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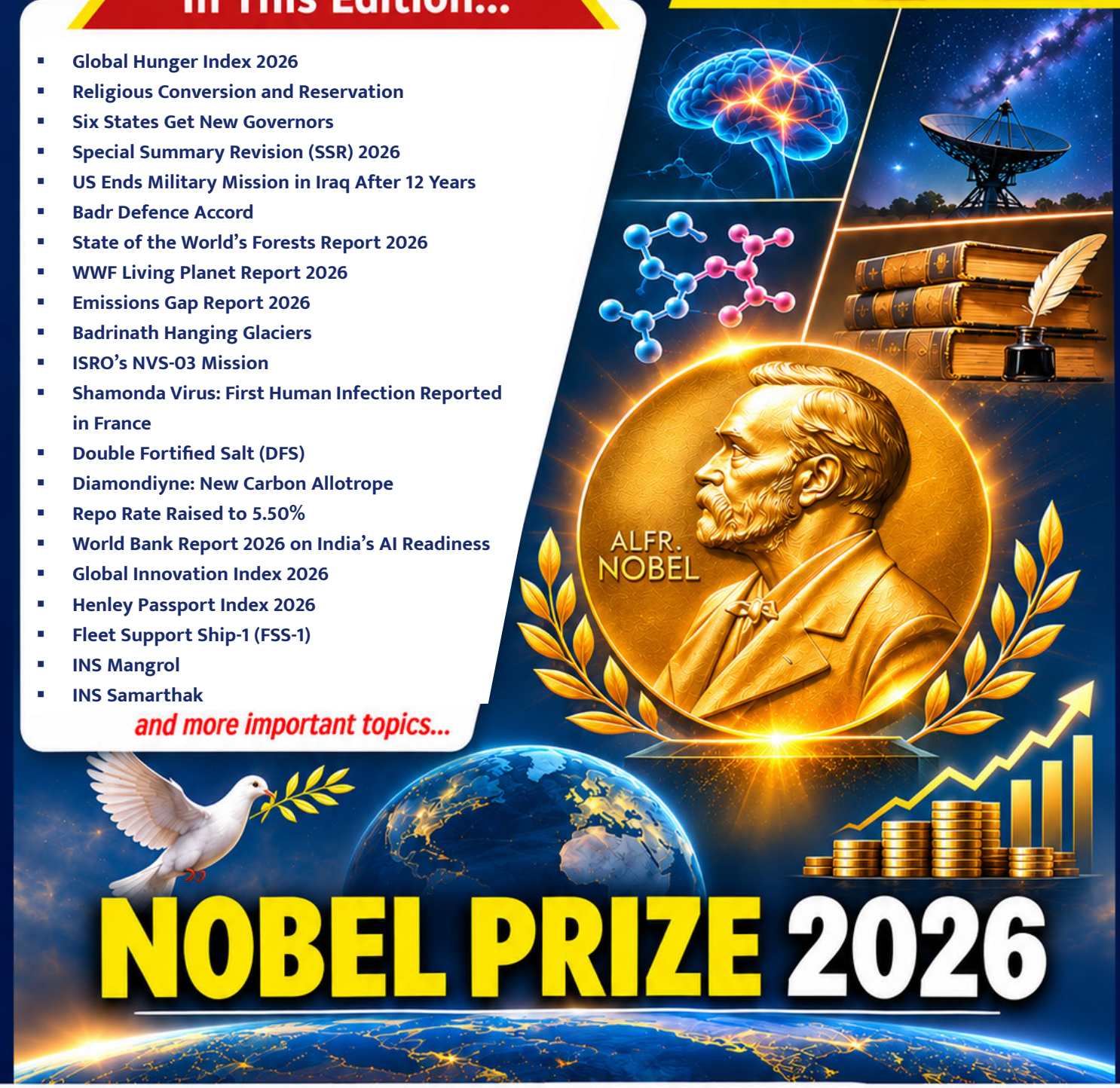


Interview Guidance by Kumud Mishra, IAS

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and more important topics...



NOBEL PRIZE 2026

» SPECIAL FEATURES

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Message



A civil servant with the right aptitude is the kind of officer the nation expects. Right aptitude does not mean possessing vast knowledge, but having relevant knowledge, a balanced perspective and the ability to implement that knowledge effectively.

When it comes to UPSC or PCS examinations, mere accumulation of knowledge is not enough; its effective expression is equally important. These examinations assess an aspirant's analytical ability, expression skills and balanced understanding of contemporary issues. The process of preparation is not limited to the examination alone; it also inspires individuals to develop a meaningful perspective on important national and social issues. Undoubtedly, this journey is challenging, yet equally inspiring and purposeful.

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I hope that Perfect 7 magazine will remain a perfect companion in your preparation journey and continue to guide you throughout your Civil Services Examination journey.

With Best wishes.

Vinay Singh
Founder
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1 Indian Society & Art and Culture

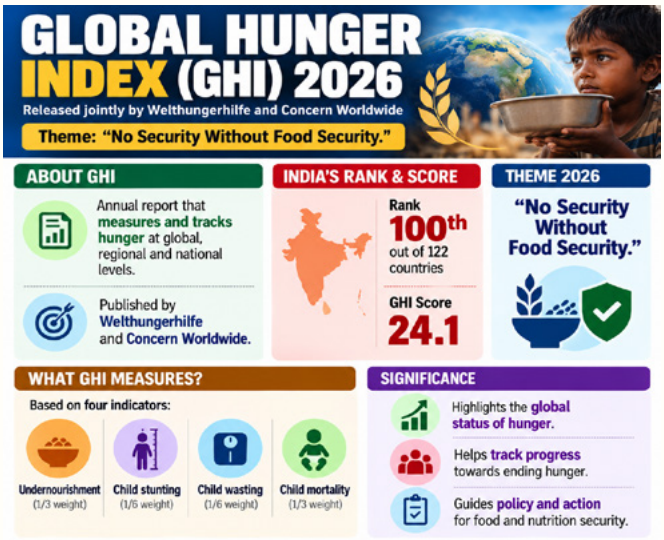
Global Hunger Index 2026: India's Challenge of Moving from Food Security to Nutritional Security

Context:

Recently, the Global Hunger Index (GHI), released in October 2026, once again brought the challenge of hunger and malnutrition in India into the spotlight. In this index, India ranks 100th out of 122 countries with a score of 24.1, placing it in the 'Serious' category. This situation has emerged at a time when India is making efforts to ensure food availability through increased food grain production, expansion of the Public Distribution System, and various welfare schemes. The question is not merely whether the country has sufficient food grains, but also whether every citizen has access to adequate, nutritious, and balanced food.

Global Hunger Index 2026: Key Findings

- The Global Hunger Index (GHI) is a multidimensional index jointly published by Welthungerhilfe, the Institute for International Law of Peace and Armed Conflict (IFHV), and Helvetas. Its objective is to assess the state of hunger across countries and regions and encourage policy efforts to eliminate hunger.
- According to GHI 2026, India has a score of 24.1. In comparison, South Asia has an average score of 23.5, while the global score stands at 18.1. Nepal has a score of 14.5, Bangladesh 19.2, and Pakistan 25.5. These figures indicate that nutritional challenges are widespread across South Asia, although their severity varies among countries. India's 100th rank in the index is significant, but the complete picture cannot be understood through rankings alone. Therefore, while assessing India's actual progress, its score, nutrition-related indicators, and long-term trends should also be considered.



Four Major Indicators of the Global Hunger Index (GHI):

- The Global Hunger Index is calculated on the basis of four indicators.
  - **Undernourishment:** This indicates the proportion of the population that does not receive adequate calories. In India, the rate has been recorded at 9.8 per cent.

- » **Child Stunting:** Children under five years of age having a low height for their age may indicate long-term nutritional deficiencies. In India, the rate is 29.3 per cent.
- » **Child Wasting:** Children having a low weight for their height are associated with acute nutritional deficiencies. In India, the rate is 19 per cent, which is a matter of particular concern.
- » **Child Mortality:** The mortality rate among children under five can be influenced by factors such as inadequate nutrition, infections, and limited access to healthcare services. In India, the rate has been recorded at 2.7 per cent.

- These figures are based on the latest relevant data available for use in the 2026 index. The index uses available data for the period 2023–2025 for undernourishment, the latest available data for child wasting covering 2021–2025, and data from 2024 for child stunting and child mortality. Therefore, the report should not be interpreted as an immediate snapshot of every situation measured in 2026.

Major Challenges Facing India:

- **Poverty and Economic Inequality:** For low-income families, obtaining sufficient food itself can be difficult, while ensuring access to a balanced and diverse diet is an even greater challenge. Food prices and employment uncertainty also influence this situation.
- **Maternal and Child Nutrition:** Inadequate nutrition during pregnancy, maternal anaemia, low birth weight, and the failure to provide appropriate complementary feeding to infants at the right time can affect children's development. Adequate nutrition and proper care during the first 1,000 days of life are particularly important.
- **Lack of Safe Drinking Water, Sanitation and Healthcare Services:** Recurrent infections and diseases such as diarrhoea can prevent the body from adequately absorbing and utilising nutrients from food. As a result, malnutrition may persist even when food is available.
- **Social and Regional Inequalities:** Limited access to healthcare services in rural and remote areas, neglect of women's nutritional needs, and a lack of awareness can aggravate the problem. Therefore, malnutrition cannot be addressed merely through food grain distribution; it requires coordinated efforts across health, education, sanitation, and social security.

Government Policies:

- The Government of India has implemented several important schemes to ensure food security and improve nutrition. Under the National Food Security Act, 2013, food grains are provided to eligible households.
- Under the Pradhan Mantri Garib Kalyan Anna Yojana, a decision was taken to provide free food grains to approximately 81.35 crore beneficiaries for five years beginning 1 January 2024. This supports food availability and economic security for vulnerable households.
- Under Saksham Anganwadi and POSHAN 2.0, attention is given to the nutritional needs of young children, pregnant women, lactating mothers, and adolescent girls in targeted areas. Anganwadi services include supplementary nutrition, health education, health check-ups, and referral services wherever necessary.
- The Pradhan Mantri Poshan Shakti Nirman (PM POSHAN) scheme provides meals to schoolchildren. Meanwhile, the POSHAN Abhiyaan emphasises behavioural change, community participation, and coordination among nutrition-related services.
- However, the actual impact of these schemes depends on their implementation. It is essential to ensure that regular and quality services reach beneficiaries, malnourished children are identified in time, and appropriate treatment is provided. Therefore, actual nutritional outcomes should also be evaluated rather than relying solely on the quantity of food grains distributed or the

number of registered beneficiaries.

Limitations of the Global Index and India's Perspective:

- The Global Hunger Index provides useful international comparisons, but its limitations must also be understood. Three of its four indicators relate to the health and nutritional status of children under five years of age. Therefore, the index is not a direct measure of the food security situation of the entire population, although its undernourishment indicator relates to the overall population.
- The Government of India has expressed objections to previous editions, arguing that the GHI is an incomplete measure of the actual state of hunger in the country. Keeping this perspective in mind, the methodology of the index, its data sources, and its limitations should be reviewed.
- However, the limitations of an index cannot be used as a reason to ignore the problems it highlights. It is not appropriate to treat international rankings as the ultimate truth, but indicators such as child wasting, undernourishment, and child mortality must be taken seriously. Along with the GHI, India should also use its national surveys, health data, and district-level nutrition indicators.

