transport and Other Allied Workers Social Security and Welfare Act 2024), aiming to cover approximately **5.4 million** workers across various sectors. This initiative, a first in India, includes **workers in ancillary roles such as tyre repair and wheel balancing**.

What is Social Security?

Social Security refers to a system of public programs **designed to provide economic support and protection to individuals and families** facing various life circumstances that may lead to income loss or financial hardship. It typically includes measures such as pensions for retirement, disability benefits, unemployment benefits, healthcare coverage, maternity and parental benefits, and survivor benefits.

Issues with India's Social Security system:

1. **Lack of Coverage:** Around 53% of India's salaried workforce and most gig workers lack access to social security benefits.
2. **Budgetary Allocation:** Initial funding for the National Social Security Fund was inadequate, far below estimated needs.
3. **Poor Fund Utilization:** Funds allocated often remain unspent or underutilized, indicating inefficiencies in management.
4. **Corruption and Leakage:** Funds are sometimes misused or diverted, with instances of fraud and improper beneficiary management.
5. **Inadequate Benefits:** Some schemes offer minimal benefits or have restrictive eligibility criteria, leaving out many deserving recipients.
6. **Budgetary Cuts:** Reductions in allocations for key schemes like MGNREGA reflect lower priority for social welfare.
7. **Digital Divide:** Transition to digital platforms for benefits distribution excludes those without access to technology.
8. **Informal Sector:** The vast informal labour sector, comprising 91% of India's workforce, lacks formal social security coverage and benefits.

Government of India's schemes:

Programmes for Social Security Cover



Context: Pradhan Mantri Suraksha Bima Yojana (PMJJBY), Pradhan Mantri Jeevan Jyoti Bima Yojana (PMSBY) and Atal Pension Yojana (APY) complete 8 years of providing social security cover



The three schemes were launched in **May 2015**, to ensure affordable insurance and security for people from the unorganized sector of the country.

Comparison of the three schemes:

Scheme	Pradhan Mantri Suraksha Bima Yojana	Pradhan Mantri Jeevan Jyoti Bima Yojana	Atal Pension Yojana
Type of Scheme	Accidental insurance 	Life insurance 	Pension scheme . The minimum pension is guaranteed by the Government. 
Objective	To provide insurance against accidental death and disability at affordable rates	To provide life insurance at affordable rates	To provide a pension to unorganized sector workers
Eligibility Criteria	Age between 18 to 70 years	Age between 18 to 50 years	Age between 18 to 40 years
Insurance Coverage	Rs. 2 lakh for accidental death and full disability, Rs. 1 lakh for partial disability	Rs. 2 lakh for natural or accidental death	Depends on the contribution made by the subscriber
Premium	Rs. 12 per annum	Rs. 330 per annum	Depends on the age and contribution of the subscriber
Tax Benefits	No tax benefits are available	Tax benefits available under Section 80C	Tax benefits available under Section 80CCD
Achievement	More than 34 crore enrolment	More than 16 crore enrolment	More than 5 crore enrolment

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Steps to Improve Social Security in India:

1. **Universal Social Security:** Consolidate existing schemes and provide universal coverage to all labourers.
2. **Expand EPFO Contribution:** Increase contributions to EPFO for formal workers, both employers and employees.
3. **Government Support:** Provide subsidies or assistance to vulnerable workers unable to contribute.
4. **Digitization and e-Shram Platform:** Invest in digital platforms for efficient registration and delivery of social security services.
5. **Mandatory Social Security for Employers:** Enforce mandatory social security entitlements for employees through their employers.
6. **Raise Awareness:** Increase awareness about social security rights and available benefits among workers.

Insta Links:

- [Assessing India's Social Security Programs](#)

Prelims Links:

Q. Who among the following can join the National Pension System (NPS)? (UPSC 2017)

- (a) Resident Indian citizens only
- (b) Persons of age from 21 to 55 only
- (c) All State Government employees joining the services after the date of notification by the respective State Governments
- (d) All Central Government employees including those of Armed Forces joining the services on or after 1st April, 2004

Ans: (c)

Q. Regarding 'Atal Pension Yojana', which of the following statements is/are correct? (UPSC 2016)

- 1. It is a minimum guaranteed pension scheme mainly targeted at unorganized sector workers.
- 2. Only one member of a family can join the scheme.
- 3. Same amount of pension is guaranteed for the spouse for life after the subscriber's death.

Select the correct answer using the code given below:

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

Ans: (c)

Topics: Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.

12. RELEASE OF SDG INDIA INDEX 2023-24: NITI AAYOG

Context:

The recently released SDG India Index 2023-24 demonstrates significant advancements in multiple areas, despite global challenges.

What is the SDG India index?

- 1. **First launched in December 2018**, the index has become the primary tool for monitoring progress on the SDGs in India.
- 2. It has also **fostered competition among the states and UTs** by ranking them on the global goals.
- 3. The index is developed in **collaboration with the United Nations in India**.
- 4. It tracks the progress of all states and UTs on **113 indicators aligned with the National Indicator Framework (NIF)** of the Ministry of Statistics and Programme Implementation.

How are states and UTs ranked?

- 1. The SDG India Index scores **range between 0–100**, higher the score of a State/UT, the greater the distance to target achieved.
- 2. **States and UTs are classified into four categories** based on Index score:
 - a. Aspirant: 0–49.
 - b. Performer: 50–64.
 - c. Front-runner: 65–99.
 - d. Achiever: 100.

Currently, there are **no states in the aspirant and achiever category**.

Latest finding of the report:

- 1. India's **composite SDG score has improved from 57 in 2018 to 71 in 2023-24**, reflecting substantial strides towards achieving the SDGs.
- 2. All states and Union Territories (UTs) have shown improvement, with **scores ranging from 57 to 79**.
- 3. **32 States and UTs in the front-runner category** with 10 new entrants.
- 4. Between 2018 and 2023-24, the **fastest moving States are Uttar Pradesh** (increase in score by 25), **followed by J&K (21), and Uttarakhand (19)**.
- 5. **New front-runners include** states like **Arunachal Pradesh, Assam, Madhya Pradesh, and West Bengal**.

Ever Wondered?!
Where India stands today in SDG Achievements?

1. **Goal 1: No Poverty**
 - a. The score increased from **60 in 2020-21 to 72 in 2023-24.**
 - b. Significant **reduction in multidimensional poverty**, dropping **from 24.8% in 2015-16 to an estimated 11.28% in 2022-23.**
2. **Goal 3: Good Health and Well-being**
 - a. The score improved from **52 in 2018 to 77 in 2023-24.**
 - b. Key health indicators, such as **maternal mortality rate (97) and under-five mortality rate (32)**, have shown significant improvements.
 - c. **High immunization coverage (93.2%) and institutional deliveries (97.8%)** have been crucial contributors.
3. **Goal 6: Clean Water and Sanitation**
 - a. Improvement in score from **63 in 2018 to 89 in 2023-24.**
 - b. Achievement of **Open Defecation Free (ODF) status in all districts** and high access to **improved drinking water sources.**
4. **Goal 7: Affordable and Clean Energy**
 - a. The score **increased dramatically from 51 in 2018 to 96 in 2023-24.**
 - b. **Universal access to electricity** and significant **coverage of clean cooking fuels (96% households).**
5. **Goal 13: Climate Action**
 - a. The highest increase in score, **from 54 in 2020-21 to 67 in 2023-24.**
 - b. Increase in **renewable energy capacity** and compliance with environmental standards.

Conclusion:

India's success in adopting, implementing, and monitoring SDGs stands as a testament to the principle of cooperative federalism, envisioned by the government of India and promoted by NITI Aayog. The index represents the articulation of the comprehensive nature of the Global Goals under the 2030 Agenda while being attuned to the national priorities.

Insta Links:

SDGs vs MDGs- similarities, differences and time period.

[SDGs National Indicator Framework \(NIF\) Progress Report 2023](#)

[UN Sustainable development goals](#)

[What is the SDG India Index?](#)

Prelims link

Q. Consider the following statements: (**UPSC CSE 2016**)

1. The Sustainable Development Goals were first proposed in 1972 by a global think tank called the 'Club of Rome'.
2. The Sustainable Development Goals have to be achieved by 2030.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Ans: (b)

Mains Links:

[Critically analyse India's efforts towards achieving the Sustainable Development Goals \(SDGs\) by 2030. What course corrections are required to meet the targets?](#)

13. ECONOMIC SURVEY 2024 SHINES LIGHT ON MENTAL HEALTH

Context:

Economic Survey 2024 **Addresses Mental Health at the Economic Level for the First Time Ever.**

National Prevalence of Mental Health

1. **Mental Disorders:** **10.6%** of Indian adults suffer from mental disorders (NMHS 2015-16).
2. **Treatment Gap:** Ranges from 70% to 92% for different disorders.
3. **Urban vs. Rural:** Higher mental morbidity in urban metro regions (**13.5%**) compared to rural (**6.9%**) and urban non-metro areas (**4.3%**).
4. **Adolescent Mental Health:** Increased poor mental health among adolescents, with 11% feeling anxious, 14% experiencing extreme emotions, and 43% having mood swings (NCERT Survey), exacerbated by COVID-19.

The Economic Survey highlights the significant impact of mental health disorders on the economy:

1. **Productivity Losses:** Absenteeism, decreased productivity, and disability.
2. **Increased Healthcare Costs:** Higher expenditures for treatment and care.
3. **Poverty and Mental Health:** Stressful living conditions, financial instability, and limited opportunities increase psychological distress.

Government Initiatives:

Initiative/Policy	Details
National Mental Health Programme	Upgraded over 1.73 lakh Sub Health Centres , Primary Health Centres, Urban PHCs, and Urban Health and Wellness Centres to Ayushman Arogya Mandirs providing mental health services.
National Tele Mental Health Programme	Established 53 Tele MANAS cells in 34 states/UTs with over 1600 trained counsellors in 20 languages, handling more than 8.07 lakh calls since Oct 2022 (as of 31 March 2024) .
Increasing Mental Health Personnel	Sanctioned 25 Centres of Excellence to increase PG students' intake, strengthened 47 PG Departments in 19 Government medical colleges/institutions, provided mental health services to 22 AIIMS, and set up three Digital Academies for online training.
Rashtriya Kishor Swasthya Karyakram	Conducted Adolescent Friendly Health Clinics (AFHC) and Peer education programmes across the country.
NIMHANS and iGOT-Diksha Collaboration	NIMHANS (Bengaluru) provides psychosocial support and training via iGOT-Diksha platform . Conducts online training for health workers.
WHO	On World Mental Health Day 2023 (October 10), WHO underscored the theme that "Mental health is a universal human right."
Paro Declaration	Adoption of the Paro Declaration , which aims to provide universal access to People-centred Mental Health Care and Services .

Recommendations of Economic Survey:

Policy Recommendation	Details
Increase Number of Psychiatrists	Raise from 0.75 psychiatrists per lakh population (2021) to WHO norm of 3 per lakh.
Comprehensive Guidelines	Develop for excellence centres' services alongside mental healthcare professionals and users.
Programme Effectiveness	Gather feedback from users , professionals, and stakeholders to assess and improve programmes.
Peer Support Networks	Nurture networks, self-help groups , and community-based rehabilitation to de-stigmatize mental disorders.
NGO Partnerships	Scale up efforts, share knowledge, and leverage resources to enhance policies and identify areas of improvement.
Involve Individuals with Experience	Engage those with personal experience in decision-making, service planning, and advocacy.
Early Identification	Sensitize mental health at preschool, Anganwadi level for early disorder identification.
Standardized Guidelines	Standardize mental health services across government and private sectors.
School Integration	Develop age-appropriate mental health curriculum , encourage early intervention, and promote community-level interactions.

Community Approach	Adopt a bottom-up, whole-of-community approach to address mental health and break the stigma.
Acknowledge Reluctance	Public health officials should tackle mental health by addressing fundamental personal reluctance.

Topics: Important aspects of governance, transparency and accountability, e-governance applications, models, successes, limitations, and potential; citizens charters, transparency & accountability and institutional and other measures.

14. RAJASTHAN PIONEERS 10-YEAR ROAD SAFETY PLAN

Context:

Rajasthan will become the first state in India to adopt a 10-year road safety action plan aimed at reducing road accidents by 50% by 2030.

Measures included in the Rajasthan government's 10-Year Road Safety Action Plan:

- Integrated Road Accident Database (iRAD): Technology Use:** Implementation of the iRAD application for online data entry of road accidents.
- Public Awareness and Behavioral Changes:** Campaigns to raise awareness and bring about behavioural changes regarding road safety rules and provisions.
- Specific Safety Measures:**
 - Speed Limits:** Implementation and enforcement.
 - Safe Distance:** Promoting safe driving distances.
 - Traffic Signals:** Improving adherence to traffic signal regulations.
 - Road Barriers:** Installing and maintaining barriers for enhanced safety.
 - Pedestrian Safety:** Ensuring safety measures for pedestrians.
 - Seatbelt and Helmet Use:** Enforcing the use of seatbelts and helmets.
 - Vehicle Insurance:** Ensuring all vehicles have valid insurance.
- World Bank Assistance:** Utilizing the World Bank's assistance to incorporate international best practices in the preparation of the action plan and road safety policy.
- Coordination Among Stakeholders:** Enhanced collaboration among various departments like Transport, Public Works, Police, Medical & Health, and Forest departments for accurate data reporting and successful implementation.
- Workshops and Training:** Workshop organized by the State Road Safety Institute aimed at training police personnel on the Integrated Road Accident Database (iRAD) application for effective data entry and analysis of road accidents.

Road Accidents in India:

- WHO estimates 300,000 road-related deaths annually, affecting 5%-7% of GDP.
- Tamil Nadu has the highest reported cases.
- Speeding causes over half of deaths, while dangerous driving causes over 42,000.
- India leads in total deaths due to road accidents, followed by China and the US.

Primary Reasons Behind Road Accidents in India:

Reasons	Description
Over speeding	According to the Road Accidents in India-2022 report, over-speeding accounted for over 72% of all accidents and two-thirds of deaths and injuries in India.
Drunk Driving	Drunk driving accounted for about 2% of road accidents in India in 2022.
Distracted Driving	Using mobile phones, eating, or engaging in activities while driving diverts attention.
Road Design	Potholes, poorly marked lanes, inadequate road signs, insufficient lighting, and lack of pedestrian facilities contribute to accidents.
Weather Conditions	Dense fog, excessive rainfall, and strong winds make driving challenging.

Mechanical Failures	Vehicle breakdowns or malfunctions compromise safety. Faulty brakes, tyres, and other components contribute to accidents.
Non-Compliance with Traffic Rules	Lack of adherence to traffic rules significantly contributes to road accidents.
Non-Use of Seat Belts and Helmets	Nearly 83% of car occupants killed in accidents in 2021 were not wearing seatbelts.
Overloading of Vehicles	In 2020, overloaded trucks caused 10,000 deaths and 25,000 injuries on National Highways in India.
Low Awareness	According to a SaveLIFE study, over 37% believed wearing seat belts is not mandatory for rear-seat passengers, and only 27.7% were aware of the law.

Ever Wondered?!

If there was a committee on Road Safety in India? Yes! There is ...

Sundar Committee Recommendations on Road Safety:

- Establish National Road Safety & Traffic Management Board.
- Establish State Road Safety & Traffic Management Boards.
- Develop a National Road Safety Plan with specific targets and action plans.
- Improve post-accident care, trauma management, and national road accident database.
- Arrange 1% of diesel and petrol cess proceeds for Road Safety Fund.
- Address issues like decriminalization of road accidents, insurance, and dedicated highway police.
- Approve the National Road Safety Policy in 2010.

Global Initiatives for Road Safety

- Brasilia Declaration on Road Safety (2015): Aims to halve global deaths and injuries from road traffic accidents by 2030.
- Decade of Action for Road Safety 2021-2030: UN initiative to prevent 50% of road traffic deaths and injuries by 2030.
- International Road Assessment Programme (iRAP): Charity dedicated to safer roads.

International Best Practices for Sustainable Safety:

- Netherlands' Sustainable Safety vision: Focuses on preventing crashes and reducing severity through a safe road system.
- Japan's Sustainable Safety: Reduced road traffic deaths from 16,765 in 1990 to 3,215 in 2019.
- Measures: Strict enforcement of traffic laws, improved road infrastructure, seat belt and helmet use promotion, road safety education, and advanced safety technologies.

India-Specific Initiatives:

- Motor Vehicles Amendment Act, 2019: Increases penalties for traffic violations, addresses defective vehicles, and juvenile driving.
- Cargo by Road Act, 2007: Regulates common carriers, limits their liability, and determines liability for goods loss or damage.
- Control of National Highways (Land and Traffic) Act, 2000: Provides control over land, right of way, and traffic movement.
- National Highways Authority of India Act, 1998: Establishes authority for National Highways development, maintenance, and management.

Other Measures to address Road accidents:

Measures	Details
Enforcement of Seat-belt and Helmet Use	A WHO report states that wearing a seatbelt reduces the risk of death by 45-50%, and for rear seat occupants by 25%.
Awareness Campaigns	E.g., the UN's #MakeASafetyStatement, to educate the public on road safety.
Speed Limit	Implement measures to reduce speeding, enhance traffic management systems, and enforce strict penalties for drunk driving.
Infrastructure Improvement	Enhance road infrastructure to ensure safe conditions, addressing issues contributing to accidents. Invest in ongoing government programs for rapid improvements.
Focus on Vulnerable Road Users	Prioritize the safety of vulnerable road users (pedestrians, cyclists, two-wheeler riders) through tailored infrastructure and awareness programs.

Emergency Care Services

Improve access to high-quality emergency care services and after-care for road crash victims.

India's road network status:

- **Road density:** 1,926 per 1,000 sq km in 2018-19, higher than many developed countries.
- **Surfaced/paved roads:** over 64% of the total road length, comparatively lower than in developed countries.
- **National Highways:** About 2% of total road length in 2019.
- **Other networks:** State Highways (about 3%), District Roads (about 10%), Rural Roads (about 7%)

Insta Links

[Editorial: Road Accidents](#)

Mains Links

Road traffic accidents are a leading cause of death in India, and a major contributor to socio-economic losses, disability burden, and hospitalization. Discuss (15M)

15. RTI APPEALS DISPOSAL NEARS 100%

Context:

Union Minister recently announced **that nearly 100% of Right to Information (RTI) appeals are being disposed of**, with pendency decreasing annually, (from approximately **35,000 (2019-20) to 23,000 (2023-24)**)

About RTI Act 2005

1. **Purpose:** Grants citizens the right to access information from Public Authorities (PAs) to promote transparency, accountability, and public participation in governance, while combating corruption.
2. **Nodal Agency:** Department of Personnel and Training under MoPPG&P.
3. **Replacement:** Replaced the Freedom of Information Act, 2002.

Key Features

1. **Information Commissions:** Establishes Central and State Information Commissions, outlining their constitution, composition, and functions.
2. **Public Information Officers:** Obligates PAs to designate Central/State Public Information Officers (CPIO/SPIOs) to provide requested information.

Appeals System:

1. **First Appeal:** To a senior officer within 30 days of filing the RTI application.
2. **Second Appeal:** To the Central/State Information Commissioner (CIC/SIC) within 90 days of the first appeal decision.
3. **Burden of Proof:** On CPIO/SPIOs to justify denial of information.
4. **Appeal Resolution:** Must be resolved within 30 days, extendable to 45 days.
5. **Binding Decisions:** CIC/SIC decisions are binding.

RTI Act's Impact on India

1. **Fosters transparency and accountability:** RTI applications have helped identify and address ghost workers in the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)
2. **Curbs corruption:** Increased transparency exposes corrupt practices, empowering citizens to hold authorities accountable, as observed by Transparency International's report Corruption Perception Index.
3. **Promotes good governance:** Fosters citizen participation in decision-making and policy formulation.
4. **Empowers citizens:** Access to information allows disadvantaged groups to access entitlements and hold authorities accountable, with RTI applications registered reaching a whopping 3.02 crores in last 15 years.
5. **Democratizes knowledge:** RTI increases public awareness about government functioning and social issues. The Press Council of India has affirmed that the RTI Act has significantly boosted the quality of investigative journalism in India.

Hurdles in the Right to Information Act

1. **Vacant posts:** There are currently seven vacancies out of 11 positions in the Central Information Commission, and several state information commissions are also facing vacancies.
2. **Backlog of requests:** Public authorities often grapple with overwhelming backlogs of RTI requests, leading to delays and frustrations for applicants.
 - Eg: over 3.2 lakh appeals and complaints were pending as of June 2023.
3. **Non-compliance and apathy:** Some public officials exhibit apathy towards adhering to the Act's provisions, failing to respond to requests within the stipulated timeframe or providing incomplete or misleading information.
 - Eg: The Official Secrets Act of 1923 has also been frequently used as an excuse to not implement RTI wholly.
4. **Frivolous and repetitive requests:** While the Act encourages active citizen engagement, a surge in frivolous or repetitive requests can strain resources and divert attention from genuine queries of public interest.
5. **Fee barriers and intimidation tactics:** Such tactics against RTI applicants can discourage individuals from exercising their right to information, particularly marginalized communities.
6. **Lack of awareness and training:** Inadequate public awareness about the Act and insufficient training for public officials on its proper implementation hamper its effectiveness.
 - Eg: In 2021, a study found that 40% of RTI requests denied were without a valid reason.

Conclusion:

- The right to information is a fundamental right under Article 19 (1) of the Indian Constitution.
- In light of the recent case, the court has directed the government to collate information on vacancies and pending complaints under the RTI Act and take immediate steps to fill the vacancies.
- This and other challenges must be addressed to realise the fundamental rights of the citizens.

Insta Links:

- [New draft digital data protection bill: How it compares with the older version and laws elsewhere](#)

Mains Links:

Q. The Digital Personal Data Protection Bill must ensure that individuals' personal data is collected and processed in a manner that respects their privacy rights under Article 21 of the Indian constitution. Comment. (250 Words)

16. UNION BUDGET 2024-25: TRANSIT ORIENTED DEVELOPMENT (TOD) FOR 14 LARGE CITIES

Context:

The Union Budget 2024-25 highlighted Transit Oriented Development (TOD) for 14 large cities with populations over 30 lakhs.

What is Transit Oriented Development (TOD)?

Transit Oriented Development (TOD) is an urban planning approach that focuses on creating compact, walkable communities centered around high-quality public transport systems. It aims to maximize accessibility to public transportation, reduce reliance on private vehicles, and promote sustainable urban growth.

Key Features:

1. **Mixed-Use Development:** Incorporates residential, commercial, and recreational spaces within walking distance of transit stations.
2. **High Density:** Encourages higher population densities near transit hubs.
3. **Walkability:** Prioritizes pedestrian-friendly infrastructure.
4. **Public Transport Integration:** Ensures efficient, reliable public transport systems are central to community design.



Examples from India:

1. **Delhi Metro:** Areas around metro stations like Connaught Place have seen significant development, with mixed-use buildings and pedestrian-friendly designs.
2. **Mumbai Metropolitan Region:** The Mumbai Metropolitan Region Development Authority (MMRDA) has proposed TOD policies to enhance development around metro and monorail stations, improving access and reducing traffic congestion.
3. **The redevelopment of New Delhi Railway Station (NDLS)** was become the first project to be undertaken on the Transit-Oriented Development (TOD) concept in the NCR.

Examples from the World:

1. **Hong Kong:** The city's MTR Corporation integrates property development with its transit network, creating highly accessible, mixed-use developments around stations.
2. **Portland, USA:** The Pearl District transformed from an industrial area into a vibrant neighborhood centered around the Portland Streetcar, featuring high-density housing, retail, and parks.
3. **Copenhagen, Denmark:** The Finger Plan incorporates TOD principles, ensuring suburban development follows rail lines, promoting compact growth and efficient public transport use.

Pillars of TOD & Policy:

Pillars	Description
Enable Transformation (From Private to Public Transportation)	Assist cities in shifting from private vehicle dependency to public transport-oriented development.

Accessible Public Transport (Promote Green Mobility)	Promote the usage of public transport by making it accessible, encouraging walking and cycling, and curbing pollution and negative impacts of motorization.
Compact Walkable Communities	Create livable and affordable communities that are compact and walkable.

Benefits:

1. **Economic:** Increased property values, reduced transit times, and higher labor productivity.
2. **Environmental:** Lower carbon emissions, reduced air pollution, and protection of green spaces.
3. **Social:** Improved public health through increased physical activity, reduced urban sprawl, and enhanced quality of life.
4. **Reduces vehicular traffic and congestion** - This reduces private vehicular usage and congestion on roads.
5. **Efficient use of land resources:** Optimizes land-use efficiency compared to distributed standalone terminals. This allows for sustainable urban planning and growth.
6. **Leveraging complementary advantages:** Congestion pricing, parking policies along with promotion of non-motorized transit via walking and cycling can be dovetailed into the system.
7. **Inclusivity:** Develop inclusive habitats in transit areas so public transport users can live in walkable, livable communities. Allocate a portion of housing for Economically Weaker Sections (EWS) and affordable housing in the influence zone.
8. **Safety for Vulnerable Sections:** Ensure a safe society by focusing on the safety of women, children, senior citizens, and differently abled individuals through necessary amendments to building bylaws.

Challenges to Transit Oriented Development (TOD) in India:

1. **Land Acquisition Issues:** Difficulty in acquiring land for development due to legal and ownership disputes.
2. **Coordination Among Agencies:** Lack of coordination between various urban development and transportation agencies.
3. **Funding Constraints:** Insufficient financial resources for large-scale TOD projects.
4. **Regulatory Hurdles:** Complex regulatory and approval processes delaying implementation.
5. **Public Resistance:** Resistance from local communities due to displacement fears and lifestyle changes.
6. **Infrastructure Gaps:** Inadequate existing infrastructure to support high-density development.
7. **Environmental Concerns:** Potential negative environmental impacts and challenges in maintaining green spaces.

8. **Technical Expertise:** Lack of technical expertise and skilled professionals in urban planning and TOD.
9. **Policy Inconsistencies:** Inconsistent policies and lack of a unified approach across different regions and cities.
10. **Cultural Barriers:** Cultural preferences for private vehicles over public transportation.

Steps Taken for TOD in India:

1. **National Transit Oriented Development Policy, 2017:** Guiding Principles: Includes Last Mile Connectivity, Mixed Landuse, Interconnected Street Network, etc.
 - **Supportive Tools:** Emphasizes Universal Accessibility, Public-Private Partnerships (PPP), etc.
2. **Smart Cities Mission:** Incorporates TOD as a key component to promote sustainable urban development.
3. **Multi-modal Integration:** Efforts to integrate various transport modes (metro, bus, cycling, etc.) for seamless connectivity in TOD zones.
4. **Local TOD Policies:** Development of specific guidelines like the TOD Manual for Delhi to guide local implementation.

Topics: India and its neighbourhood- relations.

17. INDIA-MYANMAR RELATIONS AMIDST EVOLVING SITUATION IN MYANMAR

Context:

The conflict between **ethnic armed organisations (EAOs) and the military junta** in Myanmar has created a serious humanitarian crisis, which the United Nations Security Council took up for discussion on July 3.

Background of the crisis:

- Military, Tatmadaw, seized power in a **coup on February 1, 2021**.
- Detained civilian leaders, including Aung San Suu Kyi.
- Declared a state of emergency, reversing the democratic transition from 2011.
- Protests sparked by military crackdowns and civilian casualties.
- Ethnic armed groups intensified resistance, causing humanitarian crisis.
- Crisis impacts **regional stability and international relations.**



Fig: Myanmar: Arrow shows Refugees escaping from Myanmar

India- Myanmar relationship:

Dimension	Examples and Details
Geopolitical Importance	Myanmar serves as a land bridge linking India's northeastern states to Southeast Asia , facilitating regional connectivity. Also, India's engagement with Myanmar counters China's influence in the region.
Strategic Significance	Developments in Myanmar impact neighbouring countries including China, Laos, Thailand, Bangladesh, and India.
	Neighbourhood First Policy: India prioritizes Myanmar in its diplomatic initiatives.
	Act East Policy: Myanmar is pivotal in India's efforts to enhance ties with the Asia-Pacific region
Areas of Collaborative Cooperation	Trade: India is Myanmar's fifth-largest trading partner , focusing on sectors like agriculture, pharmaceuticals, IT, and energy.
	Energy Cooperation: Significant investments in Myanmar's oil and gas sector support India's energy security
	Infrastructure Projects: Projects like <u>Kaladan Multi-Modal Transit</u> Transport and <u>India-Myanmar-Thailand Trilateral Highway</u> promote connectivity and trade
	Defense Partnership: Joint military exercises and training initiatives strengthen defence ties.

Capacity Building Measures	India has extended USD 2 billion in soft loans and supports Myanmar's educational and agricultural research institutions. India provides timely aid during crises such as natural disasters and health emergencies.
Cultural Connectivity	Shared Buddhist heritage and historical ties foster mutual understanding and cultural exchange. Indian Diaspora: A significant Indian-origin population contributes to Myanmar's economy through businesses and investments.

Issues between the two countries:

- India suspended Free Movement Regime (FMR) with Myanmar:** India suspended Free Movement Regime (FMR) due to security concerns: insurgent activities, trafficking, and mass immigration from Myanmar. This measure **restricts the movement of refugees seeking safety and asylum in India**.
- Internal Security Threats:** The India-Myanmar border is porous and poorly guarded, situated in a remote, insurgency-prone area close to opium-producing regions. This vulnerability has been exploited by terrorist and insurgent groups from India's northeastern states, who have established camps in Myanmar.
- China's Influence:** China's substantial economic influence in Myanmar poses a challenge for India, impacting bilateral relations.
- Delays in joint infrastructure projects and the Rohingya crisis** further strain ties, reflecting broader security and humanitarian concerns.

Conclusion:

Amidst challenges like regional security threats and China's influence, India must pursue strategic diplomacy, accelerate joint infrastructure projects, and enhance security cooperation to mitigate tensions and promote stability in the region.

Also, **there are compelling reasons to reconsider this suspension**. Reinstating FMR could provide immediate humanitarian relief to affected communities and enhance India's reputation as a responsible regional power committed to humanitarian principles.

Insta Links:

- [India-Myanmar relations](#)

Mains Links:

Q. Analyze internal security threats and transborder crimes along Myanmar, Bangladesh and Pakistan borders including Line of Control (LoC). Also, discuss the role played by various security forces in this regard. (UPSC 2020)

Prelims Links:

Q. In the Mekong-Ganga Cooperation, an initiative of six countries, which of the following is/are not a participant / participants? (UPSC 2015)

- Bangladesh
- Cambodia
- China
- Myanmar
- Thailand

Select the correct answer using the code given below:

- 1 only
- 2, 3 and 4
- 1 and 3
- 1, 2 and 5

Ans: C

Topics: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

18. INDIA-RUSSIA TIES: HIGHLIGHTS FROM THE 22ND ANNUAL SUMMIT

Context:

The Prime Minister of India co-chaired the 22nd Annual Summit with the President of Russia in Moscow.

Key outcomes of the summit:

- Trade and Economic Partnership:**
 - Set a bilateral trade target of **USD 100 billion by 2030**.
 - Promote bilateral settlements** using national currencies.
 - Expand energy cooperation** in nuclear, oil, and petrochemical sectors.
- Transport and Connectivity: Increase cargo turnover** via projects like the North-South International Transport Corridor and the Chennai-Vladivostok Eastern Maritime Corridor.
- UNSC Reform: Advocate for comprehensive reform** to make it more representative and effective.
- Counter-Terrorism:** Urge finalization and adoption of the Comprehensive Convention on International Terrorism.
- Implement UNGA and UNSC resolutions** on countering terrorism and violent extremism.
- Ukraine:** Support peaceful resolution through dialogue and diplomacy.
- Military Cooperation:** Encourage joint manufacturing in India for maintenance of Russian-origin arms and defence equipment under the Make-in-India program.

Timeline of the Relationship:



Important Dimensions of India-Russia Relations:

Dimensions	Details
Political Relations	The Annual Summit meeting between the PM of India and the Russian President is the highest institutionalized dialogue mechanism in the strategic partnership.
	The Strategic Partnership between the two countries was elevated to the level of "Special and Privileged Strategic Partnership" in 2010.
International/Multi-lateral Organisations and Connectivity Projects	BRICS, SCO, G20, International North-South Transport Corridor (INSTC).
Defence and Security Cooperation	Evolution of India-Russia military-technical cooperation from a buyer-seller framework to joint research, development, and production of advanced defence technologies
	Russia is India's top military supplier accounting for 45% of total defense imports.
	Examples include the BrahMos Missile System , licensed production of SU-30 aircraft, and T-90 tanks. Deal for five S-400 batteries in 2018, and supply of MiG-29-K aircraft and Kamov-31
	Cooperation is guided by the Agreement on the Programme for Military-Technical Cooperation for 2021-2031

Trade and Economic Relations	Revised targets of increasing bilateral investment to US \$50 billion and bilateral trade to US \$30 billion by 2025.
	Bilateral investments surpassed the previous target of \$30 billion in 2018, leading to a revised target of \$50 billion by 2025.
Nuclear Energy	2014 Strategic Vision for strengthening cooperation in peaceful uses of atomic energy. Kudankulam Nuclear Power Plant (KKNPP) is being built in India with Russian cooperation.
Space Cooperation	Cooperation in the peaceful uses of outer space. MoU between ISRO and ROSCOSMOS on Joint Activities in the field of Human Spaceflight Programme (Gaganyaan).
Science & Technology	Working Group on S&T under IRIGC-TEC.
	Institutional mechanisms: Integrated Long Term Programme (ILTP) and Basic Science Cooperation Programme.
	Initiatives: Traditional Knowledge Digital Library (TKDL), GIAN, and Russia-India Network (RIN) of Universities.
Cultural Cooperation	A strong tradition of Indian studies in Russia. Strong Russian interest in Indian dance, music, yoga, and Ayurveda.

India-Russia Relationship Challenges

- Defence issues: Declining orders from Russia due to India's diversification of defense imports.
- Russia's apprehensions over India's foreign policy: Criticism of Indo-Pacific and Quad, arguing it aims to contain China.
- USA Factor: Russia's US relations diverge, influencing its reliance on China for support and power
- India's signing of Foundational agreements with the US: LEMOA, COMCASA, BECA.
- Russia's policy change: Supplying China with weapon systems like the Sukhoi 35 and S-400 missile defense system.
- China Factor: Russia's growing bond with China strains Indo-Russia relations.
- Failure of Russia-India-China (RIC) forum: No major diplomatic success due to India's unresolved issues with China.
- Growing China-Russian ties: Russia's joining of the Chinese One Belt One Road initiative.

Way Forward for India-Russia Relations

- Rebuilding on strengths and common concerns.
- Identifying strengths and common concerns for joint projects in third countries. Ex - Rooppur nuclear plant project in Bangladesh.
- Deepening scientific and technological relations with Russia.
- Building a Russia-India-China (RIC) alliance using creative means.
- Balancing relationships between Russia, China, and the US, especially after the Freedom of Navigation operation (FONOP) in India's Exclusive Economic Zone.

Conclusion

On the whole, **Both India and Russia will have to learn to navigate** their relationship amidst challenges emerging not just from bilateral factors but also regional and global ones, as both countries seek to strengthen their position at a time of flux in the international order.

Insta Links:

- [30 years of Indo-Russian Friendship Treaty 1993](#)
- [India-Russia relations](#)

Mains Links:

Q. What is the significance of Indo-US defence deals over Indo-Russian defence deals? Discuss with reference to stability in the Indo-Pacific region. (UPSC 2020)

Prelims Links:

Q. Recently, India signed a deal known as 'Action Plan for Prioritization and Implementation of Cooperation Areas in the Nuclear Field' with which of the following countries? (UPSC 2019)

- Japan
- Russia
- The United Kingdom
- The United States of America

Ans: B

19. PM'S VISIT TO AUSTRIA

Context:

PM's visit to Austria holds particular historical importance as it was his maiden official visit to the country and the first by an Indian Prime Minister in 41 years. This visit is pivotal in shaping the future trajectory of India-Austria relations.

Key Takeaways from the Visit:

- **Economic Cooperation:**
 - One of the major highlights of the visit was the focus on enhancing economic cooperation between the two countries.
 - Several Memorandums of Understanding

(MoUs) were signed in areas such as renewable energy, technology, and infrastructure development.

- Austria's expertise in renewable energy and India's push for sustainable development create a complementary synergy that can be harnessed for mutual benefit.
- The Prime Minister met with Austrian CEOs and emphasized the '[Make in India' initiative](#), promoting investments in India's growing market.
- **Cultural Exchange:**
 - PM emphasized the importance of cultural exchanges in fostering mutual understanding and goodwill.
 - Initiatives were discussed to promote cultural tourism and educational exchanges, which would help in bringing the people of both nations closer.
 - The Austrian rendition of "Vande Mataram" highlighted the cultural bond, showcasing mutual respect and appreciation.
- **Strategic Dialogue:**
 - A comprehensive strategic dialogue was initiated to address global challenges such as [terrorism](#), climate change, and cybersecurity.
 - Both leaders expressed their commitment to working together on these issues at various international forums, reinforcing their shared values and interests.
 - The visit underscored the significance of a rules-based international order, with the [UN Charter](#) at its core.
- **Defense Collaboration:**
 - Strengthening defense collaboration was another critical aspect of the visit.
 - Discussions were held on expanding cooperation in defense technology and manufacturing, which could lead to joint ventures and enhanced security ties.
- **Healthcare Partnership:**
 - Given the lessons learned from the COVID-19 pandemic, both nations recognized the need for collaboration in the healthcare sector.
 - Agreements were made to share best practices and technologies, especially in the fields of medical research and pharmaceuticals.

Significance of the Visit

- **Reinvigorating Bilateral Relations:** PM's visit comes at a time when global geopolitics is in flux. Strengthening ties with [Austria, a key EU member](#), is crucial for India as it seeks to enhance its influ-

ence in Europe. The visit serves as a reinvigoration of bilateral relations that had remained dormant for decades.

- **Economic Opportunities:** The focus on economic cooperation opens up numerous opportunities for both countries. Austria's advanced technology and India's vast market potential create a conducive environment for business and investment.
- **Cultural Diplomacy:** The emphasis on cultural exchanges underscores the soft power aspect of diplomacy. By promoting cultural and educational ties, both nations can build a foundation of mutual respect and understanding, which is essential for long-term strategic partnerships.
- **Geopolitical Strategy:** In the context of global power shifts, aligning with Austria helps India balance its relationships with major powers. It also provides a strategic foothold in Central Europe, which is vital for India's broader foreign policy objectives.

Way Forward:

- **Implementation of Agreements:** Both nations should prioritize the swift implementation of the agreements signed during the visit. Regular monitoring and follow-up mechanisms should be established to track progress and address any challenges that arise.
- **Enhanced People-to-People Contact:** To strengthen ties at the grassroots level, initiatives promoting tourism, student exchanges, and cultural events should be actively pursued. This will help in building a stronger bond between the citizens of both countries.
- **Joint Research and Innovation:** Collaborating on research and innovation, particularly in emerging technologies and sustainable practices, can yield significant benefits. Joint projects and funding for research initiatives should be encouraged.
- **Regular High-Level Engagements:** To maintain momentum, regular high-level visits and dialogues should be scheduled. This will ensure that the relationship remains dynamic and responsive to changing global scenarios.

Conclusion:

As both nations move forward, the emphasis should be on building a comprehensive and sustainable relationship that benefits both parties. With mutual commitment and strategic vision, India and Austria can look forward to a future of enhanced cooperation and shared prosperity.

20. A DECADE OF INDIA'S ACT EAST POLICY (AEP)

Context:

2024 is the tenth anniversary year of the Act East Policy (AEP). The AEP, which replaced the Look East Policy (LEP) in 2014, has laid the foundations for India's engagements with the East.

What is Act East Policy?

The Act East Policy (AEP) is an initiative by the Indian government, **launched in 2014**, to strengthen **economic, strategic, and cultural ties** with countries in the **Indo-Pacific region**, with a core focus on the **ASEAN nations**. It aims to enhance **regional connectivity, promote economic cooperation, and develop strategic partnerships** to bolster India's influence and integration in the region. The policy evolved from the earlier **Look East Policy of 1992, expanding its scope and strategic objectives**.

Its key principles are-

- Develop strategic **security cooperation and strategic relations** in the Indo-Pacific.
- **Strengthen India's economic ties and connectivity** with the region through **increased trade and investment**.
- Boost historical **cultural ties**.
- **4C's of Act East Policy:** Culture, Commerce, Connectivity and Capacity building

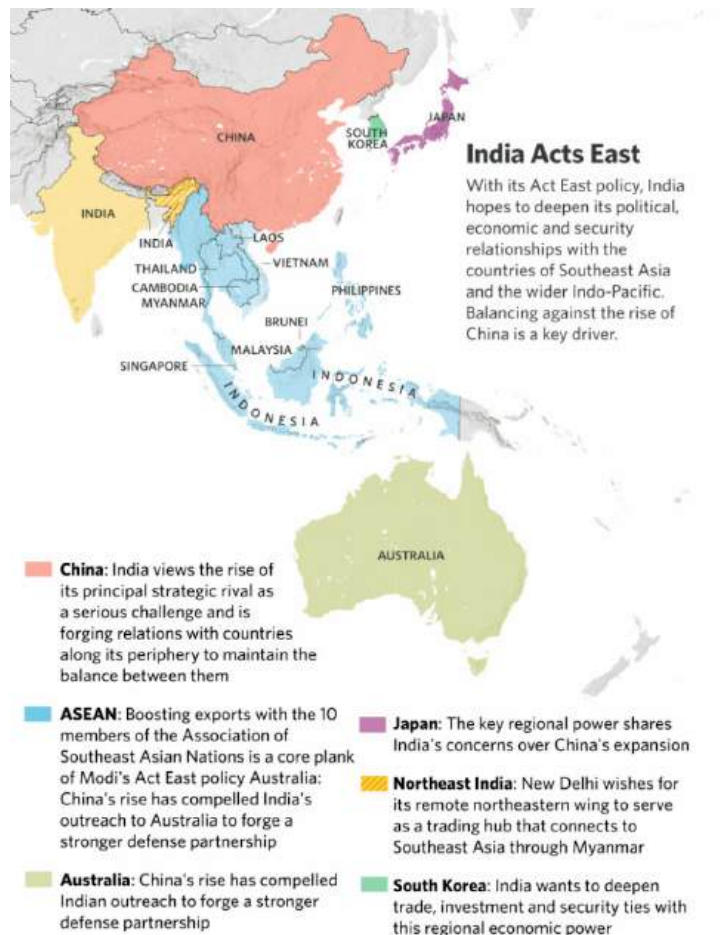
India- ASEAN Strategic Partnership

- In 2012, ASEAN & India became **strategic partners**.
- ASEAN is India's **4th largest trading partner**.
- India set up a **separate Mission to ASEAN** and the **East Asia Summit** in Jakarta in April 2015 with a **dedicated Ambassador** to strengthen engagement with ASEAN and ASEAN-centric processes.

India and Other Regional Partners in the East

Apart from ASEAN, India has taken other policy initiatives and collaborations in the region that involve some members of ASEAN

- Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (**BIMSTEC**),
- Mekong-Ganga Cooperation (**MGC**)
- Asia-Europe Meeting (**ASEM**),
- East Asia Summit (**EAS**),
- ASEAN Regional Forum (**ARF**),
- ASEAN Defence Ministers' Meeting + (**ADMM+**) and
- Expanded ASEAN Maritime Forum (**EAMF**).



Initiatives under Act East Policy:

Category	Initiative	Description
Security Co-operation	Agreements with ASEAN	Combat transnational crime and terrorism
	SAGAR	Deepen economic and security cooperation with maritime neighbours, build maritime security capabilities
	India-ASEAN Agreement on Maritime Cooperation (2019)	Strengthen maritime cooperation
	Joint Exercises	Malabar naval exercise, Tiger Cub air exercise
	Delhi Dialogue	Annual discussions on politico-security and economic issues between ASEAN and India
	Defense Exports	Supplied BrahMos missile system to the Philippines.

Economic Connectivity	Connectivity Projects	India-Myanmar-Thailand Trilateral Highway, Kaladan Multi-Modal Transit Transport Project
	FTA Agreements	ASEAN-India FTA in Goods Agreement (2009), India-ASEAN Services and Investment FTA (2014)
	Business & Innovation	ASEAN-India Start-up Festival, ASEAN-India Grassroots Innovation Forum, ASEAN India Business Council (AIBC)
	Funding	ASEAN-India Cooperation Fund, ASEAN-India Science and Technology Development Fund, ASEAN-India Green Fund
	Economic Ministers' Meetings	Foster economic collaboration, ensure sustainable benefits
	IORA	Strengthen Economic Cooperation, Trade Facilitation, Investment Promotion, Social Development
Health	Supplied Covid-19 vaccines under Vaccine Maitri initiative .	
Cultural Ties	Project Mausam	Rebuild maritime cultural connections with 39 countries bordering the Indian Ocean
	Restored monuments like My Son temples (Vietnam) , Buddhist Pagodas in Bagan (Myanmar) , Wat Phou Temple Complex (Laos) , Preah Vihear temple (Cambodia) .	

Achievements:

1. **Positioned India in the Indo-Pacific:** E.g., support for the Philippines on South China Sea dispute.
2. **Strengthened strategic partnerships:** India has upgraded its relations to a **strategic partnership** with Indonesia, Vietnam, Malaysia, Japan, Republic of Korea (ROK), Australia and Singapore forging close ties with all countries in the Indo-Pacific region.
3. Enhanced links with **BIMSTEC and IOR**.
4. **Greater integration of Northeastern** states with ASEAN, e.g., India-Japan Act East Forum.

Challenges:

- Chinese economic influence in **ASEAN**.
- India's economic under-performance, e.g., **trade deficit of over \$43 billion**.

Conclusion

The Act East Policy lies at the heart of India's initiatives in the Indo-Pacific which aims to strengthen economic, security and cultural ties with ASEAN and other regional partners in the Indo-Pacific.

Prelims Link:

Q.1 The term 'Regional Comprehensive Economic Partnership' often appears in the news in the context of the affairs of a group of countries known as (UPSC 2016)

- G20
- ASEAN
- SCO
- SAARC

Ans: (b)

Q.2 In the Mekong-Ganga Cooperation, an initiative of six countries, which of the following is/are not a participant/participants? (UPSC 2015)

- Bangladesh
- Cambodia
- China
- Myanmar
- Thailand

Select the correct answer using the code given below:

- 1 only
- 2, 3 and 4
- 1 and 3
- 1, 2 and 5

Ans: (c)

Topics: Effect of policies and politics of developed and developing countries on India's interests, Indian diaspora.

21. TIBET-CHINA DISPUTE ACT PASSED BY US CONGRESS

Context:

US Congress recently, passed the "**Promoting a Resolution to the Tibet-China Dispute Act**," aimed at countering China's historical claims over Tibet and promoting dialogue between Beijing and the Dalai Lama.

What does the Policy say?

The US policy mandates peaceful resolution of the Tibet-China dispute through **dialogue, aligning with international law and the UN Charter, and supporting the Dalai Lama's "Middle Way Approach"**.

What is the History of the Issue between China and Tibet?

- The China-Tibet issue centres on **Tibet's historical quest for independence and China's claim of sovereignty over the region**.
- 13th Dalai Lama declared Tibet's de facto independence in 1913**, which China never recognized.
- Post-Chinese Communist Party takeover, Tibetan leaders signed the **Seventeen Point Agreement** in 1951, **granting autonomy but allowing Chinese military presence**.
- The agreement, rejected by many Tibetans, sparked tensions leading to the **1959 Tibetan Uprising**.
- Following the **Dalai Lama's flight to India** and the establishment of the Central Tibetan Administra-

tion, **China intensified control over Tibet, suppressing freedoms and imposing demographic changes, challenging Tibetan cultural survival.**



India's Tibet Policy:

Aspect	Details
Historical Boundaries between India and Tibet	Defined under the Simla Convention of 1914 between Tibetan representatives and British India.
Chinese Annexation (1950)	China's full control over Tibet led to disputes over boundaries, including the McMahon Line .
1954 Agreement	India signed an agreement with China recognizing Tibet as part of China .
Tibetan Refugees (1959)	India provided refuge to the Dalai Lama and his followers after the Tibetan uprising.
Official Policy	India recognizes the Dalai Lama as a spiritual leader ; and restricts political activities of Tibetan exiles.
Policy Shifts	Since 2003, the Government of India has recognised Tibet Autonomous Region as part of the People's Republic of China following the signing of the Declaration on Principles for Relations and Comprehensive Cooperation between India and China
Balancing Act	India maintains Tibet is part of China while supporting Tibetan cultural identity cautiously

Impact of Tibet and the Dalai Lama on India-China relations:

- Geopolitical Significance:** Tibet historically neighboured India, influencing boundaries and the Line of Actual Control (LAC) over 3500 km.
- Strategic Importance:** Tibet's plateau is crucial for

water resources and holds geopolitical significance, complicating India-China-Tibet dynamics.

3. **Diplomatic Agreements:** India recognized Tibet as part of China in a 1954 agreement (and again in 2003), altering its stance from historical conventions.
4. **Dalai Lama's Presence:** China views the Dalai Lama, residing in India, as a separatist, straining bilateral relations persistently.

Conclusion:

India faces **complex challenges in its Tibet policy, balancing humanitarian concerns with geopolitical realities**. As it navigates relations with China, maintaining a strategic yet compassionate approach towards Tibetans in India while addressing legal and leadership issues post-Dalai Lama will be crucial for stability and regional cooperation.

Insta Links:

- [India-China relations](#)

Mains Link:

Q. The China-Pakistan Economic Corridor (CPEC) is viewed as a cardinal subset of China's larger 'One Belt One Road' initiative. Give a brief description of CPEC and enumerate the reasons why India has distanced itself from the same. (UPSC 2018)

Prelims Link:

Q. "Belt and Road Initiative" is sometimes mentioned in the news in the context of the affairs of : (UPSC 2016)

- (a) African Union
- (b) Brazil
- (c) European Union
- (d) China

Ans: D

GENERAL STUDIES – 3

Topics: [Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment.](#)

22. RBI'S DRAFT FOREIGN EXCHANGE MANAGEMENT REGULATION, 2024

Context:

The RBI has proposed draft regulations (**Draft Foreign Exchange Management (Export and Import of Goods and Services) Regulations, 2024**) to streamline export-import transactions, enhancing ease of business for small exporters and importers.

Key Highlights of the Draft Regulation:

- **Exporters must declare the full export value** of goods or services to the specified authority.
- **The full export value must be realized and repatriated to India** within nine months from the date of shipment for goods and the date of invoice for services.
- **Authorized Dealers (AD)** may extend the specified period for reasonable and sufficient cause.
- **No advance remittance** for the import of gold and silver is permitted unless specifically approved by RBI.

Aim of the Draft:

The draft regulations **aim to enhance business convenience**, particularly for small exporters and importers, while enabling **Authorized Dealer Banks** to offer faster and more efficient services to foreign exchange clients. These **regulations align with India's progressive liberalization policies** governing foreign exchange transactions under FEMA.

What is FEMA?

Aspect	Details
	FEMA, or the Foreign Exchange Management Act, 1999 , is Indian legislation that regulates foreign exchange transactions, payments, and dealings
Enactment Date	June 1, 2000
Objective	Facilitate external trade and payments, promote orderly development of foreign exchange market.
Scope	Regulates foreign exchange transactions, acquisitions, payments, exports, imports, and related activities
Regulatory Authority	Reserve Bank of India (RBI)
Nature of Offence	Civil offence
Penalties	Penalties and fines for violations
Applicability	Entire India; includes agencies and offices managed by Indian citizens outside India.
Entities Covered	Foreign exchange, foreign securities, export and import of commodities/services, securities under the Public Debt Act 1994, banking, financial, and insurance services
Control of Foreign Exchange	RBI controls through Authorized Persons: authorized dealers, money changers, offshore banking units, etc.

Under FEMA all foreign exchange transactions are categorized into two types: current account transactions and capital account transactions.

1. **Current Account Transactions:** These include transactions that do not significantly impact the resident's assets or liabilities outside India. Examples include payments for foreign trade, expenses related to foreign travel, and educational expenses abroad.
2. **Capital Account Transactions:** These involve transactions that alter the resident's assets or liabilities outside India, such as investments in foreign securities or acquisition of immovable property overseas

Resident Indians: Defined under Section 2(v) of FEMA, 1999, a resident in India typically includes individuals residing in India for more than 182 days during the preceding financial year, Indian-registered corporations, and offices or agencies in India owned or controlled by non-residents or vice versa.

Mains Link:

Q. Discuss how emerging technologies and globalisation contribute to money laundering. Elaborate measures to tackle the problem of money laundering both at national and international levels. (UPSC 2021)

Prelims Links:

Q. Which one of the following groups of items is included in India's foreign exchange reserves? (UPSC 2013)

- (a) Foreign-currency assets, Special Drawing Rights (SDRs) and loans from foreign countries
- (b) Foreign-currency assets, gold holdings of the RBI and SDRs
- (c) Foreign-currency assets, loans from the World Bank and SDRs
- (d) Foreign-currency assets, gold holdings of the RBI and loans from the World Bank

Ans: (b)

23. HOW TO READ INDIA'S BALANCE OF PAYMENTS?

Context:

India's current account registered a surplus in Q4 of 2023-24. However, a surplus is not always good, nor is a deficit always bad.

About Balance of Payments (BoP):

Aspect	Description
Definition	Balance of Payments (BoP) is a <u>systematic statement of all economic transactions of a country with the rest of the world</u> during a specific period, usually one year. It shows if the country has a trade surplus (exports > imports) or a trade deficit (imports > exports).
Purposes of Calculation of BoP	• Reveals the financial and economic status of a country. • Indicates whether the country's currency value is appreciating or depreciating. • Helps the Government decide on fiscal and trade policies.
Components of BoP	<u>Current Account:</u> Shows export and import of visible (merchandise/goods) and invisible (non-merchandise/services, transfers, income). A surplus occurred in Q4 of 2023 due to higher service exports and remittances, despite a trade deficit.
	<u>Capital Account:</u> Shows capital expenditure and income, including ECB, FDI, and FPI. Q4 of 2023 showed a net surplus of \$25 billion
	<u>Errors and Omissions:</u> Reflects the country's inability to record all international transactions accurately.
	<u>Changes in Foreign Exchange Reserves:</u> Shows movements in foreign currency assets held by the RBI and in Special Drawing Rights (SDR) balances.
Overall BoP Status	The BoP account <u>can be a surplus or a deficit</u> . A deficit can be bridged by drawing from the Foreign Exchange (Forex) Account. If forex reserves fall short, it leads to a BoP crisis.

