



INSIGHTSIAS

SIMPLIFYING IAS EXAM PREPARATION

SUPER BLUE MOON

Recently a special astronomical event known as a “Super Blue Moon” occurred. This event combines two rare phenomena: a “blue moon” and a “super moon.”



19 AUG - 24 AUG 2024

WEEKLY CURRENT AFFAIRS

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GENERAL STUDIES – 1

Topics: Women and women related issues.

1. ISSUE OF WOMEN SAFETY IN INDIA

Context:

The **recent rape and murder of a young doctor in Kolkata** highlights severe flaws in the legal system.

Women's Safety Statistics (2022)

1. **Total Crimes:** 445,256 cases registered, a 4% increase from the previous year (about 51 FIRs per hour).
2. **Crime Rate:** 66.4 per lakh population; charge sheet rate at 75.8%.
3. **Crime Types:** 31.4% cruelty by relatives, 19.2% kidnapping, 18.7% assault, 7.1% rape.
4. **Sexual Violence:** Nearly 39,000 incidents in 2016; one rape every 15 minutes in 2018.
5. **Workplace Harassment:** Over 400 cases annually since 2018.
6. **Juvenile Offenders:** 86 rape cases, 68 modesty outrages.
7. **State Data:** Delhi had the highest rate (**144.4 per lakh**); Uttar Pradesh reported the most cases (65,743).

Demands of Healthcare Workers:

Demands	Current Provisions
Central Protection Act	Advocating for a nationwide law similar to the UK's NHS zero-tolerance policy and US felony classifications. Felonies range from Class A (life imprisonment) to Class E (1-5 years).
Enhanced Safety Measures	Better lighting, security guards, monitored security cameras, safer working conditions, and emergency response systems in healthcare settings.
State Responsibilities	Health and law enforcement are State subjects; lack of centralized data on attacks on medical professionals. N.K. Singh proposed shifting health to the Concurrent List.
Ministry of Health and Family Welfare Order	Mandates filing of an FIR within six hours of violence against healthcare workers.
National Medical Commission (NMC) Directives	Requires medical colleges to develop safe work environment policies and timely incident reporting.

Issues with Legal Response to Crimes Against Women

1. **Inadequate Legal Action:** History of violence often goes unaddressed, as seen in the Kolkata case.
2. **Low Conviction Rates:** High dowry death cases with low convictions due to lenient settlements.
3. **Underpunished Domestic Violence:** Domestic violence laws are weak, with minimal punishment for offenders.
4. **Lax Bail Norms:** Easy bail access for serious crimes like stalking and harassment.
5. **Slow Legal Process:** Delayed trials and high rates of cases disposed of without proper legal proceedings.

India's initiatives related to women's safety:

Legislations:

1. CEDAW ratified (1993)
2. Immoral Traffic (Prevention) Act (1956)
3. Indecent Representation of Women Act (1986)
4. National Policy for Women Empowerment (2001)
5. Protection of Women from Domestic Violence Act (2005)
6. PoSH Act (2013)
7. Criminal Law (Amendment) Acts (2013 & 2018)
8. POCSO Act (2012)

Strategies and Measures:

1. Beti Bachao Beti Padhao Scheme
2. Ujjawala Scheme
3. NIRBHAYA Fund
4. Ministry of Women and Child Development initiatives

5. Safety in trains: 182 helpline, CCTV, 'R-Mitra' app
6. Safety for women tourists: 'Incredible India Help Line', Code of Conduct
7. Safety in metro: Women-only coaches, reserved seats
8. Universal Women Helpline Scheme

Mobile Apps:

1. Suraksha
2. Amrita Personal Safety System (APSS)
3. VithU


Global Initiatives:

1. **International Day for the Elimination of Violence Against Women:** Observed on November 25 by the UN.
2. **UN Women Safe Cities Initiative:** Creates safer public spaces for women and girls.
3. **Gender Inclusive Cities Programme:** Funded by the UN Trust Fund, improves women's safety in cities.
4. **UN Development Fund for Women (UNIFEM):** Supports gender equality and women's empowerment.

National Commission for Women (NCW) had asked all states to ensure that coaching centres and educational institutes strictly enforce the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013.

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	<p>Sexual harassment includes "any one or more" of the following "unwelcome acts or behaviour" committed directly or by implication:</p> <ul style="list-style-type: none"> • 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	<p>Compensation is determined based on five aspects:</p> <ul style="list-style-type: none"> • 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)

Visit Insights IAS Daily Current Affairs

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)

2. JUSTICE HEMA COMMITTEE REPORT RELEASED

Context:

On August 22, the **Kerala High Court** ordered the state to submit the entire Hema Committee report, including redacted sections, in a sealed cover. This follows a PIL **demanding criminal action against offenders** named in the report. Released on August 19, **four-and-a-half years after its submission**, the 233-page report exposes severe discrimination and **exploitation of women in the Malayalam film industry**.

Background of the case:

In 2017, a **Malayalam actress was abducted and assaulted**, leading to an investigation that implicated **actor Dileep**. This event shook the industry and prompted the formation of the **Women in Cinema Collective (WCC)** to support the survivors. The Kerala government established the **Justice Hema Committee to investigate gender issues in the industry**, and the committee submitted a report in 2019 detailing sexual harassment and gender inequality.

Why was it delayed?

The report was delayed for **nearly five years due to privacy concerns and sensitive information** but was finally released in August 2024. Key findings include widespread sexual harassment, a fear of retribution, **dominance by a male “mafia,”** lack of basic facilities for women on film sets, and gender pay disparities.

Key Issues Highlighted in the Report:

Highlights	Details
Sexual Abuse	Unwanted physical advances, rape threats, and code names for women willing to compromise.
Casting Couch	Women are forced to exchange sexual favours for jobs; those who comply are labelled as “cooperating artists.”
Safety on Film Sets	Female workers often bring relatives for protection against sexual demands and harassment.
Criminal Influence	Industry affected by criminal elements; female artists are harassed in hotels, often under threat by intoxicated men.
Fear of Consequences	Despite legal protections, women fear the stigma and consequences of reporting sexual harassment.
Cyberthreats	Women in cinema face online harassment, bullying, defamation, and vulgar comments on social media.
Inadequate Facilities	Lack of proper toilet facilities on sets, especially during menstruation, causes discomfort and difficulties.
Inhumane Working Conditions	Junior artists suffer from inadequate pay, slave-like treatment, long hours, and delayed or misappropriated payments.

Key Recommendations of the Report:

- Internal Complaints Committee (ICC):** Mandate ICCs under the 2013 Workplace Harassment Act, including FEFKA and AMMA members.
- Independent Tribunal:** Suggest an independent tribunal for harassment cases with in-camera proceedings for privacy.
- Written Contracts:** Make written contracts mandatory for all workers in the film industry.

- Gender Training:** Require cast and crew to complete gender awareness training before production.
- Support for Women Producers:** Provide budgetary incentives and loans for films produced by women

coverage.

- Over 88% of schools and over 85%** of Anganwadi centres receive tap water.
- Over 2 lakh villages and 190 districts** reached 'Har Ghar Jal' status.

Legal framework for Women’s safety:

- Indian Penal Code (BNS): Sections 354, 354A, 509 (sexual offences).
- Workplace Harassment Act, 2013: Mandates Internal Complaints Committees (ICC).
- IT Act, 2000: Addresses obscene digital content.
- POCSO Act, 2012: Protects children from sexual exploitation.
- Immoral Traffic Act, 1956: Prevents trafficking for sexual exploitation.

Mains Links:

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

Q. Is the National Commission for Women able to strategize and tackle the problems that women face in both public and private spheres? Give reasons in support of your answer. (UPSC 2017)

About the mission:

Aspect	Jal Jeevan Mission
Objective	Provide 55 liters of water per person per day through Functional Household Tap Connections (FHTC) by 2024 to every Rural households
Ministry	Launched in 2019 under Ministry of Jal Shakti
Focus	It is a Demand-driven scheme with strong emphasis on Jan bhagidari (community engagement) as a crucial pillar of the project.
Objective	The mission is centered on easing the burden of water collection for rural residents, particularly women who often travel long distances for water.
Key Areas Covered	<ul style="list-style-type: none"> Ensuring functionality of existing water supply systems and connections Water quality monitoring, testing, and sustainable agriculture. Coordinated use of surface water and groundwater. Drinking water source augmentation, grey water and reuse
Additional Inclusions	<ul style="list-style-type: none"> Prioritizing FHTCs in areas with poor water quality, drought-prone villages, Sansad Adarsh Gram Yojana (SAGY) villages, etc. Providing FHTCs to schools, Anganwadi centers, Gram Panchayat buildings, health and wellness centers, and community buildings. Technological solutions for removing contaminants in areas with water quality concerns.
Paani Samitis	<ul style="list-style-type: none"> Role: Paani Samitis are responsible for planning, implementing, managing, operating, and maintaining village water supply systems. Composition: 10-15 members, 50% women, SHG reps, health workers, Anganwadi teachers, etc. It develops village plan with local resources and with Gram Sabha approval
Funding Pattern	The fund sharing pattern between the Centre and states is 90:10 for Himalayan and North-Eastern States, 50:50 for other states, and 100% for Union Territories.
Challenges	Rural regions face high water stress. While household connection progress is vital, sustaining water sources for the long term remains a challenge.
Partnership	The United Nations Office for Project Services (UNOPS) is collaborating with the Denmark government to support the mission in Uttar Pradesh.
Employment Impact	An average of over 29 million people employed annually during the mission's construction phase. Visit Insights IAS Daily CA for more News

GENERAL STUDIES – 2

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

1. JAL JEEVAN MISSION COMPLETES FIVE-YEAR

The Jal Jeevan Mission (JJM), a central government initiative to provide piped water to every rural household by 2024, was launched in 2019.

Key Achievements

- Over 77% of rural households in India now have piped water connections, a significant leap from the 2019 baseline of 17%.
- States Achieving 100% Tap Connectivity: Goa, Telangana, Haryana.
- Union Territories Achieving 100% Tap Connectivity: Puducherry, Andaman and Nicobar Islands, Dadra & Nagar Haveli, Daman & Diu.
- Tap water coverage increased from over 3 crore to 15 crore households.
- 8 states and 3 Union Territories achieved 100%

A fully functional tap water connection is defined as a household getting at least 55 litres of potable water per capita per day all through the year

Present challenges with the mission:

Aspect	Details
State Disparities	Only a few states report high coverage rates. In contrast, populous states like Uttar Pradesh and Rajasthan have lower coverage.
Quality Concerns	Some households, despite having tap connections, use local groundwater due to inadequate tap water quality.
Reporting and Certification	Adoption numbers rely on self-reporting by villages and lack third-party certification.
Shortcomings in Reality	Despite official claims of 100% household tap connections (FHTC), many households lack taps, and those with taps often receive limited water
Discrepancies in Reporting	Discrepancies exist between official reports and ground reality, where eligible FHTC households are not fully connected to running water supply.

Water Treatment Efforts	Water treatment plants have been commissioned to address water scarcity, but the challenge lies in <u>commissioning pipes over difficult terrain</u> .
Taps Get Stolen	In some areas, <u>taps provided by the mission have been stolen</u> , and households lack sufficient storage to maintain a continuous water supply.

Suggestions:

- **Quality Over Quantity:** Prioritizing consistent, high-quality tap water adoption in rural India is crucial. States with lower adoption rates and larger populations should receive assistance to improve their numbers.
- **Third-Party Assessment:** Implement third-party assessments to verify the accuracy of reported tap water connections, ensuring transparency and accountability.
- **Focus on Lagging States:** Prioritize states with lower adoption rates and larger populations to accelerate progress toward universal tap water coverage.
- **Public Awareness:** Conduct awareness campaigns to educate rural communities on the benefits of clean tap water and proper water usage.
- **Make the Right to Water Legal:** In India, the right to water is not enshrined as a fundamental right in the Constitution.

Other steps are taken for water management in Urban Areas:

- **Atal Bhujal Yojana:** For sustainable management of groundwater resources with community participation in selected water-stressed areas.
- **National Aquifer Management Program:** For mapping of aquifers, characterization, and development of aquifer management plans.
- **National Water Policy (2012):** Include provisions like rainwater harvesting, augmenting the availability of water through direct use of rainfall, etc.
- **Atal Mission for Rejuvenation and Urban Transformation (AMRUT):** To provide tap connections to over 1 crore households in 500 cities.

Conclusion:

On 28 July 2010, through Resolution 64/292, the United Nations General Assembly explicitly recognized the human right to water and sanitation and acknowledged that clean drinking water and sanitation are essential to the realization of all human rights.

Insta Links:

- [Jal Jeevan Mission \(JJM\) has hit the 51% mark](#)

- [Jal Jeevan Mission](#)

Mains Links:

The Jal Jeevan Mission will be a major step towards improving our people’s ease of living and meeting their aspirations of a New India. Analyse. (250 words)

Prelims links:

Consider the following statements: (UPSC 2020)

1. 36% of India’s districts are classified as “overexploited” or “critical” by the Central Ground Water Authority (CGWA).
2. CGWA was formed under the Environment (Protection) Act.
3. India has the largest area under groundwater irrigation in the world.