Way Forward:

- India needs to adopt a multidimensional strategy to address hunger. While maintaining the availability of food grains through the Public Distribution System, efforts should be made to improve access to pulses, millets, and other nutritious food items. Promoting dietary diversity in accordance with local conditions is essential.
- Special attention should be given to the period from pregnancy to the first 1,000 days of a child's life. Regular health check-ups for pregnant women, adequate maternal nutrition, promotion of breastfeeding, and appropriate complementary feeding after six months of age can help reduce the risk of malnutrition.
- Anganwadi centres should be provided with adequate resources, trained personnel, and regular monitoring. Timely measurements of children's weight and height are essential for identifying malnutrition and ensuring appropriate treatment.
- Better coordination should be established among safe drinking water, sanitation, primary healthcare services, and nutrition programmes. The participation of local bodies, self-help groups, and communities can strengthen the accountability of these schemes.
- Nutrition policies should be evaluated not merely on the basis of budgets and the number of beneficiaries, but also on improvements in children's health, dietary diversity, reductions in anaemia, and declining malnutrition rates. The availability of reliable, regular, and comparable data is essential for this purpose.

Conclusion:

The Global Hunger Index 2026 provides India with an opportunity to move beyond food security and focus on comprehensive nutritional security. The country has made efforts to meet the food requirements of a large population through food grain distribution and welfare schemes. However, challenges related to nutritional quality, maternal and child health, and regional inequalities remain significant. India's progress should not be assessed solely through international rankings, but also through the healthy development of children, improved nutrition among women, and families' access to nutritious food. Achieving Sustainable Development Goal 2, or 'Zero Hunger', requires an integrated approach that combines food availability, nutrition, healthcare, sanitation, and social security. This approach can help India move towards a healthier, more capable, and inclusive society.

Nobel Prize in Literature 2026

Context:

Recently, The Nobel Prize in Literature 2026 has been awarded to Anne Carson, a Canadian poet, essayist, translator and classicist, on 8 October 2026. The Swedish Academy recognised her "bold and inventive oeuvre that, in playful dialogue with the classical tradition, has created new forms for contemporary literature."

About Anne Carson:

- Anne Carson is renowned for combining poetry, prose, essays, translation, drama and classical scholarship. She studied at the University of Toronto, where she completed her undergraduate and postgraduate education, including a doctorate in classical studies.
- Her academic engagement with Ancient Greek and Roman literature has significantly influenced her literary approach. She reinterprets classical texts and ideas through innovative forms, connecting ancient traditions with contemporary themes and concerns.

Why Did She Win the Nobel Prize?

- Carson received the award for her distinctive literary style, characterised by experimentation, intellectual depth and the blending of genres. Her works challenge conventional boundaries between poetry, fiction, literary criticism and translation.
- The Swedish Academy particularly highlighted her creative engagement with classical literature. By reimagining ancient narratives and philosophical ideas, she has developed new modes of literary expression suited to modern readers.

Notable Literary Works:

- Some of Anne Carson's prominent works include:
  - » Eros the Bittersweet
  - » Autobiography of Red
  - » Men in the Off Hours
  - » The Beauty of the Husband
  - » Red Doc>
  - » Antigonick
- These works demonstrate her distinctive use of classical references, unconventional structures and interdisciplinary literary techniques.



Particulars	Details
Award	Nobel Prize in Literature, 2026
Laureate	Anne Carson
Nationality	Canadian
Born	1950
Birthplace	Toronto, Canada
Profession	Poet, essayist, classicist, translator and teacher
Prize share	1/1 (entire prize)
Awarding institution	Swedish Academy
Award citation	For her bold and inventive literary works engaging with classical traditions
Previous year's laureate (2025)	László Krasznahorkai, Hungarian writer

Significance of the Award:

- The Nobel Prize in Literature 2026 highlights the continuing relevance of classical literature in contemporary society. It recognises literary experimentation and encourages new approaches to storytelling, poetry and translation.
- Carson's achievement also demonstrates how literature can bridge historical periods, cultures and academic disciplines. Her work illustrates that ancient texts can remain relevant when interpreted through modern perspectives.

Conclusion:

Anne Carson's Nobel Prize in Literature 2026

underscores the importance of innovation and classical knowledge in shaping contemporary literature. Her achievement demonstrates how the reinterpretation of cultural heritage can generate new forms of artistic expression and sustain the relevance of historical traditions in the modern world.

Nobel Peace Prize 2026

Context:

On October 9, 2026, the Norwegian Nobel Committee announced the 2026 Nobel Peace Prize for South African jurist Navanethem "Navi" Pillay for her efforts to promote peace and international law.

Navi Pillay: Life and Major Contributions

- Navi Pillay was born in 1941 in Durban, South Africa, into a family of Indian Tamil origin. She faced racial discrimination under the apartheid system and worked for equality and justice through the legal profession.
- She played a legal role in protecting the rights of anti-apartheid activists and supporting Nelson Mandela and other individuals involved in the struggle.
- Her major contributions are as follows:
  - » **International Criminal Tribunal for Rwanda (ICTR):** In 1999, she became a judge at the tribunal and later served as its president. Her contributions to cases related to the Rwandan genocide helped establish that sexual violence and rape could constitute acts of genocide and crimes against humanity.
  - » **International Criminal Court (ICC):** She served as a judge in the Appeals Division of this court. The court plays an important role in ensuring individual accountability for genocide, war crimes, and crimes against humanity.
  - » **United Nations High Commissioner for Human Rights:** She served in this position from 2008 to 2014. During this period, she emphasised the universality and protection of human rights.
  - » **International Justice:** She supported efforts to investigate and prosecute serious international crimes and ensure justice for victims.

Nobel Peace Prize:

- The Nobel Peace Prize is a prestigious international honour awarded to individuals and organisations that make significant contributions to peacebuilding, conflict resolution, and the protection of human rights.
- The announcement of Navi Pillay as the recipient of the 2026 award highlights the importance of international justice, the rule of law, and human rights. The award comes at a time when various regions of the world continue to face armed conflicts, human rights violations, and challenges concerning the effectiveness of international institutions.



Conclusion:

The 2026 Nobel Peace Prize reinforces the idea

that peace and justice are complementary to each other. Navi Pillay's contributions demonstrate that impartial legal action against international crimes and the protection of human rights are essential for global peace. In the current global context, strengthening international institutions, respecting their decisions, and ensuring equal legal accountability for all countries are important steps towards a more peaceful world order.

Lakshadweep Achieves 100% Literacy under ULLAS Scheme

Context:

Recently, Lakshadweep was declared a fully literate Union Territory by its Administrator, Praful Patel. The achievement came under the ULLAS–Nav Bharat Saaksharta Karyakram, following special teaching and assessment campaigns in which all identified eligible learners successfully passed the literacy assessment examination.

Background:

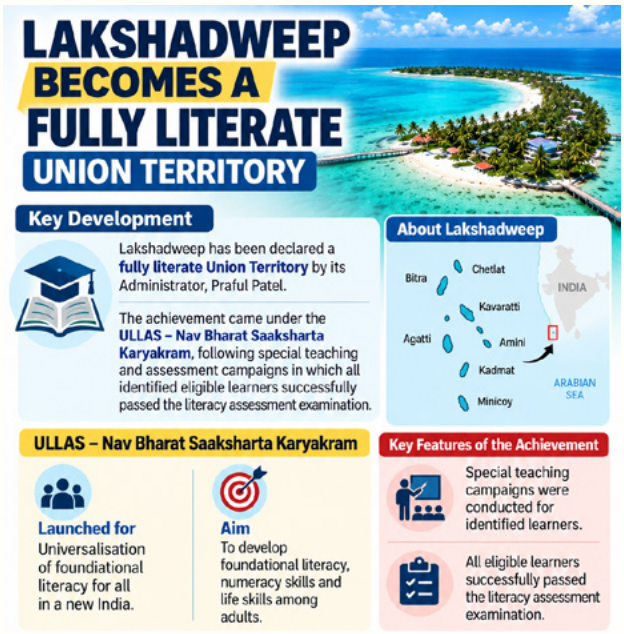
- According to the 2011 Census, Lakshadweep had a literacy rate of approximately 91.85%. An initial survey identified 1,113 adult non-literate persons who required literacy support.
- To address this gap, special initiatives were undertaken, including teaching programmes, home-based learning support, and assessment drives to help eligible learners acquire foundational literacy and numeracy skills. As a result, all identified eligible learners successfully cleared the Foundational Literacy and Numeracy Assessment Test (FLNAT).

About ULLAS–Nav Bharat Saaksharta Karyakram:

- ULLAS stands for Understanding of Lifelong Learning for All in Society. It is a Centrally Sponsored Scheme implemented by the Ministry of Education for non-literate persons aged 15 years and above.
- Its major components include:
  - » Foundational literacy and numeracy.
  - » Critical life skills, including digital and financial literacy.
  - » Basic education.
  - » Vocational skills development.
  - » Continuing education.
- The scheme operates from 2022–23 to 2026–27 and promotes volunteerism, community participation and technology-enabled learning.

Literacy benchmark:

- In August 2024, the Ministry of Education defined literacy as the ability to read, write and perform calculations with comprehension, alongside critical life skills such as digital and financial literacy.
- A literacy rate of 95% or above is considered equivalent to full literacy for a State or Union Territory under the national framework.



Significance of Lakshadweep's Achievement:

- **Social Empowerment:** Literacy enables citizens to understand their rights and government schemes more effectively.
- **Economic Development:** Financial literacy and basic numeracy help people access

employment and livelihood opportunities.

- **Digital Inclusion:** Digital literacy facilitates access to online services and digital payments.
- **Inclusive Development:** Adult education provides learning opportunities to people who were deprived of formal education during childhood.
- **Sustainable Development Goals:** This achievement aligns with Sustainable Development Goal 4 (SDG 4) of the United Nations, which focuses on inclusive and equitable quality education and lifelong learning opportunities.

Challenges:

- Maintaining literacy requires continued learning opportunities, digital access, vocational training and regular assessment. Special attention is also necessary for elderly persons, persons with disabilities and geographically isolated communities.

Conclusion:

Lakshadweep's achievement of full literacy highlights the importance of adult education, community participation, and targeted learning campaigns. However, lasting success will depend on integrating literacy with digital and financial empowerment, livelihoods, and lifelong learning. This achievement represents an important step towards inclusive development in India and the goal of Viksit Bharat 2047.

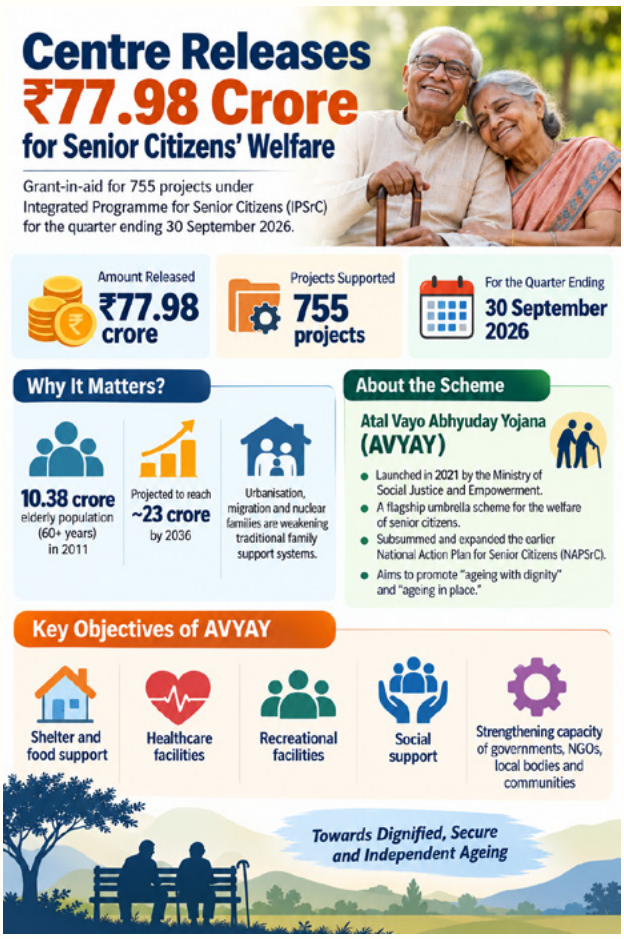
AVYAY Scheme: Rs.77.98 Crore for Senior Citizens' Welfare

Context:

Recently, the Union Ministry of Social Justice and Empowerment released Rs.77.98 crore as grant-in-aid for 755 projects under the Integrated Programme for Senior Citizens (IPSrC) for the quarter ending 30 September 2026. The programme is a component of the Atal Vayo Abhyuday Yojana (AVYAY) and aims to promote dignified, secure and independent ageing.