Difference between BoP and BoT:

Topic	Balance of Payment (BoP)	Balance of Trade (BoT)
Components	The current account, capital account, financial account, errors and omissions	Trade in goods (merchandise trade)
Coverage	Trade in goods, services, income flows, and transfers (current and capital)	Trade in physical goods (raw materials, manufactured goods, commodities)
Definition	A comprehensive record of all economic transactions between residents of a country and the rest of the world over a specific period	Difference between the value of a country's exports and imports of goods (merchandise trade) over a specific period
Focus	A comprehensive view of a country's economic transactions with the rest of the world	Focuses solely on the trade of goods
Inclusion of Services, Income Flows, and Transfers	Yes	No

Why Current account surplus is not always good, nor is a deficit always bad?

- A surplus is not always good because it can indicate **reduced domestic investment or economic activity**, as seen during economic downturns.
- Conversely, a deficit is not always bad because **it can signal strong domestic demand and investment in growth**, such as importing capital goods to boost future production capacity.
- In essence, the context and underlying reasons behind the surplus or deficit are crucial for determining their impact on the economy.

Importance of Balance of Payments (BoP):

Importance	Description
Economic Indicator	It is a crucial indicator of a country's economic relationships with the global market, revealing trade flows, financial transactions, and overall economic health.
Policy Formulation	Helps by offering insights into competitiveness, trade performance, capital flows, and monetary stability.
Exchange Rate Management	Central banks use the BoP to assess foreign currency supply and demand, manage exchange rate stability, and determine the need for currency interventions.
External Debt Management	Assists in monitoring the capacity to service foreign debt and assessing borrowing sustainability, promoting prudent debt management.
Investment Decisions	Investors analyse the BoP to gauge a country's investment attractiveness, where a favourable BoP indicates stability and positive economic prospects.
Policy Coordination	Facilitates international policy coordination, helping to identify areas of cooperation, address global imbalances, and promote financial stability.

Insta Links:

- [India's balance of payments](#)

Prelims Links:

Q1. Which of the following has/have occurred in India after its liberalization of economic policies in 1991? (UPSC 2017)

- Share of agriculture in GDP increased enormously.
- Share of India's exports in world trade increased.
- FDI inflows increased.
- India's foreign exchange reserves increased enormously.

Select the correct answer using the codes given below:

- 1 and 4 only
- 2, 3 and 4 only
- 2 and 3 only
- 1, 2, 3 and 4

Ans: (b)

Q2. With reference to Balance of Payments, which of the following constitutes/constitute the Current Account? (UPSC 2014)

1. Balance of trade
2. Foreign assets
3. Balance of invisibles
4. Special Drawing Rights

Select the correct answer using the code given below:

- (a) 1 only
- (b) 2 and 3
- (c) 1 and 3
- (d) 1, 2 and 4

Ans: (c)

24. SKILL UP: TACKLING INDIA'S UNEMPLOYMENT

Context:

Economic growth alone hasn't solved India's job problem over the past 50 years. Job availability has lagged behind economic growth, particularly affecting the young population.

High Unemployment Rate in India

- Consistent increase in unemployment rate over two decades, from 2% in 2010 to 9.2 percent in June 2024. (According to the Centre for Monitoring Indian Economy)
- Over 42% of India's under-25 graduates unemployed in 2021-22.
- Despite 2000s GDP growth, employment growth rate remains unresponsive, indicating jobless growth.

Types of Employment in India:

Types	Description
Wage Employment	Regular Wage Jobs: Formal, structured positions with fixed salaries, found in government organizations, private companies, and multinational corporations.
	Casual or Daily Wage Labor: Involves daily wage labour, prevalent in sectors like construction, agriculture, and unorganized labour markets.
Self-Employment	Entrepreneurship: Individuals engaged in entrepreneurial activities, running small businesses or enterprises such as shops, local services, or manufacturing units.
	Farmers: Agriculture serves as a significant source of self-employment, with individuals owning and operating farms independently or as part of a family-run enterprise.
	Freelancing and Informal Work: Reflects the gig economy trend, with individuals working as freelancers, consultants, or in part-time roles.

Why Is India's Economic Growth Not Corresponding with Sufficient Job Creation?

Issue	Explanation	Example
High-Skill, Low-Employment Sectors	Economic growth driven by services and capital-intensive sectors generates fewer jobs.	IT sector contributes significantly to GDP but employs only about 4.5 million directly .
Premature Deindustrialization	Decline in manufacturing's share of GDP and employment at low per capita income.	Limits absorption of surplus agricultural labor, a key job creation pathway.
Skill Mismatch	Gap between skills demanded by job market and workforce capabilities.	Only 4.7% of workforce had formal skill training as per 2015 report.
Informal Sector Dominance	Over 90% of workforce in low-productivity, insecure jobs.	Gig economy offers flexible work but lacks security and benefits.
Global Economic Trends	Job market affected by global protectionism and economic disruptions.	4.25 lakh tech employees lost jobs in 2023 due to global recession.
Impact of Automation and AI	Emerging technologies displacing low-skill jobs.	9% of workforce could be displaced by automation by 2030.

Academia-Industry Mismatch	Education system fails to meet modern job market needs.	Only 47% of Indian graduates were employable in 2019.
'Missing Middle' in MSMEs	Predominance of very small and very large firms hampers job creation.	Lack of mid-sized firms limits employment potential.
Regional Disparities	Economic growth concentrated in few urban centers.	Migration pressures from less developed regions to urban areas.
Demographic Dividend Challenge	Need to create 10-12 million jobs annually for new entrants.	Economy consistently falls short of job creation target.

Jobless Growth in India:

- **Two types of jobless growth in India:**
 - **Weak Responsiveness:** Automation and tech introduction lead to jobless growth, but increasing GDP can still boost employment.
 - **High Responsiveness:** In India, **labour productivity growth is strongly** linked to output growth. So even though GDP increases, output will increase only if labour productivity increases.

Social Impact of Unemployment in India:

Social Impact	Details
Marginalisation of People	Prolonged unemployment leads to the erosion of skills, reducing employability even when jobs become available. Perpetuates a cycle of joblessness as skills diminish over time.
Social Unrest	High unemployment can result in dissatisfaction, social unrest, and various forms of manifestation such as protests, crime rates, and civil unrest.
Migration	High unemployment often drives rural-to-urban migration in search of better opportunities. This migration can strain urban infrastructure, leading to the development of slums and inadequate living conditions.
Impact on Education	Financial struggles due to high unemployment may deter families from investing in education. Immediate earning potential may take precedence over education, perpetuating a cycle of limited opportunities for future generations.
Disproportionate Impact on Social Groups	Disadvantaged groups like youth, women, rural labourers, minorities, and scheduled castes are disproportionately affected by unemployment. – Exacerbates existing inequalities in society.
Increased Crime	Lack of lawful income sources due to unemployment can drive individuals toward illegal activities. Unemployment is linked to higher crime rates in affected areas.

Addressing Unemployment in India:

- Importance of good infrastructure, both physical and human, for job creation.
- Convergence of urbanisation and industrialisation paths for job creation.
- Focus on Tier II cities for potential 70% job generation and GDP growth.
- Implementation of National Employment Policy (NEP) to enhance workforce quality and create public jobs.
- Introduction of Urban MGNREGA for income security and public asset creation.
- Rapid industrialization and agricultural investment for job creation and productivity boost.
- Diversification of agriculture and promotion of agro-processing for export.
- Expanding education and healthcare to enhance human capital.
- Reforming education system and providing vocational training.

Conclusion

More than 50% of India's population is below the age of 25 and more than 65% is below the age of 35. India's young demographic is an asset in an ageing world. This clearly presents the case for India to **address the jobless growth scenario**.

Mains Links:

Most of the unemployment in India is structural in nature. Examine the methodology adopted to compute unemployment in the country and suggest improvements. (UPSC 2023)

Prelims Links:

Disguised unemployment generally means (UPSC 2013)

- (a) a large number of people remain unemployed
- (b) alternative employment is not available
- (c) the marginal productivity of labour is zero
- (d) productivity of workers is low

Ans: C

25. ECONOMIC SURVEY 2024: HERE ARE THE KEY TAKEAWAYS

Context:

Economic Survey 2023-24 was tabled in Parliament by Union Minister for Finance and Corporate Affairs, Smt. Nirmala Sitharaman.

What is the Economic Survey?

- It provides a **detailed report of the state of the national economy (from agriculture to unemployment to infra-structure)** for the year that is coming to a close (2023-24) with forecasts of the upcoming financial year (2024-25).
- It is **prepared by the Economic Division of the Department of Economic Affairs (DEA)**, Ministry of Finance, under the **guidance of the chief economic adviser (CEA)**.
- Once prepared, the **Survey is approved by the Finance Minister** and the comments or policy solutions contained in the Survey are **not binding on the government**.
- The first Economic Survey was **presented for 1950-51 and until 1964**, it was presented along with the budget.

The main highlights of the Economic Survey are as follows:

Chapter	Highlights
State of the Economy – Steady as She Goes	Projected real GDP growth of 6.5–7% . Real GDP grew by 8.2% in FY24. Retail inflation reduced from 6.7% to 5.4% . CAD at 0.7% of GDP. Real GDP 20% higher than FY20 level. 55% of tax from direct Tax, 45% from indirect Tax. Free food grains to 81.4 crore people.
Monetary Management and Financial Intermediation- Stability is the Watchword	RBI maintained a steady policy rate at 6.5% . Credit disbursal grew by 20.2% . Double-digit bank credit growth. Gross and net NPAs at multi-year lows. Industrial credit growth at 8.5% . Primary capital markets facilitated ₹10.9 lakh crore .
	• Bank credit has experienced a double-digit growth, with both gross and net non-performing assets at multiyear lows. • Target-based approach followed for Financial Inclusion with emphasis on promoting India's Digital Public Infrastructure
Prices and Inflation- Under Control	Retail inflation at 5.4%, lowest since pandemic. Price cuts for LPG, petrol, and diesel. LPG inflation deflationary. Food inflation increased to 7.5% . Government interventions mitigated food inflation. RBI projects inflation to 4.5% in FY25.
	• Most States & I-ITS witnessed decreased inflation rates in FY24 compared to FY23. With 29 out of 36 recording rates below 6% in FY24.
External Sector - Stability Amid Plenty	• India's rank in World Bank's Logistics Performance Index improved to 38th. CAD narrowed to 0.7%. Services exports grew by 4.9% to USD 341.1 billion. • India top remittance recipient at USD 120 billion, followed by Mexico, China, Philippines and Pakistan. • External debt to GDP ratio at 18.7%.
Medium-Term Outlook – A Growth Strategy for New India	• Deliberate focus on boosting private investment • Growth & expansion of India's Mittelstand (MSMEs) • Agriculture as an engine of future growth • To secure financing of green transition in India • Bridging education-employment gap • Focused building of state capacity.

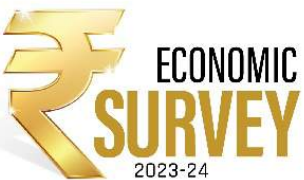
Climate Change and Energy Transition: Dealing with Trade-Offs	India only G20 nation aligned with 2°C warming. Renewable energy capacity increased. Non-fossil sources 45.4% of installed capacity. Emission intensity reduced by 33%. Sovereign green bonds worth 216,000 Cr issued in Jan-Feb 9023 followed 220,000 cr in oct-Dec 2023. Carbon Sink (tree and forest cover) Of 1.97 Bn tonnes Of CO2 equivalent been created between 2005 and 2019. Addition of 30 GW of solar capacity through rooftop solar under PM-Surya Ghar Yojana.
Social Sector - Benefits that Empower	Welfare expenditure grew at 12.8% CAGR. Ayushman Bharat generated 34.7 crore cards. ‘Poshan Bhi Padhai Bhi’ for preschool education. Rise in higher education enrolment driven by SC, ST, OBC. Ayushman Bharat swing lives; saves more than 1.25 lakh crore of out-of-pocket expenditure for poor and deprived families. DAY-NRLM programme covers over 89 Mn women through 83 lakh Self Help Groups; empirically associated with women’s empowerment.
Employment and Skill Development: Towards Quality	Unemployment rate declined to 3.2%. Youth unemployment reduced to 10%. Female labour force participation rate rising. EPFO membership grew by 8.4% CAGR. Gig workforce expected to expand. Rising youth and female participation in the workforce on opportunity to tap the demographic and gender dividend. Indian economy needs to generate an average of 78.5 lakh jobs in non-form sector annually until 2030.
Agriculture and Food Management – Plenty of Upside Left If We Get It Right	Agriculture sector grew at 4.18%. Credit disbursed to agriculture ₹22.84 lakh crore. 90 lakh hectares under micro irrigation. Investment in agricultural research yields high payoff. Share of non-institutional credit has reduced from in 1950 to 23.40% in 2021-22. Need to encourage production patterns and practices consistent with their agro-climatic characteristics.
Industry - Small and Medium Matters	Industrial growth rate of 9.5%. Manufacturing sector growth driven by chemicals, pharmaceuticals, machinery. PLI schemes attracted ₹1.28 lakh crore investment. India’s electronics manufacturing 3.7% of global market share. Steel sector achieved its highest levels of production in FY24. 91.76 Lakh guarantees for MSME sector approved under Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) scheme.
Services - Fuelling Growth Opportunities	Services sector GVA at 55%. India’s services exports 4.4% of global. Aviation sector grew 15%. Real estate sales highest since 2013. Internet density at 68.2%. E-commerce expected to cross USD 350 billion by 2030. India: Pharmacy of the World: • World’s 3rd largest market by volume • India’s pharmaceutical market valued at USD 50 Bn currently. • 8 Of the top 20 global generic companies based in India. • More than 12,500 Janaushadhi Kendras opened, covering all districts.
Infrastructure – Lifting Potential Growth	NH construction pace tripled to 34 km/day. Railways capital expenditure increased by 77%. New terminal buildings at 21 airports operationalized. Clean energy sector investment of ₹8.5 lakh crore. Construction of on index that tracks utilization rates of infrastructure facilities would shed light on sub-sectors where there is oversupply or shortfall.

Climate Change and India: Why We Must Look at the Problem Through Our Lens

Global strategies flawed; focus on overconsumption. India's ethos of nature harmony. Emphasis on sustainable housing through traditional households. "**Mission LiFE**" for mindful consumption.

Global strategies for climate change are flawed:

- Western approach does not seek to address the root of the problem, i.e., **overconsumption**
- Global pursuit of **energy-guzzling technologies** such as AI and large-scale mining has contributed to higher fossil fuel consumption.
- Their practices **ignore humans' underlying relationship with Nature**.




Climate Change and India

Developing countries need to be free to choose their own climate action pathways

- India must adopt its own rooted sustainable practices and embrace others' only when they are suitable and sustainable
- India's ethos offers sustainable solutions to problems plaguing market societies



Problem	Solution
Process of meat production threatening permanent degradation of land, water and natural resources	Traditional farming practices such as repurposing farm waste and byproducts from other agricultural activities as animal feed
Nucleated families requiring significant land and environmental resources	Traditional multi-generational households as pathway to sustainable housing

Mains Links:

Q. Do you agree with the view that steady GDP growth and low inflation have left the Indian economy in good shape? Give reasons in support of your arguments. (UPSC 2019)

Prelims Links: UPSC 2015

With reference to the Indian economy, consider the following statements:

1. The rate of growth of the Real Gross Domestic Product has steadily increased in the last decade.
 2. The Gross Domestic Product at market prices (in rupees) has steadily increased in the last decade.
- Which of the statements given above is/is/are correct?

1. 1 only
2. 2 only
3. Both 1 and 2
4. Neither 1 nor 2

Ans: 1

26. THE PROBLEM WITH THE KARNATAKA GIG WORKERS BILL

Context:

Karnataka introduced the draft Karnataka Platform-based Gig Workers (Social Security and Welfare) Bill, 2024, seeking to provide social security and welfare measures for platform-based gig workers in the State.

Gig Workers:

- As per the **Code on Social Security 2020**, a ***gig worker*** is a person who performs work or participates in a gig work arrangement and earns from such activities outside of traditional **employer-employee relationship**.
- **Gig Economy:** A **free market system** in which temporary positions are common and organizations contract with independent workers for short-term engagements.
- A **2022 NITI Aayog report** estimates that India will have **5 million gig workers by 2029-30**.

Key Highlights of the Karnataka Bill:

- **Creation of Welfare Board:** Board comprising Karnataka labor minister, two aggregator officials, two gig workers, and one civil society member to be formed.
- A **two-level grievance redressal mechanism** for workers, **transparency with regards to the automated monitoring** and decision-making systems deployed by platforms has been envisaged by the draft bill.
- **Timely Payment:** The draft mandates aggregators to make payments at least every week and to inform the worker about the reasons for any payment deductions.
- **Unique ID:** Gig workers can apply to receive a **Unique ID applicable across all platforms upon registration with the board**.
- **Social Security and Grievance Redressal:** Access to general and specific **social security schemes based on contributions along with a grievance redressal mechanism for gig workers**.
- **Autonomy and Contractual Rights:** The Bill aims to provide greater autonomy to the gig workers to terminate contracts and resist being overworked by employers.
- **The aggregator shall not terminate a worker without giving valid reasons in writing and prior notice of 14 days.**
- **Work Environment and Safety:** There is a mandate for aggregators to maintain a safe working environment for gig workers.
- **Welfare Fund:** Proposed fund financed by a welfare fee from aggregators along with state and worker contributions.
- **Penalties:** Basic penalty of **Rs 5,000** extendable up to **Rs 1 lakh** for aggregators violating conditions under the Bill.

Complications:

- **Those who run the platform prefer to call themselves as aggregators and consider gig workers** as independent contractors/workers.
- **Aggregators believe** that they are providing the technology and bringing together independent workers and consumers.
- **Independent workers** are masters of their own work, according to aggregators.
- **Workers in the gig economy** consider aggregators as their employers as the conditions of service and terms of employment are set by the aggregators.
- **For example, in an app-cab operation**, the price of the ride is determined by the app/aggregator
- **The entire ecosystem of working conditions** and terms for the ride are decided by the **app company only**.
- **Gig workers seek fair treatment**, improved working conditions, and access to social security as legal entitlement

Issues:

- Like the Rajasthan Act, the Karnataka Bill has skirted the issue of defining employment relations in gig work.
 - It has preferred the term 'aggregator' for app companies rather than employer.
- Without the recognition of employment relations: protective labor laws that ensure a minimum wage, occupational safety and health, working hours and leave entitlements and right to collective bargaining cannot be applied.
- There is no guarantee on minimum earnings from gig work even when a worker is available for the greater part of the day.
 - There is no regulation on working hours also.
- There are regular incidents of overworked app cab drivers being involved in accidents late in the night or early

in the morning, jeopardizing their own lives along with that of passengers.

- India has seen protests and agitations by gig workers on the issue of revenue sharing, working hours and various other working conditions and terms of employment.
- Solving issues within the existing legal framework as employment relations in the gig economy are non-existent at worst or complicated at best.

Way Forward

- Employment relations do exist in gig work, and regulations should acknowledge this.
 - Aggregators are the de-facto employers as they set the terms and conditions of employment.
 - They may present the platform as a tool connecting workers and consumers, they are responsible for designing it and establishing its terms.
 - The platform is merely a tool, and is not an independent entity, making the aggregators the actual employers.
- The welfare board model adopted by Rajasthan and Karnataka provides some welfare schemes for gig workers
 - but it does not replace institutional social security benefits such as provident fund, gratuity, or maternity benefits,
 - which regular workers are legally entitled to.
 - Historically, welfare board models have been poorly implemented, as evidenced by the Construction Workers Welfare Act of 1996 and the Unorganized Workers Social Security Act, where funds were available but inadequately used.
 - The Karnataka Bill does not address the issue of minimum wages or working hours for gig workers.
 - Section 16 discusses income security regarding payment deductions but does not guarantee a minimum income, wage entitlements, or revenue sharing between aggregators and gig workers.
 - Section 16(2) only requires weekly payments, without specifying a minimum amount.
 - The proposed Karnataka Bill, like the Code on Social Security, 2020 and the Rajasthan Act 2023, fails to address the employment relationship in the gig economy.
 - This oversight confuses employment relations and absolves employers of legal obligations, making it difficult to fully protect workers' rights.
 - Young men need jobs: As increasing numbers of young and underemployed males are leading to more crime and violence, and sexual assaults of women in Indian cities.
 - Capitalism needs to reinvent itself: The paradigm of "growth, growth, growth" treats human society and nature as a means to its goals of producing more wealth for investors and more GDP.
 - Human work and intelligence are commodities for producing value for investors in capitalist enterprises.
 - The state must take care of its citizens.

Topics: Inclusive growth and issues arising from it.

27. INCLUSIVE GROWTH OF THE NORTH-EAST REGION OF INDIA

Context:

Despite its natural wealth, the **North East region in India** struggles with infrastructure, market access, and social disparities. This underscores the urgent need for India to enhance integration efforts, unlocking the region's potential in culture, economy, and environment.

What is the North-East Region of India?

North-East India, known as the land of seven sisters, is a distinct geographic and political division of India. It boasts diverse physiographic and ecoclimatic conditions, serving as a gateway for India's unique flora and fauna.

Significance of North-East Region:

Significance	Example
Strategic Geopolitical Location	Economic corridors like the India-Myanmar-Thailand Trilateral Highway
	'Act East' policy

Rich Biodiversity and Natural Resources	Biodiversity hotspots
	Oil, natural gas, and coal reserves
Cultural Diversity and Ethnic Mosaic	Over 220 ethnic groups and dialects
	Cultural tourism potential
Agricultural and Horticultural Potential	Organic farming, high-value crops
	Cultivation of medicinal plants
Hydroelectric Power Generation	58,000 MW hydropower potential
	Contribution to renewable energy goals
Tourism Potential	Kaziranga, Meghalaya's living root bridges
	Adventure tourism opportunities
Human Resource Development	High literacy rate and young population
	Potential for innovation and entrepreneurship

Issues with the North East:

- Economic Underdevelopment and Unemployment:** The region's economy remains largely agrarian with limited industrialization.
 - High youth unemployment fuels social unrest and out-migration, creating a brain drain.
- Infrastructure Deficit and Connectivity Issues:** Despite efforts like the Act East Policy, the region lags in infrastructure development. **Example:** Slow progress of projects like the India-Myanmar-Thailand Trilateral Highway hampers economic integration.
- Agricultural Challenges:** Limited success in promoting organic farming despite initiatives.
- Climate Change and Environmental Degradation: Example:** The devastating 2022 Assam floods affected millions, showcasing the region's vulnerability.
- China's Growing Influence and Border Disputes:** Example: clashes in Tawang (December 2022) and Dokhlam high-light tension.
- Drug Trafficking and Cross-border Crime:** Vulnerability to drug trafficking from the Golden Triangle.
- Political Instability and Governance Issues:** Frequent changes in government leadership hinder policy continuity. **Example:** Political instability in states like Manipur and Arunachal Pradesh affects governance and development planning.

Government Initiatives:

Initiative	Description
Infrastructure	
Bharatmala Pariyojana	National highways development project aimed at improving road connectivity across the country.
Regional Connectivity Scheme (RCS)-UDAN	Enhances air connectivity to underserved regions, including Northeast India, promoting tourism and trade.
Connectivity	
Kaladan Multi-Modal Transit Project	Aims to connect India's Northeast with Myanmar's Sittwe Port to facilitate trade and economic activities.
India-Myanmar-Thailand Trilateral Highway	Strategic highway project to improve road connectivity between India, Myanmar, and Thailand.
Tourism	
Swadesh Darshan Scheme	Promotes integrated development of tourism infrastructure in theme-based circuits, including Northeast destinations.
Other	
Digital North East Vision 2022	Aims to digitally empower Northeast India through improved connectivity and access to digital services.
National Bamboo Mission	Promotes bamboo cultivation and utilization to enhance livelihoods and economic growth in the region.

Way forward:

Solutions	Description
Act-East from Northeast	Implement Act East policy comprehensively, collaborating closely with Northeastern state governments.
Enhancing Connectivity	Prioritize air links and road projects like the India-Myanmar-Thailand Trilateral Highway for economic integration.
Development of Tourism	Promote tourism at sites like Kaziranga National Park; develop infrastructure under the Swadesh Darshan Scheme.
Promoting Entrepreneurship	Conduct capacity building for local entrepreneurs; support initiatives like the National Bamboo Mission.
Education and Digital Connectivity	Establish centres of excellence for higher education; extend digital connectivity under Digital North East Vision 2022.
Infrastructure Development	Research viability for physical infrastructure; focus on disaster-resilient road and bridge construction.
Land Record Management	Improve land record systems to resolve disputes; for example: implementing a credible land record maintenance system.
Sports and Cultural Promotion	Support sports talents as exemplified by athletes like Mary Kom and Mirabai Chanu; promote regional sports infrastructure.

Mains Link:

Q. “The simmering North East India has awaited a healing touch since Independence”. Explain. (10M)

Prelims Link:

Q. Which Schedule of the Constitution of India contains special provisions for the administration and control of Scheduled Areas in several States? (UPSC 2008)

- (a) Third
- (b) Fifth
- (c) Seventh
- (d) Ninth

Ans: (b)

28. 9 YEARS OF DIGITAL INDIA INITIATIVE

Context:

The Prime Minister praised the successful completion of **9 years of the Digital India initiative**, highlighting its role in enhancing ‘Ease of Living’ and transparency.

What is the Digital India Initiative?

Launched in 2015, the Digital India Initiative (DII) aims to transform India into a digitally empowered society and knowledge economy. It covers various projects from **Central Ministries, Departments, and States/UTs**.

Key focus areas include:

1. Digital infrastructure
2. Governance
3. Services on demand
4. Digital empowerment of citizens

The initiative **encompasses nine pillars of growth**, with the **Department of Electronics and Information Technology (DeitY)** as the main coordination agency, along with other ministries and a monitoring committee led by the Prime Minister.

Role of the Digital India programme in bridging the digital divide and foster a digitally empowered society in India

- **Bridging the rural-urban divide:** Expanding digital infrastructure and internet access through initiatives like BharatNet.
- **Expanding digital financial inclusion:** Enabling cashless transactions, direct benefit transfers, and preventing leak-

age through mobile and Aadhaar-linked payment systems. E.g. more than 40% of all payments done in India are digital.

- **Making government services accessible:** Simplifying processes through digital locker, eSign frameworks, and on-line registration platforms.
- **Promoting universal digital literacy:** Digital Saksharta Abhiyan initiatives aim to make at least one person e-literate in every household. E.g. initiatives like "SWAYAM," offering online courses, and the "National Digital Library," providing access to a vast collection of academic resources.
- **Creating job opportunities:** Digital infrastructure enhancement and digital skill development.
- **Promoting mobile connectivity and apps:** Development of mobile apps for various government services. E.g. UMANG app.

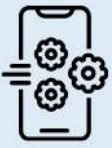
Limitations of the Digital India programme:

- **Persistent digital divide,** with rural areas lacking internet access and technology.
- **Lack of customization in implementation design** due to diverse adoption readiness.
- **Variable success of digital skilling initiatives** due to lack of qualified trainers and customized content.
- **High costs of devices and data plans** restrict sustainable adoption for economically weaker segments.
- **Rural infrastructure gaps** hinder adoption despite urban 5G and fiberization pivots.



Digital India Act 2023 (DIA)



Feature	Description
The Digital India Act (DIA) 2023 is a proposed legislation aimed at updating the legal framework to address digital challenges and opportunities. It will replace the outdated Information Technology Act of 2000	
Objective 	Formulate rules adaptable to changing technology trends.
	Provide accessible adjudicatory mechanisms for online civil and criminal offenses.
	Deliver timely remedies for citizens, resolve cyber disputes, and enforce the rule of law online.
	Responsible use of "New-Age technologies" such as Artificial Intelligence and Blockchain
Key Components 	Open Internet: Ensures choice, competition, diversity, fair market access, and ease of doing business. • Open Internet is free and open to all, and not under the control of any government or organization
	Online Safety and Trust: Focuses on safeguarding users against cyber threats and digital rights.
	Accountable Internet: Introduces legal mechanisms for complaint redressal, transparency, and norms for data.
	• Promote ethical AI practices, data privacy in blockchain applications, and mechanisms for accountability.
Salient Features 	Replaces the outdated Information Technology Act of 2000 to address contemporary digital challenges.
	Focuses on online safety, trust, and accountability, ensuring an open internet and regulating new-age technologies.
	Reviews the 'safe harbor' principle for online platform accountability (Safe Harbor rule shields platforms from liability related to user-generated content)
	Mandates stringent Know Your Customer (KYC) requirements for wearable devices with criminal law sanctions.
	Aligns with Digital India Goals for 2026 to establish a USD 1 trillion digital economy.

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Way forward:

1. **Infrastructure Development:** Invest in comprehensive rural broadband infrastructure. e.g. **BharatNet project** aims to connect over **250,000 village panchayats** with high-speed broadband.
2. **Launch targeted digital literacy programs,** especially in rural and marginalized communities. E.g. The **National Digital Literacy Mission (NDLM)** and **Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA)**
3. **Public-Private Partnerships:** Encourage collaborations between government and private sectors for digital inclusion. **E.g. Initiatives like 'Digital Village' projects**
4. **Subsidized schemes or partnerships** with private companies can provide **cost-effective smartphones and data plans** to economically disadvantaged populations.
5. **Impact assessment:** Regular surveys and feedback mechanisms can gauge the impact of digital initiatives on different segments of the population.
6. **Multilingual Digital Initiatives:** Develop and promote digital content in **regional languages.**

Conclusion

While Digital India has laid the foundations, achieving holistic digital empowerment needs patient stakeholders addressing demographic and regional realities via sustainable models rather than rushing purely for numbers.

Insta Links:

- [Digital transformation](#)

Practice Questions:

Q. Implementation of Information Technology-based projects/programmes usually suffer in terms of certain vital factors. Identify these factors, and suggest measures for their effective implementation. (UPSC 2019)

Prelims Link:

Q. In India, the term “public key infrastructure” is used in the context of (UPSC 2020)

- a) Digital technology
- b) Food security infrastructure
- c) Healthcare and education infrastructure
- d) Telecommunication and transportation infrastructure

Ans: (a)

Topics: Government Budgeting.

29. ANALYSIS OF FISCAL RESPONSIBILITY AND BUDGET MANAGEMENT (FRBM) ACT

Context:

The **Fiscal Responsibility and Budget Management (FRBM) Act of 2003** set a target to reduce the gross fiscal deficit (GFD) to 3% of GDP by 2008. By April 2018, this was **replaced with a debt-GDP ratio of 40%**, with the GFD of 3% as an operational target.

What is FRBM?

The **Fiscal Responsibility and Budget Management (FRBM) Act of 2003** is an Indian law aimed at **improving the government's fiscal management**. It sets targets for **reducing the gross fiscal deficit (GFD) and the government's debt-to-GDP ratio**, ensuring fiscal discipline, and enhancing transparency in budgeting.

The main objectives of the FRBM Act include:

Objective	Description
Fiscal Discipline	Instils discipline in managing public finances, aiming to progressively reduce revenue and fiscal deficits to sustainable levels.
Debt Management	Keeps public debt within reasonable limits, enhancing transparency and accountability through specific fiscal targets and regular reporting.

Long-Term Sustainability	Ensures long-term fiscal sustainability by controlling deficits and managing debt.
Resource Allocation	Optimizes resource allocation by reducing wasteful expenditures and prioritizing essential sectors like education and infrastructure.
Macroeconomic Stability	Brings macroeconomic stability by controlling inflation, maintaining the exchange rate, and avoiding economic imbalances.

How was India's journey towards fiscal consolidation?

Period	Reduction in GFD	Pace and Method
First Period (2003-2008)	GFD reduced from 5.8% in 2002-03 to 2.6% in 2007-08. However, GFD surged to 6.6% by 2009-10 due to the global financial crisis.	Rapid consolidation averaging 0.6% of GDP annually; achieved by compressing expenditure (2.1%) and augmenting revenue (1.1%). Gross tax-GDP ratio increased from 9.1% to 12.1% .
Second Period (2010-2019)	GFD reduced to 3.4% of GDP by 2018-19. However, the Pandemic pushed GFD to 9.2% of GDP in 2020-21 and the debt-GDP ratio to 61%.	Slowed consolidation averaging 0.2% of GDP annually; achieved by expenditure compression (1.5%) and revenue augmentation (0.2%). Tax-GDP ratio remained at 10.5% .

FRBM has been successful in achieving fiscal consolidation because:

1. The FRBM Act initially succeeded in reducing the fiscal deficit from **5.8%** of GDP in 2002-03 to **2.6% in 2007-08**. The revenue deficit also saw a decline during this period.
2. **Fiscal policies on target like FY25**, the government estimates the **fiscal deficit at 5.1** per cent of the GDP which spiked up due to COVID.
3. **Strong accountability** due to the mandatory medium-term and strategy statements which are required to be presented annually before Parliament.

However, FRBM is ineffective on various fronts like:

- Reduced expenditure in critical sectors like education and health.
- Budgetary innovations achieved deficit targets by manipulating revenue and expenditure accounts.
- Introduction of an Effective primary deficit indicator led to deficit decline.
- High debt to GDP Ratio due to government's use of escape clauses in FRBM.
- State policies divergent, leading to revenue deficits despite FRBM limit of 3.5%. Ex - 12 states face a revenue deficit even after the central grant.
- Hiking macroeconomic indicators: Vulnerability in stable prices, CAD, and unemployment due to lack of fiscal prudence.

India's fiscal consolidation journey highlights key lessons:

1. **Impact of Shocks**: Exogenous shocks can disrupt consolidation, stressing the need for ample fiscal space in stable conditions.
2. **Tax-GDP Ratio**: Improving the tax-GDP ratio is crucial for sustainable consolidation; relying solely on expenditure cuts is insufficient.
3. **Rationalizing Expenditure**: Efficient expenditure management is necessary to handle future shocks.

Conclusion:

The government should focus on revamping of FRBM Act along the lines of **NK Singh's committee recommendation** such as **adaptation of the glide path to achieve the target**, establishing of independent fiscal council, conscience use of escape clause and coordinating monetary and fiscal policy to achieve the Fiscal consolidation and prudence.

Mains Link:

Q. Public expenditure management is a challenge to the Government of India in the context of budget-making during the post-liberalization period. Clarify it. (UPSC 2019)

Prelims Links:

Q. Consider the following statements: (UPSC 2018)

- 1) The Fiscal Responsibility and Budget Management (FRBM) Review Committee Report has recommended a debt to GDP ratio of 60% for the general (combined) government by 2023, comprising 40% for the Central Government and 20% for

the State Governments.

- 2) The Central Government has domestic liabilities of 21% of GDP as compared to that of 49% of GDP of the State Governments.
- 3) As per the Constitution of India, it is mandatory for a State to take the Central Government's consent for raising any loan if the former owes any outstanding liabilities to the latter.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

Ans: C

30. UNION BUDGET 2024-25: KEY TAKEAWAYS AND GAME-CHANGERS

What is Budget?

The Union Budget is the **annual financial statement of the Indian government**, presented by the Finance Minister on February 1st. It consists of the **Revenue Budget and Capital Budget**, covering expected income and expenditures. The budget includes *macroeconomic details in Part A* and **taxation proposals in Part B**, presented as a **Money Bill** defined in **Article 110** of the Constitution. After independence, **India's first Budget** was presented in 1947 by **Finance Minister RK Shanmukham Chetty**.

Article 112 of the Indian Constitution mandates the Union Budget as the government's estimated receipts and expenditures.

Key Budget documents include:

1. Annual Financial Statement (Article 112)
2. Demands for Grants (Article 113)
3. Finance Bill ([Article 110](#))
4. Fiscal Policy Statements mandated under the FRBM Act, 2003, including
5. The Macro-Economic Framework Statement and
6. The Medium-Term Fiscal Policy cum Fiscal Policy Strategy Statement.

Objectives of budget:

The Union Budget focuses on objectives such as stimulating economic growth, promoting social justice and equality, ensuring effective resource allocation, and maintaining fiscal stability.

Stages of Budget presentation:

Stage	Description
President's Address	Joint address by the President of India to both Houses of Parliament, outlining government policy priorities, achievements, and legislative agenda.
Economic Survey Presentation	Prepared by the Economics Division of the Department of Economic Affairs under the Chief Economic Advisor's guidance. Tabled in Lok Sabha a day before the Union Budget presentation.
Railway Budget (Till 2016)	Presented separately until 2016, merged with the General Budget in 2017.
Union Budget Presentation	Presented by the Finance Minister on February 1st.
General Budget Discussion	After the Budget presentation, discussed in both Houses of Parliament. Allows critique and debate on the Budget.
Voting on Demands for Grants	Parliament approves Demand for Grants for ministries and departments, authorizing proposed expenditures.
The passing of Finance Bill	Finance Bill, containing taxation proposals, passed by both Houses of Parliament and enacted. The budget comes into effect after Presidential assent.

Union Budget 2024-25 Highlights

Aspect	Details
Economic Growth	India's economic growth remains strong despite global uncertainties.
Focus	Focus is on 4 major castes, namely 'Garib' (Poor), 'Mahilayen' (Women), 'Yuva' (Youth) and 'Anna-data' (Farmer) (similar to Interim Budget)
Budget Theme	The budget focuses on employment, skilling, MSMEs, and the middle class.
Budget Estimates 2024-25	Total receipts other than borrowings: 32.07 lakh crore
	Total expenditure: 48.21 lakh crore
	Net tax receipt: 25.83 lakh crore
	Fiscal deficit: 4.9 per cent of GDP
	Government aims to reach a deficit below 4.5 per cent next year
	Inflation is low and stable , moving towards the 4% target; core inflation is at 3.1%.

Nine Budget Priorities in pursuit of 'Viksit Bharat'



Priority 1: Productivity and resilience in Agriculture	An allocation of ₹1.52 lakh crore has been made for agriculture and allied sectors. This includes the release of 109 new high-yielding and climate-resilient varieties of 32 field and horticulture crops for cultivation by farmers.
	Natural Farming: In the next two years, 1 crore farmers across the country will be initiated into natural farming with certification and branding.
	Bio-input Centres: 10,000 need-based bio-input resource centres will be established to support natural farming.
	Digital Public Infrastructure: To further enhance agricultural efficiency, Digital Public Infrastructure (DPI) for Agriculture will be implemented, covering farmers and their lands within three years.
	New 109 high-yielding & climate-resilient varieties of 32 field & horticulture crops to be released for cultivation by farmers. A strong push to 1 crore farmers across the country towards natural farming supported through certification & branding.

Priority 2: Employment & Skilling	Package of PM's five schemes for Employment and Skilling
	Prime Minister's Package of 5 Schemes and Initiatives for employment, skilling and other opportunities for 4.1 crore youth over a 5-year period. This year, ₹1.48 lakh crore is allocated for education, employment, and skilling.
	Scheme A - First Timers: One-month salary of up to `15,000 to be provided in 3 installments to first-time employees, as registered in the EPFO
	Scheme B - Job Creation in manufacturing: Incentive to be provided at specified scale directly, both employee and employer, with respect to their EPFO contribution in the first 4 years of employment
	Scheme C - Support to employers: Government to reimburse up to `3,000 per month for 2 years towards EPFO contribution of employers, for each additional employee
	New centrally sponsored scheme for Skilling: 20 lakh youth to be skilled over a 5-year period.; 1,000 Industrial Training Institutes to be upgraded in hub and spoke arrangements.
	New Scheme for Internship in 500 Top Companies to 1 crore youth in 5 years
	To facilitate higher participation of women in the workforce, working women hostels and crèches will be established in collaboration with industry.
Priority 3: Inclusive Human Resource Development and Social Justice	Women-specific skilling programmes will be organized, and market access for women Self-Help Group (SHG) enterprises will be promoted
	Purvodaya Initiative: Develop a plan for the eastern region , including Bihar, Jharkhand, West Bengal, Odisha, and Andhra Pradesh , focusing on human resource development, infrastructure, and economic opportunities to drive Viksit Bharat.
	Develop industrial node at Gaya along the Amritsar-Kolkata Industrial Corridor . Launch power projects, including a 2400 MW power plant at Pirpainti (Bhagalpur, Bihar), with a total investment of ₹21,400 crore
	Andhra Pradesh Reorganization Act: Special financial support of ₹15,000 crore through multilateral development agencies
	Develop industrial nodes at Koppa along the Vishakhapatnam-Chennai Industrial Corridor and at Orvakal along the Hyderabad-Bengaluru Industrial Corridor
	Pradhan Mantri Janatiya Unnat Gram Abhiyan: Improve socio-economic conditions of tribal families in 63,000 villages , benefiting 5 crore people
Priority 4: Manufacturing & Services	Bank Branches in North-Eastern Region: Establish 100 branches of India Post Payment Bank
	Credit Guarantee Scheme for MSMEs in the Manufacturing Sector: A scheme providing collateral-free credit guarantees for term loans to MSMEs for machinery and equipment purchases.
	Credit Support to MSMEs during Stress Period: A new mechanism to ensure continued bank credit support to MSMEs during periods of financial stress.
	Mudra Loans: Increase the limit of Mudra loans under the 'Tarun' category to ₹20 lakh from ₹10 lakh for those with successful repayment histories.
	Enhanced Scope for Mandatory Onboarding in TReDS: Reduce the turnover threshold for mandatory onboarding on the TReDS platform from ₹500 crore to ₹250 crore.
	MSME Units for Food Irradiation, Quality & Safety Testing: Provide financial support to establish 50 multi-product food irradiation units in the MSME sector.
	E-Commerce Export Hubs: Set up E-Commerce Export Hubs through public-private partnerships to help MSMEs and traditional artisans sell products internationally.
Priority 4: Manufacturing & Services	Digital Public Infrastructure (DPI) Applications: Develop DPI applications for credit, e-commerce, education, health, law and justice, logistics, MSME, service delivery, and urban governance.

Priority 5: Urban Development	Transit Oriented Development: Develop and finance Transit Oriented Development plans for 14 large cities with populations over 30 lakh.
	Urban Housing: Invest ₹10 lakh crore, including central assistance of ₹2.2 lakh crore over the next 5 years , under PM Awas Yojana Urban 2.0 to address housing needs of 1 crore urban poor and middle-class families.
	Street Markets: Launch a new scheme to support the development of 100 weekly 'haats' or street food hubs annually for the next 5 years in select cities. (building on the success of PM SVANidhi Scheme in transforming the lives of street vendors)
Priority 6: Energy Security	Energy Transition: Introduce a policy document on ' Energy Transition Pathways ' to balance employment, growth, and environmental sustainability.
	Pumped Storage Policy: Develop a policy to promote pumped storage projects for electricity storage.
	Research and Development of Small and Modular Nuclear Reactors: Partner with the private sector to research and develop Bharat Small Modular Reactors and newer nuclear technologies
	Advanced Ultra Super Critical Thermal Power Plants: Propose a joint venture between NTPC and BHEL to establish an 800 MW commercial plant using Advanced Ultra Super Critical (AUSC) technology
	Roadmap for 'Hard to Abate' Industries: Implement regulations to transition 'hard to abate' industries from the 'Perform, Achieve and Trade' mode to the 'Indian Carbon Market' mode
	PM Surya Ghar Muft Bijli Yojana has been launched to install rooftop solar plants to enable 1 crore households obtain free electricity up to 300 units every month. The scheme has generated remarkable response with more than 1.28 crore registrations and 14 lakh applications
Priority 7: Infrastructure	Central Government Infrastructure Investment: Allocate ₹11,11,111 crore (3.4% of GDP) for capital expenditure.
	State Governments Infrastructure Investment: Provide ₹1.5 lakh crore in long-term interest-free loans for state infrastructure projects.
	Pradhan Mantri Gram Sadak Yojana (PMGSY): Launch Phase IV to ensure all-weather connectivity for 25,000 rural habitations.
	Irrigation and Flood Mitigation: Offer ₹11,500 crore for projects like the Kosi-Mechi intra-state link and assist states like Assam, Himachal Pradesh, Uttarakhand, and Sikkim with flood and landslide management.
	Tourism: Develop Vishnupad Temple Corridor, Mahabodhi Temple Corridor, Rajgir , and assist in enhancing temples, monuments, wildlife sanctuaries, natural landscapes, and beaches in Odisha.
Priority 8: Innovation, Research & Development	Anusandhan National Research Fund: Operationalize fund for basic research and prototype development.
	Financing Pool: Establish a ₹1 lakh crore pool to support private sector-driven research and innovation at a commercial scale.
	Space Economy: Create a ₹1,000 crore venture capital fund to expand the space economy fivefold over the next 10 years.
Priority 9: Next Generation Reforms	Rural Land Related Actions: Implement Unique Land Parcel Identification Number (ULPIN) or Bhu-Aadhaar for all lands; Digitize cadastral maps and survey map sub-divisions based on current ownership; Establish a land registry and link it to the farmers registry.
	Urban Land Related Actions: Digitize land records in urban areas using GIS mapping.
	Services to Labour: Integrate the e-shram portal with other platforms for a one-stop solution; Develop open architecture databases to keep up with labour market changes and skill requirements.
	NPS Vatsalya: Introduce NPS-Vatsalya for contributions by parents and guardians for minors.

Railway Budget at a Glance:



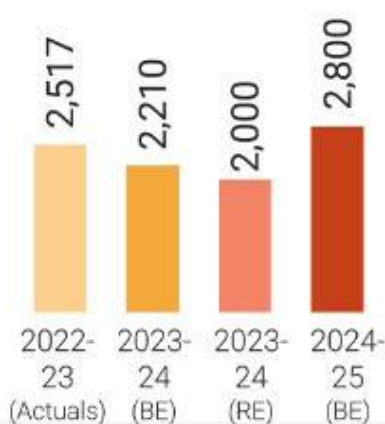
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Railway Budget at a Glance

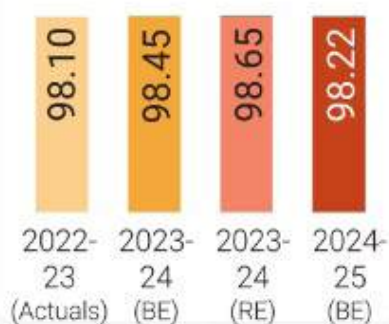
Net Revenue

In ₹ crore



Operating Ratio

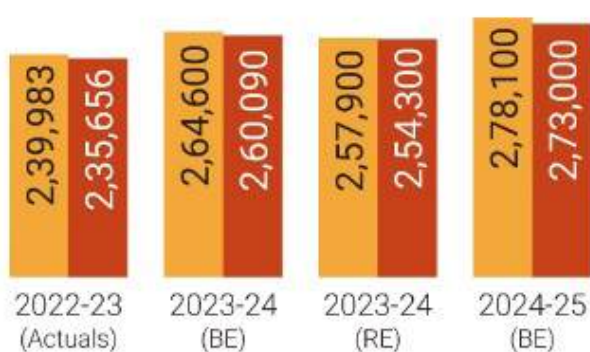
In per cent



Working Results

In ₹ crore

■ Gross Traffic Receipts
■ Total Working Expenses



Railway Earnings

In ₹ crore

■ Passenger ■ Freight



Other Important Infographics about Trends in this budget:

Resources transferred to States and UTs – has increased from 17.06 lakh core in 2021-22 to 23.49 lakh crore in Budget estimates of 2023-25.

Trends in Tax Receipts - Direct Tax increased (6.2% of GDP in 2022-23 to 6.8% of GDP as 2024-25 budget estimates); Indirect tax saw a slight decline (5.1% of DGP in 2022-23 to 5.0 in 2024 -25).

Trends in Deficit- Fiscal Deficit declined, currently at 4.9% of GDP, Revenue Deficit fell to 1.8%, Primary Deficit decreased to 1.4%, Effective Revenue Deficit declined to 0.6% as per budget estimates 2024 - 25.

Indirect taxes:

- Customs duty on three more medicines to be fully removed, to provide relief to cancer patients. Basic customs duty on mobile phone, mobile PCBA and mobile charger to be reduced to 15%.
- 25 critical minerals to be exempted from customs duties & basic customs duty on two Of them to be reduced.
- List of exempted capital goods for use in the manufacture of solar cells & panels in the country to be expanded.
- Customs duty proposed to be removed on oxygen free copper for manufacture of resistors & certain parts for manufacture of connectors to be exempted.

31. **URBAN TRANSFORMATION STRATEGIES IN UNION BUDGET 2024-25:**

Strategies in Union Budget 2024-25	Details						
PM Awas Yojana (PMAY)	Expansion and Investment: Allocation for 3 crore additional houses, including <u>PM Awas Yojana Urban 2.0</u> for 1 crore urban poor and middle-class families with ₹10 lakh crore investment. Central assistance of <u>₹2.2 lakh crore</u> over five years and interest subsidies for affordable loans. Pradhan Mantri AWAS Yojana <table><tr><th>PM AWAS URBAN</th><th>PM AWAS GRAMIN</th></tr><tr><td> 1.18 CRORE Houses Sanctioned</td><td> 2.94 Crore Houses Sanctioned</td></tr><tr><td> 85.04 LAKH Houses Completed</td><td> 2.63 CRORE Houses Completed</td></tr></table> Vision and Commitment: Focus on pucca houses with essential amenities (toilets, LPG, electricity, tap connections). Female head of the family mandated as owner/co-owner, promoting women’s empowerment among EWS and LIG.	PM AWAS URBAN	PM AWAS GRAMIN	 1.18 CRORE Houses Sanctioned	 2.94 Crore Houses Sanctioned	 85.04 LAKH Houses Completed	 2.63 CRORE Houses Completed
PM AWAS URBAN	PM AWAS GRAMIN						
 1.18 CRORE Houses Sanctioned	 2.94 Crore Houses Sanctioned						
 85.04 LAKH Houses Completed	 2.63 CRORE Houses Completed						
Rental Housing	Dormitory-type accommodation for industrial workers through PPP mode, supported by <u>Viability Gap Funding (VGF)</u> and anchor industries. Policies for efficient and transparent rental housing markets.						
Cities as Growth Hubs	Development of cities as growth hubs through economic and transit planning, orderly peri-urban area development, and creative brownfield redevelopment. <u>Transit Oriented Development plans for 14 large cities with populations above 30 lakh.</u>						
Water Supply and Sanitation	Partnership with state governments and multilateral development banks to <u>promote water supply, sewage treatment, and solid waste management projects in 100 large cities.</u> Utilization of treated water for irrigation and tank filling.						
Weekly ‘Haats’	Support for developing <u>100 weekly ‘haats’ or street food hubs each year for five years</u>, building on the success of the <u>PM SVANidhi Scheme for street vendors.</u>						
Stamp Duty	Encouragement for states to moderate high stamp duty rates and lower duties for properties purchased by women, as part of urban development reforms.						

'Cities as Growth Hubs'

- Orderly development of peri-urban areas through economic and transit planning
- Framework for creative brownfield redevelopment of existing cities
- Water supply, sewage treatment and solid waste management projects and services for 100 large cities

- 14 large cities with a population above 30 lakh will have Transit Oriented Development Plans
- 1 cr urban poor and middle-class families to be covered under the PM Awas Yojana Urban 2.0
- 100 weekly 'haats' or street food hubs in select cities
- Rental housing for industrial workers to be facilitated in PPP mode

Other Initiatives:

Initiative	Description
AMRUT (Atal Mission for Rejuvenation and Urban Transformation) Scheme	Aims to provide basic services like water supply, sewerage, and urban transport to households, ensuring improved urban infrastructure.
Climate Smart Cities Assessment Framework 2.0	Evaluates and guides cities in integrating climate resilience into their urban planning and development strategies.
TULIP - The Urban Learning Internship Program	Offers internships to young graduates in urban local bodies and smart cities to enhance their understanding of urban governance and planning.
Smart Cities Mission (SCM)	Focuses on promoting sustainable and inclusive cities that provide core infrastructure, a clean and sustainable environment, and quality of life to citizens.
National Mission for Clean Ganga (NMCG)	Aims to rejuvenate the Ganga River by implementing projects for pollution abatement, river surface cleaning, and biodiversity conservation.
River Cities Alliance (RCA)	A collaborative platform for river cities to share knowledge and best practices on river management and sustainable urban development.
National Water Policy, 2012	Advocates for rainwater harvesting and desalination in urban and industrial areas to increase the availability of utilizable water, promoting sustainable water management.

Need for Urban Transformation Strategy

1. **Increasing Urban Population:** Currently, urban areas constitute ~35% of India's population; Expected to grow to 53% by 2047.
2. **Economic Contribution:** Urban centres contribute ~**66% to the national GDP**; Expected to reach 80% by 2050.
3. **Key Issues:**
 - i. Infrastructure deficit.
 - ii. Rapidly deteriorating environment, including air pollution.
 - iii. Sub-optimal planning and governance.

Mains Link:

Q. With a brief background of quality of urban life in India, introduce the objectives and strategy of the 'Smart City Programme.' (UPSC 2016)

Prelims Link:

Q. With reference to Ayushman Bharat Digital Mission, consider the following statements: (UPSC 2022)

1. Private and public hospitals must adopt it.
2. As it aims to achieve universal, health coverage, every citizen of India should be part of it ultimately.
3. It has seamless portability across the country.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

Ans: (d)

Q. Consider the following statements: (UPSC 2011)

In India, a Metropolitan Planning Committee

1. is constituted under the provisions of the Constitution of India.
2. prepares the draft development plans for metropolitan area.
3. has the sole responsibility for implementing Government sponsored schemes in the metropolitan area.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 2 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

Ans: (a)

32. UNION BUDGET 2024-25: 12 NEW PLUG-AND-PLAY INDUSTRIAL PARKS

Context:

TWELVE INVESTMENT-READY **“PLUG AND PLAY” INDUSTRIAL PARKS** TO BE CREATED UNDER **NATIONAL INDUSTRIAL CORRIDOR DEVELOPMENT PROGRAMME: UNION BUDGET 2024-25**

What are Industrial Parks?

Industrial Parks are designated areas specifically developed to accommodate clusters of industrial activities. They offer specialized infrastructure and facilities to support manufacturing and business operations

Examples from India:

- **Sri City, Andhra Pradesh:** A large Special Economic Zone (SEZ) providing world-class infrastructure to attract global investments in various industries.
- **Gautam Budh Nagar, Uttar Pradesh:** An industrial park focusing on sectors like electronics, IT, and textiles, enhancing regional economic growth.

Examples from the World:

- **Shenzhen Special Economic Zone, China:** An industrial park that transformed Shenzhen into a major global manufacturing hub, boosting economic development and innovation.
- **Silicon Valley, USA:** A renowned industrial park for technology and innovation, housing numerous tech companies and startups, driving significant advancements in the tech industry.

Currently, the **Government of India has approved the development of 11 industrial corridors**, comprising 32 projects organized into four phases. The current list of industrial corridors includes:

1. Delhi Mumbai Industrial Corridor (DMIC)
2. Chennai Bengaluru Industrial Corridor (CBIC)
3. Extension of CBIC to Kochi via Coimbatore
4. Amritsar Kolkata Industrial Corridor (AKIC)
5. Hyderabad Nagpur Industrial Corridor (HNIC)
6. Hyderabad Warangal Industrial Corridor (HWIC)
7. Hyderabad Bengaluru Industrial Corridor (HBIC)
8. Bengaluru Mumbai Industrial Corridor (BMIC)
9. East Coast Economic Corridor (ECEC) with Vizag Chennai Industrial Corridor (VCIC) as Phase-1
10. Odisha Economic Corridor (OEC)
11. Delhi Nagpur Industrial Corridor (DNIC)

The National Industrial Corridor Development and Implementation Trust (NICDIT) oversees these projects, aiming for systematic, multi-modal connectivity across economic zones to enhance logistics and economic activities.