Which of the statements given above is/are correct?

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

Ans: B

[Topics: Welfare schemes for vulnerable sections of the population by the Centre and States and the performance of these schemes.](#)

2. MULTIDIMENSIONAL VULNERABILITY INDEX (MVI) LAUNCHED BY UN

Context:

The UN General Assembly has launched the “**Multidimensional Vulnerability Index**” (MVI), a new tool to help **small island and developing nations access low-interest financing**. Though use is **voluntary**, the UN urges its adoption

What is Vulnerability?

Vulnerability **refers to the susceptibility of individuals or groups** to harm due to various factors, such as social, economic, environmental, or health-related circumstances. It highlights the condition of being at risk and unable to adequately protect oneself from adverse situations.

About Multidimensional Vulnerability Index (MVI):

The MVI is a **new global benchmark measuring structural vulnerability and resilience** across various **sustainable development dimensions**. It **complements GDP** and other metrics, **aiming to capture vulnerabilities and resilience** in all developing countries. Initially advocated by **small island states**, it includes factors like import dependency, climate risks, and social resilience.

Aspects	Description
About	The Multidimensional Vulnerability Index (MVI) measures structural vulnerability and lack of resilience across various dimensions of sustainable development at the national level.
Purpose	It addresses the needs of small island developing states (SIDS) and other developing nations that face unique vulnerabilities but don't qualify for low-interest financing.
Key Indicators in the MVI	<p>The MVI includes indicators such as:</p> <ul style="list-style-type: none"> i) Import dependency ii) Exposure to extreme weather events and pandemics iii) Impacts of regional violence and refugee crises iv) Demographic pressure v) Water and arable land resources vi) Child mortality under five.
Limitations of Traditional Measures	Traditional metrics like Gross National Income (GNI) often miss the vulnerabilities of developing countries. These measures hinder them from accessing necessary development financing.
Applications of the MVI	<p>The MVI will guide:</p> <ul style="list-style-type: none"> i) Programmatic support for SIDS and other developing countries ii) Debt service strategies iii) Financing sustainable development initiatives tailored to the challenges of SIDS.

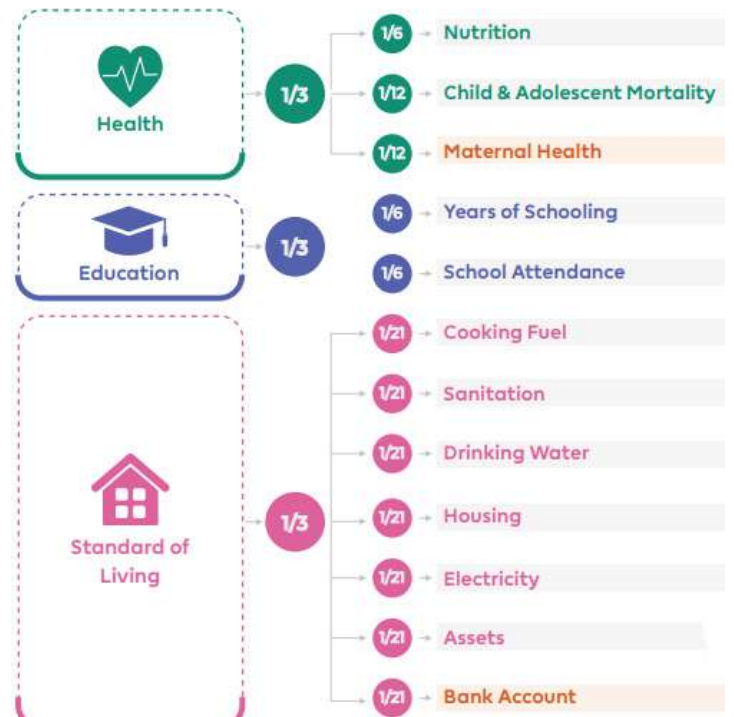
Singificance: The MVI is crucial for helping these nations access concessional financing, improve planning, manage debt, and prepare for climate impacts.

Other similar Indices:

What is National MPI?

The National Multidimensional Poverty Index (MPI) is a metric assessing poverty in a country by considering health, education, and standard of living, represented by 12 indicators. It employs the Alkire Foster methodology.

Indicators and their weights



The National Multidimensional Poverty Index (MPI), a first-of-its-kind, estimates multiple deprivations at a household level using NFHS data. Published by NITI Aayog, it includes three dimensions and 12 indicators. Sub-indices measure the Headcount Ratio (how many are poor) and the Intensity of Poverty (how poor are the poor). The Global MPI, published by OPHI in collaboration with UNDP, is a similar index addressing worldwide multidimensional poverty.

Key findings of Niti Aayog:

- Steep decline in Poverty Headcount Ratio (HCR): HCR represents the percentage of the population below the Poverty Line.
- Positive Improvement in All 12 MPI Indicators
- Faster Decline in Poorer States: Poorer states like Uttar Pradesh and Bihar show a rapid decline in poverty, suggesting a reduction in disparities.
- SDG Target 2: India is expected to achieve Sustainable Development Goal (SDG) Target 1.2, aiming to reduce multidimensional poverty by at least half, well before 2030.
- Successful Government Initiatives: Programs like Poshan Abhiyan and Anemia Mukta Bharat have improved healthcare access, while the Targeted Public Distribution System under the National Food Security Act (ensures food grains for over 81 crore beneficiaries), extending free food grain distribution under Pradhan Mantri Garib Kalyan Anna Yojana.

Insta Links:
[Multidimensional poverty](#)

Mains Links:

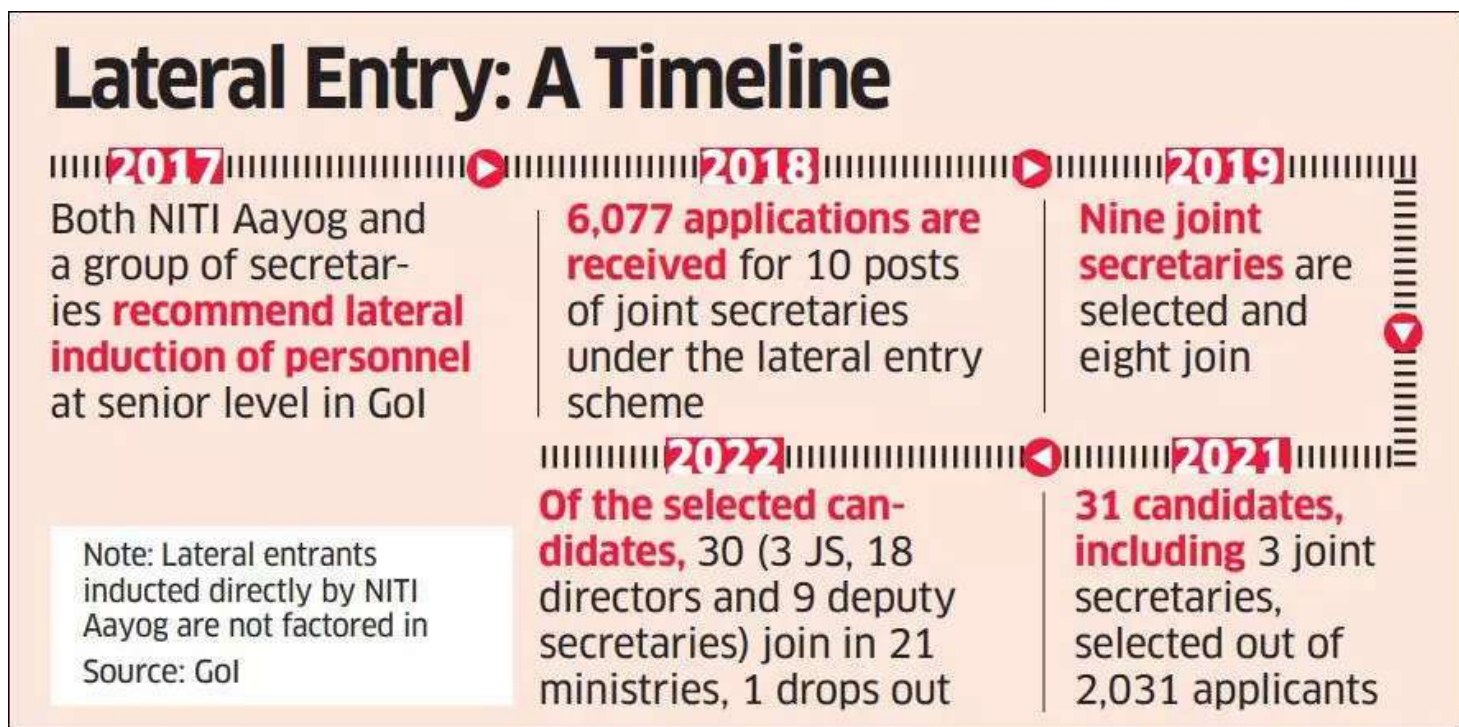
Though there have been several different estimates of poverty in India, all indicate a reduction in poverty levels over time. Do you agree? Critically examine with reference to urban and rural poverty indicators. (UPSC 2015)

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.

3. LATERAL ENTRY INTO THE CIVIL SERVICES

Context:

The central government has made its **largest push for lateral entry into civil services**, with the UPSC advertising **45 posts across various ministries**. These positions include **10 joint secretaries and 35 director/deputy secretaries**, to be filled on a contract basis.



About Lateral Entry:

The term lateral entry relates to the appointment of specialists, mainly those from the private sector, in government organisations.

Committees’ recommendations on lateral entry:

- The idea has been advocated by Surinder Nath Committee (2003), Hota Committee (2004) and Second ARC (2008).
- NITI Aayog, in its three-year Action Agenda (2017—2020), recommended the induction of personnel at middle and senior management levels in the central government.

Aim: This move aims to **bring fresh talent and expertise into governance**, with a focus on improving policy-making.

Positive implications of lateral entry recruitment:

1. **Enhanced Performance:** Bringing in target-oriented talent from the private sector can boost government efficiency.
2. **Increased Competition:** Introducing outside talent encourages competition, reducing complacency among civil servants.

3. **Proven Success:** NITI Aayog's positive experience with lateral entry highlights its effectiveness.
4. **Diverse Values:** Lateral entry infuses the government with values of economy, efficiency, and effectiveness, fostering a performance-driven culture.
5. **Specialized Knowledge:** Governance is increasingly complex, requiring specialized skills that generalist officers may lack. Specialists are essential for addressing modern administrative challenges.
6. **Filling the Gap:** Lateral entry helps bridge the shortage of IAS officers, filling critical gaps in the government workforce.
7. **Cultural Shift:** It promotes a shift away from bureaucratic red-tapism, encouraging a culture of efficiency and effectiveness.
8. **Participatory Governance:** Lateral entry allows private sector and non-profit stakeholders to actively participate in the governance process, promoting a more inclusive approach.

Negative implications of lateral entry recruitment

Negative Implications	Details
Non-application of Reservation Provisions	The government has said that the Reservation criteria do not apply to single-post jobs , potentially depriving underrepresented groups of opportunities in higher government positions.
Conflict of Interest Situations	Appointing individuals from private companies in related ministries may raise ethical concerns and questions of conflict of interest . Private sector professionals may struggle to transition from a profit-oriented approach to a public service mindset required in government roles.
Corruption Risk	Short-term lateral entry could lead to varying interests and motivations , potentially resulting in corrupt practices.
Lack of Training and Experience	Outside talent may lack the extensive field experience that civil services provide, potentially delaying administrative work.
Difficulty in Measuring Performance	The complex nature of government roles makes it challenging to assess the performance of lateral entrants.
Cumbersome Decision-Making Process	Lateral entrants may face difficulties adapting to the system without proper training , and by the time they build the necessary networks, their term may end.

Way forward:

1. **Objective Criteria:** Assign lateral entrants to meaningful portfolios with clear role requirements to ensure motivation and effectiveness.
2. **Relax Age Barrier:** Lower the age requirement for lateral entry to attract younger talent, similar to past practices with figures like Montek Singh Ahluwalia and Bimal Jalan.
3. **Transparent Process:** Ensure a transparent selection process, with UPSC's involvement to provide legitimacy.
4. **Training:** Develop intensive training programs for private-sector entrants to help them navigate the complexities of government work.

Conclusion:

Lateral entry is beneficial but requires careful consideration of entry criteria, assignments, training, and systemic reforms to succeed.

Insta Links:

[Lateral Entry](#)

Mains Link:

Q. "Lateral entry into administration is a reform that needs to be better implemented", do you agree? Give your opinion with a suitable justification. (250 words)

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

4. INDIA-JAPAN RELATIONS

Context:

Japan's Foreign Minister, Kamikawa Yoko, highlights the **deep historical ties and democratic values shared between Japan and India**. Kamikawa's visit to India aims to strengthen the "**Japan-India Special Strategic and Global Partnership**" in key areas like defense, economics, people-to-people exchanges, and **Women, Peace, and Security (WPS)**.