Background:

- India is undergoing a demographic transition characterised by an increasing elderly population, declining fertility and rising life expectancy. According to the 2011 Census, India had 10.38 crore people aged 60 years and above, comprising 5.11 crore males and 5.27 crore females.
- Their population is projected to reach approximately 23 crore by 2036. Urbanisation, migration and the growth of nuclear families are also weakening traditional family-based support systems, increasing the need for institutional and community-based elderly care.



About Atal Vayo Abhyuday Yojana (AVYAY):

- Launched in 2021 by the Ministry of

Social Justice and Empowerment, AVYAY is a flagship umbrella scheme aimed at promoting "ageing with dignity" and "ageing in place." It subsumed and expanded the earlier National Action Plan for Senior Citizens (NAPSrC), bringing multiple interventions for elderly welfare under a unified framework.

- The scheme seeks to provide shelter, food, healthcare, recreational facilities and social support to senior citizens. It also strengthens the capacity of governments, non-governmental organisations, local bodies and communities to deliver elderly care.

Major Components:

- **Integrated Programme for Senior Citizens (IPSrC):** IPSrC provides financial assistance to eligible implementing agencies, including voluntary organisations and other approved institutions, for operating and maintaining facilities such as senior citizen homes and continuous-care homes. The recent release of Rs.77.98 crore for 755 projects seeks to strengthen institutional care and related welfare services.
- **State Action Plan for Senior Citizens (SAPSrC):** Under SAPSrC, State and Union Territory governments prepare and implement action plans according to their specific needs. Financial support from the Centre enables States to develop locally appropriate interventions for elderly welfare.
- **Community-Based Care:** The scheme promotes ageing in familiar surroundings through accessible healthcare, suitable home modifications, community participation and support services that enable older persons to maintain independence.

Constitutional and Legal Provisions:

- Article 41, a Directive Principle of State Policy, directs the State to provide public assistance in cases including old age, subject to its economic capacity and development.
- Article 46 promotes the educational and economic interests of weaker sections, while Article 21 has been interpreted to protect the right to live with dignity.
- The Maintenance and Welfare of Parents and Senior Citizens Act, 2007 provides a legal framework for maintenance of parents and senior citizens, establishment of old-age homes and protection of their life and property.

Significance:

- The initiative strengthens social security, promotes intergenerational equity and addresses the healthcare and care needs associated with population ageing.
- It can reduce the burden on vulnerable families, support community-based care and promote the social inclusion of older persons.

Chola-Era Nataraja and Sivagami Idols Unearthed in Tamil Nadu

Context:

Recently, the Tamil Nadu State Department of Archaeology unearthed two 12th-century Chola-era bronze idols of Lord Nataraja and Goddess Sivagami during an archaeological excavation in Nagapattinam, Tamil Nadu.

Key Facts About the Discovery:

- The two bronze idols were discovered approximately one metre below the ground, along with their respective pedestals. The Nataraja idol measures approximately 110 cm in height and 100 cm in width, while the Goddess Sivagami idol measures 82 cm in height and 23 cm in width.
- Nataraja is depicted with four arms performing the Ananda Tandava (dance of bliss), whereas Goddess Sivagami is represented in the graceful Tribhanga posture.
- The idols have been taken for scientific examination and conservation, including

chemical treatment and metallurgical analysis.



About Chola Empire:

- The Cholas were among the most powerful dynasties of South India, ruling large parts of present-day Tamil Nadu and expanding their influence towards Sri Lanka and Southeast Asia. Vijayalaya Chola established the Imperial Chola dynasty in the 9th century.
- Rajaraja Chola I (985–1014 CE) expanded the empire and constructed the famous Brihadeeswara Temple at Thanjavur. His successor, Rajendra Chola I (1014–1044 CE), undertook naval expeditions towards Southeast Asia and founded Gangaikonda Cholapuram.
- The Cholas maintained an efficient administrative system, supported village self-government and promoted maritime trade with China and Southeast Asia. The Uttaramerur inscriptions provide important evidence of their local administrative institutions and village assemblies.

Chola Art and Architecture:

- The Chola period is regarded as a golden age of South Indian temple architecture and bronze sculpture. The dynasty made remarkable contributions to the Dravidian style of temple architecture, characterised by monumental vimanas, elaborate sculptures and spacious temple complexes.
- Important examples include Brihadeeswara Temple at Thanjavur, Gangaikonda Cholapuram Temple and Airavatesvara Temple at Darasuram. These three temples are collectively recognised by UNESCO as the Great Living Chola Temples, inscribed in 1987 and extended in 2004.
- Chola bronze sculptures were primarily produced through the lost-wax technique, also known as Cire Perdue. This technique involved creating a wax model, covering it with clay, melting the wax and pouring molten metal into the resulting cavity. The sculptures are known for realistic anatomy, graceful postures and intricate ornamentation.

Significance of the Discovery:

- The discovery provides evidence of Chola-era religious practices, particularly Shaivism, and highlights advanced bronze-casting and metallurgical skills.
- It also reinforces Nagapattinam's historical importance as a maritime trading centre. Such archaeological findings help reconstruct medieval Indian history and strengthen heritage conservation efforts.

Conclusion:

The discovery of Chola-era Nataraja and Sivagami idols highlights the remarkable achievements of the Chola dynasty in art, architecture, metallurgy and religious traditions. It demonstrates how archaeological excavations contribute to understanding India's historical evolution and emphasises the need to preserve the country's rich cultural heritage.

2 Polity & Governance

Religious Conversion and Reservation: Balancing Social Justice, Constitutional Identity and Equality

Context:

Recently, on October 15, 2026, the Supreme Court upheld the Madras High Court's decision in a case concerning reservation under the Backward Class (Muslim) category in Tamil Nadu following religious conversion. The Court clarified that merely converting from Hinduism to Islam does not automatically make a person eligible for reservation under Tamil Nadu's notified Backward Class (Muslim) category. This decision has brought the constitutional foundations of religious conversion, caste identity, social backwardness and affirmative action into the centre of public debate.

Background of the Case:

- The case concerned an individual who had converted from Hinduism to Islam. Subsequently, he applied for a certificate recognising him as a member of the 'Muslim Lebbai' community, which is included in Tamil Nadu's Backward Class (Muslim) list. However, the local revenue officer rejected his application, following which he approached the Madras High Court.
- Meanwhile, in 2024, the Tamil Nadu government issued a government order permitting individuals belonging to the Backward Class (BC), Most Backward Class (MBC), Denotified Communities (DNC) or Scheduled Castes (SC) who converted to Islam to obtain certificates under any of the state's seven notified Muslim Backward Class categories.



- These seven communities include Deccani Muslims, Dudekula, Labbai (including Rowther and Marakayar), Mapilla, Sheikh, Syed and Ansar. A 3.5% reservation is provided to these communities in Tamil Nadu under a state law enacted in 2007.
- On June 25, 2026, the Madras High Court struck down this government order. Subsequently, the state government appealed to the Supreme Court. On October 15, 2026, a Bench comprising Justice Prashant Kumar Mishra and Justice S. Chandrashekhar upheld the High Court's decision.

Key Grounds of the Supreme Court's Judgment:

- **Religious Conversion Does Not Automatically Grant Membership of a Backward Class:**
  - » The Court clarified that religious conversion changes an individual's religious identity but does not automatically confer membership in a particular social community. For example, a person who converts to Islam cannot be considered a member of the Muslim Lebbai community or any other notified Muslim backward community solely on the basis of religious conversion.
  - » According to the Court, the identity of these communities is based on their shared history, ancestry, occupation and social relationships. Therefore, inclusion in these communities requires compliance with the prescribed social and legal criteria.
- **Social Backwardness and Legally Recognised Backward Class Are Different Concepts:**
  - » The Court clarified the distinction between social backwardness and membership of a constitutionally recognised backward class. Even after religious conversion, an individual may continue to face poverty, illiteracy, unemployment and other social difficulties. However, these circumstances alone do not make the person a member of another religion's notified backward community.
  - » In other words, reservation is not an individual or transferable right. Rather, it is linked to the identity of a social group recognised under the Constitution and its backward social status.
- **The Principle of Equality in Islam and the Social Structure of Indian Muslim Society:**
  - » The Court emphasised the principle of equality in the fundamental teachings of Islam, where religious conduct and morality are given importance rather than birth-based social hierarchy. However, it also acknowledged the historical existence of social classifications such as Ashraf, Ajlaf and Arzal within Indian Muslim society.
  - » The Court recognised that despite the concept of equality in religious teachings, the historical and social divisions existing in Indian society cannot be ignored. Therefore, Muslim communities can also receive reservation as Backward Classes if they fulfil the constitutional requirements.

Constitutional Provisions and Legal Position:

- To understand this judgment, it is necessary to examine some important provisions of the Indian Constitution.
  - » **Article 14-Equality Before Law:** Article 14 guarantees equality before the law and equal protection of the laws to all persons. Any reservation policy introduced by the State must be consistent with the constitutional principles of equality and reasonable classification. In this case, the Court clarified that including an individual in a notified backward class without establishing the prescribed social identity would not be consistent with the constitutional principle of equality.
  - » **Article 15(4)- Special Provisions for Socially and Educationally Backward**

Classes: Article 15(4) empowers the State to make special provisions for the advancement of socially and educationally backward classes, Scheduled Castes and Scheduled Tribes. Its objective is to address historical inequalities and provide equal opportunities in the field of education.

- **Article 16(4)- Reservation in Government Employment:** Article 16(4) allows the State to provide reservation in government appointments for backward classes that are not adequately represented in state services. The Supreme Court clarified that the benefit of reservation is linked to a constitutionally recognised backward class and is not a transferable right derived from an individual's previous social identity.
- **Article 341 and Article 366(24)- Identification of Scheduled Castes:** Under Article 341, communities notified by the President are granted Scheduled Caste status. Article 366(24) defines Scheduled Castes as those castes, races or tribes that have been notified under Article 341.

- According to Clause 3 of the Constitution (Scheduled Castes) Order, 1950, a person professing a religion other than Hinduism, Sikhism or Buddhism cannot be recognised as a member of a Scheduled Caste. Thus, under this Order, conversion to Islam or Christianity results in the loss of Scheduled Caste status.