Despite decades of development, these clusters have not propelled India to replicate **China's manufacturing success.**

Reasons behind India not becoming a manufacturing hub like China:

1. **Poor Infrastructure:** China has invested heavily in its infrastructure, including roads, ports, and power supply, facilitating efficient manufacturing and logistics.
 - a. India's infrastructure, though improving, still suffers from **frequent power outages, inadequate transportation facilities, and congested ports, increasing production costs and causing delays.**
 - b. **E.g.,** China's Spent \$8 trillion on infrastructure development between 2011 to 2021 while India plans only \$1.4 trillion for the National Infrastructure Pipeline from 2019 to 2025.
2. **Logistical Inefficiencies:** China boasts **world-class logistics and supply chain management**, ensuring smooth production and distribution.
 - a. While inefficient logistics in India **hinder productivity and competitiveness**, impacting the overall efficiency of the manufacturing sector.

- b. E.g. India is currently ranked 38th in the LPI 2023 while china was ranked 14th.
3. **Regulatory and Bureaucratic Hurdles:** India's cumbersome regulatory framework involves multiple approvals, unclear regulations, and red tape, discouraging investors and delaying projects.
4. **High Cost of capital:** Lower interest rates and better access to affordable credit in China facilitate manufacturing investments.
 - a. While high-interest rates and limited affordable credit in India increase business costs, hindering expansion and technological upgrades.
 - b. E.g., India's average lending rate was 8.6 % in 2022, significantly higher than China's 4.3%.
5. **Taxation issues:** China's tax policies are more conducive to manufacturing, encouraging foreign and domestic investments.
 - a. Although GST reforms are positive, India's tax structure remains complex, adding to operational costs.
6. **Skill Gap and workforce issues:** China has invested in vocational training and education, creating a skilled labour pool for manufacturing, while a significant portion of India's workforce lacks advanced manufacturing skills, affecting productivity and quality.
 - a. E.g., according to India Skills report, only 49% of Indian youth is employable.
7. **Limited technological adoption:** Slow adoption of advanced technologies in India results in higher production costs and lower efficiency.
 - a. E.g., Indian textile sector still relies on outdated technologies.
8. **R&D Investment:** Significant investment in R&D in China drives innovation and advanced manufacturing capabilities. While limited R&D investment in India hampers innovation and development of new manufacturing processes.
 - a. E.g., India spends only 0.64 percentage of its GDP on R&D while China spends 2.64 % of its GDP.

Way forward:

1. **Investment in Infrastructure:** India should prioritize infrastructure projects such as the Dedicated Freight Corridor (DFC) and the Bharatmala project to improve logistics and connectivity across the country.
2. **Smart Industrial Zones:** Establishing Special Economic Zones (SEZs) with integrated infrastructure (power, water, transport) to attract manufacturing clusters.
 - a. For instance, the Gujarat International Finance Tec-City (GIFT) is a successful example of an SEZ attracting global financial institutions.
3. **Expanding initiatives like the Skill India Mission** to train and certify workers in manufacturing skills, modelled on successful vocational training programs in countries like Germany.
4. **Adoption of Industry 4.0 Technologies:** Incentiv-

izing the adoption of automation, IoT, and digital manufacturing technologies through schemes like the Production Linked Incentive (PLI) for electronics manufacturing.

5. **Green Manufacturing Initiatives:** encouraging sustainable practices through incentives for eco-friendly technologies and compliance with global environmental standards, similar to Sweden's carbon-neutral manufacturing goals.

Conclusion

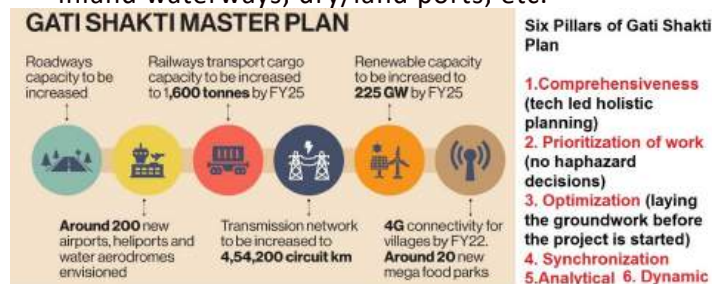
By focusing on these strategic areas and learning from successful international examples, India can overcome its challenges and position itself as a competitive manufacturing hub. These initiatives not only enhance industrial capabilities but also contribute to economic growth, job creation, and sustainable development.

About PM Gati-Shakti National Master Plan:

PM Gati Shakti Master Plan (2021), is a **Rs. 100 lakh-crore project** for developing '**holistic infrastructure**'. It aims to ensure the speed (Gati) and Power (Shakti) of **infrastructure projects** in the **next four years**, with a focus on expediting works on the ground, saving costs and creating jobs, and bringing down the logistics cost.

Gati Shakti scheme will give the necessary push to infrastructure development:

- **Boost to infrastructure:** A **plug-and-play model** for industrial parks. It will subsume National Infrastructure Pipeline launched in 2019
- **Helps solve logistical issues:** India's logistics cost **burden is 13-14% of GDP**, compared to **6-8%** in more competitive economies.
- **Curbs red-tapism:** g., the Railways has started a '**Common Drawing Approval System**' on an online platform, so all the approvals can be accessed on one portal.
- **Increased coordination:** Gati Shakti will **bring together 16 infrastructure-related Ministries**.
- **Incorporation of various projects from different ministries:** Gati Shakti will incorporate the **infrastructure schemes of various Union ministries and state governments:** Bharatmala, Sagarmala, UDAN, inland waterways, dry/land ports, etc.



About NICDP:

The National Industrial Corridor Development Programme (NICDP) aims to develop futuristic industrial cities that can compete globally in manufacturing and investment. It

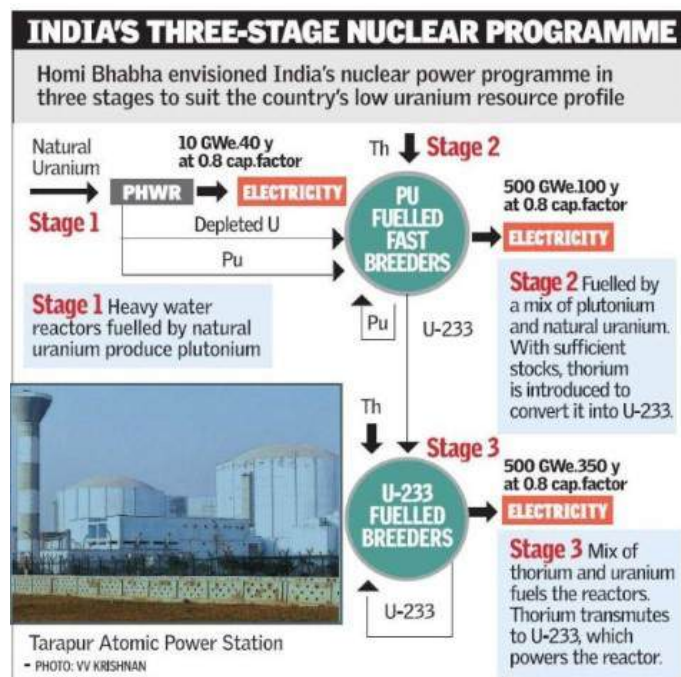
includes **11 industrial corridors with 32 projects in four phases**. The first corridor, the **Delhi Mumbai Industrial Corridor**, was approved in 2007. The implementation is managed by the **National Industrial Corridor Development and Implementation Trust (NICDIT)** and the **National Industrial Corridor Development Corporation Limited (NICDC)**, with oversight by an Apex Monitoring Authority chaired by the Finance Minister.

Insta Links

[PM GatiShakti — National Master Plan](#)

Mains Links

Q. Gati Shakti will ensure integrated planning and implementation of infrastructure projects in the coming years, with a focus on expediting works on the ground, saving costs and creating jobs. Discuss. (250 Words) (UPSC Mains 2022)



Present status:

With **500 MW Prototype Fast Breeder Reactor (PFBR)** at Kalakand, India is finally ready to **start the second stage**. However, experts estimate that it would take India at least another four decades before it has built up a sufficient fissile material inventory to launch the third stage.

- Globally, countries like **Russia, Argentina, Canada, China, South Korea, and the US** are already developing or licensing SMRs.

Use of nuclear power:

electricity generation with over 20 reactors in operation, Scientific studies at BARC, Nuclear medicine, crop improvement, and food preservation are practical applications, while strategic deterrence is maintained for national security.

Challenges:

India's nuclear program has been subject to international sanctions and restrictions due to its status as a nuclear-armed nation outside the Nuclear Non-Proliferation Treaty (NPT). Technological dependence on imported technology and equipment.

Small modular reactors and its advantages:

The term refers to a class of modern reactors that are **essentially "small"**, and each unit can be manufactured in a factory and transported to a location for installation. They are envisaged for markets such as remote applications or for remote locations with limited grid capacity.

Reactor	Power Capacity
Large, Conventional Reactor	700+ MW(e)
Small Modular Reactor	Up to 300 MW(e)
Micro Reactor	Up to ~10 MW(e)

33. BUDGET 2024-25: BHARAT SMALL REACTORS (BSRS)

Context:

The 2024-25 Union Budget emphasizes the importance of nuclear energy in India's energy mix, particularly through **Small Modular Reactors (SMRs)**. The government will partner with the private sector to develop **Bharat Small Reactors (BSRs)**.

What are Bharat Small Reactors (BSRs)?

Bharat Small Reactors (BSRs) are **compact, factory-built nuclear reactors designed for India's energy needs, offering a safe, cost-effective, and low-carbon energy source**, which involves collaboration between the Indian government and private sector.

This marks a historic shift in India's nuclear policy, as the **Atomic Energy Act of 1962** previously barred private sector participation. **Bharat Small Reactors (BSRs)**, aligned with **global trends in Small Modular Reactors (SMRs)**, are based on India's **existing Pressurized Heavy Water Reactor technology**. They aim to enhance nuclear energy's contribution, currently at **1.6%**, to India's energy mix.

India's Three stage Nuclear Programme:

In 1954, India established the Department of Atomic Energy (DAE) to harness nuclear resources for peaceful purposes, following Dr. Bhabha's vision of self-reliance in nuclear energy.

Small Modular Reactor (SMR)

	Zero carbon emissions from power production
	90 per cent energy capacity
	Compact design (partly underground)
	Fabricated in factory
	Construction 3-5 years
	Emergency planning zone 2km radius
	WalkAway safe passive safety features
	~\$1-3 billion US
	Reduced waste
	Reduced fuel requirements with next generation technologies

Typical Pressurised Water Reactor

	Zero carbon emissions from power production
	90 per cent energy capacity
	Large above ground plant
	Built at site
	Construction 6-12 years
	Emergency planning zone 16km radius
	Automatic safety operator intervention
	~\$6-12 billion US
	Waste in the form of spent fuel bundles
	Standard fuel requirements

More about Small Modular Reactors (SMRs):

Small Modular Reactors (SMRs)	
SMRs are	Small – physically a fraction of the size of a conventional nuclear power reactor.
	Modular – making it possible for systems and components to be factory-assembled and transported as a unit to a location for installation.
	Reactors – harnessing nuclear fission to generate heat for electricity production or direct application.
Capacity	Ranging from less than 30 MWe to 300+ MWe .
Classification	Land-based water-cooled SMRs, Marine based water cooled SMRs, High-temperature gas-cooled SMRs (HTGRs), Liquid metal-cooled fast neutron spectrum SMRs (LMFRs), etc
Status of development (globally)	At present, nearly 80 SMR designs are in the development and licensing stages, and a few of them are in the deployment and operational stages.
Advantages	Manufactured off-site: This can significantly save construction time, unlike the conventional nuclear reactors that are built on-site.
	Low running costs (lesser fuel, fewer staff) and increased efficiency .
	Better control/flexibility: Generating less electricity when demand is down and are particularly useful for remote locations – have variable power generation requirements.
	Safety features: Don't need a power supply and can handle accidents without the assistance of a person or a computer.
	SMRs and SDGs: SMRs can play a key role in the clean energy transition , while also helping countries achieve SDG 7 (universal access to energy).

Challenges	Lack of development: SMR industry is yet to realise a fully developed operational fabrication facility for large-scale serial manufacturing of SMR components.
	Economic benefits depend on the large-scale production of SMRs.
	A large number of technologies: For deployment of the SMRs at the same time, could not only create regulatory challenges for the nuclear industry but also take away some degree of cost optimisation .
	Mobilising finance: For technology development, licensing and construction of prototype plants.
Way ahead	Standardisation of designs of components and modules, strategic partnerships , and harmonisation of regulatory and licensing processes will facilitate the adoption of SMRs at a large scale.
	The existing safety assessment methodology should be updated.
	Availability of low-cost finance , inclusion in green taxonomy and utilisation of innovative financing instruments such as green bonds, etc.
	Availability of required skilled personnel across the value chain of engineering, design, testing, inspection, construction, etc.

Conclusion:

Nuclear science and technology in India has been marked by significant achievements, embracing Small Modular Reactors can pave the way for more sustainable and efficient nuclear power generation

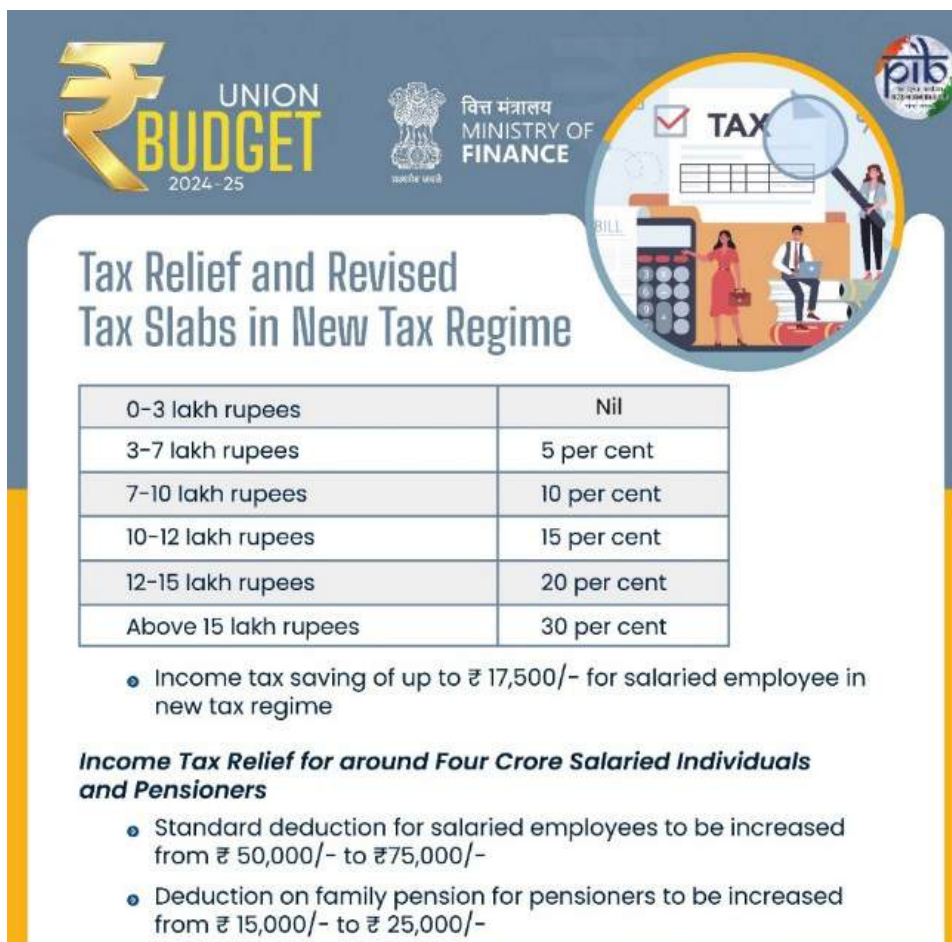
Insta Links:

The Future of Nuclear Power in India

Mains Links:

Give an account of the growth and development of nuclear science and technology in India. What is the advantage of a fast breeder reactor programme in India? (UPSC 2019)

New Tax Slabs:



UNION BUDGET 2024-25

**विद्युत मंत्रालय
MINISTRY OF FINANCE**

TAX

Tax Relief and Revised Tax Slabs in New Tax Regime

0-3 lakh rupees	Nil
3-7 lakh rupees	5 per cent
7-10 lakh rupees	10 per cent
10-12 lakh rupees	15 per cent
12-15 lakh rupees	20 per cent
Above 15 lakh rupees	30 per cent

- Income tax saving of up to ₹ 17,500/- for salaried employee in new tax regime

Income Tax Relief for around Four Crore Salaried Individuals and Pensioners

- Standard deduction for salaried employees to be increased from ₹ 50,000/- to ₹ 75,000/-
- Deduction on family pension for pensioners to be increased from ₹ 15,000/- to ₹ 25,000/-

Topics: Major crops cropping patterns in various parts of the country, different types of irrigation and irrigation systems storage, transport and marketing of agricultural produce and issues and related constraints; e-technology in the aid of farmers.

34. NATIONAL POLICY ON FARMER PRODUCER ORGANISATIONS (FPOS) PROPOSED

Context:

The draft National Policy on **Farmer Producer Organisations (FPOs)** has been put for public comment by the Ministry of Agriculture and Farmers Welfare

Who are Farmer Producer Organisations (FPOs)?

Farmer Producer Organisations (FPOs) are voluntary collective entities formed by farmers to enhance their bargaining power and access to inputs, markets, and technology. They enable **small and marginal farmers to pool resources**, share risks, and collectively undertake farming and marketing activities. **Currently, 5000 FPOs** have been registered on the Open Network for Digital Commerce portal for selling the produce online.

The key objectives of the proposed policy include:

1. **Promoting Formation:** To consolidate existing FPOs and establish 50,000 new FPOs, **benefiting 2.50 crore farmers**.
1. **Assessment:** Assessment of all schemes, including the 2021 Central sector scheme 'Formation and promotion of 10,000 FPOs'.
2. **Capacity Building:** Emulation of the AMUL model with a 3-tier structure emphasizing collective business goals, capacity building, and professional management.
3. **Market Linkages:** End-to-end value chain approach to boost farmers' income from production to marketing.
2. **Financial Support:** Offering financial assistance and incentives to FPOs to strengthen their operational capabilities and sustainability.
3. **Policy Framework:** Developing a supportive policy framework at national, state, and local levels to create an enabling environment for the growth and success of FPOs.
4. **Technology Adoption:** Promoting the adoption of modern agricultural technologies and practices through FPOs to enhance productivity and efficiency.

Details of the Policy:

1. **FPO Eligibility:**
 - a. **Minimum 300 members** (100 in North East/hilly/UTs).
 - b. **Registered as a legal entity under** Comp-

nies Act 2013 or Cooperative Society Act.

- c. **Must register with the FPO Registry Portal** maintained by the Central Government.
4. **Central Nodal Department (CND) Role** (Department of Agriculture and Farmers' Welfare (DA&FW)): Allocate funds for FPO development through convergence of central government schemes; Facilitate institutional loans to FPOs at subsidized interest rates.
 5. **Central Nodal Agency:** Small Farmers' Agribusiness Consortium, New Delhi (under DA&FW).

FPOs' Role in Indian Agriculture

- **Reducing Costs:** FPOs can assist farmers in reducing costs through bulk purchases, marketing, and transport.
- **Modernizing Agriculture:** FPOs can promote modernization of agriculture, especially for small and marginal farmers.
- **Collective Farming:** FPOs can engage farmers in collective farming, addressing productivity issues from small farm sizes.
- **Competing with Large Enterprises:** FPOs can enhance farmers' bargaining power and income levels.
- **Access to Technology:** FPOs provide access to modern technologies, credit, capacity building, and traceability of agricultural produce.
- **Easy Access to Credit:** FPOs provide easy access to government/donor/service providers' funds and support services.
- **Eliminating Intermediaries:** FPOs eliminate non-transparent intermediaries in agricultural marketing, reducing farmers' incomes.
- **Value Addition:** FPOs manage post-harvest losses and provide value chain facilities.
- **Collective Strength:** FPOs help small, marginal, and landless farmers deal with issues like crop failure and market access.
- **Price Fluctuation Management:** FPOs can manage price fluctuation through contract farming and agreements.

Issues facing FPOs.

1. **Lack of/ Inadequate Professional Management** – Trained manpower is presently not available in the rural space to manage and supervise FPO business professionally.
2. **Weak Financials** – FPOs are mostly represented by Small and marginal farmers with poor resource bases hence, initially they are not financially strong enough to deliver vibrant products and services.
3. **Lack of Risk Mitigation Mechanism** – Presently, while the risks related to production at the farmers' level are partly covered under the existing crop/ livestock / other insurance schemes, there is no provision to cover the business risks of FPOs.
4. **Inadequate Access to Market** – Lack of linkage with Industry/ other market players, and large retailers by the FPOs.
5. **Inadequate Access to Infrastructure** – Like transport facilities, storage, value addition (cleaning, grading, sorting, etc.) and processing, brand build-

ing, and marketing.

6. **Lack of technical Skills/ Awareness** – Inadequate awareness among the farmers about the potential benefits of collectivization & non-availability of competent agencies for providing handholding support.

Government steps to address these issues.

1. **Equity Grant Fund Scheme** for Enhancing viability, sustainability of FPOs and Increasing credit worthiness of FPCs.
2. **Credit Guarantee Fund Scheme** to provide collateral-free credit to FPOs.
3. **Scheme for the Creation of Backward and Forward Linkages** to bridge the gaps in the supply chain in terms of the availability of raw materials and linkages with the market.
4. **Operation Greens (TOP to TOTAL)** will promote FPOs, agri-logistics, processing facilities, and professional management.
5. **100% tax deduction for FPOs** with an annual turnover of up to Rs. 100 crores.

Success Stories of Farmer Producer Organisations (FPOs):

1. **Oriental FPO**: Developed cold chain infrastructure and launched a branded product called 'Safe N Fresh' in Jammu and Kashmir UTs.
2. **Prayag Raj Farmer Producer Company Limited**: Established input retail outlets benefiting farmers and consumers in Uttar Pradesh.
3. **Rameshwar Farmer Producer Company Limited**: Established wholesale counters for vegetable sales, providing more remunerative channels for farmers in Uttar Pradesh.
4. **Rampur FPO**: Collaborated with the district administration for the "**Aahaar Se Upchar Tak**" campaign, supplying nutrition-rich products to Anganwadi Kendra and improving nutritive outcomes in Uttar Pradesh.

Strengthening FPOs:

- APMC Act Amendments
- Creation of **farm-level infrastructure** at FPO level.
- **Direct procurement of agricultural commodities through FPOs** under MSP scheme.
- **Promotion of private investors** to strengthen FPO financials.
- **Expansion of Equity Grant & Credit Guarantee Fund schemes** of SFAC
- **Flexible policy by states and GOI for FPO promotion.**
- **Mass awareness building among rural farmers.**

Conclusion:

FPOs have the potential to change the face of Indian agriculture by empowering farmers, increasing productivity, reducing costs, and improving access to markets, infrastruc-

ture, and technology. The government and other stakeholders must work together to further.

Insta Links:

1. [Farmer Producer Organizations](#)

Mains Links:

Q. "In the villages itself, no form of credit organization will be suitable except the cooperative society." – All Indian rural credit survey. Discuss this statement in the background of agriculture finance in India. What constraints and challenges do financial institutions supply agricultural finances? How can technology be used to better reach and serve rural clients? (UPSC 2014)

Prelims links:

Q. Which one of the following best describes the concept of 'Small Farmer Large Field'? (UPSC 2023)

- (a) Resettlement of a large number of people, uprooted from their them a large cultivable land which they cultivate collectively and share the produce.
- (b) Many marginal farmers in an area organize themselves into groups and synchronize and harmonize selected agricultural operations.
- (c) Many marginal farmers in an area together make a contract with a corporate body and surrender their land to the corporate body for a fixed term for which the corporate body makes a payment of agreed amount to the farmers.
- (d) A company extends loans, technical knowledge and material inputs to a number of small farmers in an area so that they produce the agricultural commodity required by the company for its manufacturing process and commercial Production.

Ans: (b)

35. TELANGANA UNVEILS ₹1 LAKH CROP LOAN WAIVER

Context:

The Telangana government has released **₹31,000 crore for the Crop Loan Waiver Scheme** for waiving farmers' loans. This scheme, aimed at **benefiting over 40 lakh farmers** by August end, **marks the largest loan recovery** in the country.

What are Farm loan waivers?

They are government measures that **forgive certain agricultural loans** to reduce farmers' distress, often promised during elections. These waivers involve the **government covering the farmers' debt**, providing temporary relief but not solving long-term agrarian issues.

Historical Instances of Farm Loan Waivers:

Year	Waiver Scheme	Key Details
1990-91	Agricultural and Rural Debt Relief Scheme (ARDRS)	Relief up to Rs 10,000 on select loans
2008	Agricultural Debt Waiver and Debt Relief Scheme (ADWDRS)	Rs 60,000 crores allocated for farmer relief. Full waiver for small farmers (<2 hectares). One-time settlement (OTS) of 25% for farmers with >2 hectares if they pay the remaining 75%
Post-2014	Various State Government Waivers	Total amounting to Rs 2.52 lakh crores . States: Andhra Pradesh, Telangana, Uttar Pradesh, Maharashtra, Jharkhand, Chhattisgarh, Madhya Pradesh, Punjab, Tamil Nadu

Benefits of Loan Waiver:

- For farmers:** Farm loan waivers allow farmers to reinvest in agriculture and diversify into activities like poultry, dairy, and horticulture.
- Political Benefit:** A NABARD study (1987-2020) found that only **4 out of 21 state governments** lost elections after announcing waivers.

Drawbacks of Loan Waivers:

- Limited Coverage:** Only half of beneficiaries of nine farm loan waivers since 2014 received write-offs.
- Partial Relief:** Half of the loans are for non-farm purposes.
- Multiple Loans Per Household:** Households with multiple loans receive multiple waivers.
- Exclusion of Agricultural Laborers:** Laborers, often more distressed, are excluded.
- Erosion of Credit Culture:** Encourages non-repayment expectations, leading to reduced repayment rates.
- Implementation Errors:** Prone to exclusion and inclusion errors. Eg - CAG found ineligible farmers benefited from the 2008 scheme while deserving ones did not.
- Impact on Developmental Expenditure:** Diverts funds from other developmental projects.

What needs to be done?

- Inclusive identification of vulnerable farmers** for immediate relief.
- Enhancing non-farm income to raise agricultural income** and access non-farm sources.
- Improving technology**, expanding irrigation coverage, and diversifying crops for increased productivity and income.
- Increased public investment in agriculture** for irrigation, electricity, storage, and transportation.
- Implementing direct income support schemes** like PM-KISAN and Kisan Credit Card.

- Market reforms to ensure fair pricing for farmers.**
- Encouragement of cooperative societies** for bulk purchasing and better marketing.
- Risk Mitigation:** Provision of accessible crop insurance schemes for natural calamities.

Observations made by RBI:

As per RBI, loan waivers not only inhibit investment in the farm sector but put pressure on the fiscal of states which undertake farm loan waivers.

In every state election during the last five years, a loan waiver promise is made by one political party or another.

Also, loan waivers, as the RBI has repeatedly argued, vitiate the credit culture, and stress the budgets of the waiving state or central government.

Way ahead:

The agrarian crisis in India requires comprehensive, short- and long-term solutions, including both short-term and long-term measures, to address the numerous issues and provide temporary relief.

Mains Link:

Q. Given the vulnerability of Indian agriculture to vagaries of nature, discuss the need for crop insurance and bring out the salient features of the Pradhan Mantri Fasal Bima Yojana (PMFBY). (UPSC 2016)

Prelims Link:

Q1. Under the Kisan Credit Card scheme, short-term credit support is given to farmers for which of the following purposes? (UPSC 2020)

- Working capital for maintenance of farm assets
- Purchase of combine harvesters, tractors and mini trucks
- Consumption requirements of farm households
- Post-harvest expenses
- Construction of family house and setting up of village cold storage facility

Select the correct answer using the code given below:

- 1, 2 and 5 only
- 1, 3 and 4 only
- 2, 3, 4 and 5 only
- 1, 2, 3, 4 and 5

Ans: (b)

36. ECONOMIC SURVEY 2023-24: CELEBRATING THE TRIUMPH OF INDIAN AGRICULTURE

Key Highlights of Agriculture and Allied sector from the Economic Survey:

Category	Highlights
Success Story of Indian Agriculture	From food deficit and importing country in the 1960s to net exporter of agricultural products.

Growth Rate and Employment	Agriculture sector registered an average annual growth rate of 4.18% over the last five years ; supports 42.3% of the population and contributes 18.2% to GDP .
Investment in Agriculture Research	Investment yields high returns; for every rupee invested, there is a payoff of ₹13.85 .
Foodgrain and Oilseed Production	Record production of 329.7 million tonnes in 2022-23; oilseeds area increased by 17.5% from 2014-15 to 2023-24.
e-NAM Scheme and FPOs	e-NAM portal registered over 1.77 crore farmers; 8,195 FPOs registered, with significant financial support provided.
Agricultural Price Support	MSP increased for all crops since 2018-19 with a margin of at least 50% over production costs.
Social Security for Farmers	PMKMY provides monthly pensions to farmers; 23.41 lakh farmers enrolled as of July 2024.
Crop Insurance	PMFBY offers comprehensive risk cover for crops; insured area reached 610 lakh ha in 2023-24.
Allied Sectors Growth	Livestock and fisheries sectors show significant growth, contributing to farm incomes and economic stability.
Food Processing Sector	GVA increased from ₹1.30 lakh crore in 2013-14 to ₹1.92 lakh crore in 2022-23; sector accounts for significant share in India's exports.
Three Great Challenges	Agriculture must address food and nutritional security, climate change adaptation/mitigation, and sustainable use of water, energy, and land.
Transition to Nutritional Security	Need to shift from basic food security to nutritional security; demand for pulses, millets, fruits, vegetables, milk, and meat is growing.
Policy Recommendations	1. Invoke export bans only in exceptional cases; allow farmers to benefit from higher international prices.
	2. Re-examine inflation-targeting framework to exclude food prices; address hardships for low-income consumers via direct benefit transfers or coupons.
	3. Increase Total Net Irrigated Area ; promote efficient water utilization technologies like drip irrigation and fertigation.
	4. Promote crop-neutral incentive structures to address climate considerations.

Private Sector Investment	Vital for technological advancement, improved production methods, marketing infrastructure, and reduction in post-harvest losses.
Structural Transformation Needed	Requires transformation due to water scarcity and climate change; reverse migration during COVID and extreme weather conditions in 2024 highlight the need for policy reevaluation.
Sustainable Farming Initiatives	PM-PRANAM initiative promotes reduced use of chemical fertilizers and adoption of sustainable practices.

Key points from the Economic Survey for Allied Sectors:

Sector/Area	Details
Overall Growth	Allied sectors in agriculture are emerging as robust growth centers for improving farm incomes.
Livestock Sector	CAGR: 7.38% (2014-15 to 2022-23)
	Contribution to total GVA: Increased from 24.32% to 30.38%
	Total GVA contribution: 4.66% (2022-23)
Fisheries Sector	CAGR: 8.9% (2014-15 to 2022-23)
	Contribution to agricultural GVA: 6.72%
	Record fish production: 17.54 million tons (2022-23) , ranking third globally
Government Initiatives	AHIDF : Supports investments in dairy/meat processing, animal feed, and breed improvement
	408 projects sanctioned (₹13.861 crore)
	Creates 40,000 jobs, benefits 42 lakh farmers
	PMMSY : Enhances fish production and infrastructure
Food Processing Sector	FIDF allocated ₹5.59 thousand crore for 121 projects
	GVA: Increased from ₹1.30 lakh crore (2013-14) to ₹1.92 lakh crore (2022-23)
	Contribution to manufacturing GVA: 7.66% (2022-23)
	Processed food exports: Increased from 14.9% (2017-18) to 23.4% (2022-23), totalling USD 46.44 billion

37. LEGALISING MINIMUM SUPPORT PRICE IN INDIA

Context:

The recent increases in **Minimum Support Prices (MSP)** for **14 kharif crops** have disappointed farmers, as they do not adequately reflect the rising input costs.

What is MSP?

The **Minimum Support Price (MSP)** is a minimum price for any crop at which the government purchases it from farmers, and is based on a calculation of at least one-and-a-half times the cost of production incurred by the farmers.

CROPS COVERED UNDER MSP		
KHARIF CROPS (14)	RABI CROPS (7)	CALENDAR YEAR CROPS (4)
1. Paddy	1. Wheat	1. Copra
2. Jawar	2. Barley	2. De-husked Coconut
3. Bajara	3. Gram	3. Jute
4. Ragi	4. Masur	4. Sugar Cane (FRP)
5. Maize	5. Rapeseed& Mustard	
6. Arhar	6. Safflower	
7. Moong	7. Toria	
8. Urad		
9. Cotton	• CACP recommends MSP for 22 crops before the sowing period each year • MSP derived for Toria based on MSP for Rapeseeds and Mustard and for De-husked Coconut on the Basis of MSP of Copra. • Fair and Remunerative prices for Sugar is also declared	
10. Ground Nuts		
11. Sunflower		
12. Soyabean		
13. Sesamum		
14. Nigerseed		

Ever Wondered?

How

are MSPs determined?

The Centre fixes MSPs for every kharif and rabi cropping season based on recommendations of the Commission for Agricultural Costs and Prices (CACP).

When a farmer grows a crop, he incurs costs, some of it explicit and some implicit or unpaid.

The CACP considers the following costs:

1. A 2 - Covers all cash and in-kind expenses incurred by farmers on seeds, fertilisers, chemicals, hired labour, fuel, irrigation, etc
2. A2 + FL - Actual costs plus an imputed value of unpaid family labour.
3. C2- Includes A2 + FL along with revenues forgone on owned land(rent) and fixed capital asset (interest).

MSP does not have any legal basis but has been implemented since the 1960s with the following objectives:

1. Ensuring **food security** in the country.
2. **Protection** from price drop for farmers
3. **Incentivise** desirable crop production.

Importance of MSP:

- **Safeguard against Price volatility:** The system of MSP acts as a tool for the government to control sharp falls and rises in the prices of any crops
- **Surety of minimum prices:** The MSP is announced before the sowing season so that farmers can make an informed decision. Hence, supporting farmers from distress sales.
- **Control crops short in supply:** by offering more price support for these crops so that more and more farmers are tempted to grow these crops.
- **Crop Diversification:** MSP for crops promotes

their diversification and **curbs import-dependence and food inflation** (e.g., there was a notable increase in the MSP of pulses and oilseeds in 2021 in order to incentivise its domestic production)

- **Food security:** The government can use these crops to be sold at government fair price shops at a price lower than the market rate to the below poverty line people at a lower price.
 - **Developmental schemes like PM-POSH-AN, ICDS, Anganwadi Services Scheme, and TPDS** rely on grains procured by FCI at MSP.

Limitations of MSP:

- **Lack of legal guarantee:** Farmers cannot demand MSP as a matter of right. The only crop where MSP payment has some statutory element is **sugarcane**.
- **Issues with the cost of production:** Farm activists say that the **1.5-times MSP formula** — originally recommended by the National Commission for Farmers headed by agricultural scientist **M S Swaminathan** should have been applied to the C2 costs.
- **Lack of effective data:** The CACP does not do any field-based cost estimates itself.
- **Ineffective coverage:** Though government announces MSP for 23 crops only.
- **Highly unequal across states:** In 2019-20 roughly **90%** of the rice produced in Punjab, and Haryana was procured by the government whereas roughly **1%** was procured in Karnataka and Gujarat.
- **Ineffectively Implemented:** The **Shanta Kumar Committee**, in its report in 2015, stated that only 6% of farmers receive MSP, which directly means that **94% of the farmers in the country are deprived of the benefit of the MSP**.
- **Lack of awareness:** NITI Aayog on the MSP revealed that **only 10 per cent of the farmers** were aware of MSP prices right price before the sowing season.

Therefore, the legalization of MSP is needed:

1. **Legalizing MSP enables farmers to claim MSP rights**, enforceable through courts.
2. **Improved price realization** from the private sector could boost the rural economy.
3. **Diversification of any of the MSP crops** helps farmers avoid the high input costs of select crops.
4. **Increased production of pulses and millets** promotes climate-smart agriculture.

However, there are major impediments to legalizing it:

- It would lead to a **heavy subsidy burden on the government**.
- **Ineffective grain management:** Legalising MSP will further aggravate the issues related to grain management in India.
- **Market distortion** as the natural cycle of demand-supply would be disturbed.
- It is more of a **“One size fits all” approach**; as the ultimate solution for agricultural stagnation in the country is not MSP.

Recommendation by various committees:

Recommendation	Details
Swaminathan Commission	Ensure MSP is 50% higher than the weighted average cost of production (C2+50% formula).
Ashok Dalwai Committee	Adhere to the Model Agricultural Land Leasing Act, 2016, ensuring fair tenancy reforms.
Other major Recommendations	Develop a <u>national agriculture policy focusing on the FIVE ‘Cs’</u> : Conservation, Climate change, Cultivation, Consumption, and Commercial viability.
	<u>Amend APMC Act:</u> States should amend their APMC Acts and promote the formation of farmer organizations.
	Recognize the <u>need for MSP in certain segments while supporting market-driven growth in others</u> .
	<u>Categorization & Implementation of MSP Crops:</u> Categorize MSP crops into all-India and regional importance, with respective responsibilities for the central and state governments.
	<u>Commodity-based Farmers’ Organizations:</u> Establish organizations to provide global demand-supply projections and guide planting decisions.
	Include all production costs in MSP, ensuring fair compensation and reasonable profit margins.
	Implement <u>electronic platforms for mandis</u> to enhance price transparency and market access.

Conclusion:

Legalizing MSP alone doesn’t ensure financial sustainability in farming. Income-support schemes like **PM-KISAN** and price deficiency systems like **PM-AASHA** offer more progressive solutions.

As suggested by the **Swaminathan Commission** the methods of calculation need to be restructured to make it more profitable for farmers and encourage crop diversification. But at the same time, other aspects such as irrigation, soil, irrigation, knowledge input, etc. also need to be considered to impart holistic development in the agricultural sector of the country.

Mains Links:

Q. What do you mean by Minimum Support Price (MSP)? How will MSP rescue the farmers from the low-income trap? (UPSC 2019)

Prelims Links:

Consider the following statements: (UPSC 2020)

1. In the case of all cereals, pulses and oil seeds, the procurement at Minimum Support Price (MSP) is unlimited in any State/UT of India.
2. In the case of cereals and pulses, the MSP is fixed in any State/UT at a level to which the market price will never rise.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Ans: D

Q. Consider the following statements: (UPSC 2023)

1. The Government of India provides Minimum Support Price for Niger (*Guizotia abyssinica*) seeds.
2. Niger is cultivated as a Kharif crop.
3. Some tribal people in India use Niger seed oil for cooking.

How many of the above statements are correct?

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

Ans: (c)

38. OVERHAULING PDS: REDUCING HOUSEHOLD COSTS AND ESSENTIAL REFORMS

Context:

The Household Consumption Expenditure Survey (HCES) data offers insights into the impact of the Public Distribution System (PDS) on household spending.

Impact of PDS on Household Food Consumption Diversity

- The Public Distribution System (PDS) provides **subsidized foodgrains to eligible households, covering up to 75% of the rural and 50% of the urban populations** under the National Food Security Act

(NFSA), 2013.

- This subsidy allows households to **save money on staples and allocate more resources to diverse foods like vegetables, milk, pulses, and meat, potentially enhancing their overall nutrition and dietary variety.**

Implications of PDS for Poverty:

1. **Economic Relief for Poorer Households:**
 - The PDS provides food grains at highly subsidized rates.
 - Reduces financial burden on poorer households.
 - Enables allocation of resources to other essential needs.
2. **Enhanced Measurement of Poverty:**
 - Imputes value of free or subsidized items received through PDS.
 - Improves accuracy in measuring household consumption.
 - Provides a more comprehensive assessment of economic well-being.
3. **Policy Insights and Targeting:**
 - Helps policymakers target social welfare programs effectively.
 - Guides allocation of resources based on poverty metrics.
4. **Diversification of Diet:**
 - Access to subsidized food grains frees up resources.
 - Enables purchase of diverse, nutrient-rich foods.
 - Enhances overall nutrition and dietary variety.

Reforms in PDS: Scheme for Modernization and Reforms through Technology in the Public Distribution System (SMART-PDS)

It is a **comprehensive initiative launched by the Indian government to revamp the existing Public Distribution System (PDS).** SMART-PDS aims to address the prevalent inefficiencies and leakages in the system while ensuring fairer and more transparent distribution of subsidized food grains to beneficiaries.

Key Components of SMART-PDS:

1. **One Nation One Ration Card (ONORC):** Data: It functions under ONORC where over 3.6 crore ration cards are issued nationwide, granting beneficiaries access to subsidized foodgrains across any PDS shop.
2. **Technology-Driven Reforms:** SMART-PDS builds upon existing initiatives like **End-to-End Computerization**, ensuring continued digitization and preventing regression in states.
3. **Infrastructure Interventions:** Upgrades hardware, software, and technical manpower across all states/UTs, addressing limitations and creating a **unified**

national system.

4. **Standardization and Integration:** Encourages uniform PDS operations through technology, **linking** with FCI, CWC, Education Ministry, and UIDAI for data sharing and improved targeting.
5. **Data-Driven Decision Making:** The scheme emphasizes leveraging **data analytics and business intelligence** tools to analyse beneficiary needs, consumption patterns, and distribution trends.

How is it helping reform the PDS in India?

- **Reduction of Leakages and Corruption:** Standardized processes and biometric verification minimize diversion and pilferage. Ex - the existing PDS system has been highly “leaky”, with large amounts of grains (40 to 50 per cent).
- **Improved Efficiency and Transparency:** Real-time data tracking and a centralized system enhance transparency and accountability.
- **Empowerment and Flexibility:** ONORC allows beneficiaries to access rations across India, empowering vulnerable populations.
- **Enhanced Policymaking:** Data-driven insights inform policy decisions, allowing targeted interventions and adjustments. Ex - targeted public distribution system (TPDS) providing rice/wheat in areas of preference of either.
- **Sustainable Reforms:** Continuous monitoring and up-grades prevent stagnation, ensuring adaptability to evolving needs and challenges. Ex - Linkage with Aadhaar ensures further innovation.

Mains Links:

Q. How has the emphasis on certain crops brought about changes in cropping patterns in the recent past? Elaborate on the emphasis on millet production and consumption. (UPSC 2018) (200 WORDS, 10 MARKS)

Topics: Effects of liberalization on the economy, changes in industrial policy and their effects on industrial growth.

39. TRADE IN INDIAN RUPEE

Context:

India and Russia have significantly increased their rupee-ruble transactions in 2024, **doubling them since the previous year despite U.S. and EU sanctions.**

What does the data show?

1. **Trade Volume between India and Russia:** Bilateral trade is already at \$65 billion in 2023-24, with \$60 billion from Russian exports to India, mainly in energy.
2. **Future Prospects:** Trade target of \$100 billion by 2030
3. **Banking Developments:** Russia's Sberbank reports a six-fold increase in corporate deposits in rupees since January.

What does internationalisation of the rupee mean?

Internationalisation of the rupee refers to **expanding Rupee usage in international transactions** between residents of India and non-residents. Initially focused on trade transactions like imports and exports, this process aims to gradually extend to other current account dealings and eventually capital account transactions.

Government steps towards Internationalization of the Indian Rupee:

- **1950s:** Wide use of Indian rupee in UAE, Kuwait, Bahrain, Oman, and Qatar.
- **Devaluation of Rupee in 1966** led to introduction of sovereign currencies in these countries.
- **1974: Asian Clearing Union (ACU) established by 10 Asian central banks**, to facilitate multilateral trade transaction settlements.
- **GIFT City Developments.**
- **2022:** RBI circular on “**International Trade Settlement in Indian Rupees**” introduced, External commercial Borrowings in rupees (**Masala Bonds**).
- **2023:** RBI introduced mechanism for rupee trade settlement with **18 countries**, which were authorized to open **Special Vostro Rupee Accounts (SVRAs)**.
- **2023:** Agreement with UAE allowed Indian Oil Corporation to pay in rupees for crude.

Advantages:

Benefit	Description
Reduced dependency on dollars	International use of rupee reduces overdependence on US dollar for India's import payments, insulating from pricing fluctuations and political sanctions.
Currency stability	Greater global use can lead to more stability and confidence in the rupee , similar to historical examples with currencies like the pound sterling or Japanese Yen.
Lower transaction costs	International rupee invoicing and settlement should reduce transaction costs on bilateral trades settled in dollars or euros, saving on currency conversion.
Soft power and investor appeal	Wider adoption enhances India's soft diplomacy , positioning it among emerging economies, and potentially boosting growth and investment appeal over the long term.
Macroeconomic discipline effect	Wider use encourages Indian policymakers to maintain stricter fiscal and monetary discipline , ensuring stability and signalling reliability to global markets.

Limitations of Internationalization of the Indian Rupee:

- **High volatility and low stability:** Rupee's high volatility and low stability make it less attractive for global trade and

investment.

- **Capital flight concerns:** Opening up the rupee to international markets could lead to capital flight, straining foreign exchange reserves.
- **Limited capital account convertibility:** India lacks full capital account convertibility, a risk due to past currency crises and high external debt.
- **Underdeveloped corporate debt and securities markets:** An essential for rupee internationalisation, but Indian markets lack depth, especially in derivative instruments.
- **High inflation history:** Dependence on import of commodities like oil and gold increases risk of imported inflation through rupee internationalization.

Way forward:

- **Develop Deeper Domestic Bond Markets:** Increase investment options for foreign investors and Indian trade partners.
- **Make the Rupee More Freely Convertible:** Aim for full convertibility by 2060 for easier financial investment movement.
- **Streamline Trade Settlement Processes:** Optimize documentation and procedures for rupee-denominated settlement to promote internationalization.
- **Expand Bilateral Currency Swap Agreements:** Allow settlement of bilateral trade and investment in rupee terms.
- **Offer Incentives for Rupee Usage:** Provide tax and regulatory incentives for international businesses to invoice more transactions in Indian rupee.
- **Ensure Macroeconomic Stability:** Pursue fiscal prudence, low inflation, and predictable currency issuance procedures.
- **Implement Recommendations of Tarapore Committee:** Work towards goals like reducing fiscal deficit below 3.5% of GDP and banking sector non-performing assets below 5% for stability.

Conclusion

The Tarapore Committee's recommendations (1997, 2006) to reduce fiscal deficits, inflation rates, and banking non-performing assets are crucial steps towards rupee internationalization. Advocating for rupee as an official currency in international organizations would boost its profile and global acceptance

Insta Links:

- [Internationalisation of rupee](#)

Prelims Links:

Q1. Convertibility of rupee implies (UPSC 2015)

- (a) being able to convert rupee notes into gold
- (b) allowing the value of rupee to be fixed by market forces
- (c) freely permitting the conversion of rupee to other currencies and vice versa
- (d) developing an international market for currencies in India

Ans: (c)

Q2. With reference to Balance of Payments, which of the following constitutes/ constitute the Current Account? (UPSC 2014)

1. Balance of trade
2. Foreign assets
3. Balance of invisibles
4. Special Drawing Rights

Select the correct answer using the code given below:

- a. 1 only
- b. 2 and 3
- c. 1 and 3
- d. 1, 2 and 4

Ans: (c)

Topics: Science and Technology- developments and their applications and effects in everyday life Achievements of Indians in science & technology; indigenization of technology and developing new technology.

40. HURDLES IN THE QUANTUM MISSION

Context:

A new report, surveying the existing capabilities of India in the field of Quantum technology, has found that **countries like China and the United States have a huge head start over India.**

What is Quantum Computing?

Quantum computing uses quantum mechanics principles to perform calculations, allowing multiple calculations simultaneously. Qubits, which can be both 0 and 1 simultaneously, are used in superposition, making it faster than traditional computing for certain problems.

Applications of Quantum Technology:

1. **Higher Problem-solving Capabilities:** Solves complex problems in cryptography, optimization, materials science, and drug discovery.
2. **Enhanced AI Models:** Improves machine learning algorithms for more efficient and accurate AI applications.
3. **Optimization:** Optimizes complex processes like supply-chain management and financial portfolio optimization.
4. **Secure Communication:** Enables ultra-secure communication with quantum encryption, preventing hackers from intercepting information.
5. **New Medicines:** Simulates complex molecular interactions to discover and optimize new drugs.

What is the National Quantum Mission?

The National Quantum Mission, launched in 2023 with a budget of over Rs. 6,003 crore for 2023-2031, **aims to bolster India's capabilities in this cutting-edge field.**



Quantum Computing



Context: Union Cabinet has approved the National Quantum Mission (NQM)



Quantum computing uses quantum bits (qubits) that can be both 0 and 1 at the same time, allowing for multiple calculations to be performed simultaneously, making quantum computing exponentially faster than traditional computing for certain types of problems.

About National Quantum Mission

	Description
Objective	Develop and promote Quantum Technology in India
Timeframe	2023 – 2031 (8 years)
Major themes	Quantum Computing: Develop physical qubit computers with a capacity ranging from 50-1000 qubits (to be completed within 3-8 years) Quantum Communication: Develop secure satellite-based communication with a range of 3000 km and communication lines using Quantum Key Distribution over 2000 km (to be completed within 3-8 years) Quantum Sensing and Metrology: Develop quantum sensors (magnetometers with high sensitivity in atomic clock systems) for Navigation, healthcare and diagnostics, defence, and energy sectors (to be completed within 8 years) Quantum Material and Devices: Develop devices and materials (superconductors, novel semiconductor structures, and topological materials) for quantum technology (to be completed within 3-8 years)
Key Agencies Involved	Department of Science & Technology, Department of Atomic Energy, Department of Telecommunications, DRDO, ISRO
Other Aim	The Mission also aims to establish four thematic hubs (T-Hubs) at research institutes and R&D centres (based on above themes)
Significance	India will be among the top six leading nations (US, Canada, France, Finland, China and Austria.) involved in the research and development in quantum technologies.
Other programmes	National Mission for Quantum Technologies and Applications (NM-QTA); Quantum-Enabled Science & Technology (QuEST); C-DOT's Quantum Communication Lab and Quantum Key Distribution (QKD) solution.

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'Responsible quantum technologies' movement

Context: The **"responsible quantum technologies" movement** emphasizes the need for ethical development and public trust in quantum science and technology (S&T).

- The United Nations has **declared 2025 as the International Year of Quantum Science and Technology** to raise awareness of quantum S&T's benefits.
- Responsible quantum S&T calls for **ethical practices to prevent misuse, especially given the dual-use nature of the technology.**
- Companies like IBM are committed to **positive social impact and preventing harmful applications of quantum technology.**

Challenges include **disparities in quantum S&T capacities between countries and ethical issues.** National policies often prioritize intellectual property protections over openness.

Importance of National Quantum Mission

Significance	Details
Economic Growth and Job Creation	Expected to contribute \$280-310 billion to the economy by 2030 and spur job creation in research, development, and manufacturing of quantum technologies.
Boost to Industries	Enhances the industrial ecosystem across sectors like aerospace, weather prediction, cybersecurity, advanced manufacturing, health, agriculture, and education.

Solving difficult Problems	Aids in finding solutions for issues like <u>clean energy and affordable healthcare</u> .
Improvement of Security Infrastructure	Secures communication and financial transactions through <u>Quantum Key Distribution</u> .
Complement Socio-economic Development	Supports initiatives like <u>Digital India, Make in India, and Sustainable Development Goals</u> .

Challenges for India in Implementing the National Quantum Mission:

- India's investment in quantum technology is less than China's and the US's.
- The country lags behind in quantum research papers, with only 1,711 published between 2000 and 2018.
- Indian researchers registered only 339 quantum-related patents between 2015 and 2020.
- India's researcher density is poor, is 11% of Italy's.
- India heavily relies on developed countries for quantum technology.
- Only 3% of deep tech start-ups in India are involved in quantum technology manufacturing.

Way forward:

1. Increase funding for quantum R&D.
2. Enhance research output through grants and collaborations.
3. Boost patent activity with incentives and IP protection.
4. Develop talent through scholarships and dedicated programs.
5. Foster collaboration between academia, industry, and government.
6. Prioritize key domains: computing, communications, sensors, and materials.
7. Engage public-private partnerships for scaling quantum technologies.
8. Ensure global competitiveness by leading in quantum research areas.

Insta Links:

[Quantum Computing](#)

Mains Links:

Q. What is quantum computing? Explain its applications and steps taken by India to promote quantum technologies in the country. (250 words)

Topics: Awareness in space.

41. EXPANDING THE SPACE ECONOMY

Context: Union Budget 2024-25 proposes to set up ₹1000

crore venture capital fund for the space economy

What are venture capital funds?

A venture capital fund is a type of investment fund that pools money from various investors to invest in early-stage, high-potential start-ups and small businesses. These funds aim to provide capital to companies with strong growth prospects but also higher risk.

Indian Space Economy:

1. Current value: ₹6,700 crore, 2% of the global space economy in 2021.
2. Projected share: 8% by 2030, 15% by 2047.
3. Space start-ups: Increased to nearly 200 in 2024 from 1 in 2022.
4. Investment in start-ups: \$124.7 million in 2023.
5. Indian Space Policy 2023 aims to build a \$44 billion space economy.

Emerging trends and their contribution to the Indian space sector:

Trends	Contribution to the Indian Space Sector
Private participation	ISRO promotes private participation, and domestic private space companies have raised over \$245 million in funding. India ranks fifth globally in terms of the number of private space firms.
International collaboration	ISRO collaborates with countries and international organizations for joint missions and technology transfers. For example, the NASA-ISRO Synthetic Aperture Radar (<u>NISAR</u>) mission is a joint project.
Outer planetary missions	India made history by reaching the Martian orbit with the Mangalyaan Mission and is launching <u>Chandrayaan-3</u> , India's lunar exploration mission, in the first quarter of 2023.
Human missions	Gaganyaan, India's first manned mission to space, is a significant milestone scheduled for 2023.
Development of new technologies	ISRO is developing new technologies like reusable launch vehicles and Inflatable Aerodynamic Decelerator (IAD). Agnikul, a domestic startup, successfully tested 3D-printed rocket engines.
Expansion of satellite-based services	ISRO provides satellite-based services in remote sensing, navigation, and meteorology. It plans to expand these services and offer satellite-derived data to stimulate innovation.

Private sector Participation in Space sector

Presently, the global space Industry is worth \$400 billion and is set to touch \$1 trillion by 2040. And, India's participation is just 2% of this mammoth share. Hence, the imperative for the private sector to play a bigger role.