Key points highlighted in the visit are:

1. **Historical Ties:** Japan and India share deep historical connections and democratic values.
2. **Strategic Partnership:** Strengthened "**Japan-India Special Strategic and Global Partnership**" in defense, economy, and more.
3. **Defense Cooperation:** Focus on security collaboration, including joint military exercises and technology sharing.
4. **Economic Collaboration:** Progress on key projects like High-Speed Rail and investments in Green and Digital Transformation.
5. **People-to-People Exchanges:** Expanded cultural and tourism exchanges, with events like "Japan Month" and "India Month."
6. **Women, Peace, and Security (WPS):** Emphasis on women's leadership in peace initiatives and collaboration in crisis response.
7. **Global Cooperation:** Commitment to multilateral frameworks like the Quad for a "Free and Open Indo-Pacific."

India-Japan Relations:

India-Japan	Examples
Shared Values	Democracy, Freedom, and Rule of Law
Defence and Security Cooperation	<u>India and Japan Vision 2025</u> : Work together for peace and prosperity in the Indo-Pacific region and the world
	Relationship elevated to <u>Special Strategic and Global Partnership</u> (2014)
	"2+2" Dialogue
	Inclusive and Rule-based International order in Indo-Pacific
	<u>FOIP</u> (Free and Open Indo-Pacific).
	Acquisition and Cross-Servicing Agreement with India
Strengthening India's Act East Policy	Japan supports <u>strategic connectivity</u> linking South Asia to Southeast Asia through synergy between the "Act East" policy and " <u>Partnership for Quality Infrastructure</u> ."
	Japanese help during <u>India's Balance of Payments (BOP) crisis</u> in 1991
Economic Cooperation	Bilateral trade over US \$20 billion (2022)
	Japan was the <u>4th largest investor</u> in India in FY2020.
	Industries Competitiveness Partnership
	Comprehensive and Economic Partnership Agreement (CEPA) since 2011
Culture	Buddhism
Healthcare	Narrative of AHWIN (Japan's) for AYUSHMAN Bharat.
Investment and ODA	India has been the <u>largest recipient of Japanese Official Development Assistance (ODA)</u> Loan for decades (e.g., Delhi Metro, Western Dedicated Freight Corridor, High-Speed Railways).
Global Partnership	Both are members of G4, Asia-Africa Growth Corridor, Supply chain resilience initiatives, and QUAD.

Space	<u>LUPEX Mission</u> (India's lunar lander and Japanese rover will explore the moon).
Nuclear Cooperation	<u>India-Japan Nuclear Deal 2016</u> will help India build six nuclear reactors in southern India.
Digital Infrastructure Cooperation	Cooperation in promoting joint projects for digital transformation (5G, Open RAN, Telecom Network Security, submarine cable systems, Quantum Communications).
Challenges	<u>Climate change and WTO talks</u> (Japan siding with developed countries). Japan's frosty relations with Russia (Kuril Island dispute).
Conclusion	Relations between two powers can greatly support stability in the world. Japan can help in India's rise, e.g., India's quest to become a <u>global semiconductor Chip Manufacturing hub</u> .

Insta Links

70 YEARS OF INDIA-JAPAN TIES

Mains Links

The India-Japan relationship is facing challenges due to the changing global geopolitical scenario. Analyse the challenges and suggest measures to address them. (250 Words)

Prelims Links

Consider the following countries: (UPSC 2018)

1. Australia
2. Canada
3. China
4. India
5. Japan
6. USA

Which of the above are among the 'free-trade partners' of ASEAN?

- (a) 1, 2, 4 and 5
- (b) 3, 4, 5 and 6
- (c) 1, 3, 4 and 5
- (d) 2, 3, 4 and 6

Ans: C

5. 3RD VOICE OF GLOBAL SOUTH SUMMIT: INDIA'S 'GLOBAL COMPACT'

Context: On August 17, India hosted the **3rd Voice of Global South Summit (VOGSS)**, proposing a 'Global Development Compact' to share its development experiences with other developing countries.

What is Global South?

The Global South includes countries often termed "**developing**" or "**underdeveloped**," distinct from the richer Global North. The **UN Conference on Trade and Development** notes that Global South countries often **face lower development levels**, high income inequality, rapid population growth, and significant external dependence.

According to the World Bank, the GDP of the Global South **grew from 20% of world GDP in the 1970s-1990s to about 40% by 2012**. The term **Global South was first coined in 1969** by political activist **Carl Oglesby**.



What is 'Global Compact'?

A Global Compact is **an initiative that brings together countries or organizations to commit to shared goals and principles**, often focusing on sustainable development, human rights, and global cooperation.

What is VOGSS?

The **Voice of Global South Summit (VOGSS)** unites **Global South countries** to share perspectives on issues aligned with the philosophy of '**Vasudhaiva Kutumbakam**.' India hosted the **1st and 2nd VOGSS in January and November 2023**.

Key Highlights of the 3rd VOGSS:

- **Theme:** "An Empowered Global South for a Sustainable Future."
- **Virtual Participation:** 123 countries joined; China and Pakistan were not invited.
- **Global Development Compact (GDC):** India proposed the GDC to address development finance concerns, focusing on trade, sustainable growth, and technology sharing.
- **Funding:** India will launch a \$2.5 million fund for trade promotion and a \$1 million trade policy training fund for capacity building.

India's Role in the Global South:

Aspect	Details
Integrating Factor	The Global South needs a central figure to unify its negotiation process.
	India is a natural contender , actively fulfilling this role.
	In January 2023, India hosted the 1st Voice of Global South Summit with 47 African, 29 Latin American and Caribbean, 31 Asian, 11 Oceania, and 7 European countries.
India's Foreign Policy Principles	India's history of non-alignment and recent actions, such as distributing COVID vaccines , being neutral in Russia-Ukraine war, Gaza war, etc., bolster its credibility.
	India is seen as more credible than powers like the US and China in the Global South.
India's Initiatives for global south	Social Impact Fund: India will contribute \$25 million for accelerating Digital Public Infrastructure (DPI) in Global South.
	Global South Young Diplomat Forum: Launched to promote education and capacity building.
	Vision of Aarogya Maitri: One World-One Health is India's mission for health security E.g. Jan Aushadhi Kendras' in African and Pacific Island countries.
Bridge Between North and South	As a democracy with diverse cultural and socio-economic backgrounds , India is well-placed to address equity and sovereignty concerns.
	India can facilitate dialogue between the North and South.
	Examples include India's role in the Quad and adding the African Union to the G20 to represent developing nations' concerns.

What is India's Global South Vision?

India's Global South Vision emphasizes fostering **strategic partnerships with nations in the Southern Hemisphere**, aiming for **a more equitable and inclusive global order**. It focuses on economic cooperation, **multilateralism, and solidarity** among developing countries to address common challenges and promote sustainable development.

Challenges Faced by the Global South:

1. **Outdated global governance** and financial institutions.
2. **Technology divides** between North and South.
3. Ongoing threats from **terrorism, extremism, and separatism**.

Conclusion

In all, the **energy and the environmental crisis as well as the geopolitical contestation** will have a significant **impact on the Global South**.

Amidst this, **India** is in somewhat of a sweet spot to **negotiate middle paths to these challenges**. Therefore, it is likely that India will **emerge as the definitive capital and voice of the Global South**.

Insta Links:

1. India's Strategic Focus: Centering Africa in the Global South Vision
2. India-Africa ties

Mains Link:

1. **How does India see its place in the economic space of rising natural resource-rich Africa? (UPSC 2014)**
2. **Increasing interest of India in Africa has its pros and cons. Critically Examine. (UPSC 2015)**

Prelims Link:

Consider the following statements: (UPSC 2016)

1. The India-Africa Summit
2. held in 2015 was the third such Summit
3. was actually initiated by Jawaharlal Nehru in 1951

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

[Topics: Effect of policies and politics of developed and developing countries on India's interests, Indian diaspora.](#)

6. CONTRIBUTIONS OF INDIAN DIASPORA TO US SOCIETY

Context:

A BCG and Indiaspora report highlights that, **despite being only 1.5% of the U.S.** population, **Indian Americans have made significant contributions to American society.**

The **United States** has a four million-plus strong Indian diaspora, the **second-largest immigrant group in the US.** The **high-achieving Indian Americans have gained attention like never before.**

Contributions:

Category	Contributions
Economic Impact	CEOs of Indian origin head 16 Fortune 500 companies.
	Notable leaders: Satya Nadella (Microsoft), Shantanu Narayen (Adobe).
Cultural Influence	Diwali and Holi widely celebrated.
	Renowned chefs: Vikas Khanna.
	Wellness practices: Deepak Chopra.
Innovation, Research, and Development	13% of US scientific publications co-authored by Indian Americans.
	Prominent figures: Har Gobind Khorana, Abhijit Banerjee, Manjul Bhargava.
Government and Public Services	Kamala Harris: First woman Vice President of Indian descent.
	Bobby Jindal: First Indian American Governor.

Rise and significance of Indian diaspora in the U.S.:

- **Presence and Dominance:**
 - The Indian diaspora excels in **politics, administration, entrepreneurship, technology, medicine, science, and academia.**
 - They are the **most educated and highest-earning Asian group** in the U.S.
- **Skilled Labor:**
 - Indian professionals, **especially in IT and**

engineering, are crucial to U.S. businesses through the H-1B visa program.

- **High-profile figures** like Sundar Pichai, Satya Nadella, and Parag Agarwal enhance India's reputation as a tech powerhouse and a source of top talent.

Impact:

1. **Changed perceptions:** The success of the Indian-American community has significantly changed the U.S. perception of Indians and India. E.g., As part of "**soft diplomacy**," Indian-Americans played a **pivotal role** in the fruition of the historic **Indo-US nuclear deal in 2005.**
2. **Strengthened the India-US relationship:** The fifth largest economy in the world, India today, is seen in the US as a strong bilateral partner **sharing common democratic values.**
3. **Economic:** The U.S. is the top remittance source (\$26B of \$113B in 2022-2023).
4. **Brain Gain:** ~20% of Indian unicorns have U.S.-educated co-founders, e.g., Rahul Chari (PhonePe), Harsh Jain and Bhavin Seth (Dream11).
5. **Political:** Effective diplomacy and lobbying, e.g., Indo-US civil nuclear deal.
6. **Cultural Diplomacy & Soft Power:** 1 in 10 Americans practices yoga (2023); Spread of Indian cuisine and Ayurveda.
7. **Indo-US Scientific Collaboration:** Projects like NISAR and iCET.

Conclusion

The uncompromisable role of the Indian-American community has become inevitable to the **all-round development of the US**, and this has significantly **transformed the perceptions of and dealings with India.**

Insta Link:

- [Indian Diaspora: The roots of global success](#)
- [Indian Diaspora](#)

Mains Link: UPSC 2017

Indian Diaspora has an important role to play in South-east Asian countries' economies and societies. Appraise the role of the Indian Diaspora in Southeast Asia in this context.

GENERAL STUDIES – 3

Topics: Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment.

7. LIMITATIONS OF E-COMMERCE IN INDIA

Context:

Union Commerce Minister Piyush Goyal expressed **concern over the rapid expansion of e-commerce in India**, highlighting potential social disruptions and questioning predatory pricing by giants like Amazon.

What is E-Commerce?

E-commerce (**electronic commerce**) refers to the buying and selling of goods or services using the **Internet**, along with the transfer of money and data to execute these transactions. It allows businesses and consumers to conduct transactions without the need for physical interaction.

Example: Amazon is a popular example of an e-commerce platform.

The recent report shows e-commerce, making up **7.8%** of total retail sales in 2022, is growing at a **27% CAGR from 2018 to 2030**.

Issues with E-Commerce:

Impact	Description
Predatory Pricing	E-commerce platforms may offer deep discounts to eliminate competitors , potentially leading to monopolies. Once competition diminishes, consumers may lose the cost-effectiveness benefits previously offered.
Reduced Options for Consumers	The decline of local shops can increase travel costs and limit shopping choices if consumers avoid online shopping.
Loss of Employment	The reduced competition and decline in traditional retail sectors may lead to job losses in these industries.
Privacy Issues	There is a risk of abuse of consumer data and privacy violations due to inadequate protection measures.
Breach of Law	Some e-commerce platforms, like Amazon in India, are engaging in direct consumer sales despite existing regulatory restrictions on B2C transactions.

In this context, the government launched ONDC to provide a level playing field to retailers as well as benefit consumers.

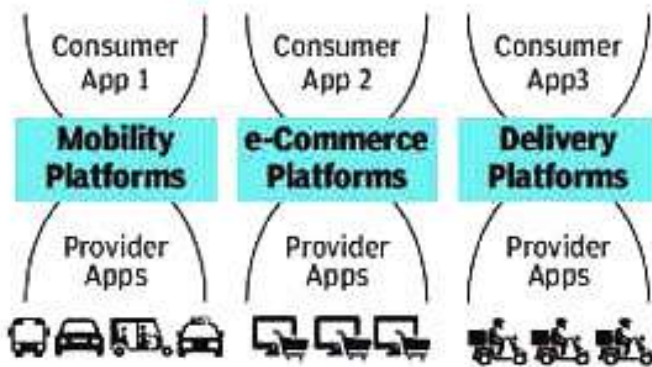
What is ONDC?