Other Important Aspects of the Judgment:

- **Role of Jamaat and Responsibility of the State:** The Tamil Nadu government argued that the concerned Muslim religious institution (Jamaat) could certify the community identity of a person converting to Islam. The Supreme Court clarified that while a Jamaat may confirm religious conversion, its certificate alone cannot establish an individual's legal membership in a backward class. This responsibility lies with the concerned government authority.
- **Position in Cases of Reconversion:** The Court also clarified that if an individual reconverts to Hinduism, the person does not automatically regain reservation benefits merely on the basis of their previous caste identity. The competent authority must determine, based on the facts, whether the individual's original caste identity has genuinely been re-established.
- **Recommendations of Expert Commissions:** The Court observed that recommendations made by a Backward Classes Commission may be important, but expert recommendations do not automatically acquire the force of law. Every government order must comply with Articles 14, 15(4) and 16(4) of the Constitution and remains subject to judicial review.

Broader Significance of the Judgment:

- This judgment highlights the importance of social identity and constitutional eligibility within India's reservation system. Its implications can be understood in the following areas:
  - **Clarity in Reservation Eligibility:** The judgment establishes that membership in a notified backward community cannot be acquired solely through religious conversion. It increases the importance of social and legal criteria in determining reservation eligibility.
  - **Constitutional Nature of Affirmative Action:** The Court clarified that reservation is not an individual benefit but a constitutional instrument to address historical social backwardness and inadequate representation.
  - **Debate on the Relationship Between Religion and Social Identity:** The judgment highlights the distinction between religious identity and social structure. It also recognises that certain communities within Indian Muslim society have historically faced social and educational backwardness.
  - **Accountability of the State:** Governments

can formulate policies to promote social justice, but such policies must be based on constitutional provisions, reliable social data and established legal procedures.

Challenges:

- Although this judgment clarifies the legal eligibility for reservation, it also raises several important questions. The social and economic difficulties faced by an individual do not disappear immediately after religious conversion. If a person has previously experienced caste-based discrimination, poverty and educational deprivation, their effects may continue even after conversion. Therefore, assessing social backwardness solely on the basis of religious identity may not be sufficient.
- It is necessary to identify caste-like social divisions and historical deprivation within Indian Muslim society. Social realities cannot be understood solely through the principles of religious teachings.
- The process of issuing certificates in cases involving religious conversion and reconversion may also become complicated. In the absence of clear administrative guidelines, eligible individuals may face unnecessary difficulties.
- Furthermore, the provisions of the Constitution (Scheduled Castes) Order, 1950, which link Scheduled Caste status to religion, have long been a subject of debate. Therefore, continuous constitutional deliberation on this issue is necessary in accordance with the broader objectives of social justice and equality.

Way Forward:

To establish a balance between social justice and constitutional equality in this matter, the following steps can be taken:

- **Scientific Social Surveys:** Data related to education, employment, income and social representation across different religious communities should be collected to identify actual backwardness.
- **Assessment of Deprivation Beyond Religion:** Reservation policies should consider not only social and educational backwardness but also historical deprivation and the level of representation.
- **Clear Administrative Guidelines:** The process of issuing certificates in cases of religious conversion and reconversion should be transparent and time-bound.
- **Institutional Accountability:** Recommendations made by Backward Classes Commissions should be based on reliable data and constitutional criteria.
- **Judicial Oversight:** The mechanism of judicial review should remain effective to ensure the constitutional validity of government orders relating to reservation.

Conclusion:

- The Supreme Court's judgment clarifies that the objective of reservation is not merely to provide individual economic assistance but to eliminate historical social inequalities and ensure equal opportunities for disadvantaged communities. At the same time, it is essential that reservation benefits are provided in accordance with established constitutional and legal criteria.
- However, the reality of an individual's social and economic backwardness cannot be ignored even after religious conversion. Therefore, India's reservation system should be based not only on religious identity but also on social realities, historical deprivation and an objective assessment of representation. Ultimately, the success of social justice lies in establishing a balance between the constitutional principle of equality and the objective of providing special opportunities to disadvantaged sections of society.

CAPF Senior Posts: IPS Deputation vs Cadre Officers

Context:

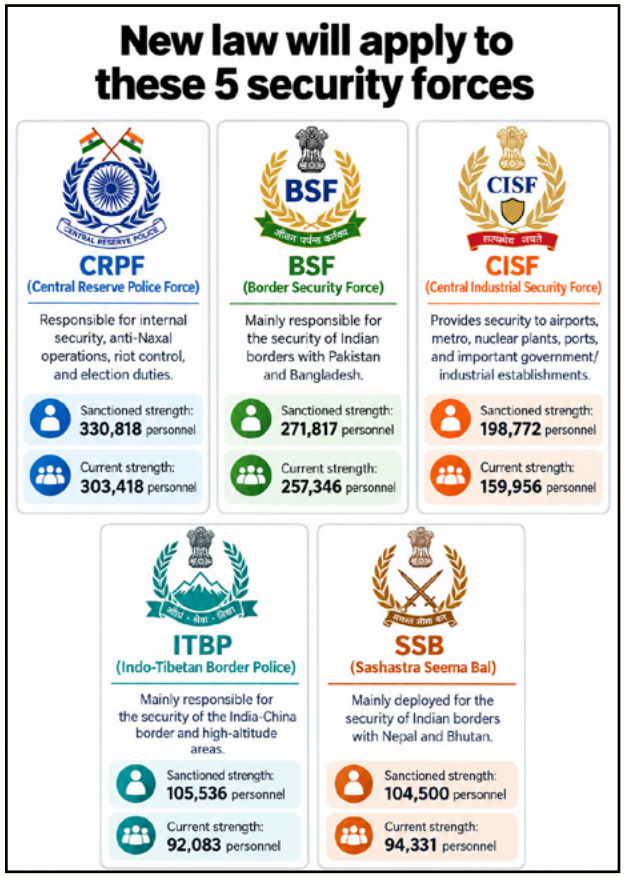
Recently, A new controversy has emerged over who should occupy senior leadership positions in India's Central Armed Police Forces (CAPFs)—IPS officers posted on deputation or officers who have risen through the ranks of the respective forces. The issue has returned to the Supreme Court amid a challenge to the Central Armed Police Forces (General Administration) Act, 2026, which provides for continued IPS deputation at senior levels.

What are CAPFs?

- The five CAPFs covered by the new law are:
  - **CRPF:** Internal security and counter-insurgency.
  - **BSF:** Border security along Pakistan and Bangladesh.
  - **CISF:** Security of critical infrastructure, airports and industries.
  - **ITBP:** India-China border security.
  - **SSB:** India-Nepal and India-Bhutan border security.
- Their Group A executive officers are generally recruited as Assistant Commandants and can rise through the hierarchy to senior command positions.

What is the Core Dispute?

- The main grievance of CAPF cadre officers is career stagnation. Senior posts have traditionally been partly filled by officers on deputation, particularly from the IPS.
- Before the 2026 legislation, recruitment rules provided for 20% of DIG posts and 50% of IG posts to be filled through deputation. CAPF officers argue that this reduces the number of promotional vacancies available to officers who have spent their entire careers in the forces.
- The issue has a long history. Around 18,000 CAPF officers had initially been involved in litigation seeking better career progression and recognition of CAPFs as Organised Group A Services (OGAS).



Supreme Court's 2025 Judgment:

- In Sanjay Prakash v. Union of India (2025), the Supreme Court recognised CAPFs as OGAS for cadre-related purposes and directed the government to conduct a cadre review within six months.
- Most importantly, the Court directed that posts earmarked for deputation up to the Senior Administrative Grade (SAG) should be progressively reduced within an outer limit of two years. The objective was to balance operational requirements with career mobility and remove stagnation among CAPF officers.

What does the 2026 CAPF Act Provide?

- The Central Armed Police Forces (General Administration) Act, 2026 creates an

umbrella framework for recruitment, promotion, deputation and service conditions of Group A officers in the five CAPFs.

- The Act provides for:
  - » 50% of IG posts through deputation;
  - » At least 67% of ADG posts through deputation;
  - » All DG and Special DG posts through deputation.

Why do CAPF Veterans Oppose It?

- **Career stagnation:** Deputation reduces promotional opportunities for officers within the force.
- **Institutional expertise:** Force veterans possess decades of specialised experience in border management, counter-insurgency, internal security and operational command.
- **Morale:** Delayed promotions and limited avenues to reach the top can adversely affect organisational morale.
- **Organisational ownership:** Officers argue that those who have served their entire careers in a force should have a meaningful opportunity to lead it.
- The Supreme Court in 2025 also noted that reducing deputation would increase the participation of CAPF cadre officers in administrative decision-making.

Why Does the Government Support IPS Deputation?

- The government argues that CAPFs frequently operate alongside State police forces. IPS officers can therefore provide institutional links between Central and State policing establishments.
- The Centre has also maintained that CAPFs have distinct operational requirements and cannot simply be treated like ordinary civilian Group A services. IPS deputation is viewed as useful for Centre-State coordination, internal security operations and administrative management.

Conclusion:

The IPS-CAPF controversy is more than a dispute over senior posts. It reflects the larger challenge of balancing operational efficiency with institutional expertise, career progression and organisational morale. India needs a system in which IPS officers and CAPF veterans complement each other, while ensuring that long-serving CAPF officers have a fair and credible pathway to the highest levels of command.

National Steel Policy 2047

Context:

On 11 October 2026, the Ministry of Steel released the draft of the National Steel Policy–Vision 2047 (Draft National Steel Policy – Vision 2047) for public consultation. The last date for submitting suggestions on this draft has been set as 30 October 2026. Its objective is to prepare a long-term roadmap for the development of India's steel sector, availability of raw materials, technological modernisation, and reduction of carbon emissions by 2047.

Background:

- India secured the position of the world's second-largest steel-producing country in 2018 and has maintained it since then. In 2025–26, the country's crude steel production was approximately 168.4 million tonnes, while finished steel consumption stood at 163.7 million tonnes.
- The National Steel Policy, 2017, set a target of increasing crude steel production capacity to 300 million tonnes and production to 255 million tonnes by 2030–31. It also emphasised domestic production of high-quality automotive, electrical, and specialty steel, along with reducing import dependence on coking coal.
- However, over the past decade, India's steel production capacity and domestic demand have increased significantly. New challenges, such as artificial intelligence, automation, green steel, energy efficiency,

and growing competition in global trade, have created the need for a new policy extending up to 2047.



Major Targets of the Proposed Policy:

- **Steel Production Capacity:** To increase it from the current approximately 220 million tonnes to 604 million tonnes per year by 2047.
- **Demand for Finished Steel:** To increase from 164 million tonnes in FY 2025–26 to 505 million tonnes.
- **Per Capita Consumption:** To increase from 116 kilograms to 302 kilograms.
- **Exports:** To increase finished steel exports to 45 million tonnes by 2047.
- **Emission Intensity:** To reduce carbon dioxide emissions per tonne of crude steel from 2.54 tonnes to approximately 1.54 tonnes.
- This proposal will replace the National Steel Policy of 2017, which set a target of 300 million tonnes of production capacity by 2030–31.

Major Challenge:

- Raw materials account for approximately 65–70% of the total cost of steel production. India is largely self-reliant in iron ore, but it meets approximately 92% of its coking coal requirements through imports.
- Coking coal is essential for producing coke in the conventional blast furnace process, where it acts as a fuel and also helps remove oxygen from iron ore.
- The policy proposes the following measures:
  - » Increasing the capacity of domestic coal mines and coal washeries.
  - » Developing additional sources of imports from countries such as Australia, the United States, and Russia.
  - » Investing in mineral assets abroad and entering into long-term supply agreements.
  - » Developing slurry pipelines for the transportation of iron ore and coking coal.
  - » Improving the monitoring of coal blending and imports through artificial intelligence (AI).
- In addition, the demand for iron ore is estimated to increase to 772 million tonnes by 2047. Therefore, the availability of high-quality iron ore will also be important.