Examples of Private sector participation:

- **Skyroot Aerospace:** Recently, it launched Vikram-S, India's first private rocket.
- **Airtel-backed OneWeb** is in the process of launching 648 small satellites in LEO mode to provide its high-speed satellite internet service.
- **Chennai's SRM University** has built the SRMSat (for monitoring carbon dioxide and water vapour)
- **Dhruva Space:** The company launched Thybolt-1 and Thybolt-2.
- **Agnikul Cosmos:** It develops rockets (using 3-D printing) fuelled by its patented semi-cryogenic engines
- **Digantara:** For addressing space junk.
- **Pibxel:** It will build a constellation of 24 hyper spectral micro satellites which will act as an "MRI scanner" of Earth.

Benefits of Private sector participation in Space

- Reforms to help India leapfrog to next stages of space activities; to become a **Global technology powerhouse**
- To enhance socio-economic use of space assets & activities; **Large-scale employment opportunity in technology sector**
- **IN-SPACe** to provide level playing field for private companies to use Indian space infrastructure (Indian National Space Promotion and Empowerment Centre)
- **NSIL** to reorient space activity models from 'supply driven' to a 'demand driven'
- Allow ISRO to focus more on R&D activities, exploration missions & human spaceflight programme



Skyroot Aerospace Private (HQ: Hyderabad) was founded by former engineers and scientists from ISRO

Bottlenecks in the Indian space sector:

- **Access to Capital:** Limited funding for downstream companies, as upstream activities receive major investments.
- **Human Resource Constraints:** A need for technically inclined marketing personnel, but they tend to prefer established businesses with market-level salaries.
- **Monopolization:** High capital requirements make it challenging for many players to enter the industry, leading to potential monopolization.
- **Funding Disparity:** India's space budget is significantly smaller compared to countries like the US and China.

Measures taken to promote private sector participation in the space industry:

Measures	Description
New Space India Limited (NSIL)	Established to utilize ISRO's research and development for commercial purposes through Indian industry partners. Announced in Budget 2019.
Indian Space Association (ISpA)	Aims to represent the collective voice of the Indian space industry, including leading domestic and global corporations with advanced space and satellite capabilities.
National Space Policy 2023	The government has approved the Indian Space Policy (ISP) 2023, to boost private sector participation and increase investments in the space sector from private companies.

ISRO Startup Hub	Launched in 2019, it provides a platform for startups to collaborate with ISRO, access ISRO's facilities, and benefit from ISRO's expertise.
Space Activities Bill, 2020	Currently under consideration by the Indian Parliament, this bill would allow private companies to engage in space activities, including satellite launches and space-based services.
Other	Technology transfer to private players by ISRO, NSIL/IN-SPACe . International collaborations: NISAR program and Artemis Accords. 100% FDI in some sub-sectors

Other Recommendations:

A recent report by the Indian Space Association, NASSCOM and Deloitte India suggested adopting OECD's framework for **segmenting the space value chain** into upstream, downstream and Auxiliary categories.

- **Upstream:** All activities, products and infrastructure that ensure development, testing, launching, operations and monitoring of space assets
- **Downstream:** All applications, services and devices relying on satellites to create business value including Earth Observation, Satellite, SATCOM, etc.
- **Auxiliary:** Additional space-related activities such as space insurance, awareness, education and training

Conclusion

The Indian space sector has an opportunity to create a vibrant ecosystem for start-ups and private enterprises. India needs to focus on building a comprehensive space policy, providing access to capital for early-stage startups, access to satellite technology for industry, improved training for satellite operations, and allowing private players to use the Indian Space Research Organisation's (ISRO) testing facilities.

Insta Links

- [Milestones in India's Space Programme](#)
- [Startups are powering India's Space Odyssey 2.0](#)

Mains Link:

Q. What is India's plan to have its own space station and how will it benefit our space programme? (UPSC 2019)

Q. Discuss India's achievements in the field of Space Science and Technology. How the application of this technology has helped India in its socioeconomic development? (UPSC 2016)

Prelims Links

Q. Consider the following statements: (UPSC 2016)

The Mangalyaan launched by ISRO

1. is also called the Mars Orbiter Mission
2. made India the second country to have a spacecraft orbit the Mars after USA
3. made India the only country to be successful in making its spacecraft orbit Mars in its very first attempt.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

Ans: C

Topics: Conservation related issues, environmental pollution and degradation, environmental impact assessment.

42. UNESCO UNVEILS 11 NEW BIOSPHERE RESERVES

Context:

UNESCO recently added 11 new biosphere reserves world-wide, spanning countries like Colombia, Italy, Mongolia, and the Republic of Korea.

- These reserves, including two transboundary sites, aim to conserve biodiversity and cultural heritage amid global biodiversity and climate challenges.

What are Biosphere reserves?

Biosphere reserves are areas designated by UNESCO to promote the conservation of biodiversity, sustainable development, and scientific research. It is managed by **Managed under UNESCO's Man and Biodiversity Programme**. They aim to balance economic and social development, cultural preservation, and nature preservation. There are now **759 reserves in 136 countries**, including **24 transboundary sites**.

They consist of three zones:

- a **core zone** for the strict protection of ecosystems and biodiversity.
- a **buffer zone** where people live and work in harmony with nature. Ex- Tourism, Research, Education, Monitoring
- a **transition zone** for sustainable activities. Ex- settlements, crop lands, managed forests, and areas for economic activities.

Status of Biosphere Reserves in India:

- India has 18 internationally recognized Biosphere reserves, first Nilgiri reserve.
- Panna in Madhya Pradesh is the latest addition.
- Twelve of 18 reserves are part of the World Network of

Biosphere Reserves.

- November 3 is World Biosphere Reserve Day.



Difference between National Park, Wildlife Sanctuary and Biosphere Reserve

Table 4.52 : Comparison of National Park, Wildlife Sanctuary and Biosphere Reserve

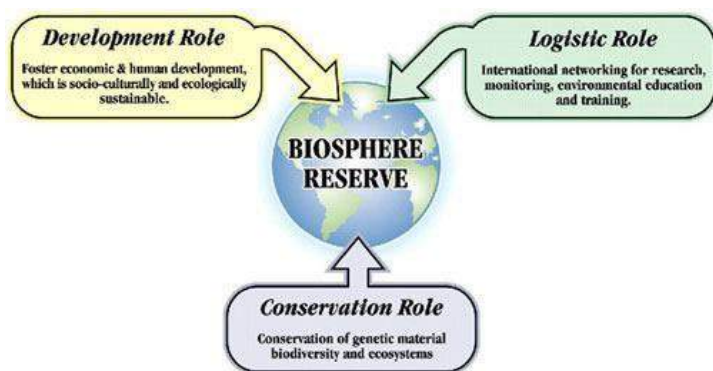
National Park	Wildlife Sanctuary	Biosphere Reserve
1. Attention is not given to biotic community as a whole. Rather conservation is connected to habitats for particular wild animal species such as lion, tiger, rhinoceros etc.	Attention is not given to biotic community as a whole. Conservation rather is species oriented such as citrus, pitcher plant, Great Indian bustard etc.	Attention is focussed on biotic community as a whole. Thus, conservation is ecosystem oriented.
2. The approach is not based on scientific principles.	The approach is not based on scientific principles.	The approach is based on sound scientific principles.
3. The size ranges from 0.04 to 3,162 sq. kms.	The size ranges from 0.61 to 7,818 sq. kms.	Size well over 5,670 sq. kms.
4. Boundaries circumscribed by state legislation.	Limits are not sacrosanct.	Boundaries incircumscribed by state legislation.
5. No biotic interference permissible except in buffer zone.	Limited biotic interference occur.	No biotic interference permissible except in buffer zone.
6. Tourism is not only permissible, but is often encouraged.	Tourism is permissible.	Normally tourism is not permissible.
7. Research and scientific management are lacking.	Research and scientific management are lacking.	Research and scientific management are carried out.
8. Due attention is not given to gene pool conservation of economic species, particularly of plants.	Proper attention is not given to gene pool conservation of economic species, particularly of plants.	Due attention is given to conservation of plants as well as animal species.

Functions of Biosphere Reserves:

Function	Description
Conservation	Managing genetic resources, endemic species, ecosystems, and landscapes.
	Preventing conflicts like man-animal incidents.
	Protecting the wildlife, culture, and customs of tribal communities.
	Support a wide variety of ecosystems, from tropical rainforests to alpine deserts.

Development	Promoting sustainable economic and human growth on sociocultural and ecological levels.
	Strengthening the pillars of sustainable development: social, economic, and environmental protection.
	Play a crucial role in combating climate change by acting as carbon sinks.
Logistic Support	Promoting research, environmental education, training, and monitoring in the context of conservation and sustainable development.

Local community engagement in conservation	Local communities in India's biosphere reserves are actively managing and conserving their ecosystems through collaborative efforts to protect mangrove forests, form self-help groups, and promote eco-tourism.
	The Gulf of Mannar Biosphere Reserve Trust is implementing plastic checkpoints to collect, recycle, and reuse plastic waste from vehicles and tourists, promoting sustainable waste management.



The threats to Biosphere Reserves (BRs)

include: Deforestation, Invasive species, land use changes like mining, urbanization and population growth causing exploitation.

Initiatives aimed at conserving Biosphere Reserves (at the Indian level):

Initiative	Description
South and Central Asian Biosphere Reserve Network Meeting (SACAM) in Chennai	UNESCO and the Indian Ministry of Environment, Forests, and Climate Change have partnered to establish SACAM, a platform for sharing expertise and fostering partnerships in sustainable environmental practices.
UNESCO's Man and the Biosphere Programme (MAB)	UNESCO's MAB, launched in 1971, aims to enhance human-environment relationships through interdisciplinary studies, economics, and education, promoting sustainable, socially and culturally appropriate development and protection of biosphere reserves It grants protection not only to the flora and fauna but also to the human communities and their ways of life within biosphere reserves.

Global Initiatives for Biosphere Reserves:

- **World Network of Biosphere Reserves:** UNESCO connects and supports global sites for biodiversity conservation and sustainable development.
- **International Cooperation:** Biosphere reserves often involve neighbouring countries, enhancing conservation efforts. Ex - Khangchendzonga Biosphere Reserve.
- **Sustainable Development Goals (SDGs):** Goals 15 (life on land) and 14 (life below water) emphasize biodiversity conservation and sustainable ecosystem management, aligning with biosphere reserve objectives.

About Man and Biosphere (MAB) Programme

The MAB Programme, launched in 1971, aims to establish a scientific basis for improving human-environment relationships. It integrates natural and social sciences to enhance livelihoods and protect ecosystems, promoting sustainable economic development. In India, **12 out of 18 biosphere** reserves are recognized under this programme, with **Nilgiri Biosphere Reserve being the first to receive recognition.**

Insta Links:

- [Panna Tiger Reserve gets UNESCO's 'Biosphere Reserve' Status.](#)

Prelims Links:

The most important strategy for the conservation of biodiversity together with traditional human life is the establishment of (UPSC 2014)

- biosphere reserves
- botanical gardens
- national parks
- wildlife sanctuaries

Ans: A

43. ADB BOOSTS ROOFTOP SOLAR REVOLUTION IN INDIA

Context: The ADB has approved a **\$240.5 million loan** for **rooftop solar systems in India**. Recently **Pradhan Mantri Surya Ghar Muft Bijli Yojana** was approved with a budget

of 75,021 crores and aims **to provide 300 units of free electricity monthly to 1 crore households** through rooftop solar setups.

Status of Rooftop solar system in India:

- **As of March 2024, India has 11.87 GW of installed rooftop solar capacity**, with a **2.99 GW** increase in 2023-2024.
- **Gujarat and Maharashtra** lead in rooftop solar installations, while residential sectors make up only 20% of the total.
- India's potential for rooftop solar is about 796 GW, with 250 million households capable of installing up to 637 GW.
- Overall solar capacity reached **73.31 GW by** December 2023, led by **Rajasthan and Gujarat**.

Rooftop Solar Systems in India: Key Benefits

- **Reduces electricity bills:** Benefits both the poor and middle classes.
- **Promotes energy self-reliance:** Helps India become self-reliant in the energy sector.
- **Enhances energy security:** Diversifies energy sources and reduces dependence on fossil fuels.
- **Supports environmental sustainability:** Reduces greenhouse gas emissions and pollution.
- **Increases energy access:** Targets individual households, especially in rural and remote areas.
- **Fulfils international commitments:** Aligns with India's international efforts to increase non-fossil fuel-based energy sources.
- **Creates opportunities for economic growth:** Creates jobs and technological innovation.
- **Provides uniform distribution of solar potential:** Can be installed across all states and regions.

Challenges in the Implementation of Pradhan Mantri Suryodaya Yojana:

Challenges	Details
Free electricity issue	The provision of free electricity by many states discourages people from adopting rooftop solar systems.
Financial Constraints for DISCOMs	Discoms foresee losses due to the net metering system, as they already incur fixed costs and pay contracted charges to power generators.
	Fear of increased costs for discoms due to compensating consumers for absorbing power from rooftop solar plants.

The limited success of previous schemes	The rooftop solar program fell short of expectations, achieving only about 11 GW by December 2023, compared to the 40 GW target.
	The majority of capacity is contributed by commercial and industrial consumers, with limited adoption by households.
Flip-Flopping Policies	GST hike on solar system components increases capital cost, affecting the attractiveness of rooftop solar.
Regulatory Framework	Slow growth due to the absence or withdrawal of state-level policy support, especially for business and industrial segments
Inconsistent Rules on Net and Gross Metering	Power ministry's new rules exclude rooftop solar systems above 10 kW from net-metering, potentially stalling the adoption of larger installations.
Low Financing	Banks advised by MNRE to offer loans for rooftop solar at subsidized rates, but nationalized banks have limited offerings. Private players in the market offer loans for rooftop solar at higher rates, up to 10-12%, posing financing challenges for adoption.

Rooftop Solar Future Strategies:

- Increase long-term solar benefits awareness.
- Offer incentives or subsidies to offset installation costs.
- Review net metering policies for fair compensation.
- Establish stable regulatory frameworks for stakeholder certainty.
- Empower distribution companies for greater solar penetration.
- Develop innovative financing mechanisms for rooftop solar projects.

About Pradhan Mantri Suryodaya Yojana:

About	Description
Name of the Scheme	Pradhan Mantri Suryodaya Yojana
Objective	Aims to provide 300 units of free electricity monthly to 1 crore households through rooftop solar setups
Definition of Rooftop Solar Panels	Photovoltaic panels installed on building rooftops connected to the main power supply unit
Subsidies	60% of installation costs are covered for 2 kW systems. 40% of installation costs covered for systems of 2-3 kW capacity

National Portal	It will facilitate subsidy applications and assist in finding a suitable vendor for installing rooftop solar. Additionally, it will aid decision-making by providing relevant information as needed.
Related Government Initiatives	The Rooftop Solar Programme was launched in 2014. Aims for 40 GW rooftop solar capacity by 2022 (deadline extended to 2026). Pradhan Mantri Suryodaya Yojana complements efforts to achieve the 40 GW target
Other Government Initiatives to Harness Solar Energy	National Solar Mission ; Solar Park Scheme ; Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM) ; Surya Mitra Skill Development Programme; International Solar Alliance

Insta Links:

[Rooftop solar scheme](#)

Mains Links:

Q. India has immense potential for solar energy though there are regional variations in its developments. Elaborate. (UPSC 2020)

Prelims Links:

With reference to solar power production in India, consider the following statements: (UPSC 2018)

1. India is the third largest in the world in the manufacture of silicon wafers used in photovoltaic units.
2. The solar power tariffs are determined by the Solar Energy Corporation of India.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Ans: D

‘Net metering’ is sometimes seen in the news in the context of promoting the (UPSC 2016)

- (a) production and use of solar energy by households/consumers
- (b) use of piped natural gas in the kitchens of households
- (c) installation of CNG kits in motor cars
- (d) installation of water meters in urban households

Ans: A

Consider the following statements: (UPSC 2016)

1. The International Solar Alliance was launched at the United Nations Climate Change Conference in 2015.
2. The Alliance includes all the member countries of the United Nations.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Ans: A

Consider the following statements: (UPSC 2022)

1. Gujarat has the largest solar park in India.
2. Kerala has a fully solar-powered International Airport.
3. Goa has the largest floating solar photovoltaic project in India.

Which of the statements given above is/are correct?

- (a) 1 and 2
- (b) 2 only
- (c) land 3
- (d) 3 only

Answer: B: 2 only

44. ISSUES WITH INDIA'S FOREST CONSERVATION

Context:

The [article](#) discusses that the **exploitation of forest resources** due to uncontrolled and unsustainable practices has **degraded forest landscapes**.

The [UN's Decade of Ecosystem Restoration \(2021-2030\)](#)

has sparked global tree-planting initiatives, but they face criticism for limited community involvement, poor post-planting care, forest encroachment, and reduced carbon sequestration and biodiversity.

Status of Forests in India:

Definition of Forest: 1996 **Godavarman Judgement** defines “forest” as any land recorded as such in government records or meeting the dictionary definition, which describes a forest as **“a large area covered with trees and undergrowth”** according to the Oxford Dictionary.

As per, the India State of Forest Report 2021:

1. **India's forest and tree cover constitutes 24.62%** of its geographical area, with forests covering **21.71%** and tree cover **2.91%**.
2. **Madhya Pradesh has the largest forest cover** by area, followed by Arunachal Pradesh, Chhattisgarh, Odisha, and Maharashtra.
3. **Mizoram, Arunachal Pradesh, Meghalaya, Manipur, and Nagaland** have the highest forest cover as a percentage of the total geographical area.
4. **States like Andhra Pradesh, Telangana, Odisha, Karnataka, and Jharkhand** have shown a positive change in forest cover, while others like Arunachal Pradesh, Manipur, Nagaland, Mizoram, and Meghalaya have experienced a decline.

5. India ranks third globally for net gain in average annual forest area between 2010 and 2020, with more than half of the world's forests located in Russia, Brazil, Canada, the United States, and China.

Significance of Trees:

Significance	Data/Example
Biodiversity Conservation	47,000 plant species and 81,000 animal species (7% and 6.5% of global flora and fauna)
Climate Change Mitigation	Forests absorb 15% of India's CO ₂ emissions (2016). Pledge to create an additional carbon sink of 2.5-3 billion tonnes CO₂ equivalent by 2030. Green India Mission aims to increase forest cover by 5 million hectares.
Livelihood Support	Over 250 million people, including tribal communities, depend on forests. Forest Rights Act and Van Dhan Yojana enhance forest-based livelihoods. E.g., Madhya Pradesh's Tendu Patta collection benefits tribal people.
Ecosystem Services	Provides air purification, soil conservation, and pollination worth trillions of rupees. Economics of Ecosystems and Biodiversity (TEEB) Initiative influences policies.
Cultural and Spiritual Significance	Supports traditional knowledge and practices. Sacred groves recognized under Biological Diversity Act . Documentation of traditional ecological knowledge in the Nilgiris Biosphere Reserve .

Major Challenges Faced by Forests in India:

Challenge	Details
Deforestation & Degradation	Loss due to development, mining, and agriculture. Forest Survey of India (2021) reported a 1,582 sq km decrease in moderately dense forests.
Human-Wildlife Conflict	Shrinking habitats lead to conflicts, with 500+ people and 100+ elephants dying annually.
Plantation vs. Conservation	Monoculture plantations harm biodiversity and ecosystem health, often lacking post-planting care and monitoring.

Legislative Loopholes	Amendments to the Forest Conservation Act, 1980 , potentially open vast areas to deforestation.
Climate Change	Forests face altered precipitation patterns , fires, and pest outbreaks, e.g., 2024 Uttarakhand fires.
Invasive Species	Species like Lantana camara in Western Ghats and Senna spectabilis in Mudumalai Tiger Reserve threaten native biodiversity.
Funding Issues	CAMPA funds for afforestation face underutilization and misallocation.
Shrinking Corridors	Wildlife corridors like Kaziranga-Karbi Anglong and Kanha-Pench are disappearing, affecting animal movement and genetic diversity.
Low Community Participation	Local community involvement ensures long-term sustainability.
Other India-Specific Challenges	Nearly 10 million hectares of India's forests are affected by encroachment.
	Approximately 275 million people rely on forests for their basic needs and livelihood.
	Since independence, about 5.7 million hectares of forest land have been repurposed for non-forestry uses .
	India faces the daunting task of restoring 26 million hectares of degraded forests by 2030 .

What is the Initiative Taken for the Ecosystem Restoration?

- Decade of Ecosystem Restoration (2021-2030):** The UN aims to restore 350 million hectares of degraded land to enhance ecosystem services and sequester 13-26 gigatons of greenhouse gases.
- Van Mahotsava in India:** Launched in 1950 by K.M. Munshi, this annual tree-planting festival occurs in the first week of July, promoting forest growth and engaging public participation.
- Global Tree Planting Initiatives:** The "One Trillion Trees Initiative" by the World Economic Forum aims to massively increase global tree cover.
- The "Great Green Wall"** of China, aimed at reducing desertification.

5. **The “Bonn Challenge”**, which has a target of restoring 150 million hectares by 2020 and 350 million hectares by 2030.

Way Forward for Forest Conservation in India

1. **Diverse Plantations**: Limit monoculture; diversify native species.
2. **Urban Greening**: Improve air quality, reduce heat islands in cities.
3. **Long-Term Commitment**: Ensure long-term nurturing and care of saplings.
4. **Integrated Landscape Management**: Holistic conservation beyond protected areas.
5. **Technological Integration**: Use advanced tech for forest monitoring.
6. **Community-Centric Models**: Scale up successful community forest management.
7. **Green Finance**: Innovative financing for conservation.
8. **Urban Forestry**: Comprehensive urban biodiversity and green infrastructure.
9. **Strengthening Governance**: Modernize forest departments and build capacity.
10. **Sustainable Livelihoods**: Promote eco-friendly forest-based livelihoods.
11. **Restoration of Degraded Forests**: Nationwide ecological restoration program.
12. **Indigenous Seed Banks**: Preserve local biodiversity for restoration.
13. **Drone-Seeding**: Use drones for reforestation in difficult terrains.
14. **Combating Forest Fires**: Preventative measures, early detection, and rapid response

Insta Links:

- **Forest Conservation Amendment Act 2023: Impact on Indigenous Communities**

Mains Links:

Q. “The most significant achievement of modern law in India is the constitutionalization of environmental problems by the Supreme Court.” Discuss this statement with the help of relevant case laws. (UPSC 2022)

Q. “Policy contradictions among various competing sectors and stakeholders have resulted in inadequate ‘protection and prevention of degradation’ to the environment.” Comment with relevant illustrations. (UPSC 2018)

Prelims Links:

Consider the following statements: (UPSC 2019)

1. As per recent amendment to the Indian Forest Act, 1927, forest dwellers have the right to fell the bamboos grown on forest areas.
2. As per the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006, bamboo is a minor forest produce.
3. The Scheduled Tribes and Other Traditional Forest

Dwellers (Recognition of Forest Rights) Act, 2006 allows ownership of minor forest produce to forest dwellers.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 3 only
- (d) 1, 2 and 3

Ans: B

45. ECONOMIC SURVEY AND BUDGET: GLOBAL APPROACH TO CLIMATE CHANGE AND INDIA’S PERSPECTIVE

Context:

The **Economic Survey 2023-24** highlights the flaws in the current global approach to climate change, **emphasizing the need for developing countries to adopt a localized perspective in their climate strategies.**

Definition and Historical Instances

The current global approach to climate change predominantly **focuses on reducing carbon emissions through renewable energy adoption**, energy efficiency, and cutting methane emissions. Historically, this approach has been **shaped by developed nations**, often neglecting the **socio-economic and geographical challenges** faced by developing countries like India.

How the global approach to climate change is flawed:

Aspect	Issue
Inadequate Funding	Only USD 100 billion was pledged by developed countries till 2020, far short of the approximately USD 6 trillion which developing countries need by 2030 to meet half of their climate targets.
Ignoring Per Capita Emissions	Developing countries like India, despite having low per capita emissions and a minimal cumulative historical contribution to global emissions (4% from 1850-2019), are urged to take greater responsibility for emissions reduction.
Overestimating Risks	The global approach often overestimates the risks associated with nuclear energy , which is one of the cleanest and safest options. Public fear, fueled by rare accidents like Chernobyl and Fukushima, hinders its broader adoption.
High-Energy Technologies	Developed countries are increasing their energy infrastructure to support energy-intensive technologies such as artificial intelligence, which exacerbates energy demand and emissions.

Overconsumption	Developed nations focus on <u>substituting means to achieve high consumption rather than addressing the root cause of overconsumption</u> , leading to higher fossil fuel usage despite climate change mitigation goals.
Example of Overconsumption	Meat Production: Developed countries' practices threaten food security and degrade resources by creating ' <u>food-feed competition</u> .' Traditional farming in developing nations reduces costs and balances the natural cycle, freeing arable land to combat global hunger.
Resource-Intensive Renewables	Transitioning to renewable energy involves <u>significant environmental costs due to the extraction of rare earth metals required for solar panels and wind turbines</u> . This process is often destructive and energy-intensive, contradicting the objectives of clean energy.
Intermittent Renewable Sources	Renewable energy sources like <u>solar and wind are intermittent, requiring substantial storage capacities</u> to ensure a stable power supply. This necessitates additional resource extraction for battery production, further impacting the environment.
Financial Burden on Developing Countries	Developing countries face a <u>significant financial burden in transitioning to cleaner energy sources</u> . The limited financial support from developed nations makes it challenging for countries like India to invest in the necessary clean energy infrastructure and technology.
Lack of Holistic Approach	The current global strategy <u>primarily focuses on technological solutions without addressing lifestyle</u> changes and reduced consumption in developed countries, which are essential for sustainable climate action.
Housing	<u>Western nucleated families lead to urban sprawl and high environmental costs.</u> Vs India: Traditional multi-generational households in India promote sustainable living with local materials, natural ventilation, and lower resource use, benefiting the elderly and reducing energy consumption.

India's Climate Action Progress

1. **Carbon Sink:** India has created a carbon sink of approximately **1.97 billion tonnes** of CO₂ equivalent between 2005 and 2019, with plans to add an additional **2.5 to 3.0** billion tonnes by 2030 through enhanced forest and tree cover.
2. **Emissions Intensity Reduction:** India aims to reduce the emissions intensity of its GDP by 45% by 2030 from the 2005 level.
3. **Mission LIFE:** Focuses on behavioral changes among individuals to combat climate change, promoting mindful consumption over overconsumption.

Benefits and Drawbacks of India's Climate Actions

Benefits:

1. **Sustainable Development:** Integrating traditional farming practices and multi-generational households promotes sustainable living and reduces environmental costs.
2. **Economic Growth:** Investing in renewable energy and energy efficiency projects can drive economic growth while reducing emissions.

Drawbacks:

1. **Financial Burden:** The transition to cleaner energy sources requires significant investment, which is challenging given the current financial support from developed nations.
2. **Technological Challenges:** Renewable energy sources like solar and wind are intermittent and require substantial storage capacities, which are resource-intensive.

Suggested Actions

1. **Develop a Climate Finance Taxonomy:** As announced in the Union Budget 2024-25, this system will classify sustainable investments, guiding investors and banks to direct capital towards impactful climate adaptation and mitigation projects.
2. **Promote Small-Scale Renewable Projects:** Focus on small-scale solar and wind projects suited to India's unique context, improving energy efficiency in industries, and promoting sustainable agricultural practices.
3. **Advocate for Equitable Climate Policies:** Push for more equitable climate policies that hold developed nations accountable for their historical emissions and current consumption patterns.

About Climate Finance Taxonomy (presented in Union Budget for 2024-25)

Definition: A classification system identifying which parts of the economy can be marketed as sustainable investments, guiding investors and banks to direct funds toward impactful climate change solutions.

Purpose: Taxonomies set standards for classifying cli-

mate-related financial instruments (e.g., green bonds) and serve other uses like climate risk management, net-zero transition planning, and climate disclosure.

Global Adoption: Countries such as South Africa, Colombia, South Korea, Thailand, Singapore, Canada, Mexico, and the European Union have developed taxonomies.

Significance:

1. **Aids countries in transitioning to a net-zero economy** by ensuring economic activities align with science-based transition pathways.
2. **Promotes climate capital deployment** and reduces greenwashing risks.
3. **Enhances capital availability** for climate adaptation and mitigation, helping countries like India achieve climate commitments and green transitions.

Way Forward:

The **Economic Survey 2023-24** and the **Union Budget 2024-25** emphasize that:

1. **India's climate strategy must balance developmental goals with meaningful climate action.**
2. India's strategy should focus on **sustainable development practices, individual responsibility, and equitable climate policies.**
3. India needs to **advocate for climate justice**, ensuring that global strategies are accommodative of its unique socio-economic context.

About Mission LiFE:

Topic	Details
	 Mission LiFE (Lifestyle for Environment) (launched in Oct 2022) is a global movement initiated by India to promote an environmentally conscious lifestyle.
Need	Addressing environmental degradation and climate change at the individual and community level
Aim	It aims to replace mindless consumption with mindful utilization and encourages individuals and communities to undertake climate-friendly actions in their daily lives.
Approach	Focus on individual behaviours, co-create globally, leverage local cultures
Objectives	Promote environmentally conscious lifestyle , nudge individuals to undertake climate-friendly actions, create a global network of Pro-Planet People (P3)
Example	Promoting Sustainable Transportation: Encouraging individuals to use public transport, carpooling, cycling, or walking instead of private vehicles to reduce carbon emissions and promote a greener commute.
Other related initiatives	Glasgow Climate Meet (COP26), Panchamrit strategy, International Solar Alliance, National Action Plan on Climate Change, National Clean Air Programme (NCAP), National Biofuel Policy

Conclusion:

By **promoting sustainable consumption and leveraging its position** in the Global South, India can push for a more equitable and effective global climate strategy.

Mains Links:

Q. Write a note on Life mission and how it will help reduce global carbon emissions.

46. WORLD MANGROVE DAY: CONSERVATION SUCCESS IN INDIA AMIDST CHALLENGES

Context:

July 26 is International Day for Conservation of Mangrove Ecosystems, declared by UNESCO **to raise awareness and promote sustainable management of mangroves**, vital for coastal protection, storm mitigation, and carbon sequestration.

About International Day for the Conservation of the Mangrove Ecosystem

Celebrated annually on July 26, this day aims to raise awareness about the importance of mangrove ecosystems and promote sustainable management and conservation solutions. It was established by **UNESCO in 2015**.

About Mangroves:

- Mangroves are **salt-tolerant plant communities** found in **tropical and subtropical intertidal regions**. They are **important refuges of coastal biodiversity** and act as **bio-shields** against **extreme climatic events**.
- They are located in the intermediate zone between the land and the sea and **represent one of the best examples of ecotone**.

The IUCN Red List of Ecosystems (RLE) has assessed mangrove ecosystems globally for the first time, revealing alarming findings.

1. **Half of the assessed global mangrove ecosystems** are at risk of collapse, with nearly 20% classified as high risk.
2. **Major threats include** climate change, deforestation, development, pollution, and dam construction.
3. **Climate change alone jeopardizes one-third of assessed mangrove**
4. **Sea-level rise** is predicted to submerge 25% of global mangrove area in the next 50 years.
5. **Without significant intervention, by 2050**, climate change and sea-level rise could lead to the **loss of 1.8 billion tonnes of stored carbon** and **expose 2.1 million lives** to coastal flooding.
6. **Indian mangroves vary in status:** Andaman and Bay of Bengal are classified as Least Concern, while South India is Critically Endangered, and West India is Vulnerable.

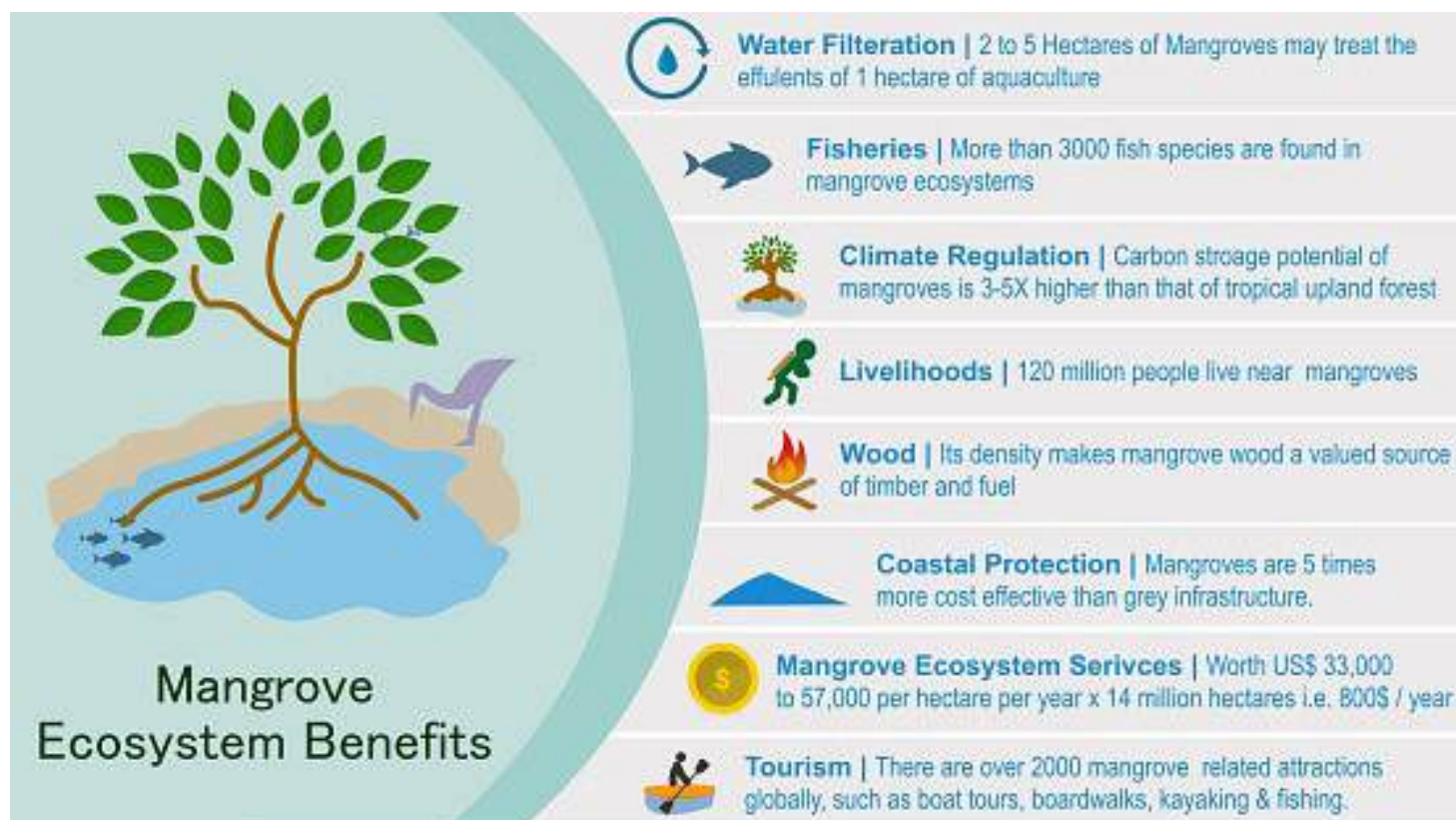
Mangroves in India

- The **'State of World Mangroves 2022'** report by the **Global Mangrove Alliance** puts the total mangrove cover of the **world at 1,47,000 sq km (14.7 million hectares)**.

- **Mangroves** make up only about **0.15% of India's** land area but provide numerous benefits to coastal communities over its vast coastline (**spanning 7516km**)
- Mangroves in India are distributed **across nine States and three Union Territories with West Bengal having the highest mangrove cover of 2,114 sq km.**
- The IFSR report also points out that there **has been an increase in the mangrove cover from 4,046 sq km in 1987 to 4,992 sq km in 2021.**
- However, the **National Decadal Wetland Change Atlas (2022)** indicates a decline in natural coastal wetlands, with intertidal mudflats and salt marshes reducing significantly.

Benefits of Mangroves for India:

Benefits	Examples
Coastal Protection	Mangroves act as natural barriers against erosion, storms, and cyclones. They reduce wave impact, protecting coastal areas from damage.
Flood Mitigation	Mangroves stabilize sedimentation and help mitigate coastal flooding. In the Sundarbans region, mangroves help prevent inland flooding during monsoon seasons.
Biodiversity Habitat	Mangroves provide critical habitats for various plant and animal species, including endangered ones like the Bengal tiger and the Ganges river dolphin. E.g., Sundarbans, the world's largest mangrove forest, hosts a diverse range of species, supporting biodiversity.
Livelihood Support	Mangroves contribute to the livelihoods of fisher communities. Programs in the Sundarbans demonstrate how involving local communities can lead to sustainable livelihoods for fisher-folk.
Water Quality Improvement	Mangroves act as natural filters, trapping sediments, pollutants, and excess nutrients. They improve water quality and benefit marine ecosystems.
Climate Change Mitigation	Mangroves absorb and store carbon dioxide (CO2) from the atmosphere, aiding in climate change mitigation.
Resilience to Climate Change	Mangroves show adaptability to sea-level rise and increased storm intensity. They recover relatively quickly from climate-related impacts.



Initiatives for Mangroves:

Global:

1. **Mangrove Breakthrough:** Introduced at UNFCCC COP27 by UN High-Level Climate Champions and Global Mangrove Alliance (GMA).
2. **Global Mangrove Alliance (GMA)** was established at the World Ocean Summit in 2018.
3. **Mangrove Alliance for Climate:** Led by UAE in collaboration with Indonesia.

India:

1. **Mangrove Initiative for Shoreline Habitats & Tangible Incomes (MISHTI)**
2. **Conservation and Management of Mangroves and Coral Reefs** under the National Coastal Mission Programme
3. **Amrit Dharohar:** To revive and conserve wetlands, and enhance biodiversity, eco-tourism, and livelihoods of local communities.
4. **Maharashtra** even established a separate **Mangrove Cell** for focused conservation.

Conclusion:

Effective mangrove conservation requires a holistic approach, incorporating climate risk management, broader ecosystem health, and inclusive community involvement. The **National Coastal Mission** aims to drive these changes, ensuring mangroves and coastal ecosystems thrive amid environmental challenges.

Mains Link: UPSC 2019

Q. Discuss the causes of the depletion of mangroves and explain their importance in maintaining coastal ecology. (15M)

Prelims Link: UPSC 2011

The 2004 Tsunami made people realize that mangroves can serve as a reliable safety hedge against coastal calamities. How do mangroves function as a safety hedge?

- (a) The mangrove swamps separate the human settlements from the sea by a wide zone in which people neither live nor venture out.
- (b) The mangroves provide both food and medicines which people are in need of after any natural disaster.
- (c) The mangrove trees are tall with dense canopies and serve as an excellent shelter during a cyclone or Tsunami.
- (d) The mangrove trees do not get uprooted by storms and tides because of their extensive roots.

Solution: D

Q. Which one of the following regions of India has a combination of mangrove forest, evergreen forest and deciduous forest? (UPSC 2015)

- (a) North Coastal Andhra Pradesh
- (b) South-West Bengal

- (c) Southern Saurashtra
- (d) Andaman and Nicobar Islands

Ans: (d)

Topics: Disaster and management.

47. HATHRAS STAMPEDE: CAUSES AND PREVENTION

Context:

The **Hathras stampede**, which tragically claimed over 100 lives, highlights the multifaceted causes and necessary prevention measures for such disasters.

What is a Stampede?

A stampede is a sudden, impulsive mass movement resulting in injuries and deaths due to overcrowding, panic, or perceived danger. According to the **National Crime Records Bureau figures, from 2000 to 2013**, almost **2,000 people** died in stampedes in India.

Key Factors Behind Stampedes:

1. **High Crowd Density**
2. **Panic and Fear**
3. **Poor Crowd Control and Management**
4. **Venue Design and Layout**
5. **Environmental Conditions**
6. **Event Characteristics**
7. **Human Behaviour**
8. **Lack of Communication**

Outcomes of Stampede:

1. **Causes of Death:** Primarily traumatic asphyxia, heart attacks, crushing injuries, and head or neck injuries.
2. **Psychological Triggers:** Panic and the breakdown of cooperative behaviour; crowd members pushing to avoid danger or achieve gratification.
3. **Physical Factors:** Poor design, blocked exits, lack of lighting, and high crowd density increase the risk.

Causes:

Stampedes in India are **primarily caused by structural failures**, such as collapsing makeshift bridges and narrow streets with few exits, as well as fire and electrical issues, like unauthorized fireworks and faulty equipment. **Crowd behaviour** also contributes significantly, with panic triggered by rumours or competition, as seen in the Hathras Stampede. **Security issues**, including under-deployment of staff and lack of surveillance, exacerbate the problem. Additionally, **poor coordination among agencies** and inadequate infrastructure and resources hinder effective crowd management.

Ever Wondered?

If Stampedes are a new to the world? Well, NO ...

1. **Moscow (1896):** Over 1,000 deaths due to a rumour-driven surge.
2. **Allahabad (1954):** Around 800 deaths at Kumbh Mela from poor planning and crowd control.
3. **Lima (1963):** 326 deaths during a football match due to panic from tear gas.
4. **Wai (2005):** Over 340 deaths at a temple due to slippery steps.
5. **Mina (2015):** Estimates range from 769 to over 2,000 deaths during Hajj pilgrimage from intersecting crowds.
6. **Mata Vaishnav Devi Shrine (2022):** The Stampede at the Mata Vaishno Devi Shrine resulted in the death of 22 people and injured 32.

NDMA Guidelines for Crowd Management:

1. Understanding venue, visitors, and stakeholders:

- a. Event type (religious, educational, sports, music, political)
- b. Expected crowd demographics (age, gender, economic status)
- c. Crowd motives (social, academic, religious, entertainment)
- d. Venue details (location, terrain, open/closed space)
- e. Other stakeholders (NGOs, local community, administrators)

2. Crowd Handling:

- a. Traffic regulation around venues
- b. Clear route and emergency exit maps
- c. Barricades for crowd control
- d. Queue management with snake line approach
- e. VIP visitor management and discouraging general admissions

3. Safety and Security:

- a. Authorized use of electricity and fire safety measures
- b. CCTV surveillance and use of mini -UAVs for large crowds

4. Communication: Public address system for crowd communication

5. Medical and Emergency Care: First-aid rooms and emergency operations centres

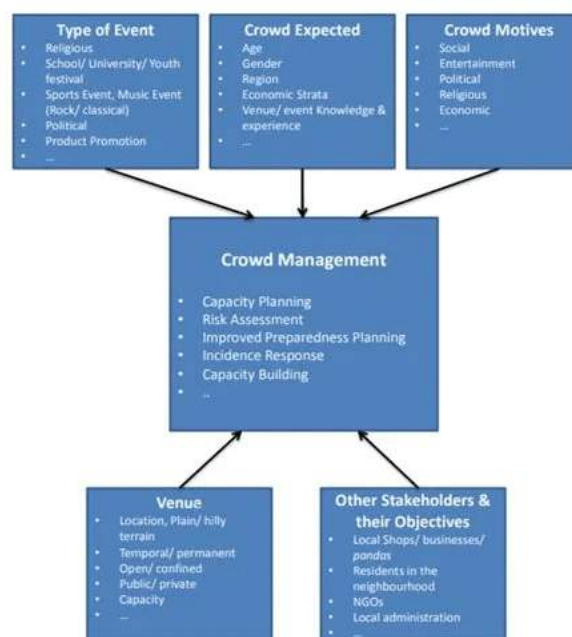
6. Role of Event Managers: Developing, implementing, and reviewing disaster management plans

7. Role of Civil Society: Involvement of NGOs in traffic control, medical aid, and disaster response

8. Role of Police: Venue assessment, crowd guidance, and traffic management

9. Role of Media: Educational role in disaster awareness; Critical role in evaluating disaster plans

10. Capacity Building: Training and assessment of security personnel and police



Use of ICT in crowd management:

ICT for Disaster mitigation and Prevention	ICT in Disaster response and relief
Technology • GIS, Remote Sensing • Radio, Television, telephone • SMS, UMS, Cell Broadcasting, Internet/Social Media • RFID • Space based sensors and balloons	Technology • PA system, SMS, UMS, Cell Broadcasting, Inter-operability of mobile service providers • Emergency lighting, alarms • RFID Tags • Registration database software • Space based sensors and balloons
Typical Usage • Early warning system, Potential Risks, Vulnerabilities • Registration of visitors, Virtual Queues, RFID • Information dissemination • To regulate flow of visitors • Prepositioning of resources	Typical Usage • To ensure rumours do not spread • Registering missing persons • Search and rescue • Keeping track of relief organizations, Camps of displaced persons • Insurance processing • Resource inventory management

Conclusion:

Moving forward, India must enact comprehensive legislation addressing tortuous liability, following the Supreme Court's observations after the Uphaar Cinema Tragedy. Emphasis should be placed on specialized training, effective communication, and stringent safety measures to maintain professionalism in managing large events.

Insta Links:

- [Crowd management in temples](#)

Mains Links:

Q. Discuss the recent measures initiated in disaster management by the Government of India departing from the earlier reactive approach. (UPSC 2020)

48. RISING FLAMES: THE GLOBAL SURGE IN WILDFIRES

Context:

Arctic wildfires have become more frequent and intense due to global warming, causing significant environmental concerns. In 2024, over 160 wildfires in Sakha, Russia, burned nearly 460,000 hectares.

Why Arctic is prone to wildfires?

- Rapid warming, four times faster than global average, leads to more frequent lightning strikes.
- Lightning strikes in Alaska and Northwest Territories doubled since 1975, escalating wildfires.
- Polar jet stream slows due to reduced temperature differences, causing prolonged warm weather and intense heatwaves.

Climate Change's Impact on Arctic Heatwaves and Wildfires

- Geographical Change: Climate change splits jet streams, creating areas of weak winds and high pressure.
- Global Warming: Human activities have increased global temperatures by 1.2°C since pre-industrial times, causing extreme heat events.
- Creating Ground: Climate change creates hot, dry conditions, accelerating fire spread and burning longer.
- Other Factors: Forest management and human activities contribute to wildfires. Controlled burns and forest gaps can limit severe fires.



Impact of Increased Heatwaves and Wildfires

- Threat to life and property: Heatwaves and wildfires can cause severe droughts, water crises and also poses a direct threat to people's lives and property as it forces people to leave their homes. Ex-France.
- Pollution: Wildfires release pollutants like Nitrous oxide,

Co₂, PM 2.5, and particulate matter, potentially leading to cardiovascular and respiratory diseases.

- Health-related issues: Heatwaves can cause dehydration, heat cramps, heat exhaustion, and heat stroke.
- Vicious cycle: Wildfires release smoke, methane, and carbon dioxide, increasing temperatures.
- Threat to biodiversity: These events destroy habitats and ecosystems, leading to loss of biodiversity. Ex - Florida's sea turtles are experiencing a gender imbalance due to climate change, which is exacerbated by hotter sand beaches, resulting in every turtle being born female.

Various steps taken by countries to mitigate its impact:

Country	Steps Taken
USA	The US Senate passed a \$430 billion bill to fight climate change and raise corporate taxes.
Japan	Initiated research for a green GDP measurement reflecting progress in reducing greenhouse gas emissions.
Germany	The European Commission approved a €3 billion scheme to support renewable energy and waste heat-based district heating programmes.
India	Approved new targets for slashing emissions and aims to meet half of its energy demands from renewable sources by 2030.

Measures for Fire Risk Reduction

- Enhancing community information and preparedness.
- Improving development planning, building standards, and forest-urban boundary management.
- Utilising Forest dryness information for early fire warning and preparedness.
- Implementing national and local measures for global greenhouse gas mitigation.
- Curtailing greenhouse gas emissions to reduce climate change's contribution to fire risk.

Conclusion

Climate change is happening. This should be accepted and not politicised. International cooperation to address climate change is vital to mitigate the adverse impact. Additionally, mitigation must be complemented with climate change-related adaption since mitigation alone cannot address the adverse effects we are facing right now.

Insta Links

- [Forest Fires](#)

Practice Questions

Q. Enumerate the causes for the rising instances of forest fires in India. What measures are needed to mitigate the adverse impacts of forest fires? (250 Words)

49. ASSAM FLOODS: WHY GANGA- BRAHMAPUTRA REGION IS FLOOD PRONE?

Context:

Six more people died in Assam floods, raising the toll to 58. Over 24 lakh are affected across 30 districts, with rivers flowing above danger levels.

The floods in Assam have led to severe consequences:

1. **Loss of Wildlife:** Over 130 wild animals, including 6 rare one-horned rhinos in Kaziranga National Park, have died. Other casualties include 117 hog deer, 2 sambar deer, a rhesus macaque, and an otter. Kaziranga hosts the world's largest population of one-horned rhinos.
2. **Infrastructure Damage:** Extensive damage to roads and infrastructure has hindered rescue and relief efforts.
3. **Displacement of People:** More than 2 million people have been displaced, forcing many to seek shelter in relief camps, straining resources and management.

What is Ganges-Brahmaputra Delta?

The **Ganges-Brahmaputra Delta**, encompassing the states of Assam, Bihar, and West Bengal and covers more than 105,000 km². It stands as a geographical marvel with its intricate river networks. However, this deltaic region is not just a testament to natural beauty but also bears the brunt of annual floods



Key factors contributing to the vulnerability of the Ganges-Brahmaputra Delta to annual floods:

Natural Factors:

1. **Heavy Rainfall and Monsoon Intensity:** The region experiences intense monsoon rains, often exceeding 2,500 mm annually, leading to rapid riverine rises and flash floods.
 - **Eg:** These rivers drain 75% of the total basin runoff in only 3 months of the monsoon.

2. **Riverine Morphology:** The Brahmaputra River has a highly dynamic and shifting course, prone to erosion and channel avulsion (sudden change in course), increasing flood risks.
 - **Eg:** The course of the Brahmaputra River has changed dramatically over the past 250 years, of 80 km from east of the Madhupur tract (Bangladesh) to the west of it.
3. **Tectonic Activity:** The region lies in a seismically active zone, and earthquakes can trigger landslides and disrupt river courses, exacerbating flood events.
 - **Eg:** Earthquakes of 1897 and 1950 in Assam increased flood frequency in the delta due to subsidence.
4. **Tidal influence:** The Ganges Delta experiences high tides, creating backwater effects that impede drainage and worsen flood inundation.
5. **Cyclonic impact:** The delta region is prone to cyclones, with an average of 4-5 cyclones making landfall every year.
 - **Eg:** 2021 Cyclone Yaas caused massive floods.

Anthropogenic Factors for Floods:

- **Deforestation and Land Use Changes:** Increases soil erosion and sediment load in rivers, causing overflows. Eg: Sundarbans flooding
- **Encroachment on Floodplains:** Blocks natural drainage and reduces buffer zones, amplifying flood impacts. Ex - Bihar floods from are particularly severe due to encroachment of floodplains.
- **Inadequate Drainage and Infrastructure:** Choked rivers and dilapidated embankments lead to widespread inundation. Ex - Inadequate and weak embankments are annually breached in Bihar-West Bengal floods.
- **Poor Urban Planning:** Increases runoff and exposes more people to risks.

Mitigating Flood Risks:

- **Implementing Early Warning Systems:** Advanced systems like Flood Early Warning System (FLEWS) in Assam provide timely alerts for evacuation and preventive measures.
- **Eco-Restoration:** Comprehensive initiatives like reforestation and wetland conservation enhance natural drainage systems and reduce vulnerability.
- **Infrastructure Development:** Investing in resilient infrastructure like embankments, flood shelters, and drainage systems to protect communities and assets. Eg - Coastal Embankment Improvement Project (CEIP) in Bangladesh part of the delta.
- **Community Engagement:** Fostering community-based initiatives for flood preparedness and involving local communities in planning and decision-making processes.
- **Climate-Resilient Agriculture:** Promoting climate-resilient agricultural practices and crop varieties to minimize flood impact on the agrarian economy. Ex - Integrated Rice-Fish Farming System (IRFFS) promoted by the World Food Programme.

NDMA Guidelines for Floods:

NDMA Guidelines	Details
Preparing for Floods:	Avoid building in flood-prone areas unless you elevate and reinforce your home. Elevate furnace, water heater, and electrical panel if susceptible to flooding. Install check valves in sewer traps to prevent flood water backup. Contact officials about flood barriers being constructed in your area. Seal basement walls with waterproofing compounds.
When a Flood is Likely:	Listen to radio/TV for information. Be aware of flash flooding - move to higher ground immediately if at risk. Be aware of areas known to flood suddenly.
If Evacuating:	Secure your home - bring in outdoor furniture, move items upstairs. Turn off utilities if instructed. Do not walk or drive through moving floodwater.

Conclusion:

As seen above, many factors are natural and inevitable to certain extent, thus, mitigating the risks associated with annual floods in the Ganges-Brahmaputra Delta requires a holistic and integrated approach that combines physical infrastructure, sustainable land-use practices, community engagement, and international cooperation.

Insta Links:

1. [Assam Floods](#)

Prelims Link:

Q. Which of the following is/are tributary/tributaries of Brahmaputra?

1. Dibang
2. Kameng
3. Lohit

Select the correct answer using the code given below:

- (a) 1 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

Ans: (d)

Q. With reference to river Teesta, consider the following statements:

1. The source of river Teesta is the same as that of Brahmaputra but it flows through Sikkim.
2. River Rangeet originates in Sikkim and it is a tributary of river Teesta.
3. River Teesta flows into Bay of Bengal on the border of India and Bangladesh.

Which of the statements given above is/are correct?

- (a) 1 and 3 only
- (b) 2 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

Ans: (b)

50. GOVERNMENT UNVEILS NATIONAL LANDSLIDE FORECASTING CENTRE

Context:

Union Minister G Kishan Reddy Inaugurates **National Landslide Forecasting Centre and Launches Bhusanket Web Portal & Bhooskhalan Mobile App.**

What is National Landslide Forecasting Centre (NLFC)?

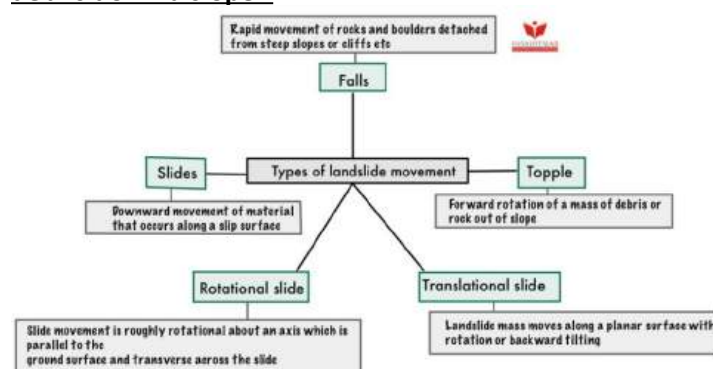
The **National Landslide Forecasting Centre (NLFC)** aims to **mitigate landslide hazards** in India. It provides **early warning bulletins for landslide-prone states** and plans to operationalize a nationwide **Landslide Early Warning System (LEWS) by 2030**

Other Initiatives:

1. **Bhusanket Web Portal:** Facilitates dissemination of information on landslide hazards and initiates short- and medium-range forecasting.
2. **Bhooskhalan Mobile App:** Provides quick daily landslide forecasts.
3. **Previously, IIT Delhi's HydroSense Lab** has created **India's first high-resolution landslide susceptibility map**

About Landslide:

A landslide is "**a movement of a mass of rock, earth or debris down a slope**".