Open Network for Digital Commerce (ONDC) connects e-marketplaces, enabling sellers and brands to list and sell products directly to customers, bypassing middlemen. It transitions from a **platform-centric model to an open-source network** for buying and selling goods and services.

- **Objectives of ONDC are:**
 - Democratization and decentralization of e-Commerce
 - Inclusivity and access for sellers
 - Increased choices and independence for consumers.
 - Making goods and services cheaper.
- It is an initiative of the **Department for Promotion of Industry and Internal Trade (DPIIT)** under the Ministry of Commerce and Industry.
- It is a **not-for-profit company** incorporated under Section 8 of the Companies Act 2013 that manages and operates the ONDC Network.

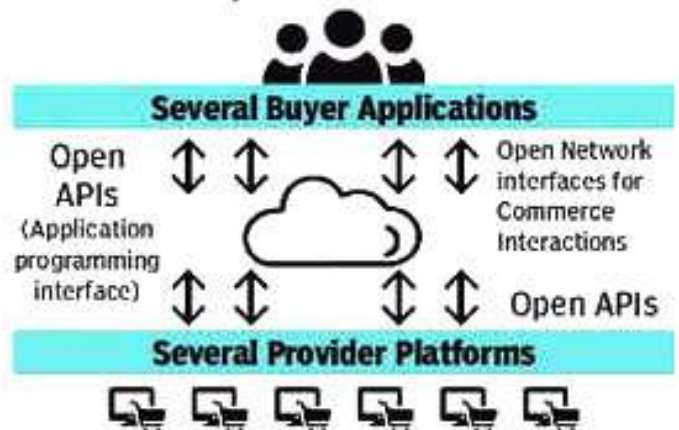
GOVT HOPES TO REPLICATE UPI MODEL'S SUCCESS

Existing: Platform-Centric Model



In the current platform-centric digital commerce model, **buyers and sellers must use the same platform/application** to do a business transaction

Future: Open Network Model



In ONDC's network-centric model, **buyers and sellers can transact no matter what platform/application they use** through an open network

ONDC can transform the e-landscape of India through:

- Empowering consumers:** ONDC increases transparency, giving consumers more information to make informed choices and access a wider range of sellers, potentially lowering prices.
 - Eg:** Recently ONDC integrated Chennai metro ticketing into its platform.
- Boosting competition:** ONDC breaks down the dominance of existing platforms, creating a level playing field that incentivizes competition among sellers, leading to more product variety and lower prices.
 - Eg:** McKinsey reports ONDC can boost self-employment in India.
- Innovation:** ONDC's open-source architecture encourages innovation within the e-commerce ecosystem.
- Cost efficiency:** ONDC's decentralized structure can streamline operations and reduce redundancies, leading to cost savings.
 - Eg:** ONDC doesn't charge any platform fees, unlike platforms like Swiggy.
- Boosting small businesses:** ONDC removes entry barriers for MSMEs and local vendors, promoting greater participation and inclusivity in the digital marketplace.
 - Eg:** ONDC boosts up the formalization of the Indian economy.

However, it faces several obstacles such as:

- Complexity factor:** ONDC's intricate mechanisms make it less user-friendly than systems like UPI, potentially hindering easy adoption.
 - Eg:** Integration of different sectors into a single platform leads to confusion.
- Dispute resolution concerns:** ONDC's focus on online buying and selling without managing the entire transaction lifecycle may increase disputes over deliveries, product quality, and after-sales service.
- Lack of robust grievance redressal mechanism:** The unclear responsibility for customer service and complaint handling may deter users from joining the platform.
 - Eg:** No dedicated Ombudsman or grievance redressal cell.
- Challenges from existing e-commerce platforms:** Established e-commerce giants have strong consumer loyalty through programs and incentives, requiring ONDC to develop compelling strategies to attract and retain customers.
 - Eg:** Options like Flipkart Plus and golden membership for loyalists.
- Price advantage uncertainty:** As a facilitator, ONDC might not directly influence pricing or offer discounts comparable to established players with bulk deals and partnerships.
 - E.g.:** Big billion-day sales by firms like Amazon and Flipkart.

Way ahead:

- Enhancing digital infrastructure:** Government investments in broadband connectivity to bridge the digital divide, especially in rural and remote areas.
- Promoting digital literacy:** A digital education policy in regional languages will empower consumers and

sellers to use ONDC effectively.

3. **Targeted outreach programs:** Well-funded outreach programs can attract and onboard small sellers, particularly MSMEs promoting platform adoption.
4. **Dispute resolution framework:** An efficient single-window mechanism is essential for addressing information asymmetry, quality concerns, and buyer-seller disputes.

Regulations of E-Commerce:

1. **Consumer Protection (E-Commerce) Rules, 2020:** These rules set guidelines for e-commerce platforms to ensure transparency, protect consumer rights, and address grievances.
2. **Consumer Protection Act, 2019:** This act provides a comprehensive framework for consumer rights protection, including provisions for e-commerce transactions and dispute resolution.

Conclusion:

As **Nandan Nilekani's committee** suggested ONDC can replicate the success of UPI in India with a collaborative effort between the government, industry players, and civil society.

Insta links:

[Open Network for Digital Commerce \(ONDC\)](#)

Mains Link:

Discuss the significance of ONDC. (150 Words)

Prelims Links:

Consider the following: (UPSC 2022)

1. Aarogya Setu
2. CoWIN
3. DigiLocker
4. DIKSHA

Which of the above are built on top of open-source digital platforms?

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

Ans: D

[Topics: Awareness in space.](#)

8. INDIA'S SPACE PROGRAMME: KEY UPDATES SINCE CHANDRAYAAN-3

Key Achievements Post-Chandrayaan-3:

Achievements	Details
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<u>Aditya L1 Mission</u>	Launched on September 2, 2023; reached orbit around Earth-Sun Lagrange point (L1) by January 2024 for solar observation.
<u>Gaganyaan TV-D1</u>	The first abort mission on October 21, 2023, successfully tested the Crew Escape System for India's human spaceflight program.
<u>XPoSat</u>	Launched on January 1, 2024; second space-based observatory studying polarized radiation from space.
<u>INSAT-3DS</u>	Launched on February 17, 2024; critical for testing GSLV reliability before the NASA-ISRO NISAR mission.
<u>Reusable Launch Vehicle (RLV-TD)</u>	Conducted successful landing experiments in 2024, paving the way for future orbital return flight tests.
<u>Small Satellite Launch Vehicle (SSLV)</u>	Completed development with successful third flight on August 16, 2024; now ready for industry use.
Roadmaps and Future Plans	
<u>Gaganyaan Program</u>	Focus on human spaceflight with astronaut training; the first uncrewed mission is expected in late 2024.
<u>Next-Generation Launch Vehicle (NGLV)</u>	Developing a heavy-lift vehicle for space station and lunar exploration goals.
Lunar Exploration	25-year roadmap, including plans for an Indian on the Moon by 2040 and long-duration lunar missions.
NSIL Missions	Collaborations with SpaceX and private sector partnerships for LVM-3 development and satellite launches.
<u>National Space Policy 2023</u>	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
Private Sector Participation	

Agnikul Cosmos	Launched SoRTeD-01 , using a semi-cryogenic engine , marking a significant achievement for India's private sector.
Skyroot Aerospace	Progressing towards launching Vikram 1 with advancements in space technology development.
IN-SPACE	Issued new guidelines, and licenses, and allowed 100% FDI in most space sectors, except for specific ceilings in satellite manufacturing and operations.

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

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 start-ups, 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

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: Disaster and management.](#)

9. RECENT INDUSTRIAL ACCIDENTS HIGHLIGHT SAFETY CONCERNS

Context:

A major blast at Escientia's pharma plant in Andhra Pradesh's Atchutapuram SEZ resulted in 17 deaths and numerous injuries, with another fire injuring 10 workers the same day. This follows a previous explosion in the same SEZ and a deadly incident in 2020.

What are Industrial and Chemical Disasters?

They are **defined as the sudden release of toxic chemicals** causing **severe disruption and widespread losses** beyond a society's coping ability. India has reported **over 130 major chemical accidents** in the past decade, resulting in over 250 fatalities, according to the National Disaster Management Authority (NDMA).

Examples of Major Industrial Disasters are:

1. **Bhopal Gas Tragedy (1984):** A gas leak from Union Carbide's plant in Bhopal killed over 3,000 people and caused long-term health issues.
2. **Chasnala Mine Disaster (1975):** A mine collapse in Jharkhand due to flooding resulted in over 375 deaths.
3. **Sukinda Valley Disaster (2008):** Toxic waste

and acid rain from chromium mines in Odisha led to severe environmental and health impacts.

4. **Latur Earthquake (1993):** An earthquake in Maharashtra caused industrial damage and significant loss of life.
5. **Gujarat Gas Tragedy (2001):** A gas leak from a pipeline in Gujarat resulted in multiple fatalities and injuries.
6. **Visakhapatnam Gas Leak (2020):** A styrene leak from the LG Polymers plant in Andhra Pradesh caused at least 12 deaths and numerous injuries.
7. **Kolkata's Dharmatala Fire (2018):** A fire at a chemical warehouse in Kolkata caused fatalities and extensive damage.

Key Factors Contributing to Industrial Accidents in India:

Factors	Description
Inadequate Regulation and Monitoring	Fragmented regulations with overlapping jurisdictions and loopholes weaken safety oversight and enforcement.
Lack of Comprehensive Chemical Risk Database	Absence of a central database hinders hazard assessment and development of safety protocols.
Insufficient Worker Training and Awareness	Untrained, contractual workers lack safety and emergency response training, increasing risks, especially with hazardous chemicals.
Poor Investment in Worker Safety	Cost-cutting measures neglect safety equipment and infrastructure, such as ventilation and fire safety.
Lack of Maintenance	Poor maintenance practices, as seen in incidents like the Visakhapatnam gas leak and Neyveli boiler blowout, compromise safety.

Legal Measures Against Industrial and Chemical Disasters:

Measures	Description
<u>UN Convention on the Transboundary Effects of Industrial Accidents (1992)</u>	Provides a framework for international cooperation, information sharing, and emergency planning.
Flexible Framework for Accident Prevention and Preparedness (CAPP) (2006)	Offers guidance to build chemical accident prevention programs, tailored to specific needs.
OECD Programme on Chemical Accidents (1990)	Focuses on preventing accidents through best practices and information sharing in chemical safety.
India	
<u>Bhopal Gas Leak (Processing of Claims) Act, 1985</u>	Addresses claims related to the Bhopal gas leak disaster.
<u>Environment Protection Act (EPA), 1986</u>	Regulates environmental safety and pollution control.
Public Liability Insurance Act (PLIA), 1991	Mandates insurance for industries handling hazardous substances to provide financial relief.
National Environment Appellate Authority Act, 1997	Establishes NEAA to handle appeals regarding restrictions on industrial activities.
Hazardous Waste (Management, Handling, and Transboundary Movement) Rules, 1989	Requires risk identification, preventive measures, and hazard reporting.
<u>National Disaster Management Authority (NDMA) Guidelines</u>	Provides direction for chemical disaster management and detailed disaster management plans.
<u>Occupational Safety, Health, and Working Conditions Code, 2020</u>	Defines employer/employee duties, safety standards, and worker rights including gender equality.
<u>ILO Recommendations on Industrial Disaster Prevention</u>	Requires identification of hazardous materials, maintaining an inventory of major hazard workplaces, and centralized data management.

Way forward:

1. **Enhanced Regulatory Framework:** Develop a national framework with defined roles for agencies to enforce

- safety regulations.
2. **Improved Monitoring and Enforcement:** Implement stricter penalties and more frequent inspections by qualified personnel.
 3. **Establishing a Chemical Risk Database:** Create a centralized database to document risks associated with industrial chemicals.
 4. **Investing in Worker Training:** Introduce comprehensive training programs and drills to improve worker awareness of safety protocols.
 5. **Adopting Best Practices and Technologies:** Encourage the use of environmentally sound technologies (ESTs) to reduce hazards and manage waste.
 6. **Incentives for Safety Upgrades:** Provide financial aid such as tax breaks or subsidies to support infrastructure upgrades and new technologies.

Mains:

Q. With growing energy needs should India keep on expanding its nuclear energy programme? Discuss the facts and fears associated with nuclear energy. (UPSC 2018)

Prelims:

Q1. In India, why are some nuclear reactors kept under “IAEA safeguards” while others are not? (USPC 2020)

- (a) Some use uranium and others use thorium
- (b) Some use imported uranium and others use domestic supplies
- (c) Some are operated by foreign enterprises and others are operated by domestic enterprises
- (d) Some are State-owned and others are privately owned

Ans: (b)

GENERAL STUDIES – 4

1. NETWORK OF WOMEN IN MEDIA, INDIA (NWMI) GUIDELINES

Context:

The Network of Women in Media, India (NWMI) has released guidelines to improve safety and equity in newsrooms. These guidelines address issues like poor working conditions, harassment, and unfair practices.