Environmental Challenges and Green Steel:

- The steel industry is a major source of carbon emissions due to its energy-intensive nature. The proposed policy aims to reduce emission intensity by approximately 39% by 2047. Four major measures are important for achieving this target:
  - » Increasing energy efficiency and the use of renewable energy.
  - » Promoting scrap-based steel production.
  - » Adopting green hydrogen-based Direct Reduced Iron (DRI) technology.
  - » Developing technologies such as Carbon Capture, Utilisation and Storage (CCUS).

Importance for the Indian Economy:

- Steel is a major foundation of the road,

railway, housing, defence, machinery, renewable energy, and manufacturing sectors.

- Increasing production capacity can promote employment, industrial investment, exports, and domestic value addition. At the same time, indigenous production of specialty steel will help reduce dependence on high-technology imports.

Conclusion:

The National Steel Policy–Vision 2047 is an important proposal towards making India a global steel manufacturing hub. Its success will depend not only on increasing production capacity but also on raw material supply, technological modernisation, worker safety, and environmental sustainability. Therefore, India should move towards developing a competitive, resource-efficient, and low-carbon steel industry.

Six States Get New Governors

Context:

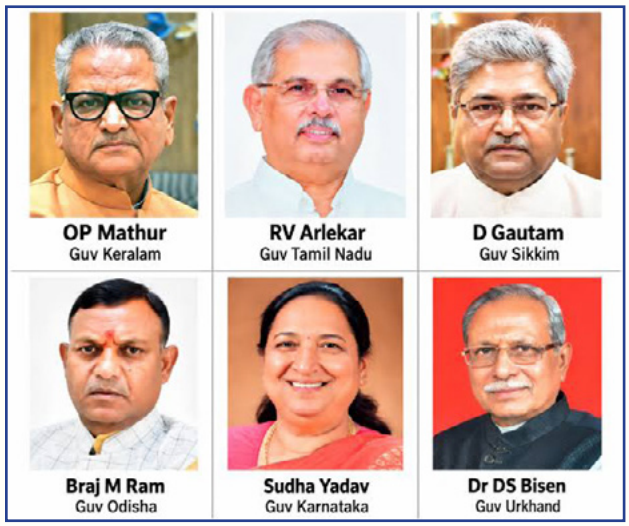
Recently, President Droupadi Murmu announced a reshuffle of gubernatorial appointments in six Indian states. Rajendra Vishwanath Arlekar was appointed Governor of Tamil Nadu, while Om Prakash Mathur was transferred from Sikkim to Keralam. Four new Governors were also appointed to Karnataka, Odisha, Uttarakhand and Sikkim. The appointments will take effect from the dates on which the appointees assume office.

List of New Governors:

State	Governor appointed
Tamil Nadu	Rajendra Vishwanath Arlekar
Keralam (Kerala)	Om Prakash Mathur
Karnataka	Dr. Sudha Yadav
Odisha	Braj Mohan Ram
Uttarakhand	Dr. Dhal Singh Bisen
Sikkim	Dushyant Gautam

Background:

- Rajendra Vishwanath Arlekar had been serving as Governor of Keralam and holding the additional charge of Tamil Nadu since March 2026. The latest appointment gives him full-time responsibility for Tamil Nadu.
- Om Prakash Mathur, who became Governor of Sikkim in July 2024, will replace Arlekar in Keralam. The other four appointments bring new Governors to their respective states.



Constitutional Provisions:

The office of the Governor is governed by Part VI of the Constitution of India.

- **Article 153:** Provides for a Governor for each State. The same person may be appointed Governor of two or more States.
- **Article 155:** The Governor is appointed by the President by warrant under his or her hand and seal.
- **Article 156:** The Governor holds office during the pleasure of the President and ordinarily has a five-year term, subject to the constitutional provision.
- **Article 157:** Specifies the qualifications for appointment as Governor. A person must be a citizen of India and at least 35 years of age.
- **Article 158:** Specifies the conditions of the Governor's office, including restrictions on

holding other offices of profit.

- **Article 163:** Provides for a Council of Ministers headed by the Chief Minister to aid and advise the Governor, except where the Constitution requires the Governor to exercise discretion.
- **Article 200:** Deals with the Governor's options when a Bill passed by the State Legislature is presented for assent.

Role and Powers of the Governor:

- The Governor is the constitutional head of a State and acts as a link between the Union and State governments. The Governor appoints the Chief Minister and, on the Chief Minister's advice, other ministers; summons and prorogues the State Legislature; and gives assent to Bills as provided under the Constitution. The Governor also performs certain judicial, legislative and discretionary functions within constitutional limits.

Conclusion:

The appointment of Governors in six states is an important development in India's constitutional administration. While the Governor's office safeguards constitutional governance, its functioning must remain consistent with democratic accountability, cooperative federalism and the principles of the Constitution.

Bankers' Books Evidence Act, 2026

Context:

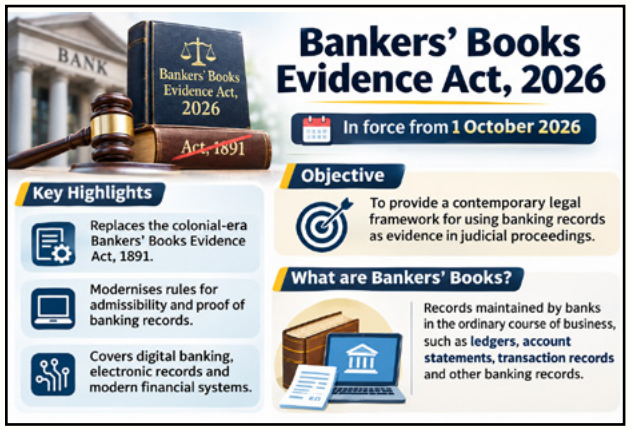
Recently, The Bankers' Books Evidence Act, 2026 comes into force on 1 October 2026, replacing the colonial-era Bankers' Books Evidence Act, 1891. The new legislation modernises the legal framework governing the admissibility and proof of banking records in judicial proceedings, taking into account digital banking, electronic records and modern financial systems.

Background:

- The earlier Bankers' Books Evidence Act, 1891 was enacted when banking records were primarily maintained in physical books and ledgers. Over time, banking has undergone significant technological transformation, with transactions increasingly taking place through core banking systems, electronic records, digital payments and computerised databases.
- The 2026 legislation seeks to align the evidentiary framework with these developments and reduce dependence on procedures designed for nineteenth-century banking practices.

What are Bankers' Books?

- Bankers' books broadly refer to records maintained by banks in the ordinary course of their business. These can include ledgers, account statements, transaction records and other banking records.
- Such records can be important evidence in cases involving financial disputes, fraud, recovery of loans, taxation, commercial transactions and criminal investigations.



Key Features of the new act:

- The Bankers' Books Evidence Act, 2026 provides a contemporary framework for recognising banking records as evidence before courts and other judicial authorities. Its framework is designed to accommodate electronic and digitally maintained banking records, reflecting the widespread use of

computerised banking systems.
- By recognising modern forms of banking records, the legislation can reduce procedural difficulties involved in producing traditional physical books before courts. It also seeks to facilitate the use of authenticated banking records while maintaining safeguards concerning their evidentiary reliability.

Why was a New Law Needed?

- The 1891 legislation was framed for a banking environment dominated by physical registers and paper-based accounting. Modern banking, however, involves enormous volumes of electronically generated data.
- Digital transactions through internet banking, mobile banking, UPI, cards and automated banking systems have fundamentally changed how financial records are created and stored. A modern evidentiary law is therefore necessary to ensure that the legal system keeps pace with technological developments.

Significance:

- The new law can contribute to faster and more efficient judicial proceedings by facilitating the use of digital banking records. It is particularly relevant in an economy where financial transactions increasingly leave electronic trails.
- It can also support the investigation and adjudication of banking fraud, money laundering, financial disputes and cyber-enabled financial offences, subject to the requirements of the applicable laws and evidentiary procedures.

Challenges:

- Greater reliance on digital records also creates challenges relating to authentication, data integrity, cybersecurity, privacy and preservation of electronic evidence. Courts and investigative agencies need adequate technological expertise to determine whether digital records are genuine and have not been altered.

Conclusion:

The Bankers' Books Evidence Act, 2026 represents an important step in adapting India's evidentiary framework to the digital banking era. By replacing a law enacted in 1891 with a framework suited to electronic banking records, it seeks to bridge the gap between technological transformation in the financial sector and the requirements of the justice system.

Special Summary Revision (SSR) 2026

Context:

Recently, the Election Commission of India (ECI) announced a Special Summary Revision (SSR) of electoral rolls in 17 States and Union Territories, ahead of upcoming elections. The revision will use January 1, 2027, as the qualifying date. The announcement comes amid ongoing debate over the Special Intensive Revision (SIR) of electoral rolls.

What Is Special Summary Revision (SSR)?

- Special Summary Revision is an electoral-roll updating exercise conducted by the ECI to ensure that voter lists remain accurate, complete and up to date.
- Its main objectives are to:
  - » Register citizens who have attained the age of 18 and meet voter eligibility requirements.
  - » Correct errors in existing electoral records.
  - » Remove duplicate entries and the names of deceased or permanently shifted electors, following due process.
  - » Facilitate public participation through claims and objections.
- The process may include house-to-house verification by Booth Level Officers (BLOs), publication of draft electoral rolls and opportunities for citizens to seek corrections.

What Does the EC Announcement Mean?

- The SSR will cover the following 17 States

and UTs: Andaman and Nicobar Islands, Assam, Bihar, Chhattisgarh, Goa, Gujarat, Kerala, Lakshadweep, Madhya Pradesh, Manipur, Puducherry, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, Uttarakhand and West Bengal.

- Key dates announced include:
  - » **November 12, 2026:** Publication of draft electoral rolls.
  - » **December 11, 2026:** Deadline for claims and objections.
  - » **January 4, 2027:** Publication of final electoral rolls.
- The qualifying date determines whether a citizen meets the age requirement for voter registration. Eligible citizens can apply for inclusion, correction or shifting of their electoral registration.



Difference Between SSR and SIR:

Basis	Special Summary Revision (SSR)	Special Intensive Revision (SIR)
Nature	Periodic updating of existing rolls	Comprehensive enumeration and verification
Existing voters	Names generally carry forward to the draft roll	Existing electors are required to complete enumeration
Documentation	No universal fresh-document requirement for every existing voter	Additional documentation may be required under applicable procedures
Main objective	Update records and correct errors	Undertake a more extensive revision of electoral rolls
Process	Claims, objections and verification	Intensive enumeration, verification and scrutiny

Important Forms for Voters:

- **Form 6:** Application for inclusion of a new elector.
- **Form 7:** Application for deletion or objection to inclusion of an entry.
- **Form 8:** Correction of electoral-roll details or shifting of residence.
- These forms help maintain accurate voter records.

Constitutional and Legal Framework:

- **Article 324:** Vests the superintendence, direction and control of elections in the ECI.
- **Representation of the People Act, 1950:** Provides the statutory framework for

electoral rolls.

- **Registration of Electors Rules, 1960:** Prescribes procedures for preparing and revising electoral rolls.

Conclusion:

Special Summary Revision (SSR) and Special Intensive Revision (SIR) serve the common objective of maintaining credible electoral rolls but differ in their methods and intensity. A transparent, inclusive and legally compliant revision process is essential to protect universal adult suffrage and the integrity of Indian democracy.