Types of flows

1. **Debris flows:** rapid mass movements of loose soil, rock, organic matter, and slurry, often triggered by intense precipitation or snowmelt.
2. **Earth flow:** It is a **down-slope viscous flow of fine-grained material** saturated with water.
3. **Mudflow:** A mudflow is a **wet or viscous fluid mass** of fine and coarse-grained material that

flows rapidly along drainage channels.

4. **Creep:** Creep is the **slow, steady, downward movement of material** under gravity that occurs in a large area

India's Vulnerability to Landslides (as per ISRO's Landslide Atlas of India)

1. **Global Ranking:** India ranks among the **top five countries** globally prone to landslides, witnessing **at least one death per 100 sq km annually** due to such events.
2. **Primary Cause:** Rainfall variability, particularly in the **Himalayas and Western Ghats**, stands as the predominant cause of landslides in India.
3. **Geographical Vulnerability:** Excluding snow-covered areas, **over 12%** of the country's geographical land area is susceptible to landslides.
4. **Regional Breakdown:**
 1. **Over 66% of landslides** occur in the **North-western Himalayas**.
 1. **Rudraprayag and Tehri Garhwal districts** of Uttarakhand have the **highest landslide density and landslide risk** exposure in the country.
 2. About 19% are reported in the **North-eastern Himalayas**.
 3. The Western Ghats contribute to **over 14% of landslide events**.
5. **Impact in the Western Ghats:** Despite fewer occurrences, landslides in the Western Ghats pose significant risks, **especially in Kerala**, making inhabitants vulnerable to fatalities.

Causes of Landslides:

Causes of Landslides	Details
Heavy Rainfall	Excessive rainfall saturates the soil, increasing its weight and reducing cohesion. This weakens slopes, particularly during heavy rain, making them more susceptible to landslides.
Steep Slopes	Areas with steep terrain face greater landslide risk as gravitational forces act more intensely on sloping surfaces, especially during heavy rainfall or seismic activity.
Earthquakes	Seismic activity can disrupt slope balance, triggering landslides. Volcanic eruptions, such as pyroclastic flows, displacing soil and rock, also contribute to landslide occurrences.

Human Activities	Deforestation, mining, construction, and excavation alter landscapes, remove vegetation, and disturb slope balance. These activities weaken terrain stability, escalating the risk of landslides.
Underlying Geology	The type of rock and soil beneath an area influences landslide susceptibility. Loose, unconsolidated soil is more prone to landslides, while stable bedrock, typical in the Himalayan landscape, is less likely to experience such events.

Effects of landslides:

- **Loss of Life:** According to the **International Disaster Database (EM-DAT)**, over 50,000 fatalities worldwide due to landslides between 2000 and 2020, with Kedarnath disaster in Uttarakhand causing 6000 deaths.
- **Environmental Impact:** Soil erosion from landslides can affect water quality and aquatic life, as seen in Oso, Washington in 2014.
- **Infrastructure Disruption:** Landslides can block critical transportation routes, as seen in the **Chamoli disaster (2021)** that led to the blockage of the Rishi Ganga River and the destruction of various infrastructure in the region.
- **Property Damage:** The cost of repairing or rebuilding homes, infrastructure, and farmlands can be substantial.
- **Displacement:** The United Nations Office for Disaster Risk Reduction (**UNDRR**) reports that landslides triggered by **heavy rainfall in Nepal in 2020 displaced more than 9,000 households**, leaving many families without shelter.

Recent examples of landslide disasters in the past year:

- **Joshimath Sinking** in Uttarakhand
- **June 2023:** A landslide in the **Noney** district of **Manipur**, India, killed at least 58 people.
- **May 2023:** A landslide in **Rio de Janeiro, Brazil**, killed at least 232 people.
- **March 2023:** A landslide in **Putumayo, Colombia**, killed at least 323 people.

Government Measures for Landslide Impact Mitigation:

- **The National Landslide Susceptibility Mapping (NLSM) Programme** (initiated by the Geological Survey of India in 2014) aims to map landslide-prone areas across India
- Establish a nationwide repository on **GIS-based Landslide Inventory**
- The goal is to enhance **understanding, assessment, and management** of landslide-prone regions in the country through comprehensive

mapping and geospatial analysis.

- **National Remote Sensing Centre (NRSC)** under the Indian Space Research Organisation (ISRO) has released the **Landslide Atlas of India**, a detailed guide identifying Landslide Hotspots in the country.

NDMA Guidelines:

National Disaster Management Guideline on Management of Landslides and Snow Avalanches

1. **Hazard, Vulnerability & Risk Assessment:** Identify areas prone to landslide hazards and assess resources at risk
2. **Early Warning Systems:** Continuous monitoring of movements, stress development, and timely data transmission
3. **Investigations for Risk Assessment:** Multi-disciplinary investigations for comprehensive risk assessment leading to the formulation of standards to effectively mitigate the impact of landslides

Way Forward for Landslide Management in India:

Way Forward	Details
Landslide Monitoring	Involves deploying sensors, satellite imagery, and ground-based instruments for detecting ground movement and potential landslide precursors.
NHAI's Landslip Detection System	The National Highways Authority of India (NHAI) plans to install a landslip detection system on the Kochi-Dhanushkodi National Highway in Munar. The system, developed by IIT-Mandi, the Indian Army, and DRDO, aims to provide early warnings about landslips.
Landslide Hazard Maps	Generation of reliable landslide hazard maps using advanced tools like UAVs, Terrestrial Laser Scanners, and high-resolution Earth Observation (EO) data.
International Best Practices	Learning from Brazil's SNAKE System, a Landslide Early Warning System (LEWS), to incorporate digital monitoring, forecasting, and alert mechanisms.
Special Purpose Vehicle (SPV) for Landslide Management	Formation of an expert professional group at the national level to study and decide on risk mitigation strategies to recommend permanent fixes for identified landslide hotspots.

Awareness Programmes	Initiatives aimed at creating a culture of awareness, alertness and preparedness among the public.
Monitoring Construction and Development	Implementing strict monitoring of construction and developmental activities, such as roads and dams, in landslide-prone areas.
Limiting Agriculture and Settlements	Restricting agriculture to valleys and areas with moderate slopes, controlling large settlements in high vulnerability zones.
Afforestation and Water Flow Control	Promoting large-scale afforestation programs and constructing bunds to reduce water flow.
Encouraging Terrace Farming	Encouraging terrace farming, especially in northeastern hill states where Jhumming (Slash and Burn/Shifting Cultivation) is prevalent.

Conclusion:

Understanding the causes and effects of landslides is essential for disaster preparedness and mitigation efforts. **Implementing early warning systems, land-use planning, and sustainable land management practices** can help reduce the vulnerability of communities to landslide hazards. Moreover, international cooperation and sharing of knowledge and best practices are crucial in addressing the challenges posed.

About GSI:

The Geological Survey of India (GSI), established in 1851 under the Ministry of Mines, is a key scientific agency conducting geological surveys and studies. **Headquartered in Kolkata, GSI has six regional offices** and state units nationwide. Originally focused on **coal deposits for railways**, it now provides comprehensive geoscientific information, maps rock types, geological structures, and explores critical minerals, utilizing advanced techniques and collaborating with various stakeholders.

Insta Links:

- [Landslide Atlas of India](#)

Mains Link:

Q. Disaster preparedness is the first step in any disaster management process. Explain how hazard zonation mapping will help disaster mitigation in the case of landslides UPSC 2019

Q. Differentiate the causes of landslides in the Himalayan region and Western Ghats (UPSC 2021)

51. DROWNING: A NEGLECTED PUBLIC HEALTH CRISIS

Context:

The increasing frequency of drowning incidents globally (including the recent case of drowning in Rau's IAS base-ment library) highlights the need for comprehensive public health interventions and policy measures to prevent such tragedies.

What is Drowning?

It is defined as the process of experiencing respiratory impairment from submersion or immersion in liquid. It is a significant yet often overlooked cause of preventable deaths, particularly affecting children and marginalized communities.

As per the NCRB -Accidental Deaths and Suicides, eighty persons die of drowning each day in India, which accounts for 7.4% of all unnatural deaths.

Key Features:

- Causes:** Rising sea levels, urban flooding, unsafe water transport, and risky livelihoods.
- At-risk Populations:** Children, adolescents, forcibly displaced people, and individuals living in poverty.
- Types of Drowning Incidents:**
 - Unintentional drowning in natural water bodies.
 - Drowning during floods and natural disasters.
 - Drowning in urban settings due to poor infrastructure and safety measures.

Examples from India:

- IAS Coaching Centre, New Delhi (2024):** Flooding in the basement of a coaching centre led to the drowning of three IAS aspirants.
- 2024 Lonavala Waterfall Tragedy**
- Chennai Floods, 2015:** Flooding of basements damaged electric equipment, causing disruptions and deaths in a hospital due to the failure of emergency power generators.

Examples from the World:

- Florida, USA (May 2024):** An incident of Toddlers drowning in home swimming pools.
- Vietnam and Uganda:** Children drowning in rivers and lakes.
- India and Bangladesh:** Children drowning while travelling to school or near their homes.
- El Salvador:** Refugees and displaced people drown-ing during perilous journeys.

Drowning is a neglected public health crisis because:

- Lack of awareness:** Drowning is often under-rec-ognized as a critical public health issue, leading to insufficient funding and attention.

- E.g.** Swimming is neglected at the school level.
- Invisibility in health policies:** It is frequently exclud-ed from national health policies and priorities, over-shadowed by more visible health crises.
 - E.g.** No policy covers drowning as a health crisis.
 - Fragmented data:** Inadequate data collection and reporting on drowning incidents hinder effective policy-making and resource allocation.
 - E.g.** the Centre reported, there were 38,000 drowning deaths reported in 2023 in India.
 - Limited resources:** Resource constraints and competing health priorities result in limited invest-ment in drowning prevention measures and public education.
 - Complexity of solutions:** Addressing drowning requires multi-faceted solutions involving commu-nity engagement, infrastructure improvements, and education, which can be challenging to implement effectively.
 - E.g.** the Urban flooding of Chennai has tak-en many lives in the recent past.
 - Cultural and Social Barriers:** Resistance to safety regulations and lack of awareness.

Impact of Drowning:

Impact	Description	Examples
Health Impact	Mental trauma for survivors and families	Families of children who drown in village ponds suffer emo-tional distress.
Economic Impact	Loss of livelihood due to the death of breadwinners	Fishermen drown-ing in coastal areas affects household economies.
Social Impact	Disruption and insecurity in communities	Fear and disruption in rural villages where children drown in open water bodies.
Educational Impact	Loss of students and impacts on school atten-dance	Students in remote areas risk drowning while crossing rivers to school.
Infrastructural Impact	The strain on emergency and medical services	Urban flooding in cities like Mumbai requires extensive rescue operations.
Policy and Governance Impact	Highlighting the need for better safety regula-tions	The Delhi coaching centre tragedy under-scores the need for building safety codes.

Environmental Impact	Water contamination and environmental neglect	Drownings in polluted rivers like the Yamuna in Delhi reflect environmental hazards.
Public Health Impact	Outbreak of diseases due to drowning in contaminated waters	Chennai floods led to the spread of water-borne diseases due to contaminated waters.

Steps Taken:

1. Global Initiatives:

- WHO's Global Report on Drowning Prevention (2014).
- UN General Assembly resolution on drowning prevention (2021).

2. Country-specific Measures:

- **Vietnam:** Swimming lessons for children under the Swim-Safe curriculum.
- **Bangladesh:** Community-based childcare centres (**Anchal**) to supervise young children.

3. India's Strategic Framework for Drowning Prevention (2023):

- Emphasis on robust data collection.
- Multi-sectoral response including infrastructure improvements, transport safety, and public awareness campaigns.

Conclusion:

It is essential to incorporate **water safety education and swimming skills** into curricula for children and adolescents to mitigate risks. By prioritizing drowning prevention and enhancing safety measures, we can significantly reduce the incidence and impact of this often-overlooked issue.

Insta Links:

- [Urban Flooding](#)

[Topics: Various Security forces and agencies and their mandate.](#)

52. INDIA'S INDIGENOUS DEFENCE PRODUCTION

Context:

[India's indigenous defence production reached a record ₹1.27 lakh crore](#) in FY 2023-24, growing **16.7%** from the previous year, per the Defence Ministry.

What is Indigenous Defence Production?

Indigenous defence production refers to the **development and manufacturing of defence equipment and technology within a country's own borders**, using its own resources,

skills, and industries. This approach aims to achieve self-reliance and reduce dependence on foreign imports for defence needs.

According to the [Stockholm International Peace Research Institute \(SIPRI\)](#), India was the **world's largest importer of major arms between 2019 and 2023**, accounting for **9.8%** of global arms sales

Need for defence indigenisation:

- For self-reliance
- To reduce dependency on the foreign player and ensure the security of the nation
- To reduce the Balance of Payment deficit
- To promote employment and also exports
- To reduce the cost of production to India and thereby reduce fiscal deficit.

Key Highlights of India's Defence Production:

- **Over 79% of defence production** was contributed by DPSUs/PSUs, and nearly 21% by the private sector.
- Since 2019-20, the **value of defence production has increased by over 60%**.
- By 2028-29, annual defence production is expected to **reach ₹3 lakh crore**, with defence exports **hitting ₹50,000 crore**.

Background of Defence Indigenisation in India:

India's Shift from Soviet-Based to Indigenous Defence Industrialization

- Shifted from license-based production to R&D-focused defence industrialization in mid-1980s.
- 1983, IGMDP developed five missile systems: Prithvi, Akash, Trishul, Nag, and Agni.
- 1990 Self Reliance Review Committee's goal to boost self-reliance index from 30% to 70% by 2005 unmet.
- Insufficient indigenous efforts led to co-development and production with foreign partners, including 1998 India-Russia BrahMos missile agreement and collaborations with Israel and France.

Potential of Defence Indigenisation in India:

1. **Rising Demand:** The Indian defence manufacturing industry is growing due to national security concerns and ongoing territorial disputes with Pakistan and China.
2. **Growth Opportunities:** India's proactive foreign trade policies and joint defence manufacturing agreements with countries like the UAE, Kazakhstan, and the US offer significant growth potential.
3. **Experienced Industry:** India has the necessary manpower and industries, such as the Ordnance Factory and HAL, actively contributing to defence indigenisation. Three Indian companies (HAL, Ordnance Factory Board, BEL) are among the top 100 defence companies globally.
4. **Future Contracts:** The defence ministry estimates

potential contracts worth ~₹4 lakh crore (US\$ 57.2 billion) for the domestic industry in the next 5-7 years (2025-2027).

Success Achieved:

Key Achievements	Details
INS Vikrant Development	Millennium Aero Dynamics and Cochin Shipyard jointly developed and produced INS Vikrant , India's first indigenously built aircraft carrier.
Indigenous Nuclear Submarine	BARC and DRDO jointly developed India's first indigenous nuclear submarine, Arihant .
Missile Development	Under the Integrated Guided Missile Development Programme (IGMDP), India developed 5 missiles: Akash, Prithvi, Agni, Trishul, and Nag .
Helicopter and Aircraft Development	HAL and Taneja Aerospace and Aviation Limited (TAAL) are developing Dhruv multirole helicopters, Light Combat Helicopter (LCH), Rudra armed helicopter , and manufacturing Tejas Light Combat Aircraft.
IRST System Development	HAL and Bharat Electronics Limited (BEL) signed a contract for the co-development and co-production of the Long Range Dual Band Infra-Red Search and Track System (IRST) for the Su-30 MKI under the MAKE-II procedure of Defence Acquisition Procedure (DAP) 2020.
Unmanned Aerial Vehicle Development	DRDO is currently developing an indigenous unmanned aerial vehicle named Nishant .
Growth in Exports	Defence exports surged from ₹1,940 crore (US\$ 255 million) in 2014-15 to over ₹15,000 crore in 2022-23 (at 21000 cr currently)
Export Deals with Countries	Indian defence companies are exporting to over 85 Friendly Foreign Countries (FFCs) in Africa, South Asia, Southeast Asia, and West Asia.
Reasons for Increase in Exports	The surge in exports attributed to policy initiatives and private sector involvement , contributed 70% to total defence exports in FY 2021-22.
	Policy Initiatives: Liberalising FDI policies, issuing Positive Indigenisation Lists, and simplifying export procedures have contributed to growth in defence exports.
	Future of Indian Exports: The Draft Defence Production & Export Promotion Policy (DPEPP) 2020 aims to export ₹35,000 crore worth of aerospace and defence equipment annually by 2025, aligning with the goal of achieving a ₹1.75 lakh crore (US\$ 25 billion) turnover in defence manufacturing.

Government's Initiative towards Defence Indigenisation:

Government's Initiative	Details
Defence Acquisition Procedure (DAP) 2020	Streamlines defence procurement under Atmanirbhar Bharat Abhiyaan, emphasizing Make in India and MSME benefits. Key features include:
	Reservation for Indian Vendors: Encourages domestic industry with up to 100% FDI allowed (74% Automatic, beyond 74% Government route).
	Enhancement of Indigenous Content: Focus on procuring indigenously manufactured products and technologies.
	Make and Innovation: Supports indigenization through Make I/II/III initiatives and iDEX for startups.
	Buy (Global-Manufacturing in India): Mandates manufacturing processes be conducted by Indian subsidiaries of foreign investors.
	Ease of Doing Business: Simplifies operations through the Project Management Unit, favouring complete product manufacturers.
Innovations for Defence Excellence (iDEX)	Engages MSMEs, start-ups, individual innovators, R&D institutes, and academia with grants, funding, and support.
SPRINT Challenges	A NIIO-DIO initiative to integrate at least 75 new indigenous technologies/products into the Indian Navy .

Indigenous Manufacturing	Simplifies industrial licensing extends validity periods, and liberalizes FDI policy (up to 74% Automatic). Defence procurement from foreign <u>sources reduced from 46% to 36%.</u>
Defence Industrial Corridors	Established in <u>Uttar Pradesh and Tamil Nadu</u> to create regional aerospace and defence hubs.
Positive Indigenisation Lists	Prioritizes procurement from domestic sources under the <u>Buy Indian (IDDM) category with embargoes on imports.</u>
E-Biz Portal	Digitizes application process for <u>Industrial License (IL) and Industrial Entrepreneur Memorandum (IEM).</u>

Challenges in Defence Indigenisation

1. Lack of a defence manufacturing base in India.
2. Low private participation due to the absence of a permanent arbitration committee for dispute resolution.
3. Conflict between manufacturers and defence forces on equipment design and capacity.
4. High costs and lack of an assured market, lead to delays and credibility issues.
5. Poor technological transfer by foreign companies.
6. Bureaucratic delays and licensing issues hinder the ease of doing business.

Way Forward for Defence Indigenisation

- **Ensure a level playing field** for private industry, DRDO, DPSUs, and OFB.
- **Utilize software industry** and technologies like AI and cyber security.
- Provide financial and administrative **autonomy to DRDO.**
- **Improve in-house design capabilities**, as seen with the Navy's success.
- **Develop a robust supply chain**, with Indian SMEs playing a key role in the global OEM supply chain.

Conclusion

Going ahead, the requirement for higher indigenous content is expected to help defence product manufacturers in India as well as encourage foreign companies to set up operations in India. France and Russia have already agreed to manufacture in India.

Insta Links:

- [**India's Defence Exports Reaches an All-time High**](#)

Mains Links:

Q. Foreign Direct Investment (FDI) in the defence sector is now set to be liberalized: What influence this is expected to have on Indian defence and economy in the short and long run? (UPSC 2014)

Prelims Links:

Q. What is "Terminal High Altitude Area Defence (THAAD)", sometimes seen in the news? (UPSC 2018)

1. An Israeli radar system
2. India's Indigenous anti-missile programme
3. An American anti-missile system
4. A defence collaboration between Japan and South Korea

Answer: (c)

Q. Which one of the following is the best description of 'INS Astradharini', that was in the news recently? (UPSC 2016)

1. Amphibious warfare ship
2. Nuclear-powered submarine
3. Torpedo launch and recovery vessel
4. Nuclear-powered aircraft carrier

Answer: (c)

GENERAL STUDIES – 4

1. ISSUES WITH THE MEDICAL ETHICS IN INDIA

Context:

The [article](#) highlights systemic issues in medical ethics oversight in India.

What is Medical Ethics?

Medical ethics **addresses ethical choices in healthcare, defining what is right or wrong within a specific cultural context.** It governs the responsibilities of healthcare providers, including **doctors, hospitals, and other professionals**, towards patients and society at large.

Issues with the Medical Ethics in India:

1. **Informed Consent:** Often not obtained adequately or at all from patients, especially in clinical trials involving vulnerable populations.
2. **Patient Privacy:** Lack of stringent measures to protect patient data and confidentiality.
3. **Conflicts of Interest:** Instances where doctors have financial interests in treatments or procedures they recommend. E.g., involvement of **senior doctors of Apollo hospitals in the organ trade racket.**
4. **Doctor-Patient Trust:** Erosion due to the commercialization of healthcare and lack of transparency.
5. **Regulatory Oversight:** Weak enforcement and compliance with ethical guidelines, leading to abuses in clinical trials and patient care.
6. **Inequitable Access:** Disparities in healthcare delivery and access to treatments based on socio-economic factors.

Provisions of the Code of Medical Ethics:

Provisions	Description
Character of Physician	A physician must uphold the dignity and honour of the profession. They should be upright, instructed in healing, pure in character, diligent in caring, modest, sober, and patient.
Maintaining Good Medical Practice	Physicians should continuously improve their medical knowledge and skills, sharing benefits with patients and colleagues. They must practice methods based on scientific principles.
Maintenance of Medical Records	Every physician must maintain indoor patient records for at least 3 years from the start of treatment.
Use of Generic Names of Drugs	Physicians should prescribe drugs using generic names whenever possible to ensure rational prescription and usage.
Exposure to Unethical Conduct	Physicians have a duty to expose incompetent, corrupt, dishonest, or unethical conduct within the profession, without bias.
Obligations to the Sick	While not obliged to treat every patient, physicians should not arbitrarily refuse treatment, especially in emergencies. They may advise seeking another physician's service when appropriate.

Other Measures Needed:

1. **Boosting Medical Humanitarianism:** Provide regular training and support to enhance doctors' empathy and compassion towards patients.
2. **Respectful Interaction:** Encourage effective communication between doctors and patients, promoting familiarity with patient histories and routines to revive the concept of 'family doctors'.
3. **Focus on Emergency Medicine (EM):** Introduce dedicated EM residents trained to handle tough situations, manage charged environments, and deliver difficult news effectively in emergency rooms and trauma centres.
4. **Enforcement of Ethical Guidelines:** Ensure strict adherence to ethical guidelines and cultural sensitivity among physicians and hospital ethical committees.
5. **Ensuring Doctor Confidence:** Implement measures for doctor safety such as security guards, CCTV cameras, and displaying patient interaction guidelines in regional languages within hospitals.

Insta Links:

- [Medical Ethics: 'Cash-for-Kidney' scam](#)

Mains Links:

Q. Case Study:

Dr. X is a leading medical practitioner in a city. He has set up a charitable trust through which he plans to establish a super-specialty hospital in the city to cater to the medical needs of all sections of society. Incidentally, that part of the State had been neglected over the years. The proposed hospital would be a boon for the region. You are heading the tax investigation agency of that region. During an inspection of the doctor's clinic, your officers have found out some major irregularities. A few of them are substantial which had resulted in considerable withholding of tax that should be paid by him now. The doctor is cooperative. He undertakes to pay the tax immediately. However, there are certain other deficiencies in his tax compliance that are purely technical in nature. If these technical defaults are pursued by the agency, considerable time and energy of the doctor will be diverted to issues that are not so serious, urgent, or even helpful to the tax collection process. Further, in all probability, it will hamper the prospects of the hospital coming up. There are two options before you: Taking a broader view, ensuring substantial tax compliance, and ignoring defaults that are merely technical in nature. Pursue the matter strictly and proceed on all fronts, whether substantial or merely technical. As the head of the tax agency, which course of action will you opt for and why? (250 words)

2. HUMILITY IN PUBLIC DISCOURSE

Context:

Freedom of speech is not just about speaking freely but also involves exercising positive character traits. Personal attacks and hate speech overshadow meaningful information and reveal a lack of understanding of both one's own and the opponent's limitations. This has turned public discourse into a spectacle, prioritizing verbal aggression over constructive debate.

What is Humility?

Humility is the quality of being modest and respectful, acknowledging one's limitations and valuing others' perspectives.

Example: A scientist, despite their expertise, listens carefully to a colleague's new theory, considering it with an open mind instead of dismissing it outright, recognizing that they don't have all the answers.

Current State of Political Discourse

Political discourse is dominated by personal attacks rather than relevant issue discussions. TRP-driven media fuels verbal harassment, turning debates into gladiatorial contests focused on aggression over constructive dialogue. This trend, prevalent in liberal democracies, teaches citizens to value harsh comments over meaningful discussions on public welfare.

Need for Humility in Public Discourse

1. **Promotes Respectful Dialogue:** Encourages listening and valuing different viewpoints.
2. **Reduces Polarization:** Minimizes personal attacks and hate speech.
3. **Fosters Understanding:** Acknowledges one's own limitations and others' perspectives.
4. **Encourages Constructive Criticism:** Focuses on issues rather than personal attacks.
5. **Enhances Cooperation:** Builds bridges between different societal sections.

Importance of Virtues in Politics

Virtues like humility and care are vital for democratic discourse, as highlighted by thinkers like Montesquieu, who advocated for education to prioritize public over private interests. The decline in character training in modern politics has shifted focus to individual achievement over collective well-being. Charles Taylor and Dr. B.R. Ambedkar also emphasized that good governance relies on the virtues of leaders.

Traditional Indian Thought on Knowledge and Character

Traditional Indian thought sees knowledge as a moral, collective endeavour, emphasizing character. The Mahabharata highlights the importance of humility and care in acquiring knowledge. Prof. Vrinda Dalmiya illustrates this with Sage Kausika learning from a butcher and a housewife, showing that humility enhances understanding.

Mains Links:

Q. Humility is the mother of all virtues, purity, charity and obedience. Comment. Do you consider yourself humble? How can you prepare yourself to become humbler? Discuss. (250 words)

3. ALICE MUNRO: ETHICAL ISSUES

Context:

Alice Munro, a Canadian Nobel laureate renowned for her short stories, is now the subject of a disturbing revelation by her daughter, Andrea Robin Skinner. Weeks after Munro's death, Skinner disclosed that Munro's second husband, Gerald Fremlin, had sexually abused her repeatedly. Despite being aware of the abuse, Munro chose to stand by Fremlin, prioritizing her own needs over her daughter's suffering. This revelation has tarnished Munro's legacy, highlighting the moral fallibility of literary idols. Skinner's estrangement from her family lasted until Munro's death, and she ultimately shared her story to shed light on the hidden darkness behind Munro's celebrated literary career.

Ethical Issues involved in the case:

1. **Failure to Protect:** Alice Munro did not protect her daughter from abuse despite knowing about it.
2. **Silent Acquiescence:** Munro's choice to remain

silent and support her abuser over her daughter.

3. **Victim Blaming:** Fremlin blamed Skinner for the abuse, and Munro did not challenge this narrative.
4. **Complicity:** Munro's family and others close to the situation did not take action to stop the abuse or support Skinner initially.
5. **Prioritizing Personal Needs:** Munro prioritized her own relationship with Fremlin over her daughter's well-being.
6. **Abuse of Power:** Fremlin used his position of trust as a stepfather to abuse Skinner.
7. **Public Deception:** The true nature of Munro's family life was hidden, potentially misleading the public about her character.
8. **Long-term Trauma:** The prolonged impact of abuse on Skinner and the lack of support from her mother and family.

Course of Action:

1. **Therapy and Counselling:** Ensure continued psychological support for Skinner to help her heal.
2. **Public Apology:** The Munro family should issue a public apology acknowledging past mistakes and supporting Skinner's account.
3. **Advocate for Victims:** Use Munro's literary legacy to raise awareness about sexual abuse and advocate for victims' rights.
4. **Family Reconciliation:** Encourage ongoing dialogue within the family to rebuild trust and support Skinner.
5. **Legal Review:** Review any remaining legal actions to ensure justice and closure for Skinner.
6. **Educational Outreach:** Support programs and initiatives that educate the public about the importance of protecting and supporting abuse victims.
7. **Establish a Fund:** Create a fund or foundation in Munro's name to support abuse survivors and promote mental health services.

4. THE POWER OF GRATITUDE

Context:

A study from **Harvard T.H. Chan School of Public Health** indicates that **practising gratitude can extend lifespan**.

What is Gratitude?

Gratitude is the **feeling of thankfulness and appreciation for what one has**. It involves recognizing and acknowledging the good things in life, whether big or small.

For example:

1. **Expressing thanks to a friend for their help**
2. Appreciating a beautiful sunset
3. Being grateful for good health.

How does Gratitude help improve lifespan?

- **Reduces Stress:** Shifts focus away from negative thoughts and emotions.
- **Promotes Positive Outlook:** Maintains a more optimistic perspective, **improving mental well-being and physical health**.
- **Encourages Healthy Behaviors:** Encourages healthier lifestyle choices like regular exercise and better sleep.
- **Strengthens Social Connections:** Fosters **stronger relationships and social support networks**.
- **Enhances Coping Mechanisms:** Cultivates effective coping strategies, helping individuals **manage challenges and adversity more effectively**.
- **Improves Emotional Resilience:** Contributes to overall mental and physical health.
- **Supports Cardiovascular Health:** Lowers the risk of cardiovascular disease.
- **Boosts Immune Function:** Positive emotions associated with gratitude enhance immune function.

Quote: Let us Rise Up and be Thankful, for if We didn't Learn a Lot Today, at Least We Learned a Little— **Gautama Buddha**

Perspective on Gratitude:

Thinker	Perspective on Gratitude
Mahatma Gandhi	Emphasized gratitude as a spiritual and moral practice, essential for personal and societal well-being.
Swami Vivekananda	Advocated for gratitude as a path to spiritual growth and fulfilment.
Aristotle	Considered gratitude a moral virtue that fosters human flourishing and strengthens social bonds.
Cicero	Advocated gratitude as a moral duty crucial for building strong relationships and societal harmony.
Immanuel Kant	Viewed gratitude as a moral sentiment rooted in recognizing and valuing others' contributions to one's life.
Marcus Aurelius	Stoic philosopher who saw gratitude as essential for maintaining inner peace and resilience.

How can one practice Gratitude?

1. **Keep a Gratitude Journal:** Write down things you are grateful for daily or weekly.
2. **Express Appreciation:** Verbalize gratitude to others for their kindness or support.
3. **Count Your Blessings:** Reflect on the positive aspects of your life regularly.
4. **Focus on the Present:** Appreciate the current moment and what it offers.

5. **Use Gratitude Affirmations:** Repeat affirmations that express gratitude.
6. **Perform Acts of Kindness:** Helping others can enhance feelings of gratitude.
7. **Mindful Meditation:** Practice meditation focused on gratitude and positive emotions.
8. **Create a Gratitude Jar:** Fill a jar with notes of things you are grateful for and review them periodically.
9. **Celebrate Successes:** Acknowledge and appreciate your achievements and milestones.
10. **Write Thank-You Notes:** Send notes of gratitude to people who have positively impacted your life.

5. RULES GOVERNING THE CONDUCT OF CIVIL SERVANTS

Context:

Puja Khedkar, a probationary IAS officer, is under scrutiny by the Department of Personnel and Training (DoPT) for **alleged misconduct and issues related to her appointment under the OBC and PH quotas**. The centre has set up a **single-member committee under the Department of Personnel and Training (DoPT)** to review her appointment process.

What is the Issue about?

Puja Khedkar, **despite a low rank, obtained IAS 2022** position through OBC and PH reservations. **Allegations question her OBC and PH certificates' validity, and her failure to attend a medical examination** raises concerns.

Rules Governing civil servants in India:

Rules on Integrity of Services	Rules for Probationers
All IAS, IPS, and IFoS officers are governed by the All-India Services (Conduct) Rules from the time they join their respective services and begin their probation period.	Probationers are governed by additional rules during their probation period , which lasts at least two years after selection.
Integrity and Devotion to Duty	IAS (Probation) Rules
Rule 3(1): Officers must uphold absolute integrity and dedication to their duties at all times.	Officers undergo training at LBSNAA in Mussoorie and must pass an examination at the end of two years to be confirmed in their service.
Gifts and Benefits	Salary and Allowances
Rule 11(1): Officers may accept gifts only from near relatives, with strict reporting requirements for any gift exceeding Rs 25,000 to prevent influence on their duties.	Probationers receive a fixed salary and travel allowance but do not have entitlements like an official car, official accommodation, or an official chamber with staff.
Unbecoming of an Officer	Probationer Discharge
Rule 4(1): Officers must not use their position or influence to secure employment for any family member with private undertakings or NGOs.	Rule 12: Circumstances for discharge include being found ineligible or unsuitable by the central government, neglecting duties, or lacking essential service qualities.
Property Details	Enquiry Process
Rule 13: Officers must annually submit property returns detailing all immovable properties owned, inherited, acquired, or held through lease or mortgage by themselves or family members.	If disciplinary action is initiated, a summary enquiry by a DoPT-appointed committee submits its report within two weeks to inform decisions regarding the probationer's status.
Sub-Rules Added in 2014	
Added standards include <u>maintaining high ethical standards, integrity, honesty, political neutrality, accountability, transparency</u> , responsiveness to the public, and courtesy in public interactions.	

Ethical issues concerning Puja Khedkar's case:

Ethical Issues	Description
Misuse of Reservation Quotas	Allegations that Khedkar may have falsely claimed OBC and PH status to secure a position in the IAS, exploiting affirmative action meant for disadvantaged groups.
Misconduct and Special Privileges	Accusations include seeking undue privileges, such as using an unauthorized beacon on her car and occupying official premises improperly.
Falsification of Documents	Concerns were raised about the authenticity of her OBC and PH certificates , which, if proven false, could indicate deception in securing her civil service appointment.
Integrity and Ethical Conduct	Questions about adherence to the All India Services (Conduct) Rules , including maintaining integrity, avoiding misuse of position, and transparency in dealings.
Legal and Disciplinary Violations	Issues related to disciplinary actions for failure to attend mandatory medical examinations and other alleged breaches of conduct as outlined by the rules for probationers.
Public Trust and Accountability	Impact on public trust in the civil service, given the sensitive nature of the allegations and the importance of ethical behaviour in upholding the integrity of governance.

Other rules regarding the conduct of Civil servants:

- Code of Conduct for Civil Servants:** Mandates that every member of the service maintains:
 - Integrity and honesty
 - Political neutrality
 - Promotion of merit, fairness, and impartiality
 - Accountability and transparency
 - Responsiveness to the public, particularly the weaker sections
 - Courtesy and good behaviour towards the public.
- Draft Public Service Bill (2007):** Proposed by the Ministry of Personnel, Public Grievances, and Pensions to establish generic standards known as **"values" for civil servants. Major values include:**
 - Allegiance to constitutional ideals
 - Apolitical functioning
 - Prioritization of good governance for public welfare
 - Objective and impartial duty performance
 - Accountability and transparent decision-making
 - Highest ethical standards maintenance
 - Merit-based selection respecting cultural and ethnic diversities
 - Economy in expenditure
 - Promotion of a healthy work environment
 - Communication, consultation, and cooperation in management.

Committee Recommendations:

Committee Recommendations	Description	Year
Santhanam Committee	Recommended reforms in recruitment processes and ethical standards for civil servants.	1964
Hota Committee	Suggested measures to enhance transparency and merit-based selection in civil service recruitment.	2003
Second ARC	Advocated for reforms to improve efficiency and accountability in recruitment and training.	2006
Alagh Committee	Proposed reforms to align civil service selection processes with modern requirements.	2008
Khanna Committee	Examined issues related to civil service reforms and competency in public service delivery.	2010

Conclusion:

The Puja Khedkar controversy highlights the **critical need for honesty and transparency in civil services**. Rules are in place to **prevent misuse of authority for personal benefit**. The incident also prompts scrutiny of the reservation system's integrity and implementation. Ethics are pivotal in ensuring public trust and confidence in civil service operations.

6. NEUROETHICS: PROTECTING OUR NEURORIGHTS

Context:

As neurotechnology advances, safeguarding neurorights becomes crucial.

What is Neurotechnology?

It refers to **tools and devices that interact with the nervous system to monitor**, understand, or influence brain activity.

Examples include:

1. **EEG (Electroencephalography)**: Records electrical activity of the brain and is used in diagnosing and treating brain disorders.
2. **MRI (Magnetic Resonance Imaging)**: Provides detailed images of brain structures.
3. **BCI (Brain-Computer Interfaces)**: Allows direct communication between the brain and external devices, helping restore functions for physically impaired individuals, like **Elon Musk's Neuralink**.

What are Neurorights?

They are **ethical and legal principles aimed at protecting individuals' mental privacy** and cognitive liberty. Key aspects include:

1. **Mental Privacy**: Protecting thoughts and brain data from unauthorized access or surveillance.
2. **Free Thought**: Ensuring individuals' cognitive processes remain uninfluenced by external manipulations.

For instance, Chile has legally recognized neurorights, mandating respect for brain activity and information. The **U.S. states like Colorado** are also enacting laws to safeguard neurological privacy. **These rights aim to prevent misuse of neurotechnology** in contexts like employment, healthcare, and marketing.

What is Neuroethics?

It addresses the ethical, legal, and social implications of neuroscience and neurotechnologies, ensuring these advancements benefit humanity while minimizing harm.

Digitisation of Neuro-Data: Opportunities and Concerns

Opportunities:

1. **Enhanced Cognitive Assistance**: Wearable EEGs and BCIs like Neuralink aid cognitive functions and help restore lost functions in physically impaired individuals.
2. **Medical Advancements**: Real-time health monitoring and personalized healthcare, improving diagnosis and treatment of brain disorders.
3. **Commercial and Research Value**: Valuable insights for neuromarketing to understand and influence consumer behaviour.
4. **Integration with Daily Life**: Smartwatches and apps track physiological activities and emotions, integrat-

ing neurotech into everyday activities.

Concerns:

1. **Surveillance Risks**: Potential misuse of neuro-data for monitoring by employers, governments, and private companies.
2. **Privacy and Security**: Threats to mental privacy and autonomy through the collection and analysis of sensitive neuro-data.
3. **Ethical and Legal Challenges**: Ethical dilemmas in mental privacy, consent, and neurotech use in societal contexts.
4. **Impact on Individual Rights**: Compromise of the right to think freely and safeguard mental states, risking exploitation and loss of personal control.

Neuroethics Initiatives:

1. **U.S. Presidential Commission on Bioethics**: Published the 'Gray Matters' report in 2015, addressing cognitive enhancement, consent capacity, and legal implications.
2. **OECD Recommendations**: In 2019, recommended principles to safeguard personal brain data and monitor misuse of neurotechnologies.
3. **UNESCO's Concerns**: In 2022, highlighted issues related to human identity, freedom of thought, and privacy, stressing the risks of unauthorized access to neural data.
4. **Institute of Neuroethics**: In 2023, emphasized proactive consideration of scientific advances and ethical research training.

Way Forward for Addressing Neuroethics Concerns:

1. **Robust Regulations**: Implement clear laws for the collection, use, and sharing of neuro-data.
2. **Protect Mental Privacy**: Safeguard against unauthorized access and misuse of neuro-data.
3. **Informed Consent**: Ensure explicit consent from individuals before using their neuro-data.
4. **Ethical Standards**: Develop and enforce guidelines for ethical neurotech research and applications.
5. **International Collaboration**: Promote global cooperation to establish consistent neuroethical standards.
6. **Ethical Review Boards**: Create diverse boards to evaluate the ethics of neurology research.
7. **Equity**: Ensure fair access to neurological interventions for all individuals.

Conclusion:

Governments and international bodies should collaborate to create robust regulations for the ethical use of neuro-data, protecting mental privacy, consent, and individual rights.

Insta Links:

- [Ethics, Integrity and Aptitude](#)

7. ETHICAL ISSUES ON GST ON ESSENTIAL DISABILITY AIDS

Context:

GST on essential disability aids like wheelchairs and Braille books is unjustly discriminatory. Since the GST regime began in 2017, disabled individuals must pay an additional 5% tax on these aids, which penalizes their disability.

Issues with tax on disability aid instruments:

Issue	Details
Article 14	GST on disability aids is argued as unreasonable under Article 14, which ensures equality. For example, a ₹1 lakh wheelchair incurs ₹5,000 GST, costing ₹10 per kilometre.
Rights of Persons with Disabilities Act, 2016	Section 3 of the Act prohibits discrimination against persons with disabilities, challenging the GST on mobility aids.
Indirect Discrimination	Chief Justice <u>D Y Chandrachud's 2021</u> judgment highlighted the need to address indirect discrimination, applicable to the GST on disability aids.
Contradicts Government Stand	The GST on disability aids contradicts the government's concern for disabled individuals, as referred to by Prime Minister Narendra Modi as " <u>divyang</u> ."
Supreme Court Judgments	The Supreme Court has invalidated <u>discriminatory taxes</u> in the past, such as in Sakal Papers (1961), Indian Express (1984), and Aashirwad Films (2007).

Ethical Issues with Disability Aid Taxation

- **Discrimination:** Taxing disability aids imposes financial burdens on disabled individuals.
- **Violation of Equality:** Taxes violate Article 14's principle of equality.
- **Economic Burden:** Additional tax on essential aids like wheelchairs and Braille books exacerbates economic strain.
- **Social Marginalization:** Taxes reinforce social marginalization by increasing the cost of mobility and learning tools.
- **Indirect Discrimination:** GST disproportionately affects disabled individuals compared to able-bodied population.

View of World Ethical Thinkers on Disabled People:

1. **Immanuel Kant:** Emphasized respect for individuals' dignity and autonomy, advocating for the equal treatment of disabled people as moral agents deserving of respect.
2. **John Stuart Mill:** Supported utilitarian principles, which would favour policies that maximize overall well-being, including the fair treatment and inclu-

sion of disabled individuals.

3. **Martha Nussbaum:** Proposed the Capabilities Approach, focusing on providing all individuals, including the disabled, with the capabilities to lead a flourishing life.

View of Indian Ethical Thinkers on Disabled People:

1. **Mahatma Gandhi:** Advocated for the upliftment and inclusion of disabled individuals, emphasizing compassion and equal opportunities.
2. **B.R. Ambedkar:** Supported social justice and equality, stressing the need for legal and social reforms to ensure the rights and dignity of all, including the disabled.
3. **Swami Vivekananda:** Highlighted the importance of treating all individuals with respect and ensuring their well-being, including those with disabilities.

What should be done?

Reform tax policies to avoid disproportionate impacts on marginalized groups, including disabled individuals, and enhance legal protections to prevent indirect discrimination and ensure inclusivity and fairness.

8. GENDER EQUALITY IN SPORTS

Context:

With the Paris 2024 Olympic and Paralympic Games, history will be made as an equal number of men and women compete, marking the largest gender-equal sporting event. As per recently released, UNESCO's Sport and Gender Equality Game Plan

Key Observations:

1. **Sexual Abuse:** 21% of women athletes and 11% of men reported childhood sexual abuse in sports.
2. **High Dropout:** 49% of girls drop out of sports during adolescence, 6 times higher than boys, due to lack of role models, safety concerns, lack of confidence, and negative body image.
3. **Inequality:** No women in the top 50 highest-paid athletes.
4. **Leadership:** Only 30% of major sports federations were chaired by women in 2023.

Suggested Actions:

1. Use sports media to change attitudes and address gender inequalities.
2. Promote gender equality in sports leadership and decision-making.
3. Develop gender-responsive infrastructure and budgeting.
4. End all forms of gender-based violence in sports.

Ethical Values from Gender Equality in Sports:

1. **Fairness:** Ensuring equal opportunities for all genders in sports participation and competition.
2. **Inclusivity:** Promoting a diverse and welcoming environment for athletes of all genders.
3. **Respect:** Valuing and recognizing the contributions of athletes regardless of gender.
4. **Empowerment:** Encouraging and supporting female athletes to reach their full potential.
5. **Integrity:** Upholding honesty and transparency in sports governance and decision-making.
6. **Safety:** Creating a secure and harassment-free environment for all athletes.
7. **Equity:** Addressing and reducing disparities in resources, pay, and representation.

9. ETHICS OF PHILANTHROPY

Context:

The [article](#) highlights the growth and potential of Indian philanthropy

“We must consider the time and the place, and the character of the receiver, which is the weights in the scale, which cause our gifts to be well or ill received.” – Seneca

Definition: [Philanthropy](#) can be defined as an act or gift done or made for humanitarian purposes.

Philanthropy in India:

In pre-independent India, **Mahatma Gandhi encouraged businessmen to contribute their wealth for the betterment of society**. Industrialists like **Jamnalal Bajaj and G.D. Birla** supported Mahatma Gandhi’s initiatives during the freedom movement while pursuing their own philanthropic interests.

Philanthropy in the West:

America: Carnegie-Rockefeller era of philanthropy.

Andrew Carnegie built impressive institutions (like Carnegie Library and Carnegie Mellon University), but also inspired (and instigated) the rich; the last line of his book reads: *“The man who dies rich, dies disgraced.”*

The Rockefeller Foundation also **developed a vaccine to eradicate yellow fever**. Both Carnegie and Rockefeller became role models, inspiring generations (including myself) to give away their wealth to improve society.

Issues with Philanthropy:

1. **The parochial nature of giving**, which risks some of the poorest regions being ignored
2. **Programmatic giving doesn’t add up** (for example: a number of foundations and NGOs work on school education, yet learning outcomes have not improved).
3. **A recipient may violate the donor’s intent** in spirit

or in law.

4. **A donor’s activities may be considered incompatible** with those of the institution’s mission.
5. **Recipient may be perceived as complicit with or oblivious to a donor’s unethical practices**, thus tainting its own good name, especially when an institution grants naming rights.
6. A donor may receive a **quid pro quo for all or part of a donation**.

The way forward for philanthropy in India:

1. **Build institutions:** Donors can fund think tanks and build area-specific (say, on energy transition) or geography-specific (such as eastern Uttar Pradesh) institutions.
 - a. **For e.g.: The Tata family built the Indian Institute of Science** in Bengaluru, The Energy and Resources Institute (TERI), the Tata Memorial Hospital, etc.
2. **Fund risky R&D for the government:**
 - a. For example, **Nandan Nilekani** built an innovation ecosystem such as Aadhaar, UPI and eKYC.
3. **Support governments to improve delivery:** Partnering with the government as a philanthropic entity is the most effective way to make a scalable and sustainable impact.
 - a. **For example, The Piramal Foundation** is supporting the Aspirational Districts collective
4. **Veddis Foundation** is funding initiatives to improve the evidence base and outcome orientation of governments.

10. EXAMPLES OF ETHICAL BEHAVIOR

Example 1: Anukathir Surya: IRS Officer’s Historic Name and Gender Change

Anukathir Surya, an IRS officer, has become the first in **Indian Civil Service** history to officially change his name and gender to be **identified as a man**. Approved by the **Ministry of Finance** on July 9, the order recognizes him as **Mr. M. Anukathir Surya in all official records**.

Ethical Values from Anukathir Surya’s Experience

1. **Integrity:** Staying true to one’s identity despite societal pressures.
2. **Courage:** Taking bold steps to seek official recognition for his gender identity.
3. **Inclusivity:** Promoting acceptance and understanding within the workplace.
4. **Resilience:** Overcoming personal and professional challenges related to identity.
5. **Respect for Diversity:** Highlighting the importance of diversity in the civil service.

6. **Advocacy for Rights:** Paving the way for others in similar situations to seek recognition and respect.

Example 2: Puja Khedkar: misuse of power

Puja Khedkar, a probationary IAS officer in Maharashtra, faced controversy and was transferred to Washim for alleged misuse of power. She used a private Audi with a red-blue beacon and claimed facilities were not allowed for probation officers. This included occupying a senior official's office without permission and making demands like a separate cabin and residential quarters. Her actions led to scrutiny over the alleged submission of fake disability and OBC certificates for her civil services exam.

Ethical Issues concerned here are:

1. **Misuse of Power:** Using a private vehicle with an unauthorized beacon and claiming facilities beyond entitlement.
2. **Ethical Breach in Documentation:** Allegedly submitting fake disability and OBC certificates.
3. **Entitlement and Privilege:** Demanding exclusive office space and facilities not permitted during probation.
4. **Influence Peddling:** Allegations of her father pressuring officials to meet her demands.
5. **Transparency and Accountability:** Lack of compliance with verification processes for disability certification.

Example 3: Hannibal Directive

The Hannibal Directive was allegedly used by Israeli forces following the October 7 by Hamas on Israel.

The Hannibal Directive is an alleged Israeli military policy aimed at preventing the capture of Israeli soldiers by militant groups, even at the risk of harming or killing the soldiers themselves.

Ethical issues associated with it:

1. **Disregard for Human Life:** Critics argue that the directive prioritizes preventing capture over minimizing harm to civilians and soldiers, potentially leading to excessive use of force.
2. **Lack of Transparency:** The secretive nature of the directive raises concerns about accountability and oversight in military operations.
3. **Legal and Moral Implications:** The policy has been criticized for potentially violating international humanitarian law by endangering civilians and using disproportionate force.
4. **Impact on Prisoner Rights:** It raises questions about the treatment and rights of captured combatants, challenging conventions on the humane treatment of prisoners of war.
5. **Public Perception and Accountability:** The direc-

tive's existence and implementation without public debate or transparency undermine democratic principles of accountability and oversight.

Example 4: Operation Nanhe Farishtey

Context: Over the past seven years (2018-May 2024), the Railway Protection Force (RPF) has rescued 84,119 children through 'Operation Nanhe Farishtey.' This initiative aims to protect vulnerable children at railway stations and on trains.

Ethical Values from Operation Nanhe Farishtey:

1. **Compassion:** Prioritizing the welfare and protection of vulnerable children.
2. **Dedication:** Continuous and unwavering efforts to rescue children in need.
3. **Responsibility:** Safeguarding the most vulnerable members of society.
4. **Collaboration:** Working with various stakeholders to ensure comprehensive care and protection.
5. **Awareness:** Raising public awareness about the plight of runaway and missing children.

Example 5: Paris Mayor Swims in Seine River to Prove Cleanliness for 2024 Olympics

Context: Paris Mayor Anne Hidalgo swam in the Seine on July 17, 2024, to show the river is clean enough for upcoming Olympic events. She swam about 100 meters to demonstrate the improved water quality following a €1.4 billion investment to prevent sewage leaks.

Ethical Values from Paris Mayor's Seine Swim:

1. **Transparency:** Demonstrating the river's cleanliness openly to the public.
2. **Accountability:** Ensuring promises about water quality for the Olympics are met.
3. **Commitment:** Investing in long-term environmental improvements.
4. **Leadership:** Leading by example to build public trust and confidence.
5. **Community Benefit:** Prioritizing public health and recreational opportunities.

CONTENT FOR MAINS ENRICHMENT

In News	Usage in answers
1. JAMES LAWSON	Context: James Lawson, an American non-violence activist who passed away on June 9, 2023, at age 95, played a pivotal role in <u>integrating Gandhian non-violence principles into the American civil rights movement</u>. <u>Martin Luther King Jr.</u> regarded Lawson as a crucial figure in the movement and a global leader in nonviolence strategy. James Lawson demonstrated several key ethical values: 1. Nonviolence: Advocated and practised nonviolent resistance inspired by Gandhian principles. 2. Inclusivity: Promoted inclusivity by combining Gandhian methods with Christian teachings. 3. Courage: Showed courage in training activists to peacefully challenge segregation. 4. Integrity: Criticized unjust actions, including US military policies, maintaining a consistent ethical stance. 5. Love: Emphasized love as a powerful tool in social movements, advocating for unity and justice. 6. Empowerment: Empowered African Americans in their struggle for civil rights through strategic nonviolence.
2. 'JADUI PITARA'	<u>'Jadui Pitara'</u> - a play-based learning-teaching material tailored for children between the age group of 3-8 years 1. Developed under <u>the National Curriculum Framework for Foundational Stage</u> (part of the implementation of the <u>New Education Policy 2020</u>) 2. Available in 13 Indian languages 3. Includes <u>playbooks, toys, puzzles, posters, flashcards, storybooks</u>, and worksheets that reflect local culture and social contexts. Aim: 1. Accommodate the diverse needs of learners and pique curiosity 2. Making the learning-teaching environment more child-centric, lively, and joyful Play's Role in Children's Development • Encourages curiosity, exploration, and experimentation. • Builds strong connections among children, teachers, parents, and community. • Stimulates brain development, particularly prefrontal cortex. • Enhances neuroplasticity and intuitive knowledge. • UNICEF emphasizes play's vital role in parenting. Usage: This example can be used in <u>Governance, Social justice, and Ethics (case study)</u> as a unique example of a child-centric foundational literacy initiative
3. FRANZ KAFKA	Context: Franz Kafka remains relevant 100 years after his death, with his works illuminating the <u>absurdities of modern bureaucracy and disillusioned political systems</u>. Who was Franz Kafka? He was a German-language novelist and writer from Prague. He is widely regarded as one of the major figures of 20th-century literature. Franz Kafka worked in an <u>insurance company by day and wrote at night</u>. His stories, reflecting his experiences in a bureaucratic world, introduced the term "<u>Kafkaesque</u>," describing nightmarish, absurd scenarios of oppressive bureaucracy. Despite burning much of his work, <u>Kafka's surviving writings like "The Trial" and "The Metamorphosis"</u> gained posthumous fame. His themes of alienation and existential dread continue to resonate, influencing many writers and maintaining relevance in modern discussions of bureaucracy and authority. <u>Kafka died in 1924</u>, but his legacy endures through his powerful and enduring literary contributions.