Common issues identified include:

1. Widespread **workplace humiliation and harassment**.
2. **Tolerance of abusive behaviour** from senior staff, often excused by past experiences.
3. **Disparaging comments** based on personal attributes like caste, gender, and sexuality.
4. Severe attacks primarily **target women and LGBTQIA+ individuals**.

Key recommendations include:

1. **Adherence to legal work hours**, with overtime recognition.
2. **Fair and transparent salaries**, adjusted for inflation and comparable industries.
3. **Minimum of 30 days paid leave**, including mental health and menstrual leave.
4. **Establishment of professional HR departments** with clear policies on acceptable behaviour.
5. **Transparent performance appraisals** and a zero-tolerance policy for toxic behaviour.
6. **Regular communication and training** on workplace policies.
7. **Prompt filling of vacancies** to avoid overburdening staff.
8. Journalists should **work no more than 144 hours** over four consecutive weeks. A mandatory day off each week.
9. **Enforce a zero-tolerance policy for toxic behaviour**, with disciplinary action against violators, regardless of position or popularity.

These measures aim to **create a respectful and equitable work environment for journalists**.

Related Information:

Values of Ethical Journalism:

Ethical Value	Description	Thinker/Expert
Truthfulness	Commitment to accuracy and honesty in reporting, avoiding distortion of facts.	Walter Lippmann
Objectivity	Reporting news without bias, ensuring fair representation of all sides of an issue.	Bernard Goldberg
Integrity	Upholding strong moral principles, avoiding conflicts of interest and corruption.	Ralph Waldo Emerson
Accountability	Taking responsibility for errors, and being transparent with corrections and clarifications.	Thomas Jefferson
Respect for Privacy	Protecting individuals' privacy, particularly in sensitive stories, while balancing public interest.	John Stuart Mill
Independence	Maintaining editorial independence from external influences, including political and corporate pressures.	George Orwell
Fairness	Ensuring equitable treatment of subjects and audiences, avoiding prejudiced or discriminatory content.	John Rawls
Transparency	Being open about journalistic processes, sources, and potential biases.	Bill Kovach and Tom Rosenstiel
Empathy	Showing compassion and understanding towards subjects, especially in human-interest stories.	Maya Angelou
Social Responsibility	Recognizing the role of media in shaping public opinion and upholding democratic values.	Noam Chomsky
Justice	Advocating for fairness, equality, and the protection of rights within media practices.	Martin Luther King Jr.
Professionalism	Adhering to high standards of journalistic practice, including thorough research and ethical sourcing.	David Randall
Human Dignity	Ensuring that all individuals are treated with respect and dignity in reporting and representation.	Immanuel Kant

2. MORAL PRESSURE AND HUMAN RIGHTS COMPLIANCE

Context:

In a world increasingly plagued by **prejudice and fanaticism, the centrality of human rights is more crucial than ever.**

What are Human Rights?

Human rights are **moral principles or norms** for certain standards of human behaviour and are regularly protected in municipal and international law.

Issues with Human Rights Compliance at global level

- Authoritarian Regimes:** Governments like those in North Korea, China, and Russia often ignore international human rights norms. Despite global condemnation, these regimes maintain oppressive practices without significant reforms.
- State Sovereignty:** The principle of state sovereignty can obstruct the enforcement of human rights. Countries may reject external pressures or interventions, citing their right to self-governance.
- Selective Enforcement:** Human rights violations are sometimes addressed selectively based on geopolitical interests. For example, some nations receive criticism for abuses while others, due to strategic alliances, avoid significant international scrutiny.
- Lack of Implementation:** Even when human rights standards are adopted, implementation can be superficial.

For instance, Myanmar has faced global condemnation for its treatment of the Rohingya, but substantive policy changes remain limited.

5. **Ineffective Sanctions:** Economic sanctions or military interventions, such as those imposed on Syria or Venezuela, often fail to resolve human rights abuses and can exacerbate humanitarian crises.
6. **Resistance to Shaming:** Efforts to name and shame violators, like the international backlash against Israel's policies or Russia's actions in Ukraine, may lead to only cosmetic changes or outright denial of allegations.

Promotion and protection of human rights:

1. **Article 51 A (g):** Every citizen to protect and improve the natural environment and have compassion for living creatures.
2. **Protection of Human Rights Act, 1993** (as amended in 2019) provided for the constitution of a National Human Rights Commission at the Union level, which steers the State Human Rights Commission in States and Human Rights Courts.
3. **Universal Declaration of Human Rights:** It is an international document adopted by the United Nations General Assembly (UNGA). It establishes the rights and freedoms of all members of the human race.
4. **Human Rights Day** is celebrated on **10th December** all around the world.
5. **Freedom in the World 2021** report released earlier this year downgraded India's status from 'Free' to 'Partly Free'.
6. **Human Rights Council:** The Human Rights Council is an inter-governmental body within the United Nations system responsible for strengthening the promotion and protection of human rights.
7. **Amnesty International:** An international organisation of volunteers who campaign for human rights.

Steps taken for the preservation of human rights:

1. **Governance systemic reforms and affirmative initiatives:** particularly in the Health and Economic sectors.
2. **Inclusive growth:** It is also antidotal to violation of human rights.
3. **Banking network:** 400 million getting into banking networks and over 200 million families benefiting out of free cooking gas connections.

Challenges to human rights:

1. **Conflicting definition of what forms human rights:** E.g. while the world has condemned Chinese persecution of the Uighur community for human rights violations, China sees it as anti-terror/

anti-separatist measures.

2. **Silence:** Silent and voiceless existence of the majority of our citizens
3. **Corruption:** Human rights get compromised in the face of corruption.

Importance of Human rights:

1. **Flourishing of Democracy:** Human rights are quintessential for flourishing democracy.
2. **Democratic values:** They are of no significance in the absence of human rights.
3. **Dignity:** Nurturing human rights is the nectar of dignity and dignified human existence.
4. **Positive ecosystem:** Flourishing human rights generates a positive ecosystem that facilitates optimal utilisation of human talent.
5. **Development:** It brings about holistic development.
6. **Indian culture:** The pro-human rights foundational spirit of Indian culture, is reflected in **Brihad Aranyaka Upanishad**.

Actions to Improve Human Rights Compliance:

1. **Strengthen International Pressure:** Increase coordinated global efforts through sanctions, diplomatic pressure, and public condemnation to hold violators accountable.
2. **Enhance Accountability Mechanisms:** Improve international legal frameworks and institutions to effectively investigate and prosecute human rights violations.
3. **Support Grassroots Activism:** Encourage and support local human rights organizations and activists to address abuses from the ground up.
4. **Promote Transparency:** Advocate for greater transparency in human rights practices and data reporting to expose abuses and drive accountability.
5. **Foster Global Cooperation:** Build alliances among nations, NGOs, and international bodies to create a unified front against human rights violations.

Insta Links:
NHRC

Mains Links:

Q. Critically examine the roles and responsibilities of the National Human Rights Commission. (10M)

CONTENT FOR MAINS ENRICHMENT

Topic in News	Usage in Answers
<h3 style="color: red;">3. THE SILENT BICYCLE REVOLUTION</h3>	<p>Context: India’s schoolgirls are quietly leading a cycling revolution, driven by state-run free bicycle schemes. In rural areas, cycling among girls has more than doubled over a decade, boosting school attendance and reducing dropout rates. This movement, though underreported, is transforming lives, especially in states like Bihar, West Bengal, Assam, and Chhattisgarh, where bicycles are empowering girls with mobility and education.</p> <p>Impact of the Cycling Revolution:</p> <ol style="list-style-type: none"> 1. <u>Increased School Attendance:</u> More girls are attending school regularly. 2. <u>Reduced Dropout Rates:</u> Fewer girls are dropping out of school. 3. <u>Empowerment:</u> Enhanced confidence and mobility for girls. 4. <u>Gender Gap Reduction:</u> A rise in cycling in India had occurred among rural girls - increasing more than two times from 4.5% in 2007 to 11% in 2017 - narrowing the gender gap in education and transportation. 5. <u>Educational Access:</u> Improved access to education in rural areas. 6. <u>Economic Mobility:</u> Potential for better employment opportunities in the future. 7. <u>Social Change:</u> Challenging traditional gender roles and promoting self-reliance. <p>American suffragist Susan B Anthony famously said that the <i>bicycle “has done more to emancipate women than anything else in the world. It gives women a feeling of freedom and self-reliance”</i>.</p>
<h3 style="color: red;">4. BENEFITS OF BAMBOO CULTIVATION</h3>	<p>Once called the “poor man’s timber,” bamboo is now “green gold” for Indian farmers, proving more profitable than crops like sugarcane and cotton. Bamboo farming is spreading beyond the Northeast to regions like Madhya Pradesh, Chhattisgarh, and Gujarat. India has 136 native bamboo species. <u>Indian Forest Act, 2017</u> reclassified bamboo as “grass,” easing restrictions on its cultivation. States like Maharashtra offer financial incentives for bamboo farming.</p> <p>Benefits:</p> <ul style="list-style-type: none"> • <u>Environmental:</u> Bamboo is an efficient carbon converter, producing 35% more oxygen than most plants. • <u>Economic:</u> High-yielding varieties like “Beema Bamboo” can yield profits of ₹75,000-80,000 per hectare annually. • <u>Health:</u> Bamboo-based foods are rich in fiber and low in calories, with some therapeutic uses. • <u>Energy:</u> Bamboo can be used for biofuels, paper production, and as a wood alternative in construction.

FACTS FOR PRELIMS

GS-1

Art & Culture

1. NATIONAL FILM AWARDS

Context:

The **70th National Film Awards for 2022**, highlighted **significant achievements in Indian cinema across various categories**. Marathi cinema received notable recognition, including:

- **Best Marathi Film:** *Vaalvi (The Termite)*, won the Best Marathi Film award.
- **Best Documentary and Best Narration:** *Murmurs of the Jungle*, secured awards for Best Documentary and Best Narration/Voice-Over.
- **Best Arts/Culture Film:** The **Marathi film Varsha (Legacy)**, Suryawanshi, won Best Arts/Culture Film.
- **Best Biographical/Historical Film:** *Aanakhi Ek Mohenjo Daro* won the Best Biographical/Historical Film award.

The **National Film Awards, established in 1954** and originally called “**State Awards**,” **initially presented 2 President’s Gold Medals, 2 certificates of merit, and 12 silver medals for regional films**.

Since **1973, the awards have been administered by the Directorate of Film Festivals**.

They are given in three main categories: **Feature Films, Non-Feature Films, and Best Writing on Cinema**.

Additionally, **the Most Film Friendly State award is presented to a state that has significantly supported the growth of the film industry**.

Society

2. DHANGARS

Context:

The **Dhangar community in Maharashtra**, a **nomadic group of shepherds** are seeking **recognition of their traditional grazing routes through forests**.

- They have also **long advocated for Scheduled Tribe (ST) status**.
- Their recent protest called for “**grazing corridors**” to allow them to continue their traditional herding practices without being penal-

ized for encroaching on protected forest areas. The **Dhangars, who are listed as a Vimukta Jati and Nomadic Tribe (VJNT) in Maharashtra**, face challenges due to forest department restrictions, **which conflict with their traditional lifestyle**.

The **Dhangar community, has significant political influence in parts of Maharashtra** but lacks a unifying issue in recent elections.

Geography

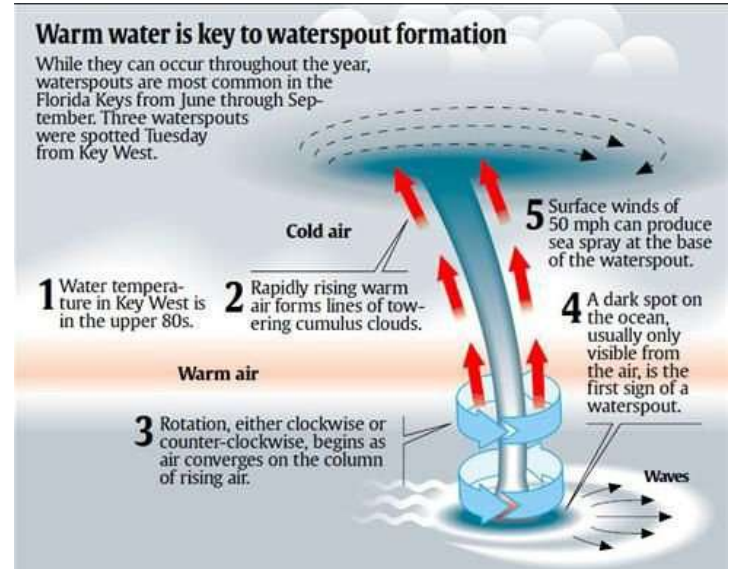
3. WATERSPOUT

Context:

Recently a tragic incident where a **luxury yacht off the coast of Sicily, Italy, sank during a violent storm, is possibly caused by a waterspout**.