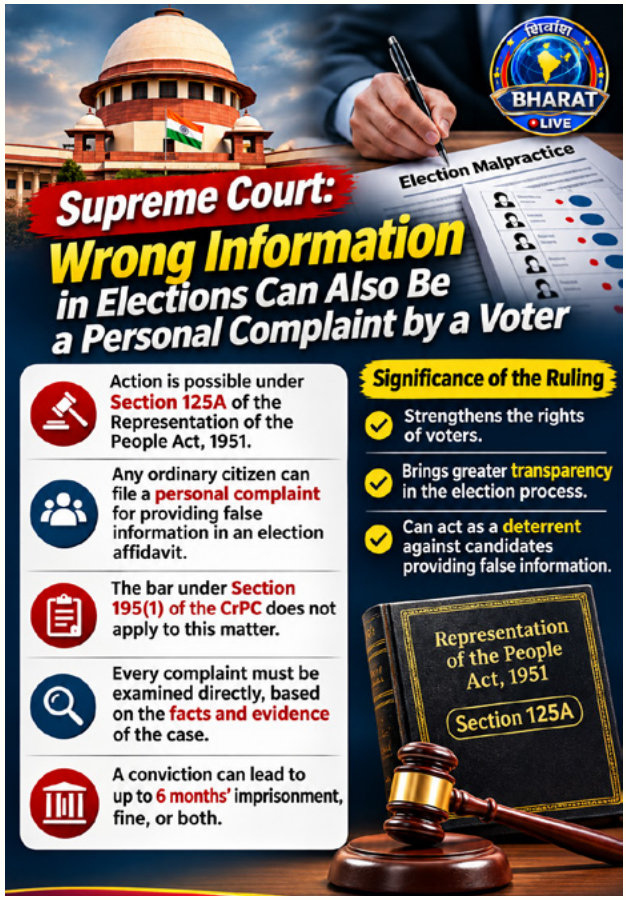
Supreme Court Ruling on False Election Affidavits

Context:

Recently, the Supreme Court of India ruled that private citizens, including voters, can file criminal complaints against candidates for allegedly providing false information or concealing mandatory information in election affidavits. The Court held that Section 195 of the Code of Criminal Procedure (CrPC), 1973, does not bar private complaints for offences under Section 125A of the Representation of the People Act (RPA), 1951.

Background:

- **Election affidavits:** Candidates are required to disclose prescribed information in their nomination papers and affidavits, enabling voters to make informed electoral choices.
- **Section 125A of the RPA, 1951:** Introduced in 2002, it provides for punishment when a candidate knowingly makes a false declaration or fails to comply with specified disclosure requirements.
- **Section 195 of the CrPC, 1973:** Restricts courts from taking cognisance of certain specified offences unless a complaint is made by the authorised public servant or court. The legal dispute concerned whether this restriction also applied to offences under Section 125A.



Supreme Court's Key Observations:

- **Private complaints are maintainable:** A voter or another private individual can approach a competent magistrate with a complaint alleging an offence under Section 125A.
- **Section 195 does not bar such complaints:** The Supreme Court observed that Section 125A was not included among the offences covered by the relevant restrictions under Section 195. Its omission was treated as deliberate.
- **Election Commission is not the exclusive route:** A complaint under Section 125A need not be initiated exclusively by the Election Commission or another public authority.
- **Courts retain safeguards against misuse:** Magistrates can deal appropriately with frivolous complaints or proceedings

intended to harass elected representatives.

- **Important distinction:** Although the Supreme Court rejected the High Court's reasoning on the maintainability of private complaints, it did not restore the complaint against Beldale. It found that the specific allegation had been prima facie rebutted by documents and that the likelihood of conviction appeared remote.

Significance for Indian Democracy:

- **Greater electoral accountability:** Candidates may face private criminal complaints for alleged violations of mandatory disclosure requirements.
- **Citizen participation:** Voters gain an additional legal avenue to raise concerns about false or concealed information.
- **Transparency in elections:** The ruling reinforces the importance of accurate affidavits in promoting informed electoral choices.
- **Institutional accountability:** It clarifies the relationship between election law, criminal procedure and judicial interpretation.
- **Deterrence:** The possibility of prosecution may encourage candidates to comply with disclosure requirements.

Conclusion:

The Supreme Court's ruling strengthens citizen access to legal remedies against alleged false disclosures in election affidavits. By clarifying that private complaints under Section 125A of the Representation of the People Act are not barred by Section 195 of the CrPC, the judgment reinforces electoral transparency and accountability. Effective implementation must balance voters' right to information with safeguards against misuse of criminal proceedings.

Khelo India Sports Goods Manufacturing Scheme 2026

Context:

Recently, the Union Cabinet has approved the Khelo India Sports Goods Manufacturing Scheme with a total outlay of Rs.1,856.67 crore for 2026–27 to 2033–34. The scheme aims to develop a globally competitive sports goods manufacturing ecosystem in India by promoting investment, innovation, skill development, quality certification and exports. The scheme aligns with the objectives of Make in India, Atmanirbhar Bharat, Khelo Bharat Niti 2025 and the vision of Viksit Bharat@2047.

Background:

- India has a substantial domestic market for sports goods, alongside established manufacturing clusters and micro, small and medium enterprises (MSMEs). However, competing globally requires improved product quality, advanced manufacturing technology, research capabilities, internationally recognised certification and stronger export networks.
- The scheme seeks to address these challenges by moving beyond traditional manufacturing towards an integrated ecosystem encompassing design, research, production, testing, skill development and international marketing.

Key Features and Financial Allocation:

- The scheme has two major components: manufacturing incentives and ecosystem development. A combined allocation of Rs.1,130 crore is earmarked for Anchor Investment Support and Turnover Linked Support.
- Anchor investors making investments of at least Rs.100 crore may receive capital expenditure support of 20%, while eligible manufacturers investing at least Rs.10 crore may receive turnover-linked incentives of up to 15%. An additional Rs.105 crore is allocated for obtaining and renewing certifications from International Sports Federations.

Development of Sports Goods Manufacturing Zones:

- The scheme envisages dedicated Sports Goods Manufacturing Zones (SGMZs), potentially comprising four integrated zones of over 300 acres each. These zones will bring manufacturers, suppliers, testing laboratories, design centres and ancillary enterprises together.
- They will be developed through convergence with the BHAVYA Scheme and National Industrial Corridor Development Corporation (NICDC) industrial parks, reducing infrastructure constraints and strengthening supply chains.



Strengthening MSMEs and Existing Clusters:

- Micro, Small and Medium Enterprises (MSMEs) account for nearly 90% of sports goods production. Established manufacturing centres such as Jalandhar in Punjab and Meerut in Uttar Pradesh provide an existing industrial base. The scheme proposes upgrading manufacturing clusters, developing common facilities and improving shared infrastructure to enhance productivity and support smaller enterprises.

Research, Innovation and Skill Development:

- The scheme promotes Centres of Excellence in premier educational and research institutions for research in sports equipment, material sciences, protective gear and advanced manufacturing.
- It also encourages research collaboration through the Anusandhan National Research Foundation. Eligible sports start-ups registered with DPIIT may receive grants of up to Rs.20 lakh for developing, testing and commercialising innovative products.
- Skill development will be undertaken in collaboration with the Ministry of Skill Development and Entrepreneurship and industry stakeholders.

Significance:

- The scheme can advance Make in India and Atmanirbhar Bharat by increasing domestic value addition, reducing import dependence and attracting private investment. It can generate employment across manufacturing, logistics, design and testing, particularly in MSME clusters.
- It will also complement Khelo India, Fit India and Khelo Bharat Niti 2025 by supporting access to quality sports equipment and strengthening India's sports ecosystem.

Conclusion:

The Khelo India Sports Goods Manufacturing Scheme seeks to connect sports development with manufacturing-led economic growth. By integrating investment, research, skills, quality assurance and export promotion, it can help India develop a competitive sports goods industry and advance the broader objectives of Atmanirbhar Bharat and Viksit Bharat@2047. Its success will depend on implementation

quality, innovation and the ability of Indian manufacturers to compete in international markets.

Pradhan Mantri Viksit Gram Swaraj Yojana (PM-VGSY)

Context:

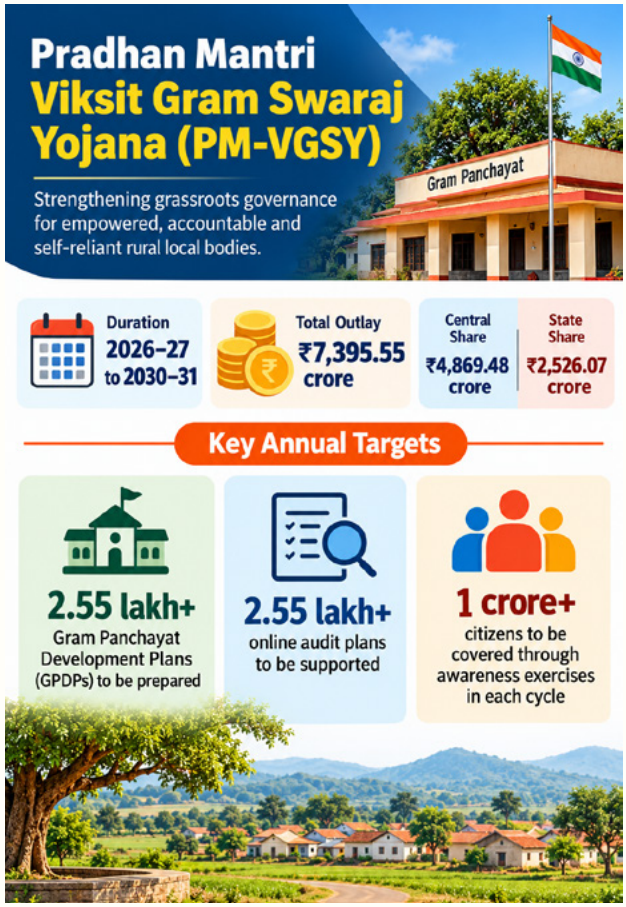
Recently, The Union Cabinet has approved the Pradhan Mantri Viksit Gram Swaraj Yojana (PM-VGSY) as a Centrally Sponsored Scheme for the period 2026–27 to 2030–31. The scheme aims to strengthen grassroots governance, improve Panchayat-level planning and transform rural local bodies into empowered, accountable and self-reliant institutions.

Key Features of the scheme:

- The scheme has a total financial outlay of Rs.7,395.55 crore, comprising a Central share of Rs.4,869.48 crore and a State share of Rs.2,526.07 crore. It aims to cover over 2.55 lakh Panchayats and traditional local bodies and benefit approximately 32 lakh elected representatives, Panchayat functionaries and other stakeholders.
- Its annual targets include preparing more than 2.55 lakh Gram Panchayat Development Plans (GPDPs), supporting at least 2.55 lakh online audit plans and conducting citizen-awareness exercises targeting at least one crore citizens per exercise.
- The scheme covers States and Union Territories, including eligible traditional rural local bodies in areas where Part IX of the Constitution does not apply.

Background:

- Rural local bodies often face inadequate administrative capacity, fragmented development planning, limited revenue mobilisation and weak financial accountability.
- PM-VGSY seeks to address these challenges through integrated planning, digital governance, capacity building and citizen participation. It will strengthen platforms such as eGramSwaraj for planning and AuditOnline for financial accountability.



Constitutional Aspects:

- The 73rd Constitutional Amendment Act, 1992 inserted Part IX, comprising Articles 243–243O, and added the Eleventh Schedule, which contains 29 subjects that may be devolved to Panchayats.
- Article 40, a Directive Principle of State Policy, directs the State to organise village Panchayats as units of self-government. Article 243G enables State Legislatures to devolve powers and responsibilities to Panchayats for economic development and social justice.
- Article 243I provides for State Finance Commissions to review Panchayat finances, while Article 280(3)(bb) concerns Union

Finance Commission recommendations for supplementing Panchayat resources.