	Values exhibited by him: 1. Integrity: Balancing a day job while pursuing his passion for writing. 2. Humility: Leading a modest life despite his literary talent. 3. Perseverance: Writing persistently, even in the face of personal struggles. 4. Empathy: Capturing the human condition and societal issues in his works. 5. Commitment to Truth: Exposing the harsh realities of bureaucracy and modern life. 6. Intellectual Honesty: Critiquing the failures of Modernism and Rationalism.
4. THAZHAKARA LAUNCHES PEOPLE'S BIODIVERSITY REGISTER	Context: Thazhakara, a gram panchayat in Alappuzha and one of the first in Kerala, has created and published a People's Biodiversity Register (PBR), involving local communities. What is the People's Biodiversity Register (PBR)? Biodiversity Recording in India • PBR is a comprehensive record of biodiversity, mandated by Biological Diversity Act (2002). • Biodiversity Management Committees oversee PBR development to conserve biodiversity, promote sustainable use, and protect traditional knowledge. • Thazhakara's PBR aids conservation efforts and guides local projects in agriculture and waste management. • Emphasizes community involvement, transparency, conservation ethics, and equitable benefit-sharing in biodiversity management. #Usage in answers: demonstrates ethical values such as community involvement, transparency, conservation ethics, and equitable benefit-sharing in biodiversity management.
5. BARCELONA RESIDENTS PROTESTING AGAINST TOURISTS	Context: Barcelona residents are protesting against mass tourism by firing water pistols at tourists and asking them to "go home." The city's tourism surged from 9.7 million in 2022 to 26 million in 2023, causing issues like rising living costs and a housing crisis. Measures like banning short-term rentals and increasing tourist taxes have been introduced but are seen as insufficient by locals. This problem isn't unique to Barcelona; cities like Venice and Amsterdam are also struggling with overtourism and its impact on local residents and the environment. Issues in the case of Barcelona's response to overtourism include: 1. Displacement of Residents: Rising rental prices and living costs push locals out of their homes and neighbourhoods. 2. Resource Strain: Increased tourism pressures local infrastructure and resources, potentially reducing quality of life for residents. 3. Cultural Erosion: The city prioritizing tourists over locals can lead to the loss of local culture and community values. 4. Environmental Impact: Mass tourism can lead to environmental degradation, including pollution and damage to natural sites. 5. Economic Inequality: While tourism boosts the economy, benefits may not be equitably distributed among residents.
6. 15-MINUTE NEIGHBOURHOODS	Context: The article discusses the potential of 15-minute neighbourhoods to address Bengaluru's urban challenges, such as congestion, water crises, and erratic weather. What are 15-minute neighbourhoods? The 15-minute neighbourhood concept is an urban planning approach where all essential services and amenities—such as groceries, schools, healthcare, and recreational facilities—are accessible within a 15-minute walk or bike ride from residents' homes. This model aims to reduce car reliance, improve environmental sustainability, and enhance community well-being by promoting walkability and local accessibility. How is it helping meet urban challenges? • Reduces traffic congestion by promoting walking and cycling. • Enhances air quality by reducing vehicle use. • Fosters stronger community interaction by providing close proximity to essential services. • Improves safety through better infrastructure for non-motorized transport. • Supports vulnerable groups with accessible services within walking distance. • Promotes physical health and well-being through active transport.

7. HOW CHESS IS HELPING FIGHT ALCOHOLISM	Context: In Marottichal, a village in Kerala, <u>chess has become a powerful tool against alcoholism and gambling.</u> • <u>Inspired by chess legend Bobby Fischer</u>, local tea shop owner Unnikrishnan began teaching the game in the 1970s, successfully <u>diverting attention from alcohol to chess.</u> • <u>Over 80% of the village's 4,000 residents now play chess</u>, making it a generational hobby. • The village <u>aims to become India's first 100% chess-literate community</u>, with plans to integrate chess into school curricula and support budding professional players. Ethical Values which can be learnt: • Chess Initiative: A Community Building Tool • Strengthens community bonds by combating alcoholism and gambling. • Reflects social responsibility by addressing a pressing social issue. • Promotes education and intellectual growth through chess. • Promotes inclusivity, involving people of all ages and backgrounds. • Encourages a healthier lifestyle by diverting attention from alcohol to a mentally stimulating game. • Highlights innovation in addressing social problems through creative solutions.
8. BIOPLASTICS FROM CASSAVA	Context: In Nagaland smallholder farmers are producing <u>compostable bioplastic bags from cassava starch</u>, setting an example in <u>reducing plastic use.</u> • This initiative, supported by <u>the North East Centre for Technology Application and Reach (NECTAR)</u>, and led by Eco starch, a local MSME, <u>aims to replace single-use plastics with biodegradable alternatives.</u> • This <u>initiative promotes the concept of 'cassava village' to boost the local economy, provide alternative livelihoods, and generate employment</u>, especially for local youth and women's self-help groups. • Eco starch plans to <u>expand its operations to include biodegradable films and bags for food packaging, further enhancing local employment opportunities.</u> Lessons that can be learnt: • Sustainable Alternatives: Using locally available resources, <u>such as cassava, for bioplastic production</u> showcases the potential for <u>sustainable alternatives to single-use plastics.</u> • Community Involvement: Empowering women's <u>self-help groups (SHGs)</u> and local youth enhances community engagement and fosters inclusive growth. • Economic Empowerment: Developing <u>'cassava villages'</u> <u>boosts the local economy</u> by providing <u>alternative livelihoods and generating employment.</u> • Scalability and Expansion: Expanding product lines can <u>create more jobs and cater to a broader market, further enhancing local economic benefits.</u>
9. INITIATIVES BY MINAL KARANWAL (IAS)	Context: Nanded (Maharashtra) ZP CEO Minal Karanwal has launched several innovative features These initiatives promote ethical values such as <u>altruism, community support, fairness, empowerment, gender equality, leadership, responsibility, inclusivity, and equity.</u>
10. OLYMPICS 2024: GREENEST GAMES EVER	Context: Paris 2024 aims to be the <u>greenest Olympics, cutting emissions to 1.75 million tonnes, down from the usual 3.5 million tonnes.</u> This eco-friendly approach includes <u>using existing buildings for 95% of events</u>, generating power from geothermal and solar sources, and promoting sustainable food and transportation. Despite challenges like <u>managing carbon emissions</u> from air travel and dealing with high temperatures, the Games showcase a <u>commitment to sustainability</u>. The event highlights the urgent need for climate action as the world faces record-breaking temperatures and environmental crises.

11. NCERT: 10 BAGLESS DAY FOR STUDENTS

Context: The NCERT has proposed 10 'bagless days' for students of Classes 6 to 8 to provide them with exposure to the world outside the classroom.

Teachers are encouraged to plan activities with local vocational experts such as carpenters, gardeners, potters, and artists. These guidelines align with the National Education Policy 2020 and emphasize work-centered pedagogy to prepare students for the 'World of Work'. The curriculum is divided into three themes: 'Science, Environment and Tech', 'Public Office, Local Industry and Business', and 'Art, Culture and History'.

Benefits:

1. **Experiential Learning:** Encourages hands-on, practical education.
2. **Community Engagement:** Involves learning from local vocational experts.
3. **Respect for Labor:** Promotes the dignity of various vocations.
4. **Holistic Education:** Balances theoretical knowledge with practical application.
5. **Cultural Awareness:** Includes exposure to art, culture, and history.
6. **Environmental Responsibility:** Focuses on understanding science, environment, and technology.
7. **Social Responsibility:** Involves visits to public offices and local industries.

FACTS FOR PRELIMS

GS-1

Art & Culture

1. ABHAYA MUDRA

Context:

The 'abhaya mudra' is a hand gesture symbolizing fearlessness and reassurance.

Originating in the Buddhist tradition, it is depicted with the right hand raised outward at shoulder height, fingers pointing up. It signifies protection and serenity, associated with the **Buddha granting fearlessness to his followers**, including taming a wild elephant. Over time, it became a **motif in Hindu art**, seen in depictions of deities like Shiva and Vishnu, illustrating their compassionate and protective qualities.

2. PROJECT PARI

Context:

The Ministry of Culture has **initiated Project PARI (Public Art of India)** to coincide with the **46th World Heritage Committee Meeting** in New Delhi from 21-31 July 2024.

About Project PARI (Public Art of India):

It is an **initiative by the Ministry of Culture, Government of India, executed by Lalit Kala Akademi and the National Gallery of Modern Art**. It aims to stimulate dialogue, reflection, and inspiration, enriching India's cultural landscape.

Featuring a diverse range of artwork inspired by traditional Indian art forms, Project

PARI includes

1. Sculptures that explore themes such as tributes to nature
2. Ideas from Natyashastra
3. Gandhi ji
4. Traditional Indian toys
5. Hospitality

6. Ancient knowledge
7. Naad (Primeval Sound)
8. Harmony of Life
9. Kalpataru (the divine tree).

Women artists play a significant role, showcasing Bharat's NARI SHAKTI through their substantial participation in the project.

3. ORDER OF SAINT ANDREW THE APOSTLE

Context:

The **Order of Saint Andrew the Apostle**, Russia's highest **civilian honour**, was awarded to **Prime Minister Narendra Modi during his visit to Russia**.

- Announced in 2019, the award recognized the Prime Minister for his exceptional services in **enhancing the strategic partnership and fostering friendly relations between Russia and India**.

About the Award:

- **Recipients:** The award is given to notable government and public figures, military leaders, and outstanding representatives in various fields, including science, culture, and the economy.
 - It can also be awarded to foreign heads of state for their services to Russia.
- **Historical Background:** Named after **Saint Andrew, one of Jesus' apostles** who is **said to have spread Christianity in Russia and Europe**, and founded the Church of Constantinople.
- **Establishment:** Created by **Tsar Peter the Great in 1698**, the order was abolished in 1918 after the Russian Revolution but was **reinstated in 1998 by a presidential executive order**.
- **Design:** The chain of the Order features **17 alternating links, with a gilded image of the State Emblem of Russia, and includes a badge, star, and a light blue silk ribbon**.

Past Recipients:

- Prominent figures in Russia, **including military engineer Mikhail Kalashnikov**, author Sergey Mikhalkov, **former Soviet leader Mikhail Gorbachev**, and leaders of the Russian Orthodox Church, have received the honour.
- Notable foreign recipients include **Chinese President Xi Jinping and former Kazakh President Nursultan Nazarbayev**.

4. AHOM 'MOIDAM'

Context:

The **Ahom era 'Moidams'** in Assam's Charaideo district have been recommended for **inclusion in the UNESCO World Heritage List** by the **International Council on Monuments and Sites (ICOMOS)**.

- These Moidams are the **burial grounds of Ahom**

royalty, created by **constructing earth mounds over hollow vaults topped by shrines**.

History and Significance:

- The Moidams **enshrine the mortal remains of Ahom royalty** along with cherished objects, reflecting their **funerary traditions and cosmologies**.
- The Tai-Ahoms migrated to present-day Assam in the 13th century, **making Charaideo their first capital and royal necropolis**.
- The site demonstrates their **integration with the natural landscape, creating a sacred geography**



5. BHOJSHALA TEMPLE-KAMAL MAULA MOSQUE COMPLEX

Context:

The **Archaeological Survey of India (ASI)** has **confirmed that the existing structure at the Bhojshala complex in Madhya Pradesh's Dhar district** was built using **remnants of an earlier temple**.

ASI Report on Temple Mutilation

- Temple pillars and pilasters mutilated, originally temple-like.
- Archaeological survey reveals temple dating back to **Paramara dynasty**.
- Hindu deities' images found on pillars, defaced for mosque use.
- **13th century CE inscriptions discovered**.
- Historical accounts of temple's conversion into a mosque by **Khilji king Mahmud in 1455 CE** referenced.

THE BHOJSHALA DISPUTE

► In 1997, entry to Bhojshala complex was banned by the district administration, triggering resentment in the Hindu community

► On Basant Panchami in 2002, the Dhar collector ordered a lathicharge on devotees who gathered for puja at Bhojshala and demanded the gates to be opened. About two dozen injured

► The lathicharge sparked a movement throughout to 'free Bhojshala'

► On April 7, 2003, ASI issued an order, permitting Hindus to worship inside Bhojshala every Tuesday, and Muslims to offer namaz on Fridays

► The same year 1 lakh devotees gathered at the gate on Basant Panchami. When the administration refused to open the gates, they tried to force in. Police lathicharge; 200 people injured

► Devotees set police vehicles on fire and beat cops. Govt estimates say public property worth Rs3 crore was destroyed



► Then CM Digvijaya Singh ordered action; 1,400 booked for beating cops and arson. Many booked under NSA or or externed. Govt passes gazette notification to attach property to recover the loss

► After BJP's Uma Bharti became CM, all cases were withdrawn, gazette notification cancelled

► In 2006, a similar situation arose when Basant Panchami fell on a Friday, when namaz is offered at Kamal Maula Mosque. Hundreds injured in clashes. Riots broke out in town. Over 200 booked

► In 2013, Basant Panchami was again on a Friday. Police were strict. People were controlled with a show of strength

6. VISHNUPAD AND MAHABODHI TEMPLES

Context:

Finance Minister announced during the Union Budget speech that corridor projects will be built for the Vishnupad Temple in Gaya and the Mahabodhi Temple in Bodh Gaya, Bihar.

- These projects aim to transform the temples into world-class pilgrim and tourist destinations, similar to the Kashi Vishwanath Temple Corridor.

Vishnupad Temple:

- Dedicated to **Lord Vishnu**, this temple features a 40cm-long footprint believed to be Lord Vishnu's.
- Built in **1787** by **Queen Ahilyabai Holkar**, it stands about 100 feet tall with 44 pillars and is located on the banks of the Falgu River.
- It is significant during pitra paksh, a period for rituals to remember ancestors.

Mahabodhi Temple:

- A **UNESCO World Heritage Site**, this temple marks the location where Gautam Buddha attained enlightenment under the Mahabodhi Tree.
- Originally built by **Emperor Ashoka** in the **3rd century B.C.**, the present structure dates back to the 5th-6th centuries and is one of the earliest brick Buddhist temples.

7. KALARIPPAYATTU

Context:

The Ministry of Youth Affairs & Sports has recognized the Kalarippayattu Federation of India for its efforts in promoting the traditional martial art of Kalarippayattu within the country.

About Kalarippayattu:

- Kalaripayattu, meaning “Battleground” (Kalari) and “Method” or “Art” (Payatt), is an ancient Indian martial art that originated in Kerala between the 3rd century BC and the 2nd century AD.
- Practiced in Kerala and parts of Tamil Nadu, it is one of the oldest and most scientific martial arts in the world, with a history of over 3,000 years.
- Kalaripayattu includes personal combat training exercises designed to develop sharp reflexes for unarmed combat and skilled fighting using various weapons such as sticks, daggers, knives, spears, swords, and shields.



8. SANGAMESHWARA TEMPLE

Context:

The ancient Sangameshwara temple in Kurnool district, Andhra Pradesh, is once again submerged due to recent heavy rains and rising water levels in the Srisailem project.

About Sangameshwara temple:

- The Sangameshwara Temple, dedicated to Lord Shiva, has recently been submerged in the backwaters of the Srisailem project in Nandyal district due to heavy inflow from the Krishna River.
- The temple was originally built in **740 AD** by **Chalukya ruler Pulakesin II** on the **Krishna River bank.**
- It was originally situated where the **Tungabhadra and Krishna Rivers merge**, **10 km from its current location.**
- To prevent submersion from the Srisailem Dam's construction, the temple was dismantled and rebuilt at its current site in 1979, maintaining its historical and religious significance.

9. CHARAIDEO MOIDAMS

Context:

Assam's Charaideo Moidams, now a **UNESCO World Heritage Site**, are royal burial sites of the Ahom dynasty, which ruled Assam from 1228 to 1826 AD.

- A moidam is a mound of earth over a grave, typically containing one or more chambers with an earthen mound covered in grass and a pavilion on top.
- Unlike Hindus who cremate their dead, the Ahoms, originating from the Tai people, practiced burial.
- Charaideo, the first capital established by King Sukaphaa in 1253 AD, remained a symbolic and ritual center of power for the Ahoms.
- The burial sites contain items for the afterlife and are reminiscent of ancient Egyptian rites, earning the nickname “Pyramids of Assam.”



10. NATIONAL MISSION FOR MANUSCRIPTS

Context:

The National Mission for Manuscripts in India aims to document, conserve, digitize, and disseminate the country's manuscript heritage.

- To achieve this, **over 100 Manuscripts Resource Centres and Manuscripts Conservation Centres** have been established nationwide.

Key achievements of the mission include:

- Documenting **approximately 5.2 million manuscripts**.
- Conserving **90 million folios of manuscripts**.
- Digitizing 350,000 manuscripts, comprising 35 million pages**.
- Conducting over **100 conservation workshops**.
- Uploading around **140,000 manuscripts on its web portal, with 75,000 available for free public access**.
- Publishing **over 100 books** since its inception.

Establishment of the **National Mission of Manuscripts (NMM)** was aimed at **safeguarding India's extensive repository of manuscripts**. The NMM an **autonomous body was established in 2003 by the Ministry of Culture, Government of India**.

11. MONASTERY OF SAINT HILARION/TELL UMM AMER

Context:

The Monastery of Saint Hilarion/Tell Umm Amer in Palestine has been inscribed on the World Heritage List and the List of World Heritage in Danger by [UNESCO](#).

The monastery, founded by Saint Hilarion, is one of the **oldest in the Middle East** and was a hub for religious, cultural, and economic exchanges during the **Byzantine period**. [UNESCO's decision follows a December 2023 move](#) to grant the site provisional enhanced protection under the **1954 Hague Convention**.



[UNESCO](#), headquartered in Paris, leads global cooperation in education, science, culture, and communication, overseeing over 2000 World Heritage sites and various other cultural and educational networks.

History

12. SANTHAL HUL

Context:

The 169th anniversary of the Santhal rebellion is celebrated

Hul Divas is observed **annually on June 30 in memory of**

tribal leaders — Sidho and Kanhu Murmu — who led the Santhal hul (rebellion) on June 30, 1855, at Bhognadih in Sahebganj district (now Jharkhand)

About Santhal Rebellion:

Topic	Information
What is the Santhal Rebellion?	Santhal rebellion (also known as 'Hul') (1855-1856) was a revolt against both the British East India Company and the zamindari system by the Santhal. The rebellion was led by the four sibling Brothers — Sidhu, Kanhu, Chand and Bhairav .
Santhals and their Migration	The Santhal people migrated from the Birbhum and Manbhum regions of Bengal to modern-day Santhal Pargana . The British relocated them to the forested area of Damin-i-Koh as part of their revenue collection strategy.
Reasons behind the Hul	The Santhals rebelled against the British due to extortions, oppressive extractions, dispossession of property, false measurements, and other illegalities .
Organization of the Hul	Contrary to popular belief, the Hul was a well-planned and organized political war . Preparations included guerrilla formations, military teams, detectives, secret bases , logistics, and a network of message carriers for coordination. Non-Adivasi Hindu castes also participated in the rebellion.
Contribution of Women	Phulo-Jhano , two sisters, led an army of 1,000 women who played crucial roles in the rebellion. The East India Company's army was defeated twice during the uprising.
End	After the rebellion started, martial law was proclaimed by the East India Company which lasted until January 3, 1856, when martial law was suspended and the rebellion was eventually suppressed by the Presidency armies .
Lasting Impact of the Hul	The Santhal rebellion inspired future uprisings, such as the Santhal involvement in the 1857 mutiny . It symbolized resistance against British colonialism and laid the foundation for subsequent movements in Jharkhand.

13. BASTILLE DAY

Context:

Celebrated in France on July 14, 1789, marking the **storming of the Bastille prison**.

- This event was a **defining moment in the French Revolution**, symbolizing the fall of the **oppressive ancien régime**.
- By the mid-18th century, **France faced severe financial crises, famine, and social inequality**, leading to widespread discontent.
- The **Estates-General's failure to address commoners' grievances** led to the formation of the **National Assembly and escalating tensions**.

Bastille Day has been **celebrated since 1790, and in 1879**, it was officially declared France's National Day.

Geography

14. PALM TREES

Context:

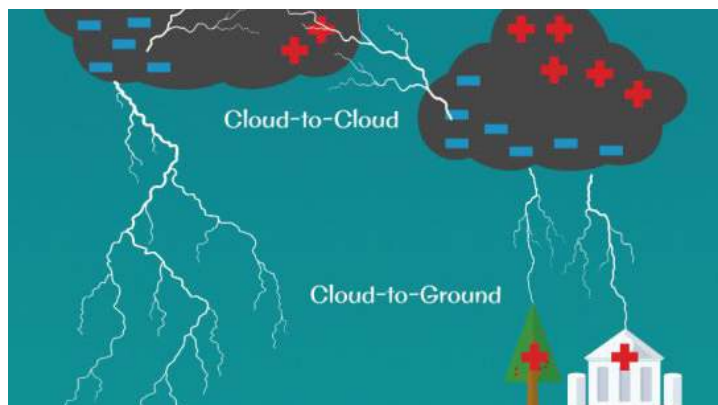
Odisha plans to plant **1.9 million palm trees** and restrict cutting to reduce **lightning deaths**, targeting areas heavily affected during pre-monsoon and monsoon seasons.

Palm trees are **part of tropical forest ecosystems and include varieties like Coconut, Oil Palm, Arecanut, and Palmyrah**. Palmyrah is the State Tree of Tamil Nadu. They act as natural conductors during lightning strikes, preventing loss of lives.

What is Lightning?

It is a **powerful electrical phenomenon** caused by the build-up of electrical charges within clouds and between clouds and the ground. It results in a **brilliant flash of light and thunder**.

India is among a **few countries with an early warning system** for lightning, providing forecasts up to five days in advance. Lightning accounted for **2,880 deaths in 2021**, making up 40% of all accidental deaths due to natural forces, as reported by the National Crime Records Bureau (NCRB). Lightning frequency is highest in **northeastern states and West Bengal, Sikkim, Jharkhand, Odisha, and Bihar**.



15. APHELION POINT

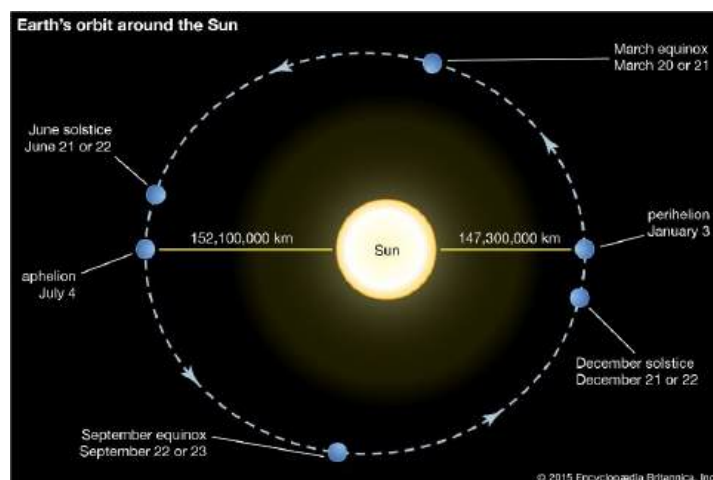
Context:

Recently, Earth has reached aphelion.

What is Aphelion Point?

Aphelion and Perihelion in Earth's Orbit

- Aphelion occurs in early July, Earth's farthest from the Sun.
- Perihelion occurs in early January, Earth is 147 million kilometres closer.
- Despite 5 million kilometre difference, Earth's axis tilt determines seasons.
- Aphelion receives 7% less sunlight than perihelion.



16. SEA GROYNES

Context:

Coastal residents in Ernakulam district, Kerala, protested against sea incursion and incompletion erection of **Sea Groynes**, by blocking the Fort Kochi-Alappuzha State Highway near Kannamaly.

What is Sea Groynes?

Sea groynes are structures built perpendicular to the shoreline, extending into the sea. They are designed to reduce coastal erosion by trapping sand and sediment carried by currents, thereby stabilizing the beach and protecting the coast from the sea's impact.



17. DENISOVANS

Context:

A study reveals that Denisovans, an extinct human species, occupied the Tibetan Plateau 160,000 years ago.

- Bone remains found in Baishiya Karst Cave indicate Denisovans survived there for millennia, enduring both cold and warm periods between the Middle and Late Pleistocene eras.
- The research team analysed over 2,500 bones from the cave, identifying one rib bone as belonging to a new Denisovan individual from 48,000 to 32,000 years ago.
- The study also showed that Denisovans hunted, butchered, consumed various animals, and used bones to make tools, highlighting their adaptability to fluctuating climatic conditions.

Who were Denisovans?

Denisovans were an extinct group of hominins, or human relatives, known primarily from remains found in Siberia and Tibet. They lived hundreds of thousands of years ago and coexisted with Neanderthals and early modern humans.

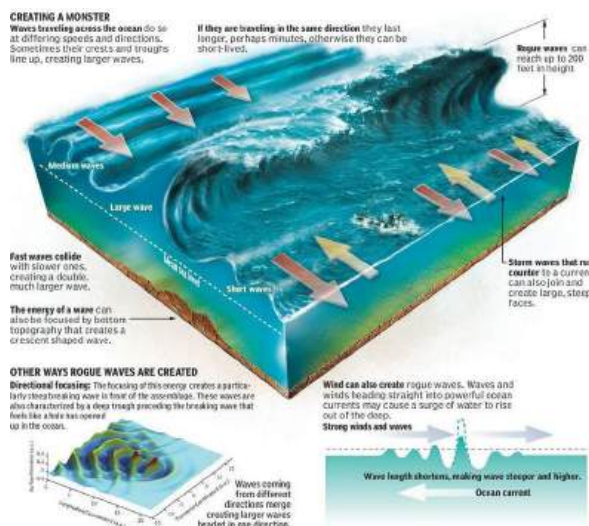
18. ROGUE WAVES

Context:

Researchers have developed an AI program that predicts rogue waves by analysing data from 172 ocean buoys.

- Rogue waves, defined as waves twice the size of surrounding waves, pose significant threats to ships, coastal infrastructure, and human lives.
- Traditionally unpredictable, these waves form when swells from distant weather systems converge or when ocean currents compress swells.
- The AI, trained on 20-minute wave pattern samples, can predict rogue waves up to five minutes in advance with around 73-75% accuracy.

Future advancements in AI and data collection may further improve prediction accuracy, potentially leading to near-perfect forecasts.



Source: National Geographic: Numerical Modeling of Extreme Rogue Waves, Science Direct, Christophe Foch, et al.; National Ocean Service, Sea Staff Works, 1970; MARUM/GEOMAR/GEOMAR DEUTSCH

GS-2

Salient features of Indian Constitution

1. CONSTITUTIONAL RIGHT TO A SPEEDY TRIAL

Context:

The Supreme Court of India emphasized the constitutional right to a speedy trial under Article 21, rebuking the National Investigation Agency (NIA) for delays in a counterfeit currency case.

- The bench stressed that the right to a speedy trial applies regardless of the crime's severity, criticizing the NIA for repeated delays in submitting its counter affidavit.
- The Supreme Court's decision highlighted the importance of a speedy trial, referencing past rulings such as Kartar Singh Vs State of Punjab (1994), Hussainara Khatoon (I) Vs Home Secretary, State of Bihar, and Abdul Rehman Antulay Vs RS Nayak (1992), which all recognized the right to a speedy trial as a fundamental right under Article 21.

2. ARTICLE 341 OF THE CONSTITUTION

Context:

The Supreme Court ruled that states cannot modify the Schedule Caste (SC) list published under Article 341 of the Constitution.

The court quashed a Bihar government notification from 2015 that classified the Tanti-Tantwa community as SC, reverting them back to the category of Extremely Backward Class. The court called the notification "mala fide" and emphasized that only Parliament has the authority to amend the SC list through legislation, not state governments.

About Article 341:

Article 341 of the Indian Constitution empowers the President to specify castes, races, or tribes as Scheduled Castes (SC) for various states and union territories. This designation is made after consulting with the Governor of the concerned state.

1. The list of Scheduled Castes is intended to provide special privileges and benefits to these communities to promote their social and educational advancement.
2. Parliament holds the authority to amend this list by including or excluding groups through legislation, ensuring the criteria for inclusion are clearly defined and adhered to.

3. RIGHT TO BE FORGOTTEN

Context:

The Supreme Court of India has **agreed to examine the issue of the “right to be forgotten,”** a concept **related to digital privacy and the control of personal data.**

- This right allows **individuals to have their personal data, such as names and photos, removed from public records and online platforms.**

Status of Right to be forgotten in India:

- In India, the **“right to be forgotten” is considered part of the broader right to privacy under Article 21 of the Constitution,** but specific legal provisions for this right are lacking.
- The **Digital Personal Data Protection Act, 2023,** which includes penalties for data misuse, **does not explicitly cover this right.**
- The **Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021,** offer a **complaint process for unauthorized personal data exposure,** but do not address the right comprehensively.

Functioning of Parliament and State Legislatures

4. EXPUNCTION POWERS

Context:

The **first special session of the 18th Lok Sabha** saw heated debates and clashes between the government and opposition over remarks that led to expunction from records.

Expunction Powers in Parliament:

- Authority given to Rajya Sabha Chairman and Lok Sabha Speaker to delete defamatory, indecent, unparliamentary, or undignified remarks.
- Aim: Maintains decorum and upholds parliamentary standards during debates.
- Rules 261 (Rajya Sabha) and 380 (Lok Sabha) allow deletion of objectionable remarks.
- Expunged portions are marked and excluded from official records to prevent circulation.

5. ANAND MARRIAGE ACT

Context:

The **National Commission for Minorities** took initiative to discuss the implementation and registration of **Sikh marriages under the Anand Marriage Act with 18 States/UTs.** **Jharkhand, Maharashtra, and Meghalaya** reported that they have already implemented the Act, while the remaining States/UTs assured that they would implement it within two months.

About Anand Marriage Act:

The Anand Marriage Act is a law **that allows Sikhs to register their marriages under a separate act, rather than the Hindu Marriage Act.**

It recognises the Sikh marriage ceremony called Anand Karaj.

Steeped in history, religion

- Maharaja of Nabha, Ripudaman Singh got Anand Marriage Act drafted from Bhai Kahn Singh Nabha in 1908. It was approved by the British Council in 1909.
- Anand Act became operational after Independence; since then, Sikh marriages are being registered under Hindu Marriage Act.
- In a Sikh marriage, the couple takes four rounds of Guru Granth Sahib during the recital of Jaavan (hymns) from the holy book; a Hindu marriage features seven phere (rounds) of the sacred fire amid chanting of mantras.
- Marriages of Buddhists, Jains are also currently registered under the Hindu Act, while Muslims, Parsis, Christians and Jews have own Acts for the purpose.



6. IMMUNITY TO GOVERNORS

Context:

The Supreme Court agreed to **examine Article 361 of the Constitution,** which **grants immunity to governors from criminal prosecution.**

- The plea calls for **judicial scrutiny of the immunity provided under Article 361.**
- Article 361** exempts the **president and governors from court accountability** for their official actions, making it an **exception to Article 14 (right to equality).**

7. UNLAWFUL ACTIVITIES PREVENTION ACT (UAPA)

Context:

The **Supreme Court of India granted bail to a Nepali citizen** detained for over nine years under the **Unlawful Activities Prevention Act (UAPA),** citing his **right to a speedy trial.**

- The bench emphasized that **statutory restrictions should not override the constitutional right to life and personal liberty** if the trial is significantly delayed.
- This **ruling follows a precedent set in the 2021 Union of India v. K A Najeeb case** and continues a trend where the **SC has granted bail despite UAPA's strict provisions due to prolonged incarcerations.**

What is UAPA?

The Unlawful Activities Prevention Act, 1967 is a Parliamentary law that gives powers to the central government to deal with activities directed against the integrity and sovereignty of India.

Provisions of the Act:

- UAPA is applicable to both Indians and well as foreigners.
- It can be applied to offences committed either in India or outside.
- The law provides for death penalty and life imprisonment as the highest form of sentences.
- A maximum time of 180 days is given to the inves-

tigating agency to file report, which can also be extended.

Amendments in 2019:

- NIA officers of the rank of Inspector or above can investigate a case in addition to DSP or ACP ranked officer in a state.
- The **law empowers the government to designate individuals as terrorists.**
- The approval of Director General of Police is **required to attach properties connected with terrorism.**

Concerns:

- It gives absolute and sweeping powers to the central government to arrest individuals indulging in an activity it considers as unlawful.
- The courts are bound to give stringent punishment under the UAPA even if offence is not serious.

Constitutional and Non – Constitutional Bodies

8. FOREIGNERS TRIBUNALS

Context:

The **Foreigners Tribunals (FTs) in Assam** are **quasi-judicial bodies** formed under the **Foreigners (Tribunals) Order of 1964.**

- They are **designed to determine whether a person is an Indian citizen or a foreigner.**

Formation and Structure:

- Established through the **Foreigners (Tribunals) Order of 1964**, linked to the **Foreigners' Act of 1946.**
- **Although 300 FTs are sanctioned, only 100 are currently operational.**
- The Assam government has recently instructed the **Border police not to refer cases of non-Muslims who entered India before 2014 to the FTs**, aligning with **the Citizenship (Amendment) Act of 2019.**
- This Act offers a **citizenship application window for non-Muslims fleeing persecution from Afghanistan, Bangladesh, and Pakistan.**

The **FTs are quasi-judicial bodies** formed by the central government through the **Foreigners (Tribunals) Order of 1964 under Section 3 of the Foreigners' Act of 1946**, to let local authorities in a State refer a person **suspected to be a foreigner to tribunals.**

Governance

9. BHUVAN PANCHAYAT PORTAL AND NATIONAL DATABASE FOR EMERGENCY MANAGEMENT

Context:

Recently **two new Geoportals** developed by ISRO: '**Bhuvan Panchayat (Ver. 4.0)**' for rural land records and '**National**

Database for Emergency Management (NDEM Ver. 5.0)' were launched.

- These portals provide **high-resolution satellite imagery for visualisation and planning.**

Portal	Purpose	Features
Bhuvan Panchayat Portal	Support decentral-ized planning Empower grass-roots citizens	Digitizes land re-cords Reduces dependen-cy on local admin-istration Minimizes corruption
NDEM Ver. 5.0 Portal	Provide space-based inputs on natural disasters Aid in disaster risk reduction	Effective early warn-ing systems Continuous moni-toring Supports India and neighbouring coun-tries

10. SAMPOORNATA ABHIYAN

Context:

The **NITI Aayog** has launched the '**Sampoornata Abhiyan**,' a **nationwide campaign aimed at achieving 100% saturation in 12 key social sector indicators.**

More about Sampoornata Abhiyan

1. **Overview:** A 3-month campaign by NITI Aayog.
2. **Objective:** To achieve **saturation of 6 key indicators** in **Aspirational Districts (ADP) and Aspirational Blocks Programme (ABP).**
3. **Programs:**
 - **ADP:** Targets 112 Aspirational Districts.
 - **ABP:** Targets 500 Aspirational Blocks.
4. **Key Indicators for Districts:**
 - Soil Health Cards distribution
 - Schools with functional electricity
 - Fully immunized children (9-11 months)
 - Pregnant women registered for ANC in the first trimester
 - Pregnant women taking ICDS Supplementa-ry Nutrition
 - Schools providing textbooks within 1 month of the session start
5. **Key Indicators for Blocks:**
 - Screening for Diabetes and Hypertension
 - Pregnant women registered for ANC in the first trimester
 - Pregnant women taking ICDS Supplementa-ry Nutrition
 - Soil Health Cards generated
 - SHGs receiving Revolving Fund

The campaign emphasizes collaboration among **local and**

state governments, central ministries, and NITI Aayog officials to support and guide local governance.

The Aspirational Districts Programme, launched in 2018 by NITI Aayog, aims to transform 112 districts focusing on Health & Nutrition, Education, Agriculture & Water Resources, Financial Inclusion & Skill Development, and Infrastructure, measured across 81 development indicators.

The Aspirational Blocks Programme, launched in 2023, targets 500 blocks in 329 districts to achieve saturation of essential government services in Health & Nutrition, Education, Agriculture and Allied Services, Basic Infrastructure, and Social Development, measured across 40 indicators.

11. SEHER PROGRAM

Context:

The **Women Entrepreneurship Platform (WEP)** and **TransUnion CIBIL** launched the **SEHER program**.

- **WEP is a public-private partnership platform** incubated at NITI Aayog aiming at empowering women entrepreneurs

What is the SEHER program?

SEHER Program in India: Empowering Women Entrepreneurs

- Aims to improve financial literacy and business skills for women entrepreneurs.
- Focuses on improving credit access and management awareness.
- Aims to boost economic development by accelerating women's entrepreneurship, which would create over 30 million new women-owned enterprises and 150 to 170 million more jobs. India has 63 million micro, small, and medium enterprises, with 20% owned by women, employing 27 million people.
- Part of WEP's Financing Women Collaborative (FWC), a unique initiative aiming to accelerate finance access for women entrepreneurs.

12. E-OFFICE

Context:

The **Indian government** is set to implement the **e-office system** in 133 attached and subordinate offices, as well as **autonomous bodies**.

- The **Department of Administrative Reforms and Public Grievances (DARPG)** will lead this initiative with the **National Informatics Centre (NIC) serving as the knowledge partner**.

About e-Office:

- A mission mode project under the **National e-Governance Program**, developed by the **National Infor-**

matics Centre (NIC), provides a digital workplace solution.

- Built on open architecture, it is a **reusable product for replication across governments**.

Its key components include:

- **eFile**: File Management System
- **KMS**: Knowledge Management System
- **WAW**: Work from Anywhere portal
- **SPARROW**: Smart Performance Appraisal Report Recording Online Window

13. ASMITA PROJECT

Context:

The **Ministry of Education and the University Grants Commission (UGC)** launched the **ASMITA (Augmenting Study Materials in Indian Languages through Translation and Academic Writing) project** to develop 22,000 books in **Indian languages over the next five years**.

- This initiative, in collaboration with the **Bharatiya Bhasha Samiti**, aims to **promote Indian languages in education**.
- The project includes three key components: **ASMITA, Bahubhasha Shabdkosh, and Real-time Translation Architecture**.
- These initiatives are expected to **enhance learning in Indian languages, empower students, and preserve linguistic traditions, aligning with the National Education Policy (NEP)**.

Thirteen nodal universities will lead the project, with a standard operating procedure (SOP) guiding the book-writing process.

14. INTERNATIONAL CENTRE FOR AUDIT OF LOCAL GOVERNANCE

Context:

The **International Centre for Audit of Local Governance (iCAL)** was inaugurated by the **Comptroller and Auditor General (CAG) of India**.

- **iCAL, the first of its kind in India**, aims to set global standards for **auditing local governance bodies**.

Objectives and Functions of iCAL:

- **Collaborative Platform**: Brings together policy-makers, administrators, and auditors for enhanced auditing practices.
- **Global Standards**: Sets international benchmarks for local governance audits.
- **Empowers auditors**, executives, and elected representatives through training and leadership development.
- **Knowledge Hub**: Functions as a knowledge hub and think tank for governance issues.

Need for iCAL:

- **Increased Funding:** Proper auditing is crucial for efficient utilization of significant funds.
- **Global Practices:** Adoption of global best practices in local government auditing is emphasized.
- **Capacity Building:** Enhancing auditors and local government employees' capacity is crucial.
- **Facilitates open communication,** data accessibility, and cooperation in addressing audit findings.
- **CAG aims to** foster cooperation, enhance auditing standards, and improve financial accountability.

15. FIRST OVERSEAS JAN AUSHADI KENDRA

Context:

India's first overseas Jan Aushadi Kendra was inaugurated in Mauritius.

- This event highlights the strong bilateral cooperation in the health sector between India and Mauritius.
- The Jan Aushadi Kendra aims to provide affordable generic medicines to enhance public healthcare in Mauritius.

About Janaushadhi Kendras:

Janaushadhi Kendras are centres that provide quality generic medicines to the public.

Supported by the Bureau of Pharma PSUs in India (BPPI) under the Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP), these centres aim to make affordable healthcare accessible.

The government has set a target to increase the number of Janaushadhi Kendras to 10,500 by the end of March 2025.

16. KIRTI PROGRAMME

Context:

The Union Minister of Sports and Youth Affairs inaugurated the second phase of the Khelo India Rising Talent Program (KIRTI).

- This phase focuses on assessing the sporting talent of 20,000 students from Municipal Corporation of Delhi (MCD) schools.

About KIRTI programme:

The KIRTI Programme is aimed at school children aged 9 to 18, with two main objectives: discovering talent nationwide and using sports to reduce drug addiction and gadget distractions.

It plans to conduct 20 lakh assessments through Talent Assessment Centres to identify potential athletes.

The programme aims to reach every block in India to connect with children interested in sports.

KIRTI launched across 50 centres, assessing 50,000 appli-

cants in its first phase across 10 sports, including athletics, boxing, and hockey.

It features a transparent selection process using IT and AI-based data analytics to predict athletic potential.

17. U-WIN

Context:

The Indian government is rolling out U-WIN, an online vaccine management portal for childhood immunization, similar to the CoWIN platform used during the COVID-19 pandemic.

- U-WIN aims to create digitized and individualized immunization records for children up to six years old and pregnant mothers.
- The platform will track all vaccinations, send reminders to parents, and provide a downloadable digital vaccine certificate.
- U-WIN will also help health workers by generating lists of due vaccinations and allow the government to study immunization trends.
- U-WIN will be linked to the existing eWIN platform for inventory management, ensuring efficient vaccine distribution and tracking.

The platform is expected to improve vaccination compliance through reminders, ensure portability of vaccination records, reduce errors, and provide detailed data on individual immunization, helping to reach unvaccinated children and improve overall public health outcomes.

Digital Impetus - Activities proposed

- Digitisation of routine immunisation micro-plan through U-WIN registration module.
- After registration, targeted beneficiaries will receive a message from U-WIN for their upcoming vaccination dose as per Universal Immunisation Programme.
- Beneficiaries are verified on U-WIN through their Aadhaar before vaccination. Ayushman Bharat Health Account unique ID is created for all registered beneficiaries.
- Acknowledgement will be sent to beneficiaries after every dose. Vaccination certificate can be downloaded from U-WIN portal.
- Engaging private sector in the future as of beneficiaries are utilising private health facilities for delivery services and vaccination.

18. CULTURAL MAPPING OF VILLAGES

Context:

The Government of India, under the Ministry of Culture, has launched the National Mission on Cultural Mapping (NMCM).

The project aims to:

- **Raise awareness about cultural heritage** and its role in development and identity.
- **Map 6.5 lakh villages**, including their geographical, demographic profiles, and cultural assets.
- **Create National Registers of Artists and Art practices.**
- **Develop a web portal and mobile app** to serve as a **National Cultural Work Place (NCWP).**
- The project targets **all inhabited villages listed in the 2011 Census, including those in Bihar.**
- The data is accessible on **the Mera Gaon Meri Dharohar Web Portal** (<https://mgmd.gov.in/>) and can be utilized by **various ministries and government organizations to protect and promote village cultures, traditions, and art forms.**

19. DIGIPIN (DIGITAL POSTAL INDEX NUMBER)

Context:

The **Department of Post** has released a **beta version of the National Addressing Grid, DIGIPIN (Digital Postal Index Number)**, for public feedback.

- Developed with **IIT Hyderabad**, **DIGIPIN aims to provide a permanent digital infrastructure** for addressing that remains **unaffected by changes in state, city, or locality names, or road networks.**
- The **system divides the country into 4m x 4m units**, each assigned a **unique 10-digit alphanumeric code based on geographical coordinates.**
- This **code serves as an offline addressing reference, useful for locating addresses, emergency operations, and logistics.**
- No **private address data is stored, ensuring privacy.**

20. PM JANJATIYA UNNAT GRAM ABHIYAAN

Context:

Finance Minister announced **the launch of the PM Janjatiya Unnat Gram Abhiyaan**, aimed at **providing basic facilities to five crore Scheduled Tribe families across 63,000 villages in tribal-majority and aspirational districts.**

- This scheme is **designed after PM-JANMAN for Particularly Vulnerable Tribal Groups.**
- The **2024-25 budget allocated ₹13,000 crore for the Ministry of Tribal Affairs**, with a significant portion going to **Eklavya Model Residential Schools.**

21. SAFAL TEST CYCLE 2024 TO REDUCE EXAM STRESS

Context:

CBSE Launches SAFAL Test Cycle to Ease Exam Pressure

Key Points	Details
Objective	Assess students of Classes 5 and 8 on core concepts instead of rote learning with no preparation required.
Background	SAFAL (Structured Assessment For Analyzing Learning) aligns with NEP 2020 to reduce exam fear. It started with 80 schools in 2022, expanded to 1,887 schools in 2023. In 2024, over 10 lakh students from 11,000 schools are participating.
Implementation	SAFAL will test science, math, and languages in 75-minute (Class 5) and 90-minute (Class 8) sessions.
Assessment Levels	1. Below Basic (two grades lower skills) 2. Basic (one grade lower skills) 3. Proficient (current grade skills) 4. Advanced (above grade skills)
Scoring	Scores are scaled for difficulty, not percentages, to act as a diagnostic tool rather than ranking students.
Future Plans	Expand to all 29,000 CBSE schools by 2025.
Goal	Identify learning gaps and plan targeted interventions without adding pressure on students.

About PARAKH (Performance Assessment, Review, and Analysis of Knowledge for Holistic Development): Independent unit within NCERT, established in 2023.

Focus Areas:

- Capacity Development under **Project Vidyasagar.**
- **National Achievement Survey (NAS)** for ongoing assessment.
- **Equivalence of School Boards** for uniform credit systems.
- **Holistic Progress Cards** for various educational stages.

22. EXTERNAL COOPERATION

Context:

The Indian central government criticized **Kerala for appointing a secretary for "external cooperation,"** stating that **foreign affairs fall solely under the central government's jurisdiction according to the Constitution.**

Constitutional provisions regarding External Affairs Seventh Schedule:

- All matters which bring the Union into relation with any foreign country” is listed under Union List.
- **Article 253:** Parliament has power to make any law for implementing any treaty with any other country or any decision made at any international conference, etc.
- **Article 293:** Places territorial limits on borrowing power of the states, i.e., states non-access to foreign loans.

International Relations

23. INTERNATIONAL NORTH-SOUTH TRANSPORT CORRIDOR

Context:

India-Russia trade has advanced with the first-ever shipment of Kuzbass coal from Siberia to India via the International North-South Transport Corridor (INSTC).

- The **7,200 km-long INSTC**, a **multimodal network of sea, road, and rail**, offers the **shortest route from St Petersburg to Mumbai**.
- The INSTC is part of Russia’s strategy to **redirect trade flows from Europe to Asia and the Middle East due to Western sanctions**.
- This corridor will benefit several countries, **including Iran, Russia, Azerbaijan, the Baltic, Nordic nations, and 11 Central Asian countries**.



24. COLOMBO PROCESS

Context:

India chaired the first meeting of the Colombo Process in Geneva, marking its first time at the helm.

About the Colombo Process:

It is a **regional consultative forum comprising 12 Asian member states** and aims to share best practices related to overseas employment for South and Southeast Asian countries that send migrant workers abroad. The member states include **Afghanistan, Bangladesh, Cambodia, China, India, Indonesia, Nepal, Pakistan, the Philippines, Sri Lanka,**

Thailand, and Vietnam. The forum, founded by 10 of these states, makes non-binding decisions by consensus.

The **International Organisation for Migration (IOM)** and the Colombo Process Technical Support Unit (CPTSU) provide technical and administrative support.

About the IOM:

Established in 1951 as part of the UN System, headquartered in Geneva, Switzerland. It comprises 175 member states and aims to address displacement issues and facilitate pathways for regular migration. It leads initiatives like the Global Compact for Migration.

25. KARTARPUR CORRIDOR

Context:

Pakistan has completed the **420-meter-long bridge** at the **zero line of the Kartarpur Corridor** after a **delay of two and a half years**.

- The bridge was necessary due to the area’s susceptibility to flooding, ensuring a safe passage for visitors to the Gurdwara Darbar Sahib.

About Kartarpur Corridor:

- Connects **Darbar Sahib Gurdwara in Pakistan with Dera Baba Nanak shrine in India’s Punjab**.
- Visa-Free Movement: **Indian pilgrims need only a permit to cross into Pakistan**.
- Commemoration: **Built to celebrate the 550th birth anniversary of Guru Nanak Dev on November 12, 2019**.
- Open Year-Round: The corridor will **remain operational throughout the year**.



26. INTERNATIONAL MARITIME ORGANIZATION (IMO)

Context:

At the **132nd session of the International Maritime Organization (IMO) Council** in London, **India led global maritime discussions.**

- The delegation proposed the establishment of **the South Asian Centre of Excellence for Sustainable Maritime Transport (SACE-SMaRT)**, aiming to **advance environmentally sustainable and technologically proficient maritime practices in the region.**

About International Maritime Organization (IMO):

- The International Maritime Organisation (IMO) is a **specialized UN agency focused on regulating shipping and preventing marine pollution from ships.**
- Established in 1948 and operational since 1958**, the IMO has 175 member states and three associate members, **with headquarters in London.**
- India joined in 1959.**
- The IMO creates a **fair, effective regulatory framework for the shipping industry** and addresses legal issues like liability and **international maritime traffic facilitation.**

- It expressed **“grave concern”** over the **safety at the ZNPP and emphasized the need to follow the International Atomic Energy Agency’s (IAEA) guidelines** for nuclear safety and security.
- India abstained from voting on a UN General Assembly resolution.**
- Countries like **Bangladesh, Bhutan, China, Egypt, Nepal, Pakistan, Saudi Arabia, South Africa, and Sri Lanka** also abstained, while Belarus, Cuba, North Korea, Russia, and Syria voted against the resolution.

Russia criticized the resolution as politicized and non-consensual, claiming it would escalate the conflict rather than promote peace.



27. MUTUAL RECOGNITION AGREEMENT (MRA) FOR ORGANIC PRODUCTS

Context:

India and Taiwan have implemented a **Mutual Recognition Agreement (MRA) for organic products.**

- This MRA, **the first bilateral agreement for organic products between the two nations**, involves **the Agricultural and Processed Food Products Export Development Authority (APEDA) of India and the Agriculture and Food Agency (AFA) of Taiwan.**
- Under this agreement, organic products produced according to **India’s National Programme for Organic Production (NPOP)** and certified by an **accredited body can be sold in Taiwan with the “India Organic” logo.**
- Conversely, **organic products from Taiwan meeting its Organic Agriculture Promotion Act standards** can be sold in India with the **“Taiwan Organic” logo.**

This agreement will facilitate the export of key Indian organic products **such as rice, processed food, green/black and herbal tea, and medicinal plant products to Taiwan.**

28. RESOLUTION ON UKRAINE’S NUCLEAR SAFETY

Context:

The **UN General Assembly** adopted a resolution addressing the **safety of Ukraine’s nuclear facilities**, including the **Zaporizhzhia nuclear power plant (ZNPP).**

29. CARBON CREDITING MECHANISM

Context:

India and Japan are planning to establish a **Joint Crediting Mechanism (JCM) for carbon trading and credit adjustment**, formalized through a **Memorandum of Cooperation.**

- Under this mechanism, **carbon credits will be allocated through a structured process and tracked via a registry.**
- These credits will contribute to each country’s **Nationally Determined Contributions under the Paris Agreement.**
- The proposal **aims to attract investments in low-carbon technologies, fostering job creation and technological diffusion.**
- The **JCM will be governed by relevant domestic laws and regulations**, with a joint committee developing the necessary rules and guidelines.
- The mechanism ensures that credits can be **shared between both countries while avoiding double counting.**

30. CULTURAL PROPERTY AGREEMENT

Context:

India and the US signed **their first Cultural Property Agreement (CPA) to prevent and curb the illicit trafficking of Indian antiquities to the US.**

- The **agreement aligns with the 1970 UNESCO Convention**, which aims to **prohibit and prevent the illicit import, export, and transfer of cultural**

property.

- Since 1976, India has repatriated 358 antiquities, with 345 retrieved since 2014, mostly from the US.
- In 2023, the US offered 1,440 artefacts for repatriation, with around 300 deemed eligible under the "antique" category.
- The agreement aims to make the repatriation process faster and smoother.

With this agreement, India joins 29 other nations with US bilateral cultural property agreements, strengthening co-operation between the two countries in protecting cultural heritage.

GS-3

Indian Economy

31. WAYS AND MEANS ADVANCES (WMA)

Context:

The Reserve Bank of India (RBI) has increased the Ways and Means Advances (WMA) limits for State governments and Union territories by 28%.

About Ways and Means Advances (WMA):

- Introduced in 1997 to address mismatches in government receipts and payments.
- Governments can obtain immediate cash from the RBI, repayable within 90 days, with interest at the existing repo rate.
- Legal Authority: Authorized under Section 17(5) of the RBI Act, 1934.
- If WMA exceeds 90 days, it becomes an overdraft, with interest 2 percentage points higher than the repo rate.

32. ESANKHYIKI PORTAL

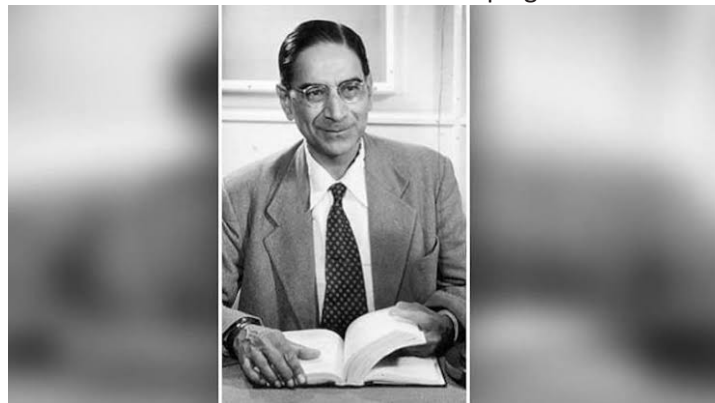
Context:

The Ministry of Statistics and Programme Implementation (MoSPI) has launched the eSankhyiki portal (<https://esankhyiki.mospi.gov.in>) to enhance user experience and facilitate easier access to official statistics, on the eve of Statistics Day (29th June). The portal features two modules:

1. **Data Catalogue Module:** Provides centralized access to major datasets including National Accounts Statistics, Consumer Price Index, and more, with over 2291 datasets available. Users can search, download, and visualize data along with specific metadata.
2. **Macro Indicators Module:** Offers time series data on key macro indicators like National Accounts Statistics and Consumer Price Index, allowing data filtering, visualization, and API sharing for increased data reusability.

Statistics Day in India:

- Commemorates P.C. Mahalanobis' birth anniversary.
- Mahalanobis founded the Indian Statistical Institute in 1931.
- Established the National Sample Survey and Central Statistical Organisation in 1950.
- Shaped India's Second Five-Year Plan (1956-61).
- Developed the Mahalanobis Distance for pattern recognition.
- Earned Padma Vibhushan, India's second-highest civilian award.
- Established the Mahalanobis International Award for life-time achievements in statistics in developing countries.



33. PROJECT NEXUS

Context:

The Reserve Bank of India (RBI) has joined Project Nexus, an international initiative aimed at enabling instant cross-border retail payments by linking domestic Fast Payments Systems (FPSs) of multiple countries.

- India's Unified Payments Interface (UPI) will be connected with the FPSs of Malaysia, the Philippines, Singapore, and Thailand, with potential expansion to more countries.
- Project Nexus, conceptualized by the Bank for International Settlements (BIS) Innovation Hub, aims to standardize the connectivity between various instant payment systems (IPS) globally.
- This will streamline cross-border payments, allowing transactions to be completed within 60 seconds.
- The platform simplifies the process by allowing a single connection to Nexus to link to all other countries in the network, accelerating the growth of instant cross-border payments.