A waterspout is a **rotating column of air and mist over water, similar to a tornado but generally weaker**. **Waterspouts can be either tornadic, associated with severe thunderstorms, or fair-weather, forming during calm conditions**.

The **waterspout that likely caused the sinking is believed to be a tornadic type**, which can cause significant destruction.



GS-2

Governance

4. FIRST INFORMATION REPORT (FIR)

Context: In response to **widespread protests following the rape and murder of a trainee doctor in Kolkata**, the Union Health Ministry directed **that heads of government hospitals must file a First Information Report (FIR) within six hours of any violence against health-**

care workers on duty.

- This directive, **issued by the Directorate General of Health Services (DGHS)**, addresses the **increasing violence faced by doctors and healthcare staff**, often from patients or their attendants.
- **Public health is a 'State' subject** and there is **no Central law for preventing violence against healthcare workers (VAHCW)**.

First Information Report (FIR) is a written document prepared **by the police when they receive information about the commission of a cognizable offence**

It is a **report of information that reaches the police first in point of time and that is why it is called the First Information Report.**

5. BHAVISHYA

Context:

The **Department of Pension and Pensioners' Welfare (DOPPW)** introduced "**Bhavishya**," a **centralized pension processing software, to address delays, errors, and financial losses in pension processing for central government employees.**

- The software **integrates 99 Ministries/Departments, 1020 Offices, and 8320 Drawing and Disbursing Officers (DDOs)**, with over 2,50,845 Pension Payment Orders (PPOs) issued by August 2024.

"Bhavishya" streamlines the pension process by auto-registering retirees, enforcing strict timelines, and providing transparency and accountability.

The system **automates pension calculations, offers real-time updates via email/SMS, and enables paperless processing through e-PPOs, which are integrated with the Public Financial Management System (PFMS) and banks.**

The software **also supports Digilocker for easy access to pension documents and issues pensioner identity cards.**

6. MASTER CLOCK SYSTEM FOR RAILWAYS

Context:

For the first time, **Indian Railways is set to develop a master clock system to synchronize time across its entire network**, addressing issues with the **current manual time-keeping method.**

- This initiative **arose due to difficulties in investigating rail accidents caused by time mismatches across different systems and applications.**
- The **existing system involves station masters setting time manually based on instructions** from section controllers, leading to discrepancies during accident investigations.
- The **new master clock system will source time from reliable sources like NAVIC or the National Physical Laboratory (NPL)** and will be **integrated across various railway applications and systems.**

This synchronized time system **will enhance operational efficiency and improve the accuracy of post-incident analyses.**

7. PORTALS IN NEWS

Portal	Description	Objectives	Key Features
PROMPT	Portal for Online Monitoring of Projects – Thermal, developed with NTPC's assistance.	Real-time tracking and analysis of thermal power projects ; enhance transparency, accountability, and resource optimization.	Real-time tracking, improved project execution, reduces delays and cost overruns, ensures efficient electricity demand management.

J A L VIDYUT DPR	Centralized digital platform developed by CEA for monitoring survey and investigation activities for Hydro Electric Projects and Pumped Storage Projects (PSPs).	Improve project management and coordination; enhance efficiency and transparency in DPR preparation.	Comprehensive view of project development statuses, real-time tracking, seamless communication, and quicker appraisals and approvals.
DRIPS	Disaster Resilient Infrastructure for Power Sector portal, developed by CEA.	Enhance disaster preparedness and response; improve coordination and efficiency in managing power sector disruptions.	Centralized system for identifying and deploying resources, comprehensive inventory of power system equipment and critical supplies.

8. COURT OF ARBITRATION FOR SPORT (CAS)

Context:

The **Court of Arbitration for Sport (CAS)** criticized **United World Wrestling's rules** for **penalizing athletes for failing a second-day weigh-in, calling them "draconian."**

- However, **CAS denied Indian wrestler Vinesh Phogat any relief after she was disqualified for being 100 grams over the weight limit** on the second day of the 50kg wrestling event at the Paris 2024 Olympics.

The **ruling highlighted the fairness of the elimination but criticized the severity of the punishment.**

The **Court of Arbitration for Sport (CAS), established in 1984,** operates under the **International Council of Arbitration for Sport (ICAS).** It is an independent **institution focused on resolving sports-related disputes through arbitration or mediation,** adapting procedural rules to the sports world's needs.

9. JAN POSHAN KENDRAS

Context:

Union Minister launched a **pilot program to transform 60 Fair Price Shops (FPS) into Jan Poshan Kendras,** which will **offer nutrition-rich food items and additional income for FPS dealers.**

- This initiative, **part of the government's first 100 days program,** aims to **improve food security, curb malnutrition, and increase transparency.**
- Alongside this, several digital tools were launched, **including the FPS Sahay application for paperless financing, Mera Ration App 2.0 for enhanced beneficiary services, and a Quality Management System for better quality control.**
- Additionally, **NABL accreditation of three laboratories and a new Contract Manual for the Food Corporation of India were introduced** to enhance standards and transparency in the Public Distribution System.

10. SEAPLANE OPERATION GUIDELINES

Context:

The Union Minister for Civil Aviation introduced **new guidelines for seaplane operations in India.** The guidelines aim to **integrate seaplanes into India's aviation sector,** creating jobs and promoting economic growth.

Key points include:

1. **UDAN 5.4:** Launching fresh bids for routes to improve connectivity.
2. **Seaplane Guidelines:** Incorporate seaplanes under the **Non-Scheduled Operator Permit (NSOP)** and extend **Viability Gap Funding (VGF)** for initial support.
3. **Future Plans:** The government is focusing on safety, flexibility, and innovation, including research into electric seaplanes to reduce carbon emissions.

UDAN 5.0



Context: The Ministry of Civil Aviation in India has launched the **5th round of the Regional Connectivity Scheme (RCS) - Ude Desh Ka Aam Nagrik (UDAN)**

About UDAN Scheme

It was launched as a Regional Connectivity Scheme (RCS) under the Ministry of Civil Aviation in 2016, to provide affordable, economically viable and profitable air travel on regional routes to the common man even in small towns.

	UDAN 1.0	UDAN 2.0	UDAN 3.0	UDAN 4.0	UDAN 5.0
Focus Category	Category 1 (19-78 Seats)	1 (19-78 Seats)	1 (19-78 Seats)	1 (19-78 Seats)	2 (20-80 Seats) and 3 (>80 Seats)
Distance Length Cap	500 km	500 km	800 km	1,200 km	Now no restriction on the distance between the origin and destination of the flight
Viability Gap Funding Cap	70% for Cat-1, 90% for Hilly States, J&K, Ladakh, NE and Island regions	Same	Same	Same	60% for Priority Areas, 20% for Non-Priority Areas
Number of Airports	70 airports	325 airports	688 airports	766 airports	766 airports
Exclusivity	3 years	3 years	3 years	1 year	1 year
Implementation Period	10 years	10 years	10 years	10 years	10 years

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11. FSSAI ORDERS REMOVAL OF A1, A2 MILK CLAIMS

Context:

The Food Safety and Standards Authority of India (FSSAI) has directed food businesses and e-commerce platforms to **remove claims of 'A1' and 'A2' milk** from packaging and websites.

A1 and A2 Milk Category:

Milk contains different forms of **casein protein**, with A1 and A2 beta-casein being the primary ones.

- **A1 beta-casein:** Found mainly in cow breeds from northern Europe, such as Holstein and Friesian.
- **A2 beta-casein:** Found in milk from breeds like Guernsey and Jersey cows from the Channel Islands and southern France.

Regular milk contains both A1 and A2 proteins, while A2 milk is distinct as it contains only the A2 variant.

Benefits of A1 and A2 Milk Product Category

- **Digestive Health:** Supporters of A2 milk claim it is easier to digest for some people, potentially reducing issues like bloating, gas, and discomfort, which are sometimes associated with A1 milk.
- **Lactose Intolerance:** While not directly related to lactose, some individuals with lactose intolerance report better tolerance with A2 milk due to differences in protein composition.
- **Marketing Claims:** A2 milk is often marketed as a healthier option, which appeals to consumers looking for alternatives to traditional dairy.



Concerns about A1 and A2 Milk Product Category

- **Lack of Scientific Consensus:** There is limited robust scientific evidence confirming the significant health benefits of A2 milk over regular milk, and much of the claims remain controversial.
- **Cost:** A2 milk is often more expensive than regular milk due to specialized breeding and production processes.
- **Marketing Gimmick:** Critics argue that the A1 vs. A2 distinction is a marketing strategy rather than a genuine nutritional difference, misleading consumers without clear regulatory backing.

The claims about A1 and A2, based on differences in **beta-casein protein**, are **not recognized by the** Food Safety and Standards Act, 2006. Companies **have six months** to phase out **pre-printed labels**. FSSAI emphasized the importance of eliminating misleading claims, with industry leaders supporting the move.

International Relations

12. ORANGUTAN DIPLOMACY

Context:

Malaysia has revised its controversial “Orangutan diplomacy” policy, initially proposed by the **Plantation and Commodities Minister**.

- The original plan **suggested gifting critically endangered orangutans to countries that purchase Malaysian palm oil, inspired by China’s “panda diplomacy.”**
- However, **this approach faced significant backlash from wildlife conservationists**, who criticized it as **hypocritical and harmful, given the link between palm oil production and deforestation, which threatens orangutan habitats.**
- In response to the criticism, **Malaysia has now altered the policy.** Instead of sending orangutans abroad, **importers of Malaysian palm oil will be offered the opportunity to “sponsor” orangutans.**
- The funds from these **sponsorships will be used for conservation efforts within Malaysia**, ensuring that **the orangutans remain in their natural habitats.**

This revised approach **aims to demonstrate Malaysia’s commitment to sustainable palm oil production and environmental conservation**, especially in light of **growing international pressure**, such as the European Union’s ban on deforestation-linked imports.

GS-3

Indian Economy

13. RAPID INNOVATION AND START-UP EXPANSION (RISE) ACCELERATOR

Context:

The Atal Innovation Mission (**AIM**), in partnership with Australia’s CSIRO, has launched a call for **applications from start-ups and MSMEs in India and Australia for the Climate Smart Agritech** cohort of the **India Australia Rapid Innovation and Start-up Expansion (RISE) Accelerator.**

- This program, **aims to support businesses in developing technologies** that **enhance agricultural productivity and resilience in the face of climate challenges.**
- The **RISE Accelerator, established in 2023**, helps **start-ups and MSMEs expand into international markets by offering online and in-person sessions, market insights, coaching, and field trials.**

Agriculture

14. ERI SILK

Context:

The North Eastern Handicrafts and Handlooms Development Corporation (NEHHDC) has achieved the Oeko-Tex certification for Eri Silk, the world's only vegan silk.

- This certification, awarded directly from Germany, highlights Eri Silk's ethical and eco-friendly production process, where the moth naturally exits the cocoon, unlike other silk types where the moth is killed.
- The Oeko-Tex certification confirms that Eri Silk is free from harmful substances and produced under environmentally friendly conditions.
- This accomplishment enhances the global recognition of Eri Silk, a Geographical Indication (GI) product of Assam, and paves the way for its expansion into international markets.

India is unique in producing all five major types of commercially important silk, which are derived from different species of silkworms. These types include Mulberry, Oak Tasar, Tropical Tasar, Muga, and Eri.

Among these, Mulberry silk is cultivated, while the others, known as vanya silks, are wild silks.

15. PURANDAR FIG

Context:

The Agricultural and Processed Food Products Export Development Authority (APEDA) facilitated the first export of India's ready-to-drink fig juice, made from GI-tagged Purandar Figs, to Poland.

- The fig juice, produced by Purandar Highlands Farmers Producer Company Ltd., gained international attention after being introduced at SIAL 2023 in New Delhi and winning an award.

APEDA has played a key role in the development and export of this innovative product, which has been granted a provisional patent.

16. ISDRA2TNPB

Context:

A team of researchers from the ICAR-National Rice Research Institute in India and Pennsylvania State University in the U.S. has developed a new, miniature genome-editing tool that holds promise for agricultural

applications.

- The new tool, based on a protein called IS-Dra2TnpB from the bacterium *Deinococcus radiodurans*, is less than half the size of these proteins, making it more suitable for plant genome editing.
- This TnpB-based system offers a significant improvement in editing efficiency, particularly in plants where traditional tools have been less effective.
- Researchers have successfully used it on both monocots (like rice) and dicots (like Arabidopsis), although the efficiency was lower in dicots.
- The system can perform both base editing and transcription activation, opening new possibilities for crop improvement, such as reducing plant height to make crops like rice less prone to cyclone damage.

The new tool's potential lies in its ability to precisely modify plant genomes, potentially removing undesirable traits or introducing beneficial ones.

Science & Technology

17. MICRO-AND NANO-PLASTICS AS EMERGING FOOD CONTAMINANTS

Context:

The Food Safety and Standards Authority of India (FSSAI) has launched a project to address the rising concern of microplastic contamination in food.