- Article 243ZD provides for District Planning Committees to consolidate plans prepared by Panchayats and Municipalities. Thus, PM-VGSY can strengthen decentralised governance, although effective devolution depends substantially on State laws and administrative arrangements.

Significance of the scheme:

- The scheme can deepen democratic decentralisation by bringing decision-making closer to citizens and promoting cooperative federalism through coordination among Central, State and local governments. Integrated planning can improve rural service delivery and reduce duplication of development expenditure.
- Digital accounting and online audits can strengthen transparency, while capacity building can improve the ability of Panchayats to utilise public funds effectively. The scheme can also support the localisation of Sustainable Development Goals through village-level initiatives in sanitation, health, education, livelihoods and environmental sustainability.

Conclusion:

PM-VGSY can help bridge the gap between constitutional recognition and effective grassroots self-government. Empowered Panchayats, transparent finances, participatory planning and genuine decentralisation are essential for inclusive rural development and the broader vision of Viksit Bharat.

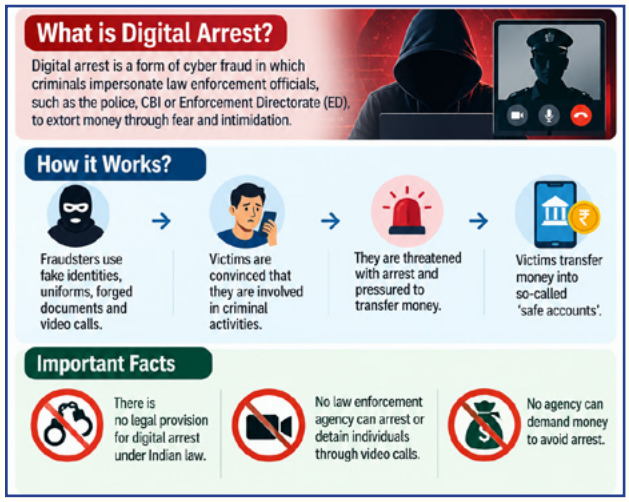
Supreme Court on Digital Arrest Fraud Compensation

Context:

Recently, 2026, the Supreme Court urged the Reserve Bank of India (RBI) to ensure that financial institutions fully compensate victims of digital arrest scams if institutional negligence or failure to exercise due diligence contributed to the fraud. The Court emphasised the need for stronger banking safeguards, accountability and regulatory mechanisms to combat rising cyber financial crimes.

What is Digital Arrest?

- Digital arrest is a form of cyber fraud in which criminals impersonate law enforcement officials, such as the police, CBI or Enforcement Directorate (ED), to extort money through fear and intimidation.
- Fraudsters use fake identities, uniforms, forged documents and video calls to convince victims that they are involved in criminal activities.
- Victims are threatened with arrest and forced to transfer money into so-called safe accounts.
- There is no legal provision for digital arrest under Indian law. No law enforcement agency can arrest or detain individuals through video calls or demand money to avoid arrest.



Key Observations of the Supreme Court:

The Bench, headed by Chief Justice of India Surya Kant, made several important observations:

- **Financial Accountability:** Banks and financial institutions should compensate victims fully if their failure to exercise due

diligence contributes to cyber fraud.

- **Suspicious Transactions:** Banks should identify unusual transactions that deviate from customers' normal transaction patterns and temporarily suspend them for verification.
- **Automated Alerts:** Suspicious transactions should trigger automated alerts to police authorities.
- **Physical Verification:** Appropriate physical verification should be conducted to establish the genuineness of suspicious transactions.
- **Regulatory Oversight:** The Court sought to examine the proposed RBI (KYC) Amendment Directions, 2026.
- **State Accountability:** States were directed to provide information regarding FIRs, investigations and prosecution in digital arrest cases.

Scale of Digital Arrest Fraud:

- More than Rs.800 crore was reportedly lost to digital arrest fraud during the current year.
- Losses from such frauds were approximately Rs.3,000 crore in the previous year.
- The government stated that digital arrest cases had declined by 50% compared to the previous year.
- More than 11 lakh requests for restoration of money had been received.

Institutional and Legal Measures:

Institution/ Mechanism	Role
Indian Cyber Crime Coordination Centre (I4C)	Coordinates cybercrime prevention and response.
RBI	Regulates financial institutions and banking safeguards.
CERT-In	Responds to cybersecurity incidents.
Helpline 1930	Reporting financial cyber fraud.
National Cyber Crime Portal	Online cybercrime complaint registration.

Major Challenges:

- Low digital and cyber awareness among citizens.
- Psychological manipulation and fear of arrest.
- Misuse of mule bank accounts for transferring stolen money.
- Weak institutional accountability and delayed financial recovery.
- Cross-border cybercrime networks and technological sophistication.

Way Forward:

- Strengthen RBI regulations and establish clear compensation mechanisms.
- Use AI-based systems to detect suspicious financial transactions.
- Improve KYC verification and monitoring of mule accounts.
- Strengthen coordination among banks, police and digital platforms.
- Promote cyber awareness through educational institutions and community programmes.
- Enhance international cooperation to tackle cross-border cybercrime.

Conclusion:

Digital arrest represents a serious challenge to India's digital transformation and financial security. The Supreme Court's intervention highlights that cybersecurity cannot remain the sole responsibility of citizens. Financial institutions, regulatory authorities and digital platforms must share accountability. A combination of technological safeguards, effective regulation, institutional responsibility and public awareness is essential to building a secure and trustworthy digital economy.



3 International Relations

India–New Zealand Free Trade Agreement (FTA): Expanding India's Economic and Strategic Presence in the Indo-Pacific Region

Context:

Recently, the Free Trade Agreement (FTA) between India and New Zealand came into force on 20 October 2026. The agreement was signed in New Delhi on 27 April 2026. It has the potential to provide a new direction to trade, investment, services, technology, and the movement of professionals between the two countries, while strengthening India's economic presence in the Indo-Pacific region. Under the agreement, the target is to double bilateral trade in goods and services to approximately NZD 7 billion (around Rs.35,000 crore) by 2030.

Background of the India–New Zealand FTA:

- India and New Zealand have shared long-standing trade and diplomatic relations. However, geographical distance, limited trade diversification, and market-related barriers have prevented the two countries from fully utilising the economic potential of their relationship.
- Negotiations for this agreement began in March 2025. After five formal rounds of negotiations and several other meetings, the negotiations were concluded on 22 December 2025. Subsequently, the agreement was signed on 27 April 2026 and came into force on 20 October 2026 after completing the necessary domestic procedures in both countries.
- The agreement is not limited to the import and export of goods; it also covers areas such as investment, services, the digital economy, agricultural productivity, traditional medicine, and technological cooperation.

Key Features of the Agreement:

- **Market Access and Tariff Liberalisation:** The most significant feature of this agreement is the provision of extensive duty-free access to Indian exports in the New Zealand market.
  - » New Zealand has provided zero-tariff access to 100% of Indian exports from the date the agreement came into force.
  - » India has offered tariff liberalisation on approximately 70.03% of its tariff lines, which will benefit nearly 95% of New Zealand's exports in terms of trade value.
  - » Sectors such as textiles, apparel, leather, footwear, gems and jewellery, engineering products, and processed food products from India are likely to benefit.
  - » Tariff concessions on industrial raw materials such as wood logs, coking coal, and metal waste and scrap may reduce production costs for India's manufacturing sector.
- **Protection of Sensitive Agricultural Sectors:** Along with trade liberalisation, India has also taken into account the need to protect the interests of its farmers and domestic

producers.

- » India has excluded dairy products such as milk, cheese, cream, curd, and whey from tariff concessions.
- » Onion, sugar, spices, edible oils, and several other sensitive agricultural products have also been protected.
- » Provisions such as Tariff Rate Quotas (TRQs), minimum import prices, and seasonal import arrangements have been introduced for New Zealand's apples, kiwifruit, and Manuka honey.
- » This provides India with an opportunity to expand trade cooperation in selected sectors while safeguarding domestic agricultural interests.



- **Investment Commitment:** New Zealand has committed to facilitating investments worth USD 20 billion in India over the next 15 years. The potential areas of investment include:
  - » Manufacturing and industrial development.
  - » Agriculture and food processing.
  - » Infrastructure and logistics.
  - » Renewable energy.
  - » Startups and emerging technologies.
  - » Digital services and innovation.
- **Services Sector and Movement of Professionals:** Under the agreement, New Zealand has provided India with market access in approximately 118 services sub-sectors. Additionally, commitments related to Most-Favoured-Nation (MFN) treatment have been included in approximately 139 sub-sectors. The key provisions include:
  - » Provision of 5,000 Temporary Employment Entry Visas for skilled Indian professionals.
  - » 1,000 Working Holiday Visas annually for young Indians.
  - » Post-study work opportunities of up to three years for graduates and postgraduates in STEM subjects.
  - » Post-study work opportunities of up to four years for students holding doctoral degrees.
  - » Opportunity for eligible international students to work up to 20 hours per week during their studies.
  - » These provisions may create opportunities for India's IT, engineering, healthcare, tourism, and professional services sectors to expand in

international markets.

- **Cooperation in Pharmaceuticals and Healthcare:**
  - » Under this agreement, efforts have been made to facilitate easier market access for Indian pharmaceutical and medical device exporters in New Zealand.
  - » The arrangement to recognise inspection approvals from trusted regulatory authorities such as the US Food and Drug Administration (FDA), European Medicines Agency (EMA), the UK's Medicines and Healthcare products Regulatory Agency (MHRA), and Canada's health authorities may reduce the need for repeated inspections and shorten the time required for market entry.
  - » Additionally, cooperation in Ayurveda, Yoga, naturopathy, and other traditional healthcare systems will be promoted. This may help expand India's AYUSH sector and medical tourism at the international level.
- **Agricultural Productivity Partnership:**
  - » An Agriculture Productivity Partnership (APP) has been established under the agreement.
  - » Its objective is not limited to increasing agricultural trade but also includes improving the productivity, quality, and income of Indian farmers.
  - » Under this partnership, specific action plans have been developed for apples, kiwifruit, and honey. Additionally, provisions have been made for establishing Centres of Excellence to promote horticultural management, post-harvest management, storage, food safety, and supply chain development.
- **Cooperation in the Digital Economy and Payment Systems:**
  - » The agreement also focuses on promoting fintech, digital payments, and interoperability between payment systems.
  - » Cooperation towards linking India's UPI system with New Zealand's payment system may facilitate digital transactions, tourism, trade, and financial services between the two countries.

Economic Significance of the Agreement for India:

- **Increased Export Competitiveness:** Zero tariffs will provide Indian products with a competitive advantage in the New Zealand market. This will create new opportunities for labour-intensive industries and exporters.
- **Promotion of the MSME Sector:** Small and medium enterprises will get opportunities to access new markets, develop trade networks, and integrate into global value chains. This may promote employment generation and local entrepreneurship.
- **Foreign Investment and Technology Transfer:** Potential investments and technological cooperation from New Zealand may enhance the productive capacity of India's manufacturing, agriculture, energy, and infrastructure sectors.
- **International Expansion of the Services Sector:** New opportunities will become available for Indian companies and professionals in IT, healthcare, education, tourism, and professional services.
- **Diversification of Export Markets:** Strengthening trade relations with developed countries may help India reduce its dependence on a few traditional markets.

Strategic and Geopolitical Significance:

The significance of the India–New Zealand FTA extends beyond economic relations and is also linked to the geopolitics of the Indo-Pacific region.