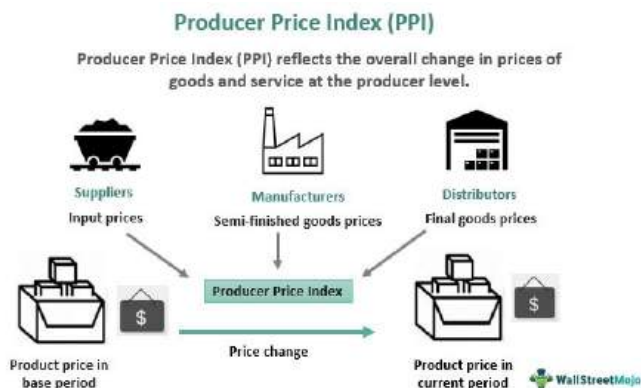
34. PRODUCER PRICE INDEX

Context:

The DPIIT is finalizing a new model of the Producer Price Index (PPI) to better capture input prices in the economy.

What is PPI?

Producer Price Index measures the average change in prices received by producers for goods and services sold in the **domestic market or exported**. It includes two types: Output PPI for goods and services leaving production sites, and Input PPI for goods and services entering production processes.



What is the need for a new Model of PPI?

The new model of **PPI aims to replace WPI** due to biases in double counting of products, exclusion of exports/imports, and overlooking the **service sector (55% of GDP)**. It has been **shared with the IMF, and consultations are under-way to transition from WPI to PPI**, aligning with most G20 economies.

The government is also **considering changing the base year of the Wholesale Price Index (WPI) from 2011-12**, with discussions ongoing with MoSPI and the National Statistical Commission.

35. STABLECOINS

Context:

Recent volatility in the stablecoin market, **such as the collapse of TerraUSD**, has drawn attention to the challenges facing these digital assets.

What are Stablecoins?

Stablecoins are digital cryptocurrencies designed to maintain a stable value by pegging their worth to assets like **fiat currencies (e.g., USD, EUR), commodities (e.g., gold)**, or other **cryptocurrencies**. They aim to minimize price volatility, making them suitable for transactions and as a store of value within the volatile cryptocurrency market. Eg: USD Coin, GEMINI Dollar, PAXOS, TrueUSD, tether etc.

Stablecoins come in several types:

1. **Fiat-collateralized**: Backed 1:1 by fiat currencies like USD or EUR (e.g., Tether, Gemini Dollar).
2. **Asset-backed**: Supported by a basket of assets like commodities or precious metals, which can affect their value (e.g., Digix Gold).
3. **Crypto-collateralized**: Decentralized and backed by cryptocurrencies, often over-collateralized to

mitigate price volatility (e.g., Dai).

4. **Non-collateralized**: Decentralized and algorithmically governed, without specific backing (e.g., Basis).

Concerns:

Concerns include risks related to short-term debt, asset stability, contagion risks, financial stability, lack of transparency, and regulatory challenges. Cooperation between the stablecoin industry and regulators is crucial for effective regulation without stifling innovation.

36. CREDIT-DEPOSIT (CD) RATIOS

Context:

The RBI is concerned about **banks with high Credit-Deposit (CD) ratios**, notably exceeding the **industry average of 80%**.

Credit-Deposit Ratio in India

- **Measures percentage of bank's total deposits used as loans.**
- **Higher ratio indicates larger portion used for lending, impacting liquidity and credit risk.**
- **RBI directed banks to reduce credit-deposit gap.**
- **RBI's Financial Stability Report shows steady rise in CD ratio, reaching 78.8% by December 2023.**
- **Over 75% of banks with CD ratios above 75% are private sector banks.**

High CD Ratios:

- Robust credit growth in retail and MSME sectors.
- Slower deposit growth due to competitive pressures.
- Shifts in customer savings behaviour towards investments.
- Pressure on Net Interest Margins, increased liquidity risk, and credit risk.

37. ZOMBIE START-UPS

Context:

Koo, the Indian social media platform created to **rival Twitter**, is **shutting down due to unsuccessful deals** with larger companies and media houses.

- Launched in **2020, Koo gained popularity during a conflict between the Indian government and Twitter.**
- Koo **offered features similar to Twitter**, supported **multiple Indian languages, and attracted prominent users, including politicians and celebrities.**
- However, the **company faced increasing losses, declining active users, and weak global sentiment, leading to the layoff of around 30% of its workforce in 2023.**

About Zombie Start-ups:

"Zombie start-ups" refer to companies that, while **technically still in operation, are struggling to grow, innovate, or generate significant revenue.**

These businesses are often **stuck in a state of stagnation**, unable to **attract further investment or reach profitability**, yet they continue to **exist due to prior funding or minimal operational costs**.

38. VIZHINJAM INTERNATIONAL SEA-PORT

Context:

Kerala Chief Minister officially welcomed the **first cargo ship, the Chinese vessel 'San Fernando,'** at the **Vizhinjam International Sea Port**.

- Developed by **Adani Ports and Special Economic Zone Ltd (APSEZ)**, this marks the beginning of **operations for India's largest deep-water trans-shipment port**.
- The port is **constructed under a public-private partnership**.



39. INVERSE ETF

Context:

Sebi's new asset class proposal for high-risk investors is expected to provide access to advanced strategies like **long-short equity funds and inverse ETFs**.

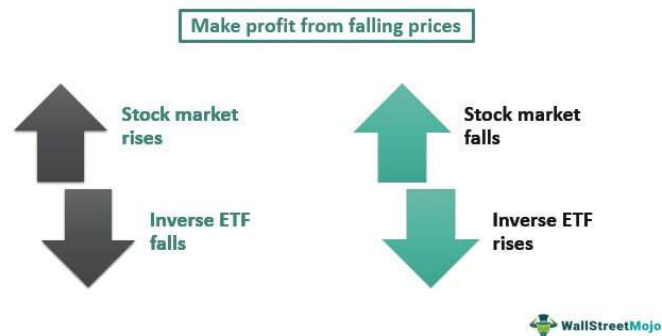
What is an ETF?

An Exchange-Traded Fund (ETF) is a type of investment fund that holds a collection of assets like stocks, bonds, or commodities and is traded on stock exchanges, much like individual stocks. ETFs offer investors a way to diversify their portfolios with a single investment and are known for their lower fees and ease of trading.

What is an Inverse ETF?

An Inverse ETF is designed to provide returns that move in the opposite direction of a specific index or benchmark. If the underlying index declines in value, the Inverse ETF aims to increase in value by the same percentage, effectively allowing investors to profit from a market downturn.

Inverse ETF



40. GLOBAL CAPABILITY CENTRES (GCCS)

Context:

Global Capability Centres (GCCs) have become a **crucial component of India's economic landscape**, contributing over **1% to the nation's GDP and significantly boosting services exports**.

- In FY24, **'other business services' provided by GCCs accounted for 26% of services exports**, second only to IT services at 48%.
- These **centres employ around 3.2 million professionals**, including **engineers and scientists, with significant contributions in engineering, research, and development (ER&D)**, business process management (BPM), and IT services.
- GCCs are increasingly establishing operations in tier-II cities** due to cost advantages and fresh talent pools.

Government initiatives like 'Digital India' and supportive state policies in Karnataka, Telangana, and Tamil Nadu have facilitated the establishment and expansion of GCCs, particularly in sectors like **automotive, electric vehicles, electronics, pharmaceuticals, and life sciences**.

Major GCC Players in India



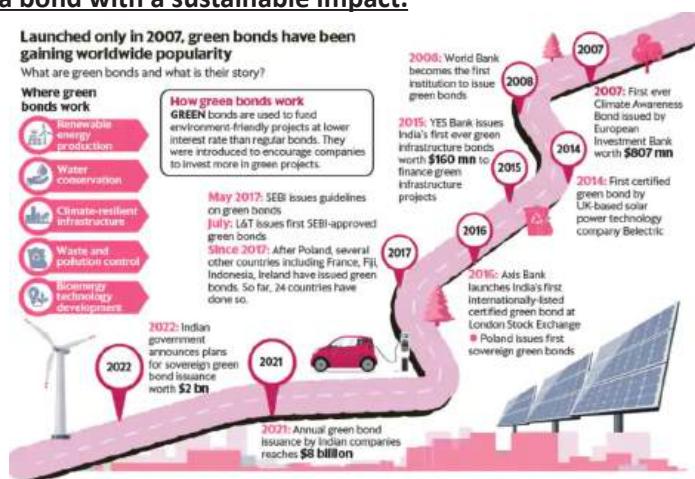

41. GREENIUM

Context:

India's sovereign **green bonds**, have not received significant green premiums from private investors, affecting the financing of green transition projects, according to the Economic Survey.

- Despite India's green bond framework being well-rated, **there is more capital potential than actual capital flow for energy transition in emerging markets.**
- The **Survey highlights the need for developed countries** to provide more **accessible, affordable financial resources in line with UNFCCC and Paris Agreement objectives.**

Greenium is defined as the **difference in yield between thematic bonds and ordinary bonds** of a similar maturity, based on the logic that investors are **willing to pay extra for a bond with a sustainable impact.**



42. LIQUIDITY COVERAGE RATIO (LCR)

Context:

The Reserve Bank of India's (RBI) latest draft guidelines **require banks to hold more liquid assets to handle potential bank runs**, potentially slowing credit growth. Banks must now account for **outflows from digital deposits** when calculating the **Liquidity Coverage Ratio (LCR)**

What is the Liquidity Coverage Ratio (LCR)?

The Liquidity Coverage Ratio (LCR) is a **regulatory standard requiring banks to hold a sufficient amount of high-quality liquid assets (HQLA)** that can be quickly converted to cash to meet their short-term obligations over a 30-day stress scenario. The goal is to ensure banks can survive a period of significant financial stress without needing external assistance. LCR in banking resulted from the **Basel III agreement.**

$$\text{Liquidity Coverage Ratio (LCR)} = \frac{\text{High-Quality Liquid Asset Amount (HQLA)}}{\text{Total Net Cash Flow Amount}}$$

Liquidity Coverage Ratio (LCR)

This move **aims to ensure banks can meet sudden digital withdrawal demands**, similar to the collapse of **Silicon Valley Bank**. However, this conservative approach may force banks to invest more in government securities, reduce credit growth, and maintain higher deposit rates.

43. PROMPT CORRECTIVE ACTION FRAMEWORK

Context:

The **Reserve Bank of India (RBI)** has introduced a **Prompt Corrective Action (PCA)** framework for **Urban Cooperative Banks (UCBs)**.

- This framework **aims to enable timely supervisory intervention and ensure UCBs implement necessary remedial measures** to restore their financial health.
- It replaces the existing Supervisory Action Framework (SAF) last revised in January 2020.**
- The **new PCA framework is designed to provide flexibility** by allowing **entity-specific supervisory action plans based on individual risk assessments.**
- It aligns with **similar frameworks for Scheduled Commercial Banks and Non-Banking Financial Companies** while maintaining supervisory rigor.
- The revised framework focuses on **capital, asset quality, and profitability, particularly targeting larger UCBs for intensive monitoring.**
- It **will not apply to small Tier 1 UCBs**. The RBI has categorized UCBs into four tiers for regulatory purposes.

44. PUMPED STORAGE HYDROPOWER

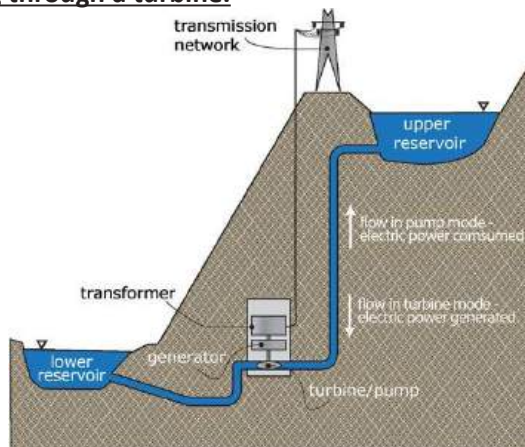
Context:

The **Uttar Pradesh government** has granted **in-principal approval for a 1,200 MW pumped storage power project** in, Sonbhadra district.

- The project will **draw its water supply from the Son River**. It aims **to generate electricity for over 6 hours daily to meet peak demand.**

About Pumped Storage Hydropower:

Pumped storage hydropower (PSH) is a **type of hydro-electric energy storage**. It is a **configuration of two water reservoirs at different elevations** that can **generate power as water moves down from one to the other (discharge), passing through a turbine**.



Agriculture

45. MINIMUM SUPPORT PRICE (MSP)

Context:

Bihar's Agriculture Minister has requested the Centre to declare a **Minimum Support Price (MSP) for makhana**, an **aquatic crop extensively cultivated in Bihar**.

- This request is significant as **Bihar contributes 85% of the country's makhana production**, involving **around 10 lakh people, primarily from poorer backgrounds**.

About MSP:

Minimum Support Price (MSP) is the **minimum price set by the government** for **certain agricultural products**, at which the products would directly be bought from the farmers if the open market prices are less than the cost incurred.



Science & Technology

46. AI WASHING

Context:

"AI washing," a term popularized by the **US Securities and Exchange Commission (SEC)**, refers to **companies exaggerating their use of AI to appeal to consumers**. It refers to a deceptive promotional practice that exaggerates or outright lies about a product or service's use of artificial intelligence.

- This phenomenon has surged **following the release of OpenAI's ChatGPT in 2022**, leading to a **significant rise in startups and companies claiming to use AI**.
- However, **only a small percentage actually integrate AI into their operations**.
- AI washing involves businesses overstating their AI capabilities or misleading consumers about their features.
- Notable examples include **Google's misrepresented AI demonstrations** and **Amazon's cashier-less checkout systems that relied on manual oversight**.

The consequences of AI washing are substantial. It **can divert resources from genuine AI innovation, complicate decision-making for businesses seeking real AI solutions**, and pose data security risks to consumers.

47. ECO-FRIENDLY SUPERCAPACITORS

Context:

Researchers at the Government College for Women, Thiruvananthapuram, have developed a method to create **eco-friendly supercapacitors** using activated carbon derived from coconut husks, a prevalent agricultural waste in Kerala.

What are supercapacitors?

- Supercapacitors, also known as ultracapacitors or electrochemical capacitors, are **energy storage devices that store electrical energy via electrostatic charge separation** at the interface between electrode and electrolyte.
- Unlike traditional capacitors, they can store much larger amounts of charge per unit volume and have the ability to charge and discharge rapidly.
- They complement batteries by providing bursts of power and extending battery life**.
- This new **biowaste-derived activated carbon** offers sustainable and efficient solutions for high-performance supercapacitors due to its availability, low cost, and environmentally friendly properties.
- The **innovative microwave-assisted production method, developed at the college's Centralised Common Instrumentation Facility (CCIF)**, produces high-quality activated carbon quickly and efficiently, making it suitable for various applications including energy storage.

48. SNOWBLIND MALWARE

Context:

Snowblind is a new Android **malware** that targets **banking credentials by exploiting a built-in Android security feature** called '**seccomp**' (secure computing), part of the Linux kernel and Android OS.

- Discovered by **security firm Promon**, Snowblind **repacks apps to evade detection of accessibility features**, allowing it to **extract sensitive information and gain remote access**.
- This malware **injects code that activates before seccomp's anti-tampering measures**, bypassing security mechanisms and **disabling biometric and two-factor authentication**.

It mainly affects users **who download apps from untrusted sources and is most active in Southeast Asia**. **Google confirmed that no apps on the Play Store are infected**, suggesting users are safe if they stick to Play Store apps.

About Malware:

- Malware, short **for malicious software**, refers to **any intrusive software developed by cybercriminals (often called hackers) to steal data and damage or destroy computers** and computer systems.
- Examples of common malware include **viruses, worms, Trojan viruses, spyware, adware, and ransomware**.

49. ZINC'S ROLE IN MAKING LEGUMES RESILIENT TO CLIMATE CHANGE

Context:

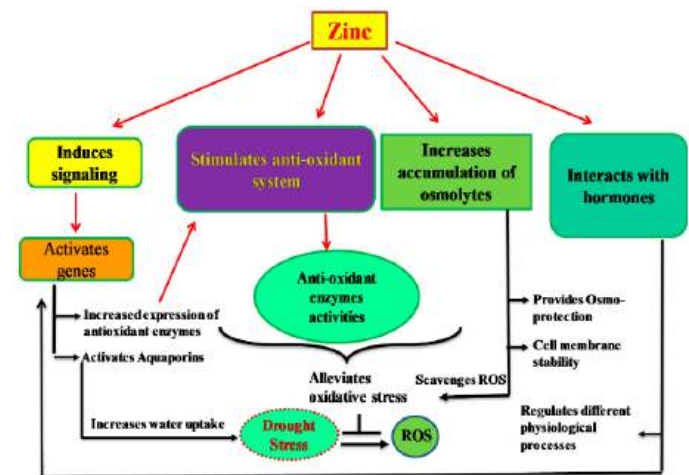
Researchers have discovered that **zinc plays a crucial role in enhancing the health and climate resilience of legume crops**.

- The **study reveals zinc's importance in nitrogen fixation**, where **atmospheric nitrogen is converted into ammonia, essential for plant growth**.
- Legumes form a symbiotic relationship with **rhizobia bacteria, which fix atmospheric nitrogen in root nodules sensitive to environmental factors like temperature, drought, and soil salinity**.
- The study also identified a transcription factor called **Fixation Under Nitrate (FUN) that controls nodule breakdown when soil nitrogen levels are high**.

Zinc acts as a **secondary signal to regulate nitrogen fixation efficiency**, with the **zinc sensor FUN playing a key role**.

Understanding how zinc and FUN regulate nitrogen fixation can help optimize this process in legume crops, leading to **increased nitrogen availability, improved yields, and**

reduced reliance on synthetic fertilizers.



50. DESERT MOSS: SYNTRICHIA CANINERVIS

Context:

Scientists have discovered **Syntrichia caninervis**, a desert moss capable of surviving **Mars-like environmental conditions**.

Syntrichia caninervis is **found in harsh locations like Antarctica and the Mojave Desert**. It is considered a potential pioneer species for Mars colonization.

What are mosses?

Mosses are **small, non-vascular plants belonging to the taxonomic division Bryophyta**. They **lack true roots, stems, and leaves, instead absorbing water** and nutrients through their stems. Mosses are commonly found in damp, shady environments worldwide, such as forests, bogs, and rocks.

51. LI-FI TECHNOLOGY

Context:

The Defence Ministry has adopted **Velmenni's Li-Fi technology** to tackle communication challenges in the Indian Navy.

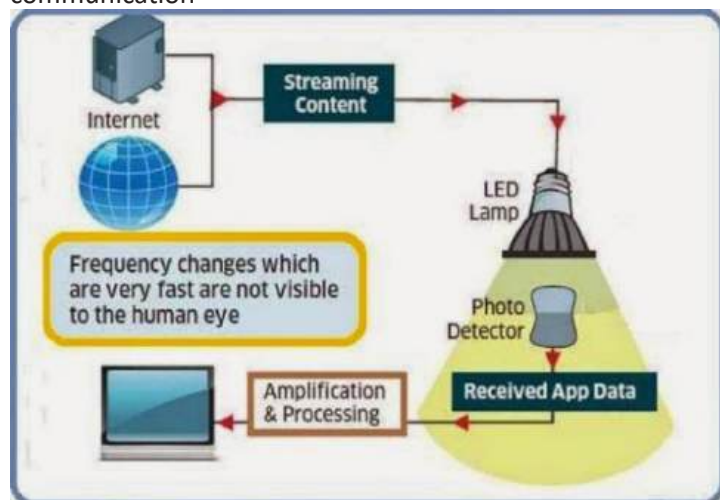
Li-Fi, developed by Velmenni, **uses light for secure wireless communication**, supported by a grant under **India's iDEX initiative**.

What is Li-Fi Technology?

LiFi (Light Fidelity) is a **wireless communication technology** using visible light, specifically LED bulbs, to transmit data. Invented by Professor Harald Haas in 2011, LiFi **offers high-speed, bidirectional mobile communication** similar to WiFi but with faster speeds, lower latency, and greater bandwidth (thousands of terahertz).

It operates by **modulating LED light to encode binary data**,

which is then received and decoded by photodiodes to transmit data wirelessly via visible light communication. This **makes LiFi ideal for electromagnetic-sensitive environments** such as aircraft cabins, hospitals, and nuclear power plants, as it does not cause electromagnetic interference and utilizes unused visible light frequencies for communication



52. ADITYA-L1 MISSION

Context: The **Aditya-L1 spacecraft** has successfully completed its **first halo orbit around the Sun-Earth Lagrangian point L1**.

- This journey requires **precise modelling of dynamics and an understanding of perturbing forces**.
- The **successful execution of these manoeuvres has validated the state-of-the-art flight dynamics software developed by URSC-ISRO**.

The **Aditya-L1 mission** is an **Indian solar observatory at Lagrangian point L1**, launched on September 2, 2023, and was inserted in its targeted halo orbit on January 6, 2024. Aditya-L1 spacecraft in the **Halo orbit takes 178 days to complete a revolution around the L1 point**.

Aditya-L1

Context: It was launched on September 2, is currently in Earth's orbit, but it is scheduled to leave this orbit and move towards the Earth-Sun system's Lagrange 1 (L1) point

Aspect	Explanation
Mission Objective	To study the Sun, its upper atmospheric dynamics (chromosphere and corona) , and understand the physics of the solar corona and its heating mechanism for the five years.
Launch Vehicle	Satellite Vehicle (PSLV)
Orbit	L1 orbit (First Lagrange point of the Sun-Earth system)
Primary Payload	Visible Emission Line Coronagraph (VELC)
Other Payloads	Solar Ultraviolet Imaging Telescope (SUIT), Solar Low Energy X-ray Spectrometer (SoLEXS), High Energy L1 Orbiting X-ray Spectrometer (HELIOS), Aditya Solar wind Particle Experiment (ASPEX), Plasma Analyser Package for Aditya (PAPA)
Significance of VELC	VELC is a solar coronagraph capable of simultaneous imaging, spectroscopy, and Spectro-polarimetry . It can image the solar corona down to 1.05 times the solar radius.
Purpose of Studying the Sun	To gain a deeper understanding of the Sun's radiation, heat, flow of particles, and magnetic fields ; provide clues about the high temperature of the solar corona; understand space weather dynamics; and offer early warnings for solar events.
Importance of L1 Point	L1 point provides an unobstructed view of the Sun , even during phenomena like an eclipse; allows payloads to directly observe the Sun; makes the mission fuel-efficient.
What is L1 Point?	Lagrange points are equilibrium positions in space where the gravitational forces of two large bodies, like the Earth and the Sun, produce enhanced regions of attraction and repulsion.

To know more Visit Insights IAS Daily Current Affairs

53. 3D HOLOGRAM TECHNOLOGY

Context:

Japan has introduced new yen banknotes equipped with **3D hologram technology** to combat counterfeiting. The existing currency remains valid, with new bills gradually entering circulation through banks and ATMs to accommodate Japan's cash-centric transactions.

What is 3D hologram technology?

3D hologram technology creates three-dimensional images that appear to have depth and motion without the need for special glasses. It uses principles of **interference and diffraction**. It uses **lasers to record light patterns** reflected from an object, producing a realistic holographic image that changes perspective as the viewer moves. These holograms are used for **security in currency, authentication of products, and immersive displays in entertainment and education**.

54. MASH (METABOLIC DYSFUNCTION-ASSOCIATED STEATOHEPATITIS)

Context:

Union Minister Dr Jitendra Singh launched the **Indo-French Liver and Metabolic Disease Network (InFLiMeN)** to prevent and cure **metabolic liver diseases**.

What is the Indo-French Liver and Metabolic Disease Network (InFLiMeN)?

The initiative, a joint effort between Indian and French experts, aims to prevent and treat metabolic liver diseases and address non-alcoholic fatty liver disease (NAFLD), by developing low-cost diagnostic tests and India-specific solutions.

Insulin Resistance and MASLD:

- Overeating carbs leads to high insulin levels, causing insulin resistance.
- Insulin resistance disrupts normal metabolism and promotes glucose conversion into fatty acids.
- Excess glucose is stored in the liver, leading to fatty liver.
- Over time, liver damage affects function, progressing to severe conditions like steatohepatitis and cirrhosis.
- Severe conditions may require a liver transplant.

One in three Indians has **fatty liver**, a condition that **pre-dates Type 2 Diabetes** and other metabolic disorders.

About Liver:

The liver is a vital organ located in the upper right abdomen, responsible for various functions including detoxification, protein synthesis, and production of biochemicals necessary for digestion.

Metabolic liver diseases are caused by disruptions in the liver's metabolic processes, often due to factors such as:

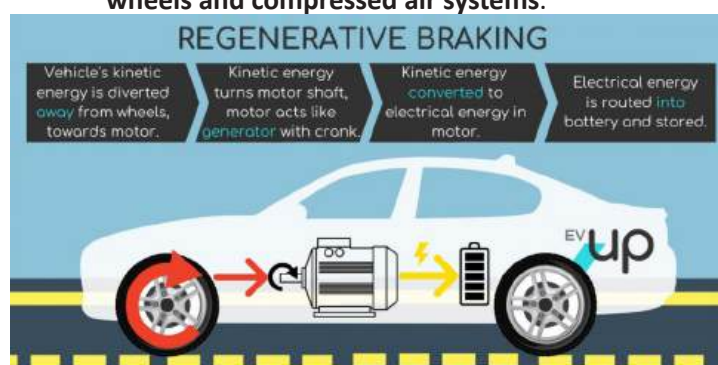
1. **Obesity:** Excess body fat can lead to fat accumulation in the liver.
2. **Diabetes:** Type 2 diabetes can increase the risk of liver fat accumulation.
3. **High cholesterol and triglycerides:** Elevated levels can contribute to liver fat buildup.
4. **Genetic predispositions:** Certain inherited conditions can affect liver metabolism.
5. **Poor diet:** High intake of sugar and fats can lead to liver fat accumulation.
6. **Alcohol consumption:** Excessive alcohol intake can damage liver cells and affect metabolism.

55. REGENERATIVE BRAKING

Context:

Regenerative braking in **electric vehicles** is a system that **converts kinetic energy from the wheels into a storable form of energy, increasing efficiency.**

- Traditional braking methods, **such as disc and induction brakes, convert kinetic energy to heat.**
- In regenerative braking, **the electric motor that propels the vehicle acts as a generator during braking, converting mechanical energy back to electrical energy,** which is then stored in the vehicle's battery.
- While beneficial, regenerative braking has limitations, **such as not being sufficient alone to stop a vehicle completely and reduced energy recovery at lower speeds.**
- Other methods of **energy recovery include fly-wheels and compressed air systems.**



56. MITOCHONDRIAL DONATION

Context:

Mitochondrial disease (Mito) encompasses **a group of disorders that impair mitochondria's ability to produce the energy necessary for organs to function,** potentially leading to organ failure.

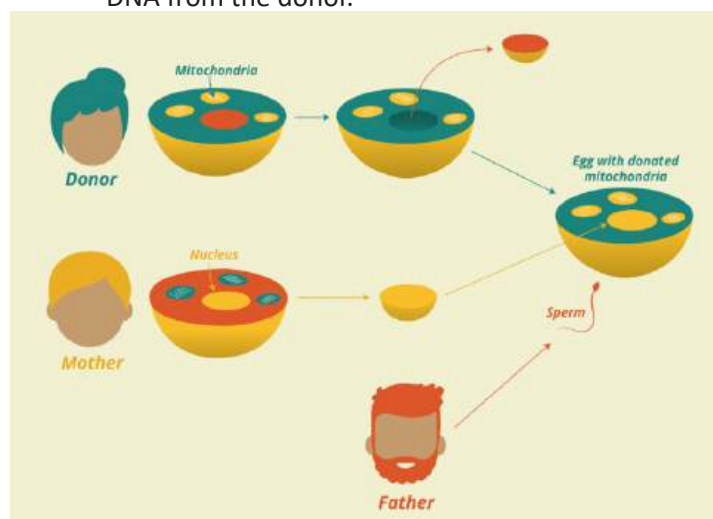
- A new procedure called **mitochondrial donation** **offers a cure for Mito.**

Mitochondrial Disease:

- **Types:** Caused by **faulty genes in nuclear DNA (inherited from both parents) or mitochondrial DNA (inherited from the mother).**
- **Symptoms:** Affects 1 in 5,000 people, impacting **energy-intensive organs like the heart, brain, and muscles.**

Mitochondrial Donation:

- **Procedure:** An **IVF-based technique allowing parents with faulty mitochondrial DNA** to have **genetically related children without passing on the disease.**
- **Process:** Involves **transferring nuclear DNA from an egg with faulty mitochondria to a donor egg with healthy mitochondria.** The resulting child inherits nuclear DNA from the parents and mitochondrial DNA from the donor.



57. MEDEVIS PLATFORM

Context:

The **World Health Organization (WHO)** has launched **MeDeVIS (Medical Devices Information System),** an online platform designed to **provide global open access to information on medical devices.**

- This platform **supports governments, regulators, and users in selecting, procuring, and using medical devices for diagnostics, testing, and treatment** of various health conditions.
- **MeDeVIS covers 2301 types of medical devices** addressing health issues like **reproductive health, noncommunicable diseases, and infectious diseases such as COVID-19.**
- MeDeVIS consolidates information from **multiple sources, simplifying the decision-making process for healthcare practitioners and patients.**

The platform references two international naming systems: **the European Medical Device Nomenclature (EMDN) and the Global Medical Device Nomenclature (GMDN),** which assist in regulatory approval, procurement, and inventory management.

The WHO aims for MeDeVIS to improve **access to life-sav-**

ing medical technologies, especially in resource-limited settings, and to contribute to universal health coverage.

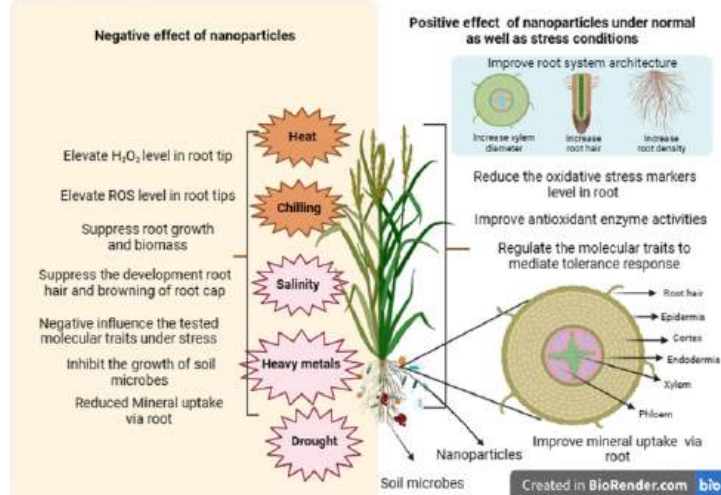
58. MINERAL NANOPARTICLES WITH WATER

Context:

Researchers at IIT Madras have discovered that water microdroplets can break down minerals into nanoparticles.

- This study, published in the journal Science, involved creating nanoparticles from minerals such as silica and alumina by applying high voltage to mineral microparticles suspended in water.
- The electric fields and surface tension within the microdroplets facilitate this rapid transformation, which is not possible with bulk water.

This innovative method holds potential for significant applications in agriculture by infusing soil with silica nanoparticles to enhance plant growth and transform un-productive lands into fertile areas.

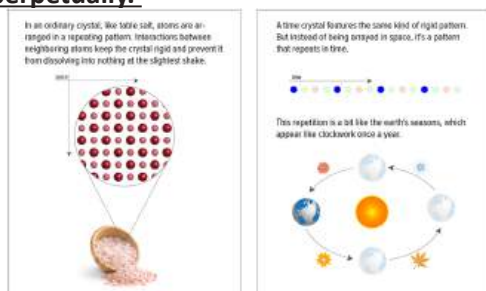


59. TIME CRYSTAL

Context:

Physicists have created a new type of “time crystal” by inflating rubidium atoms to hundreds of times their normal size using lasers.

- This innovative method results in atoms oscillating between two states without losing energy.
- Unlike traditional matter, time crystals break time symmetry, existing in the lowest energy state allowed by quantum mechanics and oscillating perpetually.



60. NASA'S CHAPEA PROJECT

Context:

NASA's CHAPEA project involved four volunteers living in a simulated Mars habitat for a year to study the challenges of long-duration missions to Mars.

- The mission, part of NASA's Crew Health and Performance Exploration Analog (CHAPEA), was the first of three planned simulations.
- The habitat, called “Mars Dune Alpha,” was a 1,700 sq ft 3D-printed structure at the Johnson Space Center in Houston, Texas, designed to replicate Martian conditions, including a backdrop of red, rocky cliffs and simulated Martian soil.
- The crew experienced conditions similar to those on Mars, including spacewalks in “Marswalks” suits, growing vegetables, and dealing with communication delays, limited resources, and prolonged isolation.

61. TIRZEPATIDE

Context:

India is set to approve the weight-loss drug tirzepatide marking a significant advancement in obesity treatment.

- Follows global trends of semaglutide for weight loss (drugs like Ozempic and Wegovy).
- Other benefits: - Decreased Blood Sugar, Reduces Hunger, Reduced Body Fat, Reduces the risk Of Chronic Disease.
- Boosts GLP-1 and GIP hormones for satiety and glucose management.
- Clinical trials show substantial weight loss with tirzepatide (participants losing up to 20.9% of their body weight).
- Tirzepatide is administered once a week via subcutaneous injection.
- Ongoing use required to maintain results, stopping the medication leads to weight regain.
- Side effects include nausea, vomiting, and risk of thyroid tumors.

62. MV SEA CHANGE

Context:

The MV Sea Change, the world's first commercial passenger ferry powered by 100% zero-emission hydrogen fuel cells, was launched in San Francisco.

It can travel 300 nautical miles and operate for 16 hours before refuelling.

What are hydrogen fuel cells?

Hydrogen fuel cells generate electricity through an electrochemical reaction between hydrogen and oxygen, producing water vapour as the only emission. They are a clean

and efficient alternative to traditional combustion engines, offering zero tailpipe emissions and the potential for use in various applications, including transportation and stationary power generation.

63. ELECTROENCEPHALOGRAM (EEG)

Context:

This year marks the 100th anniversary of the first human electroencephalogram (EEG), pioneered by German physiologist Hans Berger.

What is EEG?

EEG stands for electroencephalography, combining “Electro” for electricity, “encephalo” for the brain, and “graphy” for representation. It is an instrument that measures brain electrical activity generated by neurons, essential in fields such as neuroscience and neurolinguistics.

- **Uses:** Common applications include epilepsy diagnosis, monitoring anaesthesia effects, assessing sleep patterns, coma activity, and brain death.
- **Functioning:** Neurons in the brain create electrical signals, detected by EEG to differentiate normal and abnormal brain states.
- **Advantages:** EEG is cost-effective, non-invasive, portable, and emits no radiation or noise.
- **Disadvantages:** Setup involves time and sensitivity to hair thickness, and it primarily detects surface brain activity, sometimes needing support from MRI and advanced data processing for deeper insights.

64. COALITION OF EPIDEMIC PREPAREDNESS INNOVATIONS (CEPI)

Context:

Asia's first “Pre-clinical Network Facility” under the Coalition of Epidemic Preparedness Innovations (CEPI) at the Translational Health Science & Technology Institute (THSTI) was inaugurated recently.

- This facility, capable of handling BSL3 pathogens, becomes the 9th such lab globally and the first in Asia, enhancing research capabilities for infectious diseases.
- The Genetically Defined Human Associated Microbial Culture Collection (Ge-HuMic) Facility was also inaugurated which will serve as a repository for microbial cultures and genetically characterized animals, fostering collaborations among academic institutions, hospitals, and industry for R&D.

65. CHANDIPURA VIRUS

Context:

The Chandipura virus (CHPV), a rare and potentially deadly pathogen, has been identified as the cause of recent deaths in Gujarat.

- Identified in **1965 in Maharashtra**.
 - Spreads primarily by Phlebotomus genus sandflies, thrive in **the dry, tropical conditions** of north Gujarat.
 - Symptoms include **sudden high fever, severe headache, muscle pain, altered consciousness, seizures, coma, and death**.
 - Primarily affects **children under 15 due to low immunity**.
 - **Diagnosis challenging** due to symptom similarity with **other viral encephalitis**.
 - **No specific antiviral treatment, focusing on symptom management and intensive care**.
- Prevention strategies include reducing exposure to sandflies through insecticide use, protective clothing, insect repellents, and improved sanitation.

66. LUNAR CAVE

Context:

Scientists have confirmed the existence of a large lunar cave connected to a pit in Mare Tranquillitatis, providing potential shelter for astronauts against the moon's extreme conditions.

- This cave, was discovered through archival radar measurements from NASA's Lunar Reconnaissance Orbiter.
- Such caves, formed by volcanic processes, can protect humans from radiation, micrometeorites, and temperature extremes, facilitating long-term lunar habitation.

Further exploration could yield insights into the moon's volcanic history and internal structure, with plans for future missions to examine these caves in detail.

67. GROWTH-INDIA TELESCOPE

Context:

India's first fully robotic telescope, the GROWTH-India telescope at the Indian Astronomical Observatory in Ladakh, captured a building-sized asteroid as it approached Earth.

The telescope, part of a joint venture by IIT Bombay and the Indian Institute of Astrophysics, tracked the asteroid's rapid movement, causing background stars to appear as streaks. This 0.7m wide-field telescope specializes in time-domain astronomy and is part of the Global Relay of Observatories Watching Transients Happen (GROWTH) initiative. The project is funded by India's DST-SERB and the NSF.

68. OROPOUCHE FEVER

Context: Brazil has reported its first-ever deaths from Oropouche fever, a mosquito-borne disease with symptoms similar to dengue, but severe cases are rare.

- The virus, first detected in Trinidad and Tobago in 1955, has spread to Latin America, the Caribbean,

and recently to Europe, with Italy reporting its first case in June 2024.

- Oropouche fever is transmitted by infected midges and mosquitoes, and symptoms start between four and eight days after the bite, including fever, headaches, pain, and sometimes nausea.
- Most patients recover in about seven days, and there is no vaccine or specific treatment.

The disease's spread may be influenced by climate and environmental factors such as deforestation, but much about its transmission remains understudied.

69. SPOOFING

Context:

Caller ID spoofing allows a phone call to appear as if it originates from a falsified number, often used by fraudsters, telemarketers, and others to hide their identity.

- It's legal in many places, leading to the rise of commercial spoofing services since 2004.

About Spoofing:

- Spoofing is used for social engineering attacks, bypassing call blocking, and exploiting IVR system vulnerabilities.
- The Telecom Regulatory Authority of India (TRAI) suggested a Calling Name Presentation (CNAP) system to display caller names based on KYC documents.
- The Department of Telecommunications (DoT) has directed telecom operators to block international calls with manipulated Caller Line Identity (CLI), though the system's effectiveness remains unclear.

The Telecommunications Act, 2023 empowers the government to control telecom services during emergencies, but there has been criticism of government inaction on spoofing.

Addressing this issue would reduce fraud and spam calls, saving revenue for telecom providers and benefiting consumers and the economy.



[Environment & Ecology](#)

70. MEGAFUNA

Context:

A 41,000-year-old ostrich nest was discovered by archaeologists in Andhra Pradesh, providing significant insights into the extinction of megafauna in India.

- Megafauna, generally animals weighing over 50 kg, includes the mega omnivorous ostrich.
- The discovery supports research on the reasons behind megafauna extinction in India, such as the arrival of humans around 30,000 years ago and the co-evolution hypothesis, which suggests that geographic isolation and abiotic factors accelerated their extinction.

71. GLOBAL CONCLAVE ON PLASTIC RECYCLING AND SUSTAINABILITY (GCPRS)

Context:

The Global Conclave on Plastic Recycling and Sustainability (GCPRS) began yesterday at Bharat Mandapam, Pragati Maidan, addressing issues of plastic waste management, recycling, and sustainability to promote circularity.

About GCPRS:

The Global Conclave on Plastics Recycling and Sustainability (GCPRS), organized by the AIPMA (All-India Plastics Manufacturers' Association (AIPMA)), gathers industry stakeholders to address critical issues in plastic use and recycling, showcasing innovative technologies and fostering collaboration for sustainable practices across sectors.

Initiatives Taken to Tackle Plastic Pollution:

Global Initiatives:

1. [Global Partnership on Marine Litter \(GPML\)](#)
2. GloLitter Partnerships Project
3. [London Convention, 1972](#)

India-Specific Initiatives:

1. Elimination of single-use plastic
2. [Plastic Waste Management Rules, 2016](#)
3. Un-Plastic Collective
4. [Kerala: Beat Plastic Pollution Initiative](#)
5. **Other initiatives for plastic pollution mitigation:** Project REPLAN (REducing PLastic from Nature), Promotion of Circular Economy, EPR Portal for Plastic Packaging, Swachh Bharat Mission, Life-style for the Environment (LiFE) Movement

Environment friendly Plastics



Bio-plastics: Materials bio-sourced or biodegradable or both and are made from renewable biomass resources (e.g., corn starch/ sugarcane/ cassava)



Biodegradable plastic: plastics (other than compostable plastics) which undergo complete degradation by biological processes under ambient environment.

Compostable plastics: Plastics that undergo degradation by biological processes during composting to yield CO₂, water, inorganic compounds and biomass.



Oxo-degradable: These are conventional plastics such as PE, which include an additive to help them break down into smaller fragments, which could lead to microplastic leakage in the environment.

72. VALORIZATION OF DREDGED SEDIMENTS

Context:

The **Ministry of Ports, Shipping, and Waterways (MoPSW)** has approved a research proposal on the **valorization of dredged sediments**, led by the Indian Institute of Technology Bombay (IIT Bombay).

- This three-year project aims to **transform dredged sediments, often considered waste, into valuable construction aggregates.**
- **Valorisation refers to the act of making something valuable or useful from an existing substance.**
- This initiative **not only promotes sustainable development but also addresses environmental concerns by efficiently utilizing resources.**

73. GEARSHIFT CHALLENGE

Context:

NITI Aayog, in collaboration with **IIM Bangalore, Smart Freight Centre India, CALSTART/Drive to Zero, and WRI India**, has launched the **NITI GearShift Challenge** as part of the **e-FAST India initiative.**

- Aims to **develop innovative business models** to promote the **adoption of zero-emission trucks (ZETs) in India**, addressing economic and environmental issues.
- The first round focuses on **initial business models, while the second round involves detailed models and implementation roadmaps**, mentored by industry leaders.

With the freight sector being crucial to India's economy and a significant contributor to diesel consumption and CO₂ emissions, the challenge aims to **accelerate the shift to electric trucks, improving air quality and energy security.**

74. DUAL-TOWER SOLAR THERMAL PLANT

Context:

China has introduced the **world's first dual-tower solar thermal power plant in Gansu Province**, enhancing **energy efficiency by 24%.**

- **This innovative plant features two 200-meter-tall towers**, each surrounded by nearly 30,000 mirrors that **concentrate sunlight onto the towers to generate steam and drive turbines for electricity production.**

Key Features:

- **Dual-Tower Configuration:** **The plant's unique design involves two towers and overlapping mirror circles**, allowing mirrors to **serve either tower, boosting efficiency.**
- **Molten Salt Storage:** **Acts as a thermal battery**, storing excess **heat collected during the day and releasing it at night for continuous power generation.**
- **High Reflection Efficiency:** **Mirrors are made from specialized materials achieving a 94% reflection efficiency.**
- **Sun-Tracking Mirrors:** **Automatically adjust to follow the sun's movement**, concentrating rays on **the eastern tower in the morning and shifting westward in the afternoon.**

75. ARTIFICIAL REEFS

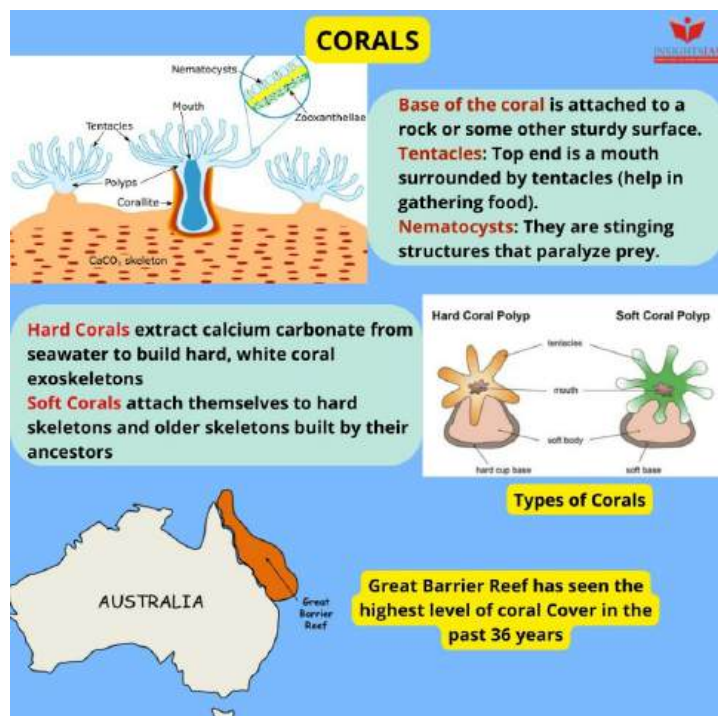
Context:

Recently **300 artificial reef** modules were deployed in **various shapes off the coast of Rameshwaram, Tamil Nadu**, to enhance **marine fisheries resources and coastal biodiversity.**

- **These reefs, located 3 nautical miles offshore at a depth of 6 meters**, benefit fishermen from eight fishing villages.

About Artificial reefs:

- **Artificial reefs are human-made structures** placed on the **seabed using biorock technology.**
- This technology **involves passing a low electrical current through water via electrodes** near a steel structure, **attracting dissolved minerals to form a calcium carbonate layer akin to natural coral reefs.**
- **These reefs provide hard surfaces for algae, barnacles, corals, and oysters to attach to, creating habitats for fish, absorbing carbon dioxide, and benefiting local fishing communities.**



76. 'WHITE CATEGORY' SECTORS

Context:

Industries classified under the 'white category' by the Central Pollution Control Board (CPCB), considered non-polluting, will no longer need prior permissions ('consent to establish' (CTE) and 'consent to operate' (CTO)) from state pollution control boards to operate under the Air Act, 1981, and Water Act, 1974, according to draft notifications from the Environment Ministry.

- White category industries, such as wind and solar power projects and air cooler assembly, must now inform state boards of their operations via self-declarations.

Categorizing Industrial Sectors:

The Ministry of Environment, Forest and Climate Change (MoEFCC) categorizes industrial sectors based on their Pollution Index (PI), which reflects the level of emissions, effluents, hazardous waste, and resource consumption.

The **Pollution Index** ranges from **0 to 100**, with higher values indicating greater pollution. The criteria for categorization are as follows:

- Red category:** PI score of 60 and above
- Orange category:** PI score of 41 to 59
- Green category:** PI score of 21 to 40
- White category:** PI score up to 20

This categorization is based on references from the Water (Prevention and Control of Pollution) Cess (Amendment) Act, 2003, Environment (Protection) Act, 1986 standards, and the Doon Valley Notification, 1989.

77. CLIMATE FINANCE ACTION FUND (CFAF)

Context:

Azerbaijan, hosting this year's COP29 UN climate talks, replaced a planned fossil fuel production levy with the launch of the "Climate Finance Action Fund" (CFAF).

- The fund aims to raise \$1 billion annually from fossil fuel-producing countries and companies to support climate projects in developing nations.
- Key focuses include clean energy, energy efficiency, climate resilience, and new technologies.

Half of the CFAF's capital will go to these projects, while the remaining half will help countries meet their Nationally Determined Contributions (NDCs) to maintain the 1.5-degree Celsius target.

Additionally, 20% of the funds will support immediate disaster response in vulnerable regions.

78. PROJECT TIGER

Day highlights that Project Tiger will displace approximately 5.5 lakh Scheduled Tribes and other forest dwellers.

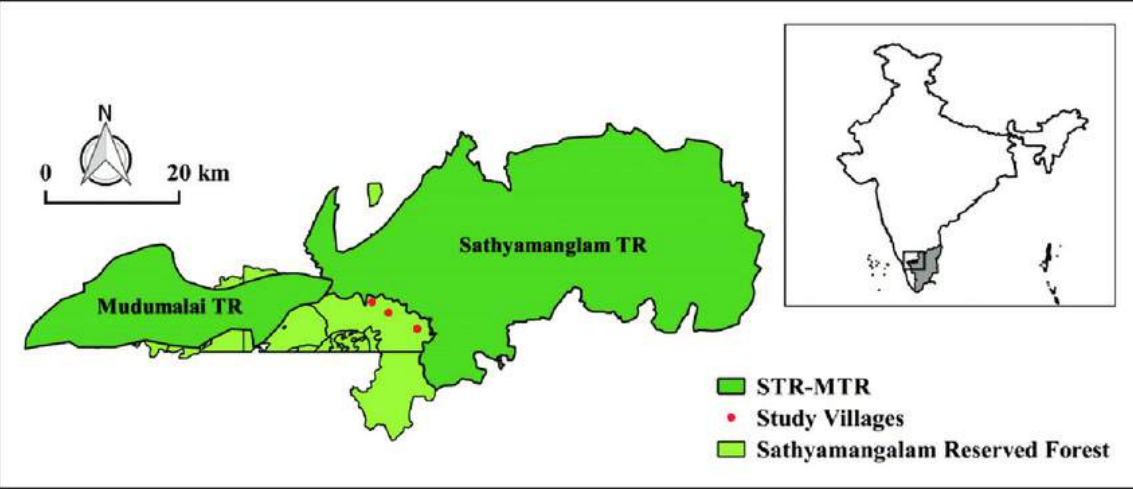
- The number of displaced individuals from tiger reserves has surged dramatically since 2021, with an average increase of 967% per protected area.
- Smaller displacements are noted in reserves in Tamil Nadu and Rajasthan.
- The report criticizes the lack of free, prior, and informed consent as mandated by the Forest Rights Act and the Wildlife (Protection) Act of 1972.

The report also notes a positive example of coexistence in Karnataka's Biligiri Rangaswamy Temple Tiger Reserve, where the Soliga tribe lives harmoniously with tigers, resulting in a significant increase in the tiger population.



79. SPECIES IN NEWS:

Name	Why in News?				
Jerdon's Courser	Context: Jerdon's Courser, a nocturnal bird endemic to Andhra Pradesh's Sri Lankamalleswara wildlife sanctuary in Kadapa, has not been seen in over a decade. - This bird, scientifically named <i>Rhinoptilus bitorquatus</i>, was thought extinct until its rediscovery in 1986. - It lives in open patches within scrub forests in the Eastern Ghats and is found exclusively in Andhra Pradesh and Telangana. Its call is a short series of two-noted whistles, "tuick-tuoo." The species is listed as Critically Endangered on the IUCN Red List.				
Dogfish shark <i>Squalus hima</i>	Context: Scientists from the Zoological Survey of India (ZSI) have discovered a new species of deep-water dogfish shark, named <i>Squalus hima</i>, from Kerala along the Arabian Sea. - Identified species often misidentified with <i>S. mitsukurii</i> and <i>S. lalannei</i>. - Detailed morphological, meristic, and morphometric analyses reveal distinct species. - Features include number of precaudal vertebrae, total vertebrae, teeth count, trunk and head heights, fin structure, and fin colour. <i>Squalus</i> and <i>Centrophorus</i> species exploited for liver oil, rich in squalene, used in high-end cosmetics and anticancer products				
Great Indian Bustard (GIB) and Lesser Florican conservation	Context: The Ministry of Environment, Forest and Climate Change (MoEFCC) has approved Rs 56 crore for the next phase of Great Indian Bustard (GIB) and Lesser Florican conservation. Since 2016, the Wildlife Institute of India has led a conservation program for the long-term recovery of the Great Indian Bustard and Lesser Florican. The next phase, planned from 2024 to 2033, focuses on habitat development, in-situ conservation, completing a conservation breeding centre, and releasing captive-bred birds. These efforts aim to protect these endangered species, which include the Bengal Florican and Houbara Bustard among others. About the Bustards: <table border="1"> <tr> <td> Great Indian Bustard  </td><td> The Great Indian Bustard is classified as critically endangered under Schedule I and IV of the Wildlife Protection Act, 1972, and listed under Appendix I of CITES. It is part of a Species Recovery Program due to its declining population. </td></tr> <tr> <td> Lesser Florican  </td><td> The Lesser Florican, also critically endangered, is listed under Schedule I of the Wildlife Protection Act, 1972, and shares the same grassland endemism across the Indian subcontinent. Male floricans are noticeably smaller and lighter than females and are known for their aerial courtship displays. They inhabit areas in Rajasthan, Gujarat, Madhya Pradesh, and parts of Andhra Pradesh, Maharashtra, and Karnataka. </td></tr> </table>	Great Indian Bustard 	The Great Indian Bustard is classified as critically endangered under Schedule I and IV of the Wildlife Protection Act, 1972, and listed under Appendix I of CITES. It is part of a Species Recovery Program due to its declining population.	Lesser Florican 	The Lesser Florican, also critically endangered, is listed under Schedule I of the Wildlife Protection Act, 1972, and shares the same grassland endemism across the Indian subcontinent. Male floricans are noticeably smaller and lighter than females and are known for their aerial courtship displays. They inhabit areas in Rajasthan, Gujarat, Madhya Pradesh, and parts of Andhra Pradesh, Maharashtra, and Karnataka.
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Vulture	Context: A study on <u>vulture conservation awareness</u> in <u>Mudumalai (MTR) and Sathyamangalam Tiger Reserves (STR) in Tamil Nadu</u> revealed that <u>local communities lack knowledge on “vulture-safe” livestock practices and the importance of vultures.</u> • Researchers found that although large veterinary doses of the harmful drug diclofenac were not sold, <u>smaller human doses were available, potentially being used for cattle.</u> • Other harmful <u>NSAIDs like Ketoprofen, Aceclofenac, and Nimesulide</u> were still available in <u>veterinary pharmacies.</u> What if vultures are gone? Nine species of vultures are found in India, most of them threatened. • Essential for <u>maintaining environment and disease control.</u> • <u>No other scavenger can replace their service.</u> • Reduced vulture populations lead <u>to increased free-ranging dog populations.</u> • <u>Dogs carry diseases affecting humans and animals.</u> WHAT CAN BE DONE TO SAVE VULTURES? • Stop the use of <u>drugs toxic to vultures.</u> • <u>Prevent poisoning of animals and carcasses.</u> • <u>Infrastructure, including for electricity should be sensitively sited.</u> • Do not <u>disturb the nesting and roosting sites.</u> • <u>Gain knowledge about vulture species.</u> 
Senna spectabilis	Context: The <u>Kerala Forest Department</u> has partnered with <u>Kerala Paper Products Limited (KPPL)</u> to <u>remove invasive species like Senna spectabilis</u> from the Wayanad Wildlife Sanctuary. • These plants <u>threaten the wildlife habitat in the Nilgiri biosphere.</u> Senna spectabilis: • A deciduous tree native <u>to tropical regions of the Americas.</u> • Ecological Impact: Thick foliage inhibits the <u>growth of native trees and grasses</u>, leading to food shortages for wildlife, particularly herbivores. <u>Disrupts germination and growth of native plant species.</u> • Conservation Status: Classified as <u>‘Least Concern’ on the IUCN Red List.</u>
Kashmir willow	Context: <u>Kashmiri willow bats</u> have gained global attention. About Kashmir willow: • The <u>Kashmir Willow (Salix alba)</u> is a <u>deciduous tree</u> that can reach heights of up to 30 meters. • It is primarily found in the <u>Kashmir region of India, where it was extensively planted by the British.</u> • Key features include its <u>high productivity, attributed to its efficient conversion of solar radiation into chemical energy.</u> • <u>Willows are known for their extensive fibrous root system</u> and their ability to form symbiotic associations with mycorrhizal fungi.