- The initiative, titled "Micro-and Nano-Plastics as Emerging Food Contaminants", aims to develop and validate methods for detecting microplastics in various food products and assess their prevalence and exposure levels in India.
- The project is being conducted in collaboration with leading research institutions across India.
- The project will focus on creating standard protocols for microplastic analysis, comparing results across different laboratories, and generating crucial data on microplastic exposure among consumers.

FSSAI's initiative follows global studies, including a report by the Food and Agriculture Organization (FAO), highlighting the presence of microplastics in common food items like sugar and salt.

18. LIQUID WATER ON MARS

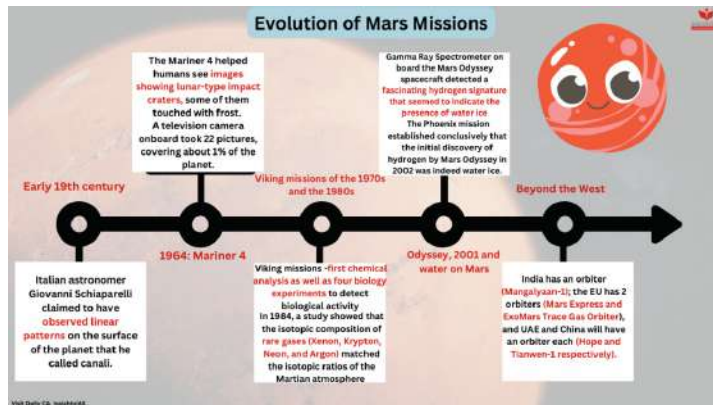
Context:

Scientists have discovered liquid water deep within

Mars' crust for the first time.

- Using data from NASA's Mars Insight Lander, **which recorded seismic waves from Marsquakes and meteorite impacts**, researchers identified a **layer of fractured igneous rock, likely granite, filled with liquid water at depths of 10 to 20 kilometers.**
- This water is thought to have seeped from the surface billions of years ago** when Mars had rivers and lakes.

The discovery could provide insights into Mars' water cycle, climate evolution, and the potential for habitable environments.



19. HAYFLICK LIMIT

Context: Biomedical researcher **Leonard Hayflick**, who discovered that **normal somatic cells can divide (and thus reproduce) only a certain number of times**, died recently.

- He gave the concept of **Hayflick limit** that normal somatic cell can only divide a finite number of times (around 40-60 times) before they stop dividing, leading to aging.
- This **discovery challenged the previous belief that cells could be immortal and that aging was solely due to external factors like disease and diet.**

The **“ultimate Hayflick limit” suggests that human lifespan is capped at about 125 years**, beyond which it cannot be extended through lifestyle or genetic interventions.

The **discovery of telomeres, the protective ends of DNA strands that shorten with each cell division, provided further insight into the aging process.**

Although **telomerase, a protein that can replenish telomeres**, has been found, **its practical application in extending human lifespan is still a distant possibility.**

20. GROK-2

Context: **Elon Musk's xAI** has unveiled two **new AI chatbot models, Grok-2 and Grok-2 Mini**, which include

advanced features such as image generation and improved coding and reasoning capabilities.

- The most discussed feature is **Grok-2's ability to create photo-realistic images, which has raised concerns about the potential misuse of AI-generated content**, especially with the upcoming US presidential election.

21. MERCURY BOMB

Context:

Recent study has found the **potential environmental threat posed by melting Arctic permafrost**, which could **release significant amounts of mercury into the environment causing Mercury bomb.**

- As **the permafrost thaws due to climate change**, mercury that has **been trapped in the soil for millennia is being released, particularly along rivers like the Yukon in Alaska.**
- While the immediate threat is minimal, **the mercury could gradually accumulate in the food chain, posing long-term risks to human health, especially in Arctic communities.**

The **study analyzed deeper soil layers in riverbanks and found consistent mercury levels** with higher estimates from previous research.

22. QUANTUM NONLOCALITY

Context:

A recent study has revealed that **a universal standard for measuring quantum nonlocality**, which describes a **strange connection between distant quantum objects, is impossible.**

- Quantum nonlocality**, a concept first **introduced by physicist John Stewart Bell in 1964**, challenges **classical physics' idea of local realism.**
- It has **significant applications in secure communication, random number generation, and cryptographic key creation.**
- The study, shows that **nonlocal quantum correlations vary depending on the type, making each nonlocal resource unique and incapable of being universally measured or compared.**

This finding **underscores the complexity and uniqueness of quantum nonlocality**, expanding its **potential applications and understanding in quantum mechanics.**

23. SUPER BLUE MOON

Context:

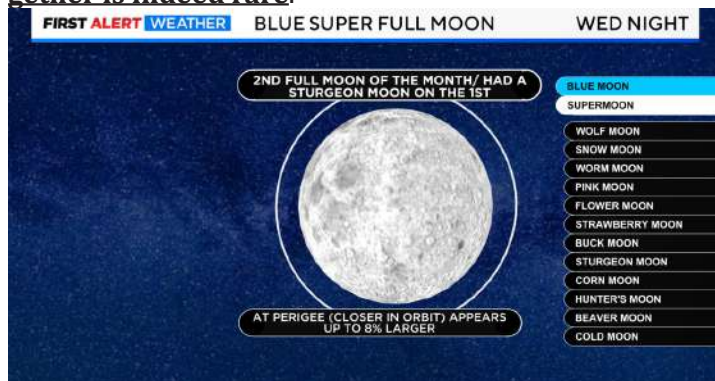
Recently a special astronomical event known as a **“Super Blue Moon”** occurred. This event combines **two rare**

phenomena: a “blue moon” and a “super moon.”

Blue Moon: Contrary to what the term suggests, a blue moon isn't necessarily blue in color. It refers to a second full moon within a single calendar month, or, less commonly, the third full moon in a season with four full moons. This phenomenon happens every two or three years.

Super Moon: This occurs when a full moon is at its closest point to Earth in its elliptical orbit, known as perigee. This proximity makes the moon appear about 14% larger and 30% brighter compared to when it's at its farthest point, or apogee.

While the term “blue moon” might imply a rare occurrence, the sighting of a supermoon and blue moon together is indeed rare.



24. JUICE MISSION

Context:

The European Space Agency's Jupiter Icy Moons Explorer (JUICE) probe is set to perform a ground-breaking double slingshot manoeuvre.

- The probe will first use the moon's gravity to redirect its trajectory toward Earth, followed by using Earth's gravity to slow down, setting it on course for its journey to Jupiter.
- This complex manoeuvre, a first in space exploration, is risky due to the potential for errors that could derail the mission.
- If successful, JUICE will reach Jupiter and its moons—Callisto, Europa, and Ganymede—by 2031, using additional gravity assists from Venus and Earth along the way.

The mission aims to:

1. **Map Moons' Surfaces:** Create detailed maps of Jupiter's moons, particularly Ganymede, Callisto, and Europa, and investigate their subsurface water bodies for potential habitability.
2. **Study Jupiter:** Develop a comprehensive understanding of Jupiter's origin, history, and evolution.
3. **Focus on Ganymede:** Examine Ganymede, the largest moon in the Solar System with its own magnetic field.
4. **Assess Habitability:** While the mission cannot detect

life, it will assess whether conditions such as water, essential biological elements, energy, and stability exist around Jupiter, which could support life.



25. ANAPHYLAXIS

Context:

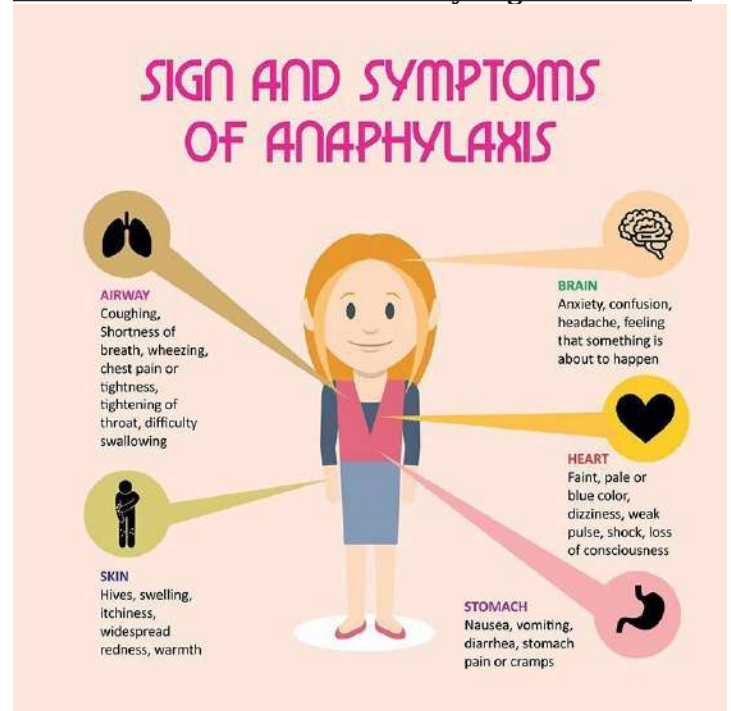
The U.S. FDA approved the first nasal spray, Neffy, for treating severe allergic reactions, offering a needle-free alternative to traditional injectors like EpiPen.

- Developed by ARS Pharmaceuticals Inc., Neffy is intended for emergency use in adults and children over 66 pounds experiencing anaphylaxis.

Anaphylaxis is a severe, life-threatening allergic reaction. It can happen seconds or minutes after you've been exposed to something you're allergic to.

Peanuts or bee stings are examples.

In anaphylaxis, the immune system releases a flood of chemicals that can cause the body to go into shock.



26. KAKRAPAR ATOMIC POWER STATION (KAPS)

Context:

India's **second indigenous 700 MW nuclear power reactor, KAPS-4**, located at the Kakrapar Atomic Power Station (**KAPS**) in Gujarat, has begun **operating at full capacity**.

- The **Nuclear Power Corporation of India Limited (NPCIL)** confirmed that **KAPS-4, which had been operating at 90% capacity**, has now reached its **full power of 700 MWe**.
- This milestone follows **the successful operation of its twin unit, KAPS-3**, demonstrating the **effectiveness of India's home-grown 700 MW Pressurised Heavy Water Reactor (PHWR) design**.

The power level increase was approved by the Atomic Energy Regulatory Board (AERB). India is **currently constructing 14 more reactors of the same design, expected to be operational by 2031-32**.

27. ELEMENTAL ABUNDANCE MEASUREMENTS OF LUNAR SOIL

Context:

The **Alpha Particle X-ray Spectrometer (APXS)** on the **Pragyan Rover of the Chandrayaan-3 mission** has provided the **first in-situ elemental abundance measurements of lunar soil in the South Polar Region of the Moon**.

- Conducted by **scientists from the Physical Research Laboratory (PRL) and ISRO**, these measurements support the **Lunar Magma Ocean (LMO) hypothesis**, which suggests that the Moon's **primordial crust formed as lighter minerals floated to the surface**.
- **APXS detected higher levels of magnesium-rich minerals**, indicating **contributions from deeper lunar layers**, likely due to **material ejected during the formation of the South Pole-Aitken (SPA) basin**.
- The data showed **that the lunar soil is a mix of two rock types: Ferroan Anorthosite (rich in plagioclase) and the Magnesian Suite**, with unexpected levels of **olivine and pyroxene, minerals typically found in the Moon's inner layers**.

28. HEAVIEST ANTIMATTER PARTICLE DISCOVERED

Context:

Scientists discovered the **heaviest antimatter particle**, named **antihyperhydrogen-4**, at the **Relativistic Heavy Ion Collider** in New York.

What is Antimatter?

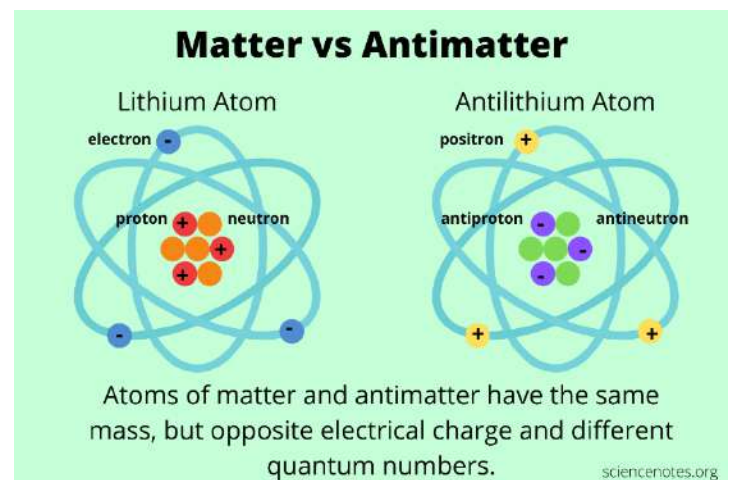
Antimatter is a **type of matter composed of antiparticles**, which have the same mass as ordinary matter particles but possess opposite electric charges. For example, the antimatter counterpart of an **electron** (which has a negative charge) is the **positron**, which has the same mass as an electron but a positive charge. Similarly, the **antiproton** is the antimatter equivalent of a **proton**, having the same mass but an opposite, negative charge.

- **Matter:** A hydrogen atom is made of one proton (positively charged) and one electron (negatively charged).
- **Antimatter:** The antimatter version, antihydrogen, consists of one antiproton (negatively charged) and one positron (positively charged).

Difference from Matter:

The key difference between **matter and antimatter lies in the charges of their particles**. When matter and antimatter come into contact, they **annihilate** each other, releasing energy in the process. This process is governed by the same fundamental forces, but the charge reversal leads to the annihilation phenomenon.

Despite equal amounts of matter and antimatter being produced at the universe's birth, **matter dominates today. Scientists are still exploring why this imbalance occurred**.



Environment & Ecology

29. GREEN TUG TRANSITION PROGRAM (GTTP)

Context:

The **Green Tug Transition Program (GTTP)**, is a significant initiative aimed at **replacing diesel-powered harbor tugs in India with zero-emission, environmentally friendly alternatives**.

- A tug is a particular class of boat **which helps mega-ships enter or leave a port**.
- Major ports will **procure or charter green tugs**

powered by emerging technologies such as battery-electric, hybrid, methanol, and green hydrogen.

- The program aligns with **India’s broader goals for sustainability and innovation in the maritime sector**, as outlined in the **Maritime India Vision 2030 and the Maritime Amrit Kaal Vision 2047.**
- These **visions aim to reduce greenhouse gas emissions, increase the use of renewable energy in ports, and promote domestic manufacturing under the ‘Make in India’ initiative.**

By 2040, all tugs operating in Indian Major Ports are expected to transition to green technologies, marking a significant step towards a greener, more sustainable maritime future for India.

30. MALABAR TREE TOAD

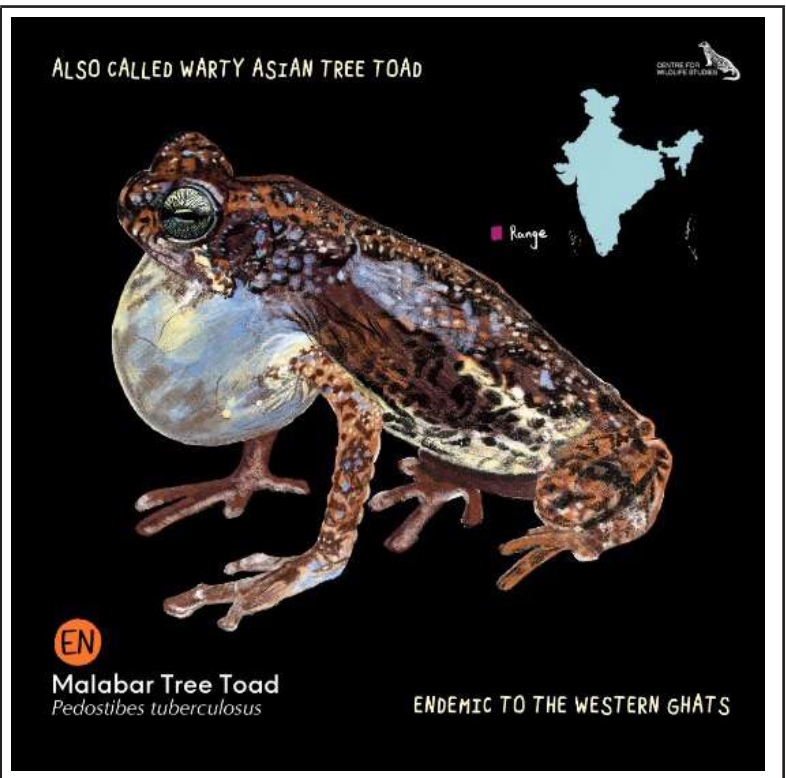
Context:

A recent study indicates that the **population of the endemic Malabar Tree Toad (MTT) in India’s Western Ghats may decline by 68.7% by 2080 due to climate change**, particularly in **protected areas (PAs).**

- The **Malabar Tree Toad**, a **unique arboreal species rediscovered in 1980** after being first discovered in 1876, faces **severe threats from climate change, habitat fragmentation, pollution, and disease.**

The study found that climate change is likely to shift **Malabar Tree Toad habitats from central to southern Western Ghats**, with **some wildlife sanctuaries potentially becoming more suitable, while others might lose suitable habitats.**

- The Malabar Tree Toad lives **mainly in trees, especially in the dense canopy of tropical rainforests.**
- It is **active at night, feeding on insects and other small creatures**, while during the day, it hides **under leaves or in tree crevices to stay safe from predators and avoid drying out.**
- The Malabar Tree Toad is **listed as “Endangered” on the IUCN Red List.**



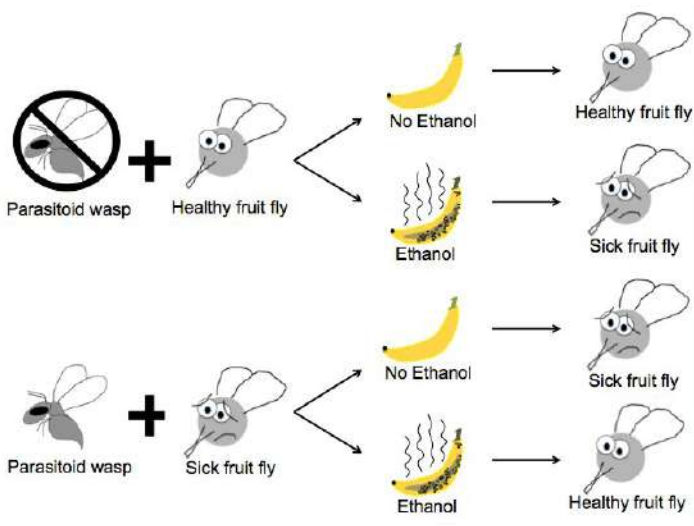
31. ZOOPHARMACOGNOSY

Context:

Zoopharmacognosy is the **study of how animals self-medicate using natural substances.**

- This behaviour has been observed across various species, **including primates, lemurs, elephants, and dogs**, who use plants, soil, and insects to **treat infections, aid in reproductive processes, and maintain general health.**
- The term was coined by **ecologist D.H. Janzen**, and it **highlights how animals instinctively use medicinal plants**, a knowledge that has influenced traditional medicine in human civilizations for thousands of years.

For example, a **Sumatran orangutan was observed treating a facial wound with the plant Fibraurea tinctoria**, which contains anti-inflammatory properties.



Disaster Management

32. AROGYA MAITRI DISASTER MANAGEMENT CUBE

Context:

The **Arogya Maitri Disaster Management Cube** is a **cutting-edge, mobile hospital developed by the Indian Air Force (IAF)** as part of **the Army’s broader BHISHM initiative (Bharat Health Initiative for Sahyog, Hita, and Maitri).**

- This **state-of-the-art cube**, is designed to **treat up to 200 casualties, making it a rapid response solution for disaster management.**
- The **cube is equipped with advanced medical equipment and integrates AI and data analytics for effective coordination and real-time monitoring.**
- It includes 72 lightweight, **transportable components that can be easily moved by hand, cycle, or drone, offering unmatched flexibility in disaster-struck areas.**
- The system **also features the BHISHM software for efficient inventory management, ensuring readiness for repeated use.**

The cube’s ability to be **quickly deployed and its robust, waterproof design make it ideal for emergency situations**, potentially saving lives during **the critical “golden hour” following mass casualty incidents.**

Defence

33. ICG MARITIME RESCUE COORDINATION CENTRE

Context: **Raksha Mantri** inaugurated the **new Indian Coast Guard (ICG) Maritime Rescue Coordination Centre (MRCC).**


- The **Regional Marine Pollution Response Centre and the Coast Guard Air Enclave** was also inaugurated.
- These facilities **are designed to enhance maritime security and ensure efficient responses to emergencies.**

Facility	Purpose	Features	Operations
Maritime Rescue Coordination Centre (MRCC)	Improve maritime rescue operations for distressed mariners and fishermen	Advanced equipment for distress monitoring and real-time communication	Manned by highly trained Indian Coast Guard personnel
Regional Marine Pollution Response Centre	Respond to marine pollution, particularly oil and chemical spills	First-of-its-kind in the region; operates 24/7; provides pollution response training	Offers training to various organizations and personnel from friendly countries

Coast Guard Air Enclave	Strengthen maritime security along the coast	Equipped with indigenously built helicopters for maritime patrols and search and rescue missions	Enhances coastal security and rescue operations
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MAPPING

INTERNATIONAL

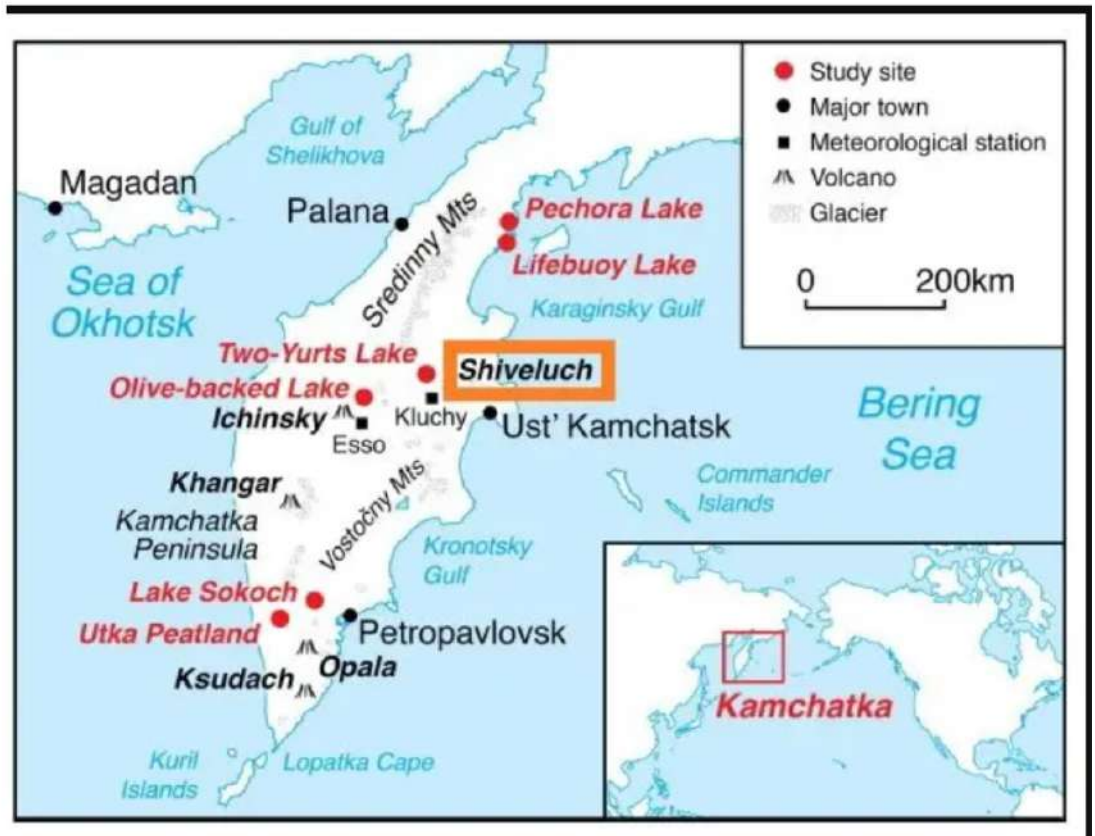
Place	Why in News?
<p>1. SOUTH CHINA SEA</p>	<p>Context: <u>Tensions in the South China Sea</u>, exacerbated by China's territorial claims and military actions, pose a significant threat to international trade.</p> <ul style="list-style-type: none"> The region is crucial for global maritime trade, with about a third of global shipping, including 40% of the world's petroleum products, passing through its waters annually.  <p>The map illustrates the South China Sea region, bordered by China to the north, Vietnam to the west, and the Philippines to the east. It shows the Gulf of Tonkin, the Gulf of Thailand, and the South China Sea. Key features include the Paracel Islands, Spratly Islands, Scarborough Shoal, and James Shoal. The 'nine-dash line' is marked in red, representing China's territorial claims. Major cities like Haiphong, Hong Kong, Taipei, and Manila are also labeled. A scale bar indicates 500 km.</p>

2. SHIVELUCH VOLCANO

Context:

The **Shiveluch volcano in Russia** erupted following a **7.0-magnitude earthquake that struck off the eastern coast**.

- The **earthquake's epicentre was located about 55 miles from Petropavlovsk-Kamchatsky**, a city on **the Kamchatka Peninsula**.



Shiveluch Volcano

INDIAN

Place	Why in News?
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3. GUMTI RIVER (TRIPURA)

Context: The Ministry of External Affairs (MEA) denied that the floods in Bangladesh were caused by the opening of the **Dumbur dam (on the Gumti River) in Tripura**.

The Gumti River originates from the **Longtharai and Atharamura ranges** in Tripura and runs over **167 km to the Indo-Bangladesh border**. It flows through Bangladesh and joins the Meghna River near Daudkandi.