Elephant

Context: The elephant population in Kerala has declined from 1,920 in 2023 to 1,793, as revealed by a recent synchronized population estimation across southern Indian states.

- This reduction, is attributed to climatic variations that prompted elephant migration to neighbouring states.
- The report emphasizes the need for conservation and management of elephant populations, noting that habitat fragmentation and developmental pressures increase human-elephant conflicts.

African Elephants

There are two subspecies of African elephants, the Savanna (or bush) elephant and the Forest elephant.

IUCN:
African Savanna: **Endangered**.
African Forest: **Critically Endangered**

Elephant

Asian Elephants

There are three subspecies of Asian elephant which are the Indian, Sumatran and Sri Lankan

IUCN Red List: **Endangered**.
World Elephant Day: **August 12**

African Elephants



African Bush Elephant



African Forest Elephant

Asian Elephants



Indian Elephant



Borneo Pygmy Elephant



Sri Lankan Elephant



Sumatran Elephant

Comparison table between African and Asian elephant

IUCN:
African Savanna: **Endangered**.
African Forest: **Critically Endangered**



IUCN Red List: **Endangered**.

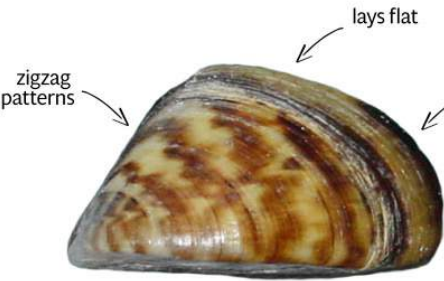
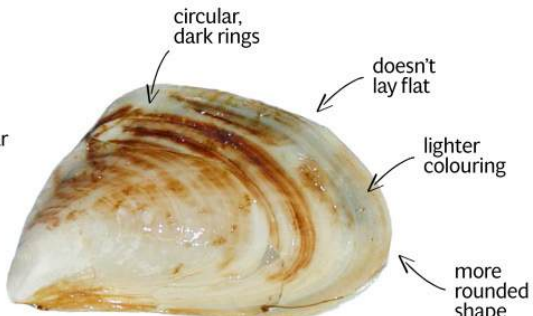
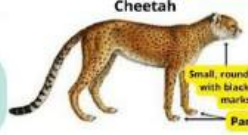
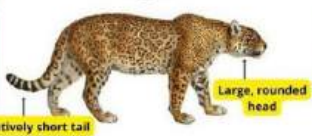


Feature	African Elephant	Asian Elephant
Size	Larger, weighing between 4000-8000 kg	Smaller, weighing between 3000-6000 kg
Ears	Large fan-shaped ears (resembling shape of African continent)	Smaller rounded ears
Skin Texture	Skin is more wrinkled	Comparatively smoother skin
Head Shape	Single dome shape	Twin domed head
Tusk Growth	Both male and female African elephants grow tusks and are larger than Asian elephants	Only some male Asian elephants have tusks
Habitat	Savannahs and forests of Africa	Forests, grasslands, and scrublands of Southeast Asia and South Asia
Trunk Tips	Have two finger-like tips on the trunk	Have only one finger-like tip on the trunk
Social Behaviour	Tend to live in larger herds	Tend to live in smaller family groups
Lifespan	70 years	48 years

Phlogacanthus Sudhansusekharii

Context: Researchers from the Botanical Survey of India (BSI) have discovered a new plant species, 'Phlogacanthus Sudhansusekharii' in Arunachal Pradesh.

- This species, belonging to the Acanthaceae family and Phlogacanthus genus, has been named in honor of Dr. Sudhansu Sekhar Dash for his significant contributions to plant and ecological research in the Indian Himalayan region.

Zebra mussel	Context: <u>Zebra mussel larvae</u>, an invasive species, have been <u>discovered in the Colorado River near Grand Junction, Colorado.</u> • This poses a severe threat to the river's ecosystem and infrastructure. • Zebra mussels are difficult to remove once established and can rapidly spread, disrupting ecosystems by eliminating essential food sources and attaching to hard surfaces, leading to clogged pipes and damaged equipment.  lays flat zigzag patterns more triangular shape zebra mussel up to 4 cm  circular, dark rings doesn't lay flat lighter colouring more rounded shape quagga mussel up to 4 cm
Project Cheetah	Context: <u>Banni, a vast grassland in the southern part of Kutch, Gujarat</u>, is being readied to <u>host cheetahs from Africa</u> as part of the <u>next phase of Project Cheetah.</u> • However, <u>Banni lacks sufficient prey for a viable cheetah population</u>, necessitating the introduction of <u>species like chital to sustain the big cats.</u> • Banni offers the <u>advantage of having no leopards</u>, making it a potential long-term site for a <u>larger cheetah population once sufficient prey is established.</u>  Cheetah is Back The fastest land animal in the world, Cheetah, declared extinct in India in 1952, will find a new home in the Kuno-Palpur National Park (KNP). African cheetahs are being brought under an intercontinental translocation project between India and Africa (mainly from South Africa and Namibia). It comes under the 'Action Plan for Introduction of Cheetah in India' under which 50 of these big cats will be introduced in the next five years.  Cheetah relocation Sites Three potential wildlife sanctuaries that would support cheetah population • Kuno-Palpur Area: 344.46km² Part of Kathiawar-Gir dry deciduous forests • Bhodgarh Area: About 4,000km² A fenced region close to India-Pakistan border • Rewari Area: 1,197km² Spreads over the southern area of Vindhya Range of hills  Asiatic Cheetah with 'red eyes'  Cheetah Tear Marks Act Like Sunglasses: Cheetah primarily hunt during the day, unlike other big cats, the tear marks help to reflect away the sun's glare, making it easier for them to focus on hunting their prey. Cheetah: IUCN (Asiatic- Critically Endangered; African- Vulnerable) • African Cheetah are Bigger in size as compared to Asiatic Cheetah, have darker color. Asiatic Cheetah (only 40-50 survive in Iran) usually have 'Red Eyes'. Leopard: IUCN: Vulnerable • India has about 12000 leopard (largest number in MP) and there has been "60% increase in the population count of leopards in India from 2014 estimates" Jaguar: IUCN: Near Threatened • The largest cat in the Americas, the Jaguar has the strongest bite force of all wild cats, enabling it to bite directly through the skull of its prey. Melanistic (black) jaguars are common and are often called black panthers. • A black panther is the melanistic colour variant of the leopard (<i>Panthera pardus</i>) and the jaguar (<i>Panthera onca</i>).  Cheetah Small, rounded head with black "tear marks" Partially exposed claws  Leopard Relatively Small, angular head  Jaguar Large, rounded head Relatively short tail  Solid black spots  Small, densely packed rosettes  Large rosettes with central spot

Agarwood	Context: India has successfully <u>prevented the inclusion of <i>Aquilaria malaccensis</i> (agarwood) in the Review of Significant Trade (RST) under CITES</u>, allowing for a new export quota. - This development <u>will benefit farmers, particularly in Assam, Manipur, Nagaland, and Tripura.</u> <u>Informal trade had increased due to past restrictions</u>, but the <u>new quota aims to regulate and legalize the trade.</u> About Agarwood: - Agarwood, used in the <u>aroma industry, medicine, and air fresheners, has a significant economic impact.</u> - The <u>essential oil from agarwood has multiple traditional and medicinal uses</u>, making it a valuable commodity.  AGARWOOD OIL																
Hoolock Gibbon	Context: The <u>Union Environment Ministry's approval for oil and gas exploration</u> by Cairn India in Assam's Hoollongapar Gibbon Wildlife Sanctuary has raised concerns <u>about the endangered hoolock gibbon's habitat.</u> Key Facts about Hoolock Gibbon: <table border="1"> <thead> <tr> <th>Facts</th><th>Description</th></tr> </thead> <tbody> <tr> <td>About</td><td>Gibbons, the smallest and fastest of all apes, inhabit tropical and subtropical forests in Southeast Asia. They have high intelligence, distinct personalities, and strong family bonds. They are one of the 20 gibbon species found worldwide.</td></tr> <tr> <td>Population and Habitat</td><td>The current population of hoolock gibbons is around 12,000. They are found in Northeast India, Bangladesh, Myanmar, and Southern China.</td></tr> <tr> <td>Gibbon Species in India</td><td>Two distinct species in India's northeast: the eastern hoolock gibbon (<i>Hoolock leuconedys</i>) and the western hoolock gibbon (<i>Hoolock hoolock</i>).</td></tr> <tr> <td>Threats</td><td>All 20 gibbon species, including hoolock gibbons, are at high risk of extinction due to conservation challenges. Significant population and habitat decline due to deforestation for infrastructure projects in India.</td></tr> <tr> <td>Conservation Status</td><td>International Union for Conservation of Nature's Red List: Western Hoolock Gibbon: Endangered; Eastern Hoolock Gibbon: Vulnerable. Both species are listed on Schedule 1 of the Indian (Wildlife) Protection Act 1972.</td></tr> <tr> <td></td><td>The Global Gibbon Network (GGN) recently convened its inaugural meeting in Haikou, China's Hainan province, to address its critical situation. The GGN was initiated at the International Gibbon Day 2020 event, with representatives from 20 gibbon conservation organizations.</td></tr> <tr> <td>About Hollongapar Gibbon Sanctuary</td><td>The Hollongapar Gibbon Sanctuary, formerly known as the Gibbon Wildlife Sanctuary or Hollongapar Reserved Forest, is an isolated evergreen forest in Assam, India. Established in 1997, the sanctuary was initially set aside in 1881, with its forests once extending to the Patkai mountain foothills. It is home to India's only ape and gibbon species, the hoolock gibbons, and the Bengal slow loris, Northeastern India's only nocturnal primate. The forest's upper canopy is dominated by hollong trees, the middle by nahar trees, and the lower by evergreen shrubs and herbs.</td></tr> </tbody> </table>	Facts	Description	About	Gibbons, the smallest and fastest of all apes , inhabit tropical and subtropical forests in Southeast Asia. They have high intelligence, distinct personalities, and strong family bonds. They are one of the 20 gibbon species found worldwide.	Population and Habitat	The current population of hoolock gibbons is around 12,000. They are found in Northeast India, Bangladesh, Myanmar, and Southern China.	Gibbon Species in India	Two distinct species in India's northeast: the eastern hoolock gibbon (<i>Hoolock leuconedys</i>) and the western hoolock gibbon (<i>Hoolock hoolock</i>).	Threats	All 20 gibbon species, including hoolock gibbons, are at high risk of extinction due to conservation challenges. Significant population and habitat decline due to deforestation for infrastructure projects in India.	Conservation Status	International Union for Conservation of Nature's Red List: Western Hoolock Gibbon: Endangered ; Eastern Hoolock Gibbon: Vulnerable . Both species are listed on Schedule 1 of the Indian (Wildlife) Protection Act 1972.		The Global Gibbon Network (GGN) recently convened its inaugural meeting in Haikou, China's Hainan province, to address its critical situation. The GGN was initiated at the International Gibbon Day 2020 event , with representatives from 20 gibbon conservation organizations.	About Hollongapar Gibbon Sanctuary	The Hollongapar Gibbon Sanctuary, formerly known as the Gibbon Wildlife Sanctuary or Hollongapar Reserved Forest, is an isolated evergreen forest in Assam , India. Established in 1997, the sanctuary was initially set aside in 1881, with its forests once extending to the Patkai mountain foothills. It is home to India's only ape and gibbon species, the hoolock gibbons, and the Bengal slow loris, Northeastern India's only nocturnal primate. The forest's upper canopy is dominated by hollong trees, the middle by nahar trees, and the lower by evergreen shrubs and herbs.
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Defence

80. RUDRAM-1

Context:

India successfully test-fires its first Indigenous anti-radiation missile, 'Rudram-1'

What is Rudram-1?

It was developed by DRDO for the Indian Air Force and is an **air-to-surface anti-radiation** missile launched from Sukhoi-30MKI fighter jets. It features INS-GPS navigation and a Passive Homing Head for accurate targeting of radiation-emitting sources. With an effective range of 500 meters to 15 km in altitude and up to 250 km in distance, Rudram-1 significantly enhances the IAF's capability to suppress enemy air defences and neutralize critical installations.

Types of Missiles Used by Indian Military

Missile Type	Name(s)	Description
Ballistic Missiles	Agni Series, Prithvi	Long-range missiles capable of delivering nuclear and conventional warheads.
Cruise Missiles	BrahMos, Nirbhay	Subsonic and supersonic missiles for precision strikes, BrahMos being the fastest supersonic cruise missile.
Anti-Tank Missiles	Nag, HELINA, MPATGM	Designed to destroy tanks and armoured vehicles.
Surface-to-Air Missiles	Akash, Barak-8	Used for air defence to intercept and destroy enemy aircraft and missiles.
Air-to-Air Missiles	Astra, Python-5	Fired from aircraft to target enemy aircraft.
Anti-Ship Missiles	BrahMos, Dhanush	Used to target and destroy enemy ships and naval vessels.
Anti-Radiation Missiles	RudraM, NGARM	Designed to detect and destroy enemy radar installations.
Surface-to-Surface Missiles	Prahaar, Shourya	Short to medium-range missiles for targeting enemy installations and strategic points on the ground.
Submarine-launched ballistic Missiles (SLBMs)	K-15 Sagarika, K-4	Launched from submarines for nuclear deterrence.
Man-Portable Air-Defense Systems (MANPADS)	Igla-S, Starstreak	Portable systems for targeting low-flying aircraft and helicopters

81. NOMADIC ELEPHANT

Context:

The **16th edition of the India-Mongolia Joint Military Exercise NOMADIC ELEPHANT** began in Meghalaya.

- The exercise aims to **enhance joint military capabilities for counterinsurgency operations under the United Nations Mandate Chapter VII**, focusing on semi-urban and mountainous terrain.
- Key **tactical drills include response to terrorist actions, the establishment of joint command posts and intelligence centres, securing helipads, special heliborne operations**, cordon and search operations, and the use of drones and counter-drone systems.

The exercise aims to **share best practices in joint operations, develop interoperability, and strengthen the camaraderie and defence cooperation** between the two nations.

82. INDIA- THAILAND JOINT MILITARY EXERCISE MAITREE

Context:

Exercise MAITREE, conducted annually since 2006, alternates between India and Thailand. This exercise is **crucial for both nations facing terrorism threats**, especially in southern Thailand regions like **Satun, Patthalung, and Bangkok**, which are prone to attacks.

The exercise includes **company-level joint training on insurgency and counter-terrorism** in jungle and urban scenarios,

enhancing defence cooperation and bilateral relations between the Indian Army and the Royal Thailand Army.

Additionally, the **Royal Thailand Navy and Indian Navy have conducted Coordinated Patrols (CORPATs)** in the Indian Ocean since 2005.

83. BIODIVERSITY BEYOND NATIONAL JURISDICTION (BBNJ) AGREEMENT

Context:

The Union Cabinet has approved **India's signing of the Biodiversity Beyond National Jurisdiction (BBNJ) Agreement.**

- This decision **aims to conserve and sustainably use marine biodiversity** in areas **beyond national jurisdiction, known as the "High Seas."**
- The **Ministry of Earth Sciences** will lead the implementation of the BBNJ Agreement.

About Biodiversity Beyond National Jurisdiction (BBNJ) Agreement:

- The **BBNJ Agreement, also known as the "High Seas Treaty,"** falls under the **United Nations Convention on the Law of the Sea (UNCLOS).**
- It addresses the **protection of marine biodiversity in the high seas** through **international cooperation and sustainable practices.**
- The **agreement prohibits sovereign rights over high seas resources and promotes the fair sharing of benefits,** an inclusive ecosystem-centric approach, and the use of traditional and scientific knowledge.
- It also **aims to minimize environmental impacts and support the achievement of Sustainable Development Goal 14 (Life Below Water).**

The BBNJ Agreement will become the third implementation agreement under UNCLOS, alongside agreements on mineral resources and fish stocks.

84. HAMAS

Context:

Argentina, has designated **Hamas as a terrorist organization and frozen its financial assets.**

- This move **aligns Argentina with the US and Israel** following a deadly Hamas attack on Israel.

About Hamas:

Hamas is a **Palestinian Islamist political organization and militant group** that has waged war on **Israel since the group's 1987 founding,** most notably through suicide bombings and rocket attacks.

It seeks to **replace Israel with a Palestinian state.**

It also **governs Gaza independently of the Palestinian Authority.**



85. PRALAY MISSILES

Context:

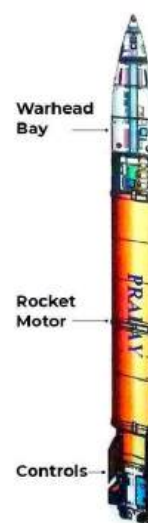
Armenia is interested in acquiring **India's Pralay missile** to counter **Azerbaijan's Israeli-origin LORA missiles.**

- This potential deal would **enhance India's reputation as a missile exporter, following the success of the Brahmos missile export.**
- **The Pralay, developed by DRDO,** has a **higher percentage of indigenous content compared** to the **Brahmos, making it more profitable for India.**
- The Pralay is a **mobile, canister-based short-range ballistic missile (SRBM)** with a range of 150-500 km, **utilizing inertial guidance and a DSMAC seeker for terminal guidance.**
- It **features a quasi-ballistic trajectory and terminal manoeuvring capabilities,** making it difficult to intercept.
- The missile can **carry various warheads and is designed to have a low radar signature.**

PRALAY: Surface-to-Surface Missile

Pralay is a canisterised tactical, surface-to-surface, and short-range ballistic missile for battlefield use developed by the Defence Research and Development Organisation of India

ENGINE: Two stage rocket motor with third stage MaRV
SPEED: Mach 1 to 1.6
RANGE: 150-500 km
TRAJECTORY: Low
GUIDANCE SYSTEM: Inertial navigation system
LAUNCH PLATFORM: 8x8 BEML-Tatra transporter erector launcher
MASS: 5 tonnes (4.9 long tons; 5.5 short tons)
OPERATIONAL RANGE: 150-500 km (93-311 mi)



Can change its path after covering certain range mid-air and is difficult to be tracked

It is capable of being launched from a mobile launcher and has latest navigation system and integrated avionics

It has the capability to defeat interceptor missiles

86. TRIPUT CLASS FRIGATES

Context:

Goa Shipyard Limited (GSL) launched the first of two indigenous Advanced P1135.6 stealth frigates, named 'Triput,' for the Indian Navy, with technology transferred from Russia.

- India contracted four frigates from Russia in 2016, with two built in Russia and two at GSL. The first Russian-built frigate, Tushil, is set to be delivered in September 2024, and the second, Tamal, by February 2025.



Type of Warship	Description	Examples
Aircraft Carriers	Large ships capable of carrying and launching aircraft.	INS Vikramaditya, INS Vikrant (under construction)
Destroyers	Versatile warships with anti-air, anti-ship, and anti-submarine capabilities.	INS Kolkata, INS Visakhapatnam, INS Imphal
Frigates	Smaller than destroyers, with multi-role capabilities.	INS Shivalik, INS Nilgiri
Corvettes	Compact warships designed for coastal defense and patrol duties.	INS Kamorta, INS Kiltan
Submarines	Submersible vessels used for stealthy underwater operations.	INS Kalvari, INS Arihant
Patrol Vessels	Smaller craft used for patrolling, search and rescue, and other coastal missions.	INS Saryu, INS Sunayna
Mine Countermeasures Vessels	Designed for mine-clearing operations.	INS Nireekshak, INS Karwar
Landing Platform Docks	Amphibious assault ships for launching troops and equipment ashore.	INS Jalashwa, INS Shardul
Offshore Patrol Vessels	Used for patrolling and surveillance in offshore waters.	INS Vikram, INS Vajra
Research Vessels	Ships dedicated to scientific research and oceanographic studies.	INS Sagardhwani, INS Sindhughosh (research variant)
Training Ships	Used for training purposes and instruction of naval cadets.	INS Tarangini, INS Sudarshini

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Disaster Management

87. ASIAN DISASTER PREPAREDNESS CENTRE (ADPC)

Context:

India has taken over as Chair of the Asian Disaster Preparedness Centre (ADPC) for 2024-25, with Rajendra Singh from NDMA assuming the role.

Aim: This move aims to strengthen India's leadership in disaster risk reduction and climate resilience.

About ADPC:

The Asian Disaster Preparedness Centre (ADPC) is an autonomous international organization focused on disaster risk reduction and building climate resilience in Asia and the Pacific. Established in 1986 in Bangkok, Thailand, its founding members include India, Bangladesh, Cambodia, China, Nepal, Pakistan, Philippines, Sri Lanka, and Thailand.

Internal Security

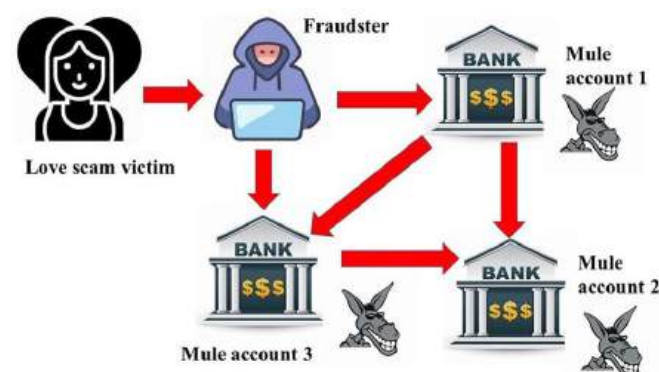
88. MONEY MULE

Context:

Banks are intensifying scrutiny on new sole proprietorship and individual current accounts to combat 'money mule' activities, aiming to deter money laundering and digital frauds.

What is a Money Mule?

A money mule is a person who allows their bank account to be used by criminals to transfer illegally obtained money. Banks have observed a rise in mule accounts, particularly among new accounts less than a year old, prompting cautious approvals and transaction limits.



Modus Operandi:

Criminals recruit money mules to launder money from online scams, frauds, and crimes like human trafficking and drug trafficking. They use mules to create distance between victims and themselves, making it harder for law enforcement to trace the funds. Methods include bank transfers, checks, virtual currency, prepaid cards, and more. Mules are often recruited through fake job ads or social media promising easy money. Some know they're aiding crime; others may not realize. They're compensated or deceived into believing they're helping a friend. When caught, they face legal consequences for facilitating money laundering, even if unknowingly.

What measures are being taken by banks?

Measures include verification visits, latitude data checks, and washout logic analysis. The Reserve Bank of India is addressing these concerns with banks amid ongoing discussions on enhancing safeguards against financial fraud.

89. CAMCOPTER S-100

Context:

India is set to enhance its naval capabilities through a deal with Austrian company Schiebel for their Camcopter S-100 unmanned aerial system (UAS).

Features of Camcopter S-100:

- The system can operate in various extreme climates and has a high endurance, making it ideal for the Indian Ocean Region.
- The Indian Navy has begun using the S-100 for Intelligence, Surveillance, and Reconnaissance (ISR) operations, which previously required manned helicopters.
- The S-100, known for its versatility and advanced technology, operates with either aviation gasoline or kerosene and can function without GPS.
- It requires minimal space for launch and recovery, making it suitable for deployment from various naval vessels.

90. THE INDIAN CYBER CRIME COORDINATION CENTRE (I4C)

Context:

The Indian Cyber Crime Coordination Centre (I4C) has been upgraded to an “attached office” of the Ministry of Home Affairs (MHA).

- This change provides I4C with greater operational independence and resources to address cybercrime.

About The Indian Cyber Crime Coordination Centre (I4C):

- The Indian Cyber Crime Coordination Centre (I4C) was initially established as a scheme under the Ministry of Home Affairs’ Cyber and Information Security (C&IS) division in 2018.
- Its objective is to act as a central point to curb cybercrime, serve as an early warning system for cybercrime prevention and detection, and facilitate easy complaint filing.
- I4C operates through various verticals, including the National Cybercrime Reporting Portal, the National Cyber-crime Threat Analytics Unit, and the National Cybercrime Research & Innovation Centre.

91. REPORTS IN NEWS

Reports	Description
Financial Stability Report (FSR)	The <u>latest 29th issue of the Financial Stability Report (FSR)</u> reveals encouraging trends in India’s banking sector as of March-end 2024.
	Scheduled commercial banks reported a notable decline in their Gross Non-Performing Assets (GNPAs) and Net NPA ratios, reaching multi-year lows <u>of 2.8% and 0.6% respectively.</u>
	<u>About the report:</u> The <u>Financial Stability Report (FSR)</u> , issued <u>biannually (every six months)</u> by the RBI, provides a comprehensive assessment of financial stability and the resilience of India’s financial system. Prepared by the <u>Sub-Committee of the Financial Stability and Development Council (FSDC)</u> , chaired by the Governor of RBI, the report evaluates risks impacting the financial sector.
The State of the World’s Mangroves 2024” Report	On <u>World Mangrove Day (July 26)</u> , a report highlighted that Southeast Asia holds about a third of the world’s mangroves, with <u>Indonesia having 21%.</u> Many mangroves face threats, including those in Lakshadweep and Tamil Nadu.
	<u>Loss drivers include climate change, industrial shrimp farming</u> , and conversion for agriculture. Mangroves are crucial for <u>biodiversity, carbon storage, disaster protection, and water quality.</u>
	<u>Mangroves support over 5,700 species</u> , act as carbon sinks storing 394 tonnes of carbon per hectare, reduce flood depths, and improve water quality by filtering pollutants.
Artificial Intelligence Preparedness Index (AIPI)	The <u>International Monetary Fund (IMF)</u> released the AIPI Dashboard, ranking <u>Singapore 1st and India 72nd.</u>
	The <u>AIPI Dashboard tracks AI readiness in 174 economies</u> based on digital infrastructure, human capital and labour market policies, innovation and economic integration, and regulation and ethics.
	Countries are categorized as <u>Advanced Economy (AE), Emerging Market Economy (EM), and Low-Income Country (LIC).</u>

Annual World Drug Report (2024)	The United Nations Office on Drugs and Crime (UNODC) released a report on World Drug Day, observed annually on June 26th since 1987 to promote action against drug abuse and illicit trafficking.
	Key highlights include a rise in drug abuse, with 292 million users in 2022, and cannabis being the most abused drug, followed by opioids, amphetamines, cocaine, and ecstasy.
	Regions most affected by drug-related criminal activity include the Triple Frontier area (Argentina, Brazil, Paraguay) and the Golden Triangle (Laos, Myanmar, Thailand).
	Cannabis legalization has occurred in Canada, Uruguay, and 27 U.S. jurisdictions. The psychoactive effect of cannabis is primarily due to THC (delta9-tetrahydrocannabinol).
	Additionally, illegal drug activities contribute to environmental issues like deforestation , toxic waste dumping, and chemical contamination.
Migration and Development Brief 2024	The World Bank released a brief highlighting key trends in remittance and migration. Remittance flows to low- and middle-income countries (LMICs) reached \$656 billion , with India receiving the most at \$120 billion, followed by Mexico, China, the Philippines, and Pakistan.
	Top migration destinations include the US, Germany, Saudi Arabia, Russia, and the UK , with the largest number of emigrants from India (18.7 million), followed by Ukraine, China, Mexico, and Venezuela. The largest migration corridor is from Mexico to the US.
New World Soil Health Index	UNESCO announced the New World Soil Health Index at an international conference in Morocco to standardize soil quality measurements and identify degradation or improvement trends. Additionally, a pilot program for sustainable soil management will be launched in ten Biosphere Reserves to implement best practices globally.
	Soil degradation is the decline in soil health, resulting in reduced capacity to provide essential ecosystem services.
	In India, 32% of land is degraded, and 25% faces desertification , caused by deforestation, unsustainable agriculture, industrial pollution, and natural erosion.
Responsible AI for All (RAI) on Facial Recognition Technology (FRT)	By NITI Aayog
	This White paper examines Facial Recognition Technology (FRT) under NITI Aayog's RAI principles to establish a framework for its responsible and safe use in India.
	FRT identifies or verifies individuals using AI algorithms based on images or videos. It performs three main functions: facial detection, facial extraction, and facial recognition .
	Applications include security (surveillance, law enforcement) and non-security uses (contactless services, authentication).
	Recommendations for responsible FRT use emphasize the need for robust data protection to ensure privacy and security. It is crucial to implement measures that ensure transparency and address AI biases to uphold accountability.
Planet on the Move	By IUCN
	It calls for a reimagined conservation approach that addresses the nexus among migration, environmental change, and conflict .
	Environmental changes drive migration, leading to resource conflicts and further environmental degradation . Current migration policies often treat human and wildlife migration separately.
	The report recommends integrating migration, humanitarian, and development needs with biodiversity conservation, establishing international legal protections for environmental migrants, and enhancing synergies between existing laws.

Financial Inclusion Index	The RBI released the Financial Inclusion Index for March 2024, with a value of 64.2, up from 60.1 in March 2023 (meaning higher Financial inclusion). This comprehensive index measures financial inclusion across banking, investments, insurance, postal, and pension sectors, reflecting the extent of inclusion in the country. It ranges from 0 (complete exclusion) to 100 (full inclusion) and includes three parameters: Access (35%), Usage (45%), and Quality (20%). The index is published annually in July.			
Digital Economy Report 2024	By UN Trade and Development (Established in 1964). It aims to help developing countries integrate into the global economy and has 195 member nations. It highlights the urgent need for sustainable strategies in the digitalization lifecycle. With internet users rising from 1 billion in 2005 to 5.4 billion in 2023, the environmental footprint of digitalization is significant. The ICT sector accounted for 1.5–3.2% of global GHG emissions in 2020, and e-waste surged by 30% from 2010 to 2022, reaching 10.5 million tonnes globally. Data centers consumed 460 terawatt hours of electricity in 2022, with water use expected to double by 2026. The demand for critical minerals like graphite, lithium, and cobalt could increase by 500% by 2050, leading to potential environmental inefficiencies. The report recommends adopting circular economy models, enforcing stricter environmental regulations, investing in renewable energy and energy-efficient technologies, and promoting sustainable business models.			
“CITES Rosewoods: The Global Picture” Report	Launched by CITES			
	The report, details characteristics, ecosystem roles, regeneration rates, and threats of CITES-listed rosewood species. This information aids CITES parties in making informed non-detriment findings (NDFs), a mandatory analysis ensuring exports of Appendix I and II species do not threaten their survival.			
	Rosewood: Tropical Hardwoods • Fabaceae family, known for rich, dark hues and aromatic properties. • Used in high-quality furniture and musical instruments. • Malabar rosewood, Shisham, and African rosewood are listed as Vulnerable, Least Concern, and Endangered on IUCN Red List. • Improve soil quality and fix atmospheric nitrogen.			
	About CITES CITES is a multilateral treaty to protect endangered plants and animals from the threats of international trade. It was drafted as a result of a resolution adopted in 1963 (but came into effect in 1975) at a meeting of members of the International Union for Conservation of Nature. • India became its 25th member when it joined it in 1976, Currently it has 184 members.  Administered by: UNEP HQ: Geneva (Switzerland). Although CITES is legally binding on the Parties – in other words they have to implement the Convention – it does not take the place of national laws. Classification of species under CITES <table><tr><td> Appendix I Trade permitted only in exceptional circumstances - 3% of all species  (Example: African rhinoceros - threatened with extinction) </td><td> Appendix II Trade strictly controlled - 97% of all species  (Example: Orchidaceae - at risk of becoming threatened) </td><td> Appendix III Request for assistance in controlling trade of species protected in a specific country  (Example: Chilean toad) </td></tr></table>	Appendix I Trade permitted only in exceptional circumstances - 3% of all species  (Example: African rhinoceros - threatened with extinction)	Appendix II Trade strictly controlled - 97% of all species  (Example: Orchidaceae - at risk of becoming threatened)	Appendix III Request for assistance in controlling trade of species protected in a specific country  (Example: Chilean toad)
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Study: Air <u>pollution</u> harms pollinators more than pests	A recent study in Nature Communications reveals that air pollution disproportionately harms pollinators like bees and butterflies while crop-destroying pests remain unaffected.
	Key findings include air pollutants disrupting scent-based communication, and impairing bees' and wasps' ability to locate flowers, mates, or prey. Ozone is the most harmful pollutant, reducing beneficial insects' ability to thrive by around 34% , with nitrogen oxides also having negative effects. These impacts occur even at low pollution levels.
	Pollination is crucial for plant reproduction, transferring pollen grains from male anthers to female stigmas, and can occur within or between plants, involving abiotic and biotic agents.
	Who are pollinators? Insects, Birds, Rodents, Reptiles, Squirrels, Monkeys and Humans.

Reports	Description
WHO/UNICEF Estimates of National Immunization Coverage (WUENIC) 2023 released	In 2023, global childhood immunization stalled , leaving 2.7 million children unvaccinated, with over 50% in conflict-affected areas.
	India faces significant gaps in vaccination, with 1.6 million children missing DPT and measles vaccines, and 2 million being zero-dose, despite the Universal Immunization Programme and initiatives.
Global Education Monitoring (GEM) Report 2024	Released by UNESCO
	It is part of the ' Education 2030 Incheon Declaration ,' highlighting the impact of climate change on education systems.
	Over the past 20 years , schools have been closed during 75% of extreme weather events, affecting over 5 million people.
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	It is part of the ' Education 2030 Incheon Declaration ,' highlighting the impact of climate change on education systems.
	Over the past 20 years , schools have been closed during 75% of extreme weather events, affecting over 5 million people.
	In India, rainfall shocks have harmed early vocabulary and later academic skills . Despite its importance, education's role in addressing climate change is often overlooked, with only 2 out of 72 climate initiatives addressing SDG 4 .
	Climate change destroys educational infrastructure , displaces people, and exacerbates vulnerabilities, particularly in marginalized and low-income communities, significantly harming educational outcomes.
'India's Energy Storage Landscape' Report	A report released by Mercom India Research
	As of March 2024, India has installed a cumulative Battery Energy Storage System (BESS) capacity of 219 MWh , with Chhattisgarh leading at over 54% of this capacity.
	BESS involves electrochemical devices that store renewable energy, such as solar and wind, for later use. Common types include Lithium-ion, Lead-acid, and Sodium-sulfur batteries.
	To promote BESS, India has introduced initiatives such as the Viability Gap Funding scheme , which aims to develop 4,000 MWh of projects by 2030-31, a waiver of inter-state transmission charges for projects commissioned up to June 2025, and the Production Linked Incentive Scheme for advanced battery storage .

Report of India's G20 Task Force on Digital Public Infrastructure (DPI) released.

In 2023, a **task force** was established under India's G20 Presidency to promote **Digital Public Infrastructure (DPI)** and financial inclusion globally.

DPI includes platforms like **digital identity, financial infrastructure, and data exchange solutions** that enhance digital inclusion and empower individuals.

Digital Public Infrastructure (DPI)



Digital Public Infrastructure (DPI)	
What is DPI?	Digital Public Infrastructure (DPI) refers to the technological foundation that enables the delivery of essential digital services to people. DPI facilitates the flow of people, money, and information through digital ID systems, real-time payment systems, and secure data sharing.
Goal	The goal of DPI is to empower citizens, promote inclusion, and improve lives by leveraging digital technology to provide accessible and efficient public services.
Three Pillars of DPI	DPIs enables three fundamental things: • Flow of people through a digital ID System E.g., Aadhar • Flow of money through a real-time fast payment system E.g., UPI • Flow of personal information through a consent-based data sharing system e.g., Account Aggregator
Other examples of DPI in India	India, through India Stack , became the first country to develop various types of DPI for services to people. E.g., Aadhaar ; DigiYatra (biometric-enabled technology for faster travel clearance and based on facial recognition system); DigiLocker (digital document storage platform) and UPI (Unified Payment Interface)
What is India Stack?	India Stack is a set of APIs (Application Programming Interfaces) that provide a unique digital infrastructure to solve India's challenges in presence-less, paperless, and cashless service delivery. India Stack provides a secure and reliable platform for digital identification (Aadhaar), digital document storage (DigiLocker), and digital payments (UPI) 
Data Protection Initiatives for DPI	• Aadhaar Act, 2016: Provides a legal framework for the Aadhaar • Personal Data Protection Bill: Aims to protect the privacy of personal data • National Cyber Security Policy, 2013: Provides a framework for the protection of critical information infrastructure and prevention of cyber-attacks. • Cyber Swachhta Kendra: It secures digital devices and networks through free tools and security solutions.
Challenges Related to DPI in India	Securing political will, public support, and necessary resources for developing and implementing DPI; Ensuring strong privacy and security measures; Addressing the digital divide and ensuring accessibility for all citizens

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World's Forests 2024 Report	By Food and Agriculture Organization (FAO)
	The theme for this year is “ Accelerating forest solutions through innovation. ” Key highlights include a decrease in the deforestation rate to 10.2 million hectares per year in 2015-2020 from 15.8 million hectares per year in 1990-2000, with India ranking 3rd for average annual net gain in forest area from 2010-2020.
	Non-timber forest products support the livelihoods of about 275 million people in India.
	There is a pressing need for innovation in the forest sector to address climate change stress through resilient forest and land management strategies against wildfires and pests.
	Innovations Enhancing Forest Potential:
	Technological: Remote sensing and cloud computing improve forest management by generating high-quality data (e.g., NASA and ESA's Landsat and Copernicus programs).
	Social, Policy, and Institutional: Engaging women, youth, and Indigenous People through dynamic innovations (e.g., India's Joint Forest Management Programme mandates 1/3rd female representation on committees).
Report “The strategic role of data centers in empowering India's digital revolution” Released	Financial: Innovations to enhance the value of standing forests and boost restoration efforts (e.g., SCRIPT – Soft Commodity Risk Platform).
	A joint report by ASSOCHAM and PwC highlights the role of data centres in advancing India's digital landscape.
	Data centres are secure spaces housing computing and networking equipment for data collection, storage, processing, and distribution . Data centres facilitate data localisation by enhancing storage capabilities.
	Indians are projected to consume the most data globally by 2028
The Impact of Climate Change on Education	Recommendations include improving regulatory compliance, increasing R&D investments to reduce power consumption, and creating data centre ecosystems in Tier 2 cities.
	By World Bank
	Key findings: Climate change intensifies extreme weather, disrupting schooling and causing learning losses.
	From 2005-2024 , schools closed during 75% of extreme weather events, impacting over 5 million people.
	Rising temperatures and food insecurity also negatively affect learning outcomes and school enrollment.
	Climate events particularly harm girls in low-income countries , preventing at least 4 million from completing their education.
	Adaptation Approaches:
	Climate Resilient Education Management: Invest in early warning systems, e.g., Indonesia's Ina-RISK app
	School Infrastructure Resilience: Strengthen buildings, e.g., Rwanda's retaining walls project.
	Classroom Temperature Management: Implement bioclimatic designs, e.g., Kenya's Green Economy Strategy.
The State of Food Security and Nutrition in the World Report, 2024	Learning Continuity: Keep schools open and enhance remote learning, e.g., Ghana's nearly 100% re-enrollment post-COVID-19.
	Report by five UN agencies (FAO, IFAD, UNICEF, WFP, WHO)
	The report focuses on financing to end hunger, food insecurity, and malnutrition . It introduces a new definition for financing food security and nutrition , encompassing public and private, domestic and foreign resources aimed at availability, access, utilization, stability of nutritious foods, and resilience of agri-food systems.
	Current Gaps in Financing: Public spending on agriculture is very low in low-income and lower-middle-income countries. Less than a quarter of official development assistance is directed towards food security and nutrition.
	Status of Food Security and Nutrition: The world is off track to achieve SDG 2 (Zero Hunger). In 2023, 1 in 11 people faced hunger, with 713-757 million undernourished. 28.9% of the global population experienced moderate or severe food insecurity

92. MAPPING

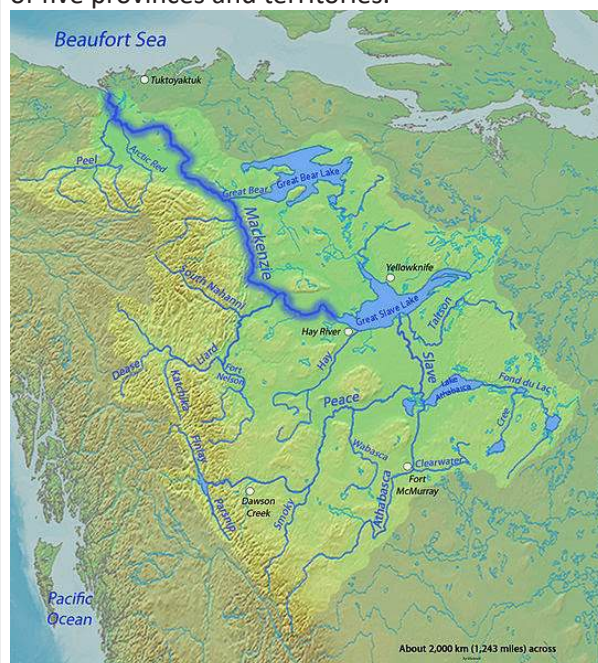
INTERNATIONAL

Place	Why in News?
1. MINAMI-TORISHIMA ISLAND (JAPAN)	Context: Researchers discovered 230 million tons of minerals, including cobalt and nickel, off a remote island 1,200 miles from Tokyo. This find could supply Japan's EV battery needs for over a decade. The seabed near Minami-Torishima island contains 610,000 metric tons of cobalt and 740,000 metric tons of nickel. Mining is set to begin in 2025, with commercial extraction expected by 2026. The discovery is significant as global demand for these minerals is projected to rise sharply, though deep-sea mining poses technical and environmental challenges. About the Island: Minami-Torishima Island, also known as Marcus Island, is an isolated Japanese coral atoll in the northwestern Pacific Ocean, 1,950 km southeast of Tokyo. It is Japan's easternmost territory and the only one on the Pacific Plate. The island is shaped like an equilateral triangle and formed by a raised coral reef, with flat terrain and a maximum altitude of 9 meters.  ©2018 The Sankei Shimbun / JAPAN Forward

2. MACKENZIE RIVER

The **Mackenzie River, Canada's longest river**, is experiencing **historically low water levels, stranding communities that rely on it for essential goods.**

The **river spans 1,738 kilometres from Great Slave Lake to the Beaufort Sea**, covering parts of five provinces and territories.



3. RWANDA

Context: **Rwandan President Paul Kagame** has **won a fourth term, securing 99.15% of the vote according to partial results from the recent election.**

About Rwanda:

Rwanda is a landlocked country **located in East-Central Africa.**

Rwanda is **bordered by Uganda to the north, Tanzania to the east, Burundi to the south, and the Democratic Republic of the Congo to the west.** The country is known as the “**Land of a Thousand Hills**” due to its hilly and mountainous terrain.



4. IVORY COAST

Context:

Ivory Coast became the first country to roll out the newest malaria vaccine, R21/Matrix-M, targeting about 250,000 children under the age of two.

- Developed by Oxford University and authorized by the World Health Organization (WHO) this three-dose vaccine is over 75% effective in preventing severe disease and death in the first year, with extended protection through a booster.

About Ivory Coast:

Côte d'Ivoire, commonly known as **Ivory Coast**, is a country located on the southern coast of West Africa.



5. PERU - MASHCO PIRO TRIBES

Context: The recent sighting of more than 50 Mashco Piro tribespeople, one of the largest uncontacted tribes in the world, is raising concerns.

- The Mashco Piro, who live deep in the Amazon rainforest of southeastern Peru, are being pressured by logging activities close to their territory.
- The Peruvian government has forbidden contact with the tribe to prevent disease transmission, but large parts of their land have been sold for logging.

About Peru:

It is a country in South America that's home to a section of the Amazon rainforest and Machu Picchu, an ancient Incan city high in the Andes mountains.

The region around Machu Picchu, including the Sacred Valley, Inca Trail and the colonial city of Cusco, is rich in archaeological sites.

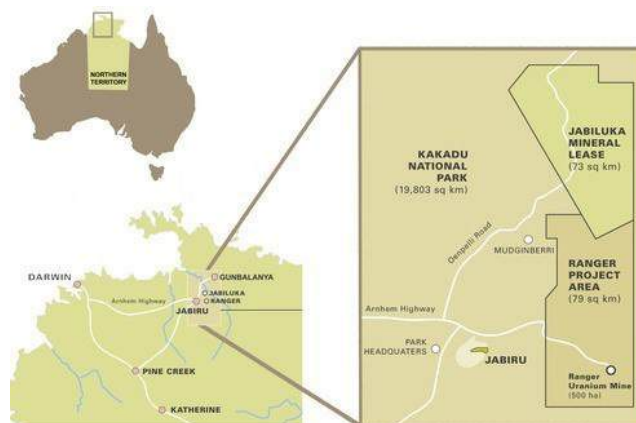
Check out the map to see neighbouring countries and geographical features.



6. JABILUKA URANIUM SITE (AUSTRALIA)

Context: Australia has banned mining at the Jabiluka uranium site, located within Kakadu National Park, in a victory for the Indigenous Mirarr people who have fought for decades to protect their land. This decision aligns with the wishes of the Mirarr, who have cared for the land for over 60,000 years.

Australia has around one-third of the world's uranium deposits. Uranium deposits in India are primarily found in crystalline rocks. Jharkhand state holds 70% of the country's uranium reserves.



7. GOLAN HEIGHTS (ISREAL)

Context: Israel conducted air strikes on Hezbollah targets in Lebanon after a rocket attack killed 12 young people playing football in Majdal Shams, Golan Heights

About Golan Heights (or simply the Golan)

It is a strategic basaltic plateau in the southwest corner of Syria. It is bordered by the Yarmouk River in the south, the Sea of Galilee and Hula Valley in the west, the Anti-Lebanon mountains with Mount Hermon in the north, and Wadi Raqqad in the east. Two thirds of the area was occupied by Israel following the 1967 Six-Day War and then effectively annexed in 1981, which was rejected by the international community that continues to consider the territory as Syrian and under Israeli occupation.



8. GOBI DESERT (CHINA)

Context: China is set to build the world's first nuclear power plant using molten thorium salt in the Gobi Desert, aiming for operation by 2025.

About Thorium-based nuclear power station:

It utilizes thorium instead of uranium as fuel. Unlike uranium, thorium must first be converted to U-233 in a reactor to produce nuclear energy. This station's reactor uses liquid salt or carbon dioxide for heat transfer and electricity generation, eliminating the need for water cooling and significantly reducing the risk of meltdowns. It will also be the first molten salt reactor since the United States shut down its test reactor in 1969.

About the Gobi Desert:

It is a vast, arid region in northern China and southern Mongolia. It's known for its dunes, mountains and rare animals such as snow leopards and Bactrian camels. In the Gobi Gursaisaikh National Park, the Khongoryn Els sand dunes are said to sing when the wind blows. The park also features the deep ice field of Yolyn Am canyon. Dinosaur fossils have been found at the red "Flaming Cliffs" of Bayanzag.



INDIAN

Place	Why in News?
9. SHYOK RIVER (LADAKH)	Context: Five soldiers, including a junior commissioned officer, died in Ladakh after their T-72 tank was swept away by the <u>Shyok River</u> during a training exercise near Saser Brangsa. About Shyok River: <u>It is a tributary of the Indus River</u> and flows through northern Ladakh in Jammu and Kashmir, India, and into <u>Gilgit-Baltistan in Pakistan</u>. Originating from the Rimo Glacier, it flows southeast before turning northwest at the Pangong range and joining the Indus at Skardu. The river, fed by glacial meltwater, traverses high-altitude deserts and mountain ranges, spanning approximately 550 km. Its main tributary is the <u>Nubra River</u>.

10. KOYNA, MAHARASHTRA

Context: India is undertaking a mission to drill a 6-km deep hole in the Koyna-Warna region of Maharashtra to study earthquakes and the earth's crust.

- This region has experienced frequent earthquakes since the Koyna Dam was impounded in 1962.
- The pilot borehole, drilled to a depth of 3 km, has already provided significant insights, including information on ancient lava flows and granitic basement rocks.
- The deep drilling aims to better understand reservoir-triggered earthquakes and involves complex techniques like mud rotary drilling and air hammering.



11. SIANG RIVER

Context: Locals are protesting against the proposed Upper Siang hydropower project in Arunachal Pradesh due to environmental and social concerns.

- The project, a massive 11,000 MW dam on the Siang River, is seen as a strategic counter to China's hydropower projects.

About Siang River:

The Tsangpo, which originates in China, is called the Siang after it enters India through the Upper Siang district in the northeastern state.

The Siang joins two other rivers – the Lohit and the Dibang – downstream to form the Brahmaputra.



12. DRONE TEST-ED AT LADAKH'S UMLING LA PASS

Context: A Bengaluru-based firm, NewSpace Research and Technologies, has successfully tested a 100-kg Max Take Off Weight (MTOW) drone at an altitude of 19,024 feet at Umling La pass in Ladakh, the world's highest motorable pass.

- It demonstrated the drone's ability to carry a 25-kg payload, surpassing the performance of China's DJI FlyCart 30 drone tested at Mount Everest base camp.
- The drone, which flew to an altitude of 6,200 meters, offers significant potential for civilian and military logistics, disaster relief, and medical transport in high-altitude regions such as J&K, Uttarakhand, and the North Eastern states.

The NewSpace drone could also **reduce the cost of high-altitude logistics operations compared to traditional manned flights**, like those conducted by the Ministry of Defence.

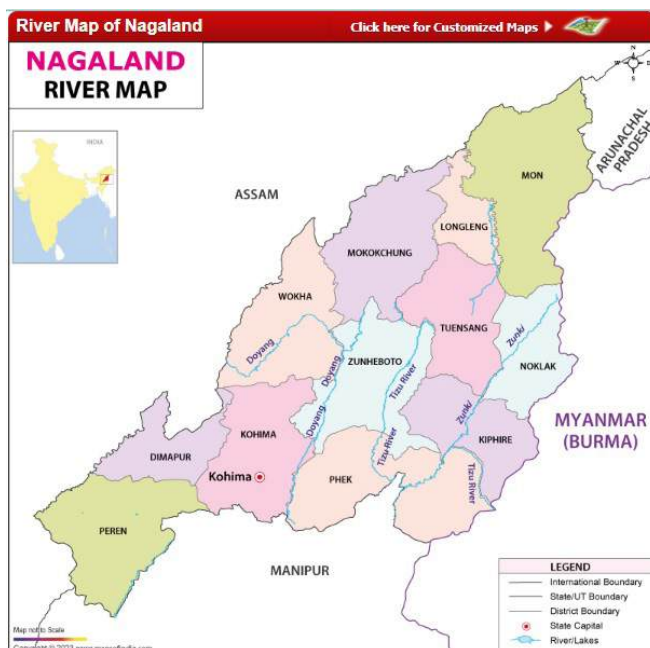


13. TIZU AND ZUNGKI RIVER (NATIONAL WATERWAYS 101)

Context: The government has announced initiatives for the economic development of Nagaland through the harnessing of Tizu and Zungki rivers (National Waterways 101)

About Tizu and Zungki River:

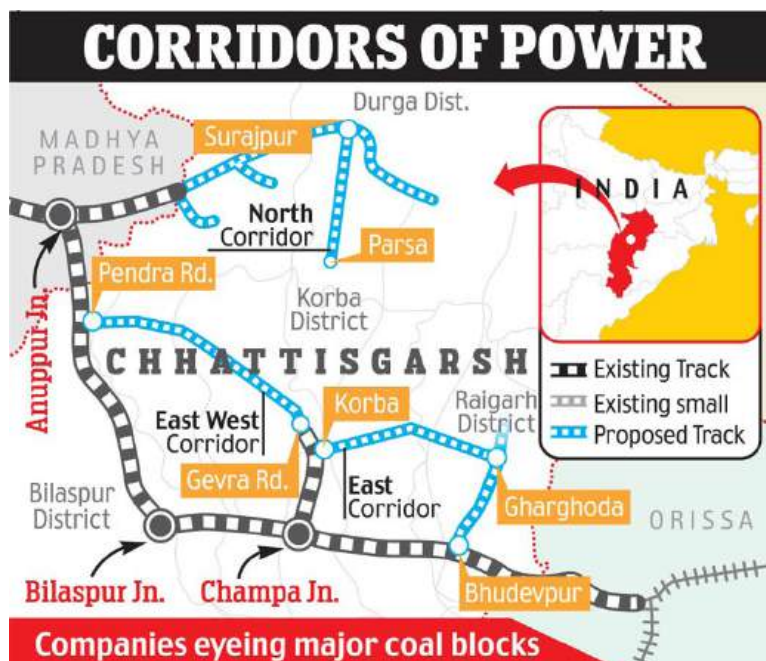
- **Tizu River:** Originates near Longkhim in Tuensang district, Nagaland. It flows into the Chinwin River (also known as Ningthi River) in Myanmar, a major tributary of the Irrawaddy River.
- **Main Tributaries:** Include Zungki, Lanye, and Likimro rivers.
- **Zungki River:** The largest tributary of the Tizu River within Nagaland.



14. GEVRA AND KUSMUNDA COAL MINES (CHHATTISGARH)

Context: Chhattisgarh-based South Eastern Coalfields Limited (SECL), a subsidiary of Coal India, has achieved a significant **milestone with its Gevra and Kusmunda coal mines** ranking **2nd and 4th among the world's largest coal mines**.

- These mines are **located in the Korba district and collectively produce over 100 million tons of coal annually**, constituting about **10% of India's total coal production**.



15. LITHIUM IN MANDYA AND YADGIRI DISTRICTS (KARNATAKA)

Context: The **Atomic Minerals Directorate for Exploration and Research (AMD)** found lithium in Mandya and Yadgiri districts, Karnataka. Preliminary surveys have identified **1,600 tonnes of lithium in Mandya**.

India has several states with significant lithium reserves, including **Karnataka, Rajasthan, Jharkhand, and Andhra Pradesh**. **Lithium** was **first discovered in Jammu and Kashmir in 1999**, and other active lithium blocks in India Katghora in Chhattisgarh.

Mandya and Yadgiri Districts

- Mandya:** Located in Karnataka, known for its sugarcane farming and rich cultural heritage.
- Yadgiri:** Also in Karnataka, primarily an agricultural district.