- **India's Presence in the Indo-Pacific Region:** Strengthening economic relations with New Zealand will provide India with an opportunity to expand its economic and diplomatic presence in Oceania and the wider Indo-Pacific region.
- **Development of Regional Supply Chains:** Amid global trade uncertainties and supply chain-related challenges, this agreement may help develop alternative trade

partnerships.

- **Competition with China:** China already enjoys preferential trade access to the New Zealand market. In this context, duty-free access for Indian products may provide Indian exporters with a more level playing field.
- **Regional Economic Integration:** India decided to withdraw from the Regional Comprehensive Economic Partnership (RCEP) in 2019. Since then, it has pursued a strategy of connecting with regional markets through bilateral Free Trade Agreements. The agreement with New Zealand is an important step in this direction.

Major Challenges Associated with the Agreement:

The benefits of this agreement will not materialise automatically. Certain challenges need to be addressed for its effective implementation.

- **Non-Tariff Barriers:** Quality standards, certification requirements, food safety regulations, and technical rules may continue to pose challenges for Indian exporters.
- **Limited Market Size:** New Zealand has a relatively small population and domestic market. Therefore, identifying new products and services will be essential for export growth.
- **Implementation of Investment Commitments:** The USD 20 billion investment commitment needs to be translated into actual projects, employment generation, and technology transfer.
- **Limited Capacity of MSMEs:** Small enterprises may face a lack of access to international quality standards, finance, and export-related information.
- **Competition in the Agricultural Sector:** Effective monitoring of imports and implementation of prescribed safeguard provisions will be necessary.
- **Logistics Costs:** Due to the geographical distance between the two countries, transportation, storage, and supply chain costs may affect competitiveness.

Way Forward:

To maximise the benefits of this agreement, India should focus particularly on export-oriented manufacturing, quality improvement, and capacity building of MSMEs. The following measures will be important in this regard:

- Providing Indian exporters with information about market demand, quality standards, and regulatory procedures in New Zealand.
- Expanding export finance, technical training, and digital trade facilities for MSMEs.
- Strengthening storage, cold chain, and food processing infrastructure for agricultural products.
- Regularly reviewing investment commitments and monitoring the implementation of projects.
- Translating cooperation in UPI, fintech, AYUSH, education, and digital services into practical projects.
- Promoting the branding of Indian products and the international marketing of Geographical Indication (GI) products.

Conclusion:

The India–New Zealand Free Trade Agreement is an important example of India's evolving trade policy, which integrates market access, investment, services, and technological cooperation. This agreement is not merely a means of reducing customs duties but also an opportunity to strengthen India's export capacity, employment generation, and economic partnerships in the Indo-Pacific region. However, its actual success will be determined not merely by trade concessions or investment-related announcements but by their effective implementation. If India succeeds in enhancing the competitiveness of its MSME, agriculture, manufacturing, and services sectors, this agreement can play an important role in advancing the goal of Viksit Bharat @2047 and strengthening India's participation in global value chains.

US Ends Military Mission in Iraq After 12 Years

Context:

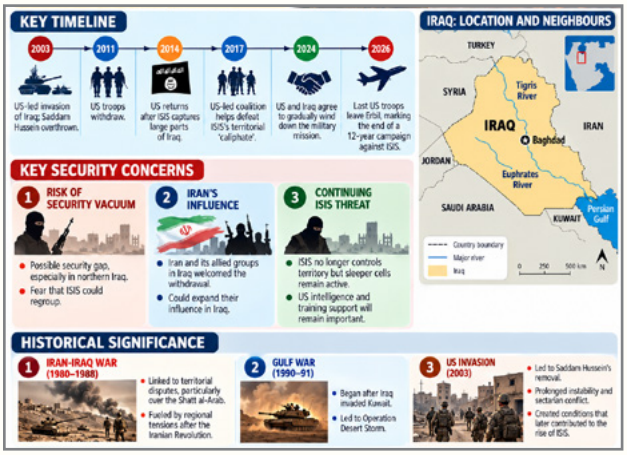
Recently, The United States has formally ended its military mission in Iraq, with the Pentagon announcing on 30 September 2026 that the last US troops and equipment had left an air base in Erbil, in Iraq's semi-autonomous Kurdish region. The Pentagon described the withdrawal as an "orderly departure", marking the end of a 12-year campaign against the Islamic State (ISIS).

Background:

- The US-led invasion of Iraq began in 2003, resulting in the overthrow of Saddam Hussein. US troops initially withdrew in 2011 but returned in 2014 after ISIS captured large parts of Iraq.
- The US-led coalition helped Iraqi forces defeat ISIS's territorial "caliphate" by 2017. Since then, ISIS has largely operated through scattered sleeper cells.
- In 2024, Washington and Baghdad agreed to gradually wind down the US-led military mission. Most US troops had already left Iraqi bases, with only a few hundred remaining in the Kurdish north.

Security Concerns:

- **Risk of Security Vacuum:** The withdrawal has raised concerns about a possible security gap, particularly in northern Iraq. There are fears that ISIS could regroup and Iran-backed militias could expand their influence.
- **Iran's Influence:** Iran and armed groups it supports in Iraq welcomed the US withdrawal. The development is particularly significant because the US is currently at war with Iran, while Iran-backed militias in Iraq have attacked US forces.
- **Continuing ISIS Threat:** Although ISIS no longer controls territory, its sleeper cells remain a security concern. Continued US intelligence and training assistance will therefore remain important.



Significance for India:

- India has major interests in a stable West Asia due to:
  - » Energy security and crude oil imports.
  - » Safety of the Indian diaspora.
  - » Trade and investment with the region.
  - » Counter-terrorism cooperation.
  - » Regional connectivity initiatives such as IMEC.
- Instability in Iraq could affect oil prices, shipping routes, diaspora security and India's economic interests.

Geography of Iraq:

- Iraq is strategically located in West Asia, with Baghdad situated on the Tigris River. It borders Turkey, Iran, Syria, Jordan, Saudi Arabia and Kuwait and has a short coastline on the Persian Gulf.
- The Tigris and Euphrates are its major rivers and merge to form the Shatt al-Arab, making the region important for water resources and geopolitics.

Historical Significance:

- **Iran-Iraq War (1980–1988):** Linked to territorial disputes, particularly over the Shatt al-Arab, and regional tensions following the Iranian Revolution.
- **Gulf War (1990–91):** Began after Iraq

invaded Kuwait and led to Operation Desert Storm.

- **US Invasion (2003):** Led to Saddam Hussein's removal, prolonged instability and sectarian conflict, creating conditions that later contributed to the rise of ISIS.

Conclusion:

The US withdrawal marks a shift from a coalition-led military mission to Iraqi-led security. Its success will depend on Iraq's ability to prevent an ISIS resurgence, manage armed militias and maintain a balance among competing regional powers.

India–Switzerland Bilateral Relations

Context:

Recently, India and Switzerland agreed to broaden bilateral cooperation into defence production, military exchanges and civil nuclear energy during Swiss President Guy Parmelin's state visit to New Delhi. The visit also marked the first anniversary of the India–EFTA Trade and Economic Partnership Agreement (TEPA).

Outcomes of Recent Meeting:

- Greater cooperation in defence production and military exchanges.
- Expansion of civil nuclear cooperation.
- Migration and Mobility Partnership to facilitate legal migration and professional mobility.
- Young Professionals Scheme for skilled youth exchanges.
- Cooperation in tunnelling, ropeways and electric mobility.
- Joint research in health, clean energy and space.
- Support for deep-tech startups and academia-industry collaboration.
- Greater coordination on ethical AI governance.

About India–Switzerland Relations:

- India–Switzerland relations are a multifaceted partnership based on democratic values, rule of law and mutual economic interests.
- Switzerland contributes capital, precision engineering and technology, while India offers a large market, manufacturing capabilities and skilled human resources.
- **Historical Evolution:**
  - » **1948 Friendship Treaty:** Diplomatic relations were established on 14 August 1948.
  - » **Industrial cooperation:** Swiss technology contributed to India's industrial modernisation, including early railway and engineering projects.
  - » **Financial transparency:** Concerns over banking secrecy gradually shifted towards cooperation against tax evasion. The Automatic Exchange of Information (AEOI) became operational in 2018.
  - » **Innovation and trade:** Platforms such as Swissnex Bengaluru strengthened scientific cooperation, followed by the signing of India–EFTA TEPA in 2024.



Current Trade and Investment:

- Switzerland is an important economic partner, with bilateral trade of around $19.55 billion in FY 2024–25. However, trade is significantly skewed towards Switzerland, partly because of India's substantial gold bullion imports.
- India exports pharmaceuticals, organic chemicals and engineering products, while Swiss exports include gold, machinery, chemicals and pharmaceuticals.
- Switzerland is also a major FDI source, with about $10.87 billion invested during 2000–2025 and over 330 Swiss companies operating in India, including ABB, Schindler and Nestlé.

Key Challenges:

- Bilateral Investment Treaty (BIT) Impasse: Differences persist over Investor-State Dispute Settlement (ISDS). Switzerland favours international arbitration, whereas India's Model BIT gives greater importance to exhausting domestic remedies.
- Pharmaceutical IPR: Swiss pharmaceutical interests seek stronger intellectual-property protection, while India seeks to safeguard affordable generic medicines and public-health concerns.
- Defence Export Neutrality: Switzerland's neutrality and war-material regulations can restrict defence exports, technology transfers and re-exports.
- Talent Mobility: Existing mobility pathways need to better reflect India's large pool of skilled professionals.

Conclusion:

India–Switzerland relations are transitioning from traditional banking and trade cooperation towards technology, talent, innovation and strategic partnership. Strengthening this relationship can support India's goals of technological advancement, resilient supply chains, sustainable infrastructure and high-quality employment.

US Suspension of Indian IT Firms from PERM Programme

Context:

On October 8, 2026, the US administration announced the suspension of eight major technology and IT services companies from the Permanent Labour Certification Programme (PERM), citing alleged visa fraud and concerns about adverse effects on employment opportunities for American workers. These companies include Tata Consultancy Services (TCS), Infosys, Wipro, HCL, Cognizant, Capgemini, Microsoft, and Adobe. This move could affect the process of obtaining Green Cards through these companies.

What is the PERM Programme?

- PERM stands for Program Electronic Review Management. It is a process administered by the US Department of Labor, under which an employer must obtain labour certification before sponsoring a foreign employee for an employment-based Green Card.
- Under this process, the employer is generally required to demonstrate that there are not sufficient qualified, willing, and available US workers for the relevant position and that employing a foreign worker will not adversely affect the wages and working conditions of US workers.
- A Green Card grants permanent residency and the right to work in the United States, whereas an H-1B visa allows foreign professionals to work temporarily in speciality occupations. Suspension from the PERM programme does not automatically mean the cancellation of H-1B visas or Green Cards that have already been granted.

Major Reasons Behind the US Administration's Action:

- According to the US administration, the employment of foreign workers by certain companies has affected employment opportunities for American citizens.

The Department of Labor has cited investigations into alleged fraud, wage-related irregularities, and the potential misuse of immigration programmes.

- US officials claimed that, since 2009, the companies concerned had filed requests involving approximately 3 million foreign workers and had received more than 230,000 H-1B visa approvals and over 100,000 permanent labour certifications.
- However, these figures and allegations have been presented by the administration. They should not be treated as proof of established fraud by the companies concerned.



Impact of the Action:

- The most direct impact of this decision may be on Indian professionals whose Green Card applications are being processed through the affected companies.
  - » **Delay in Permanent Residency:** The suspension of new PERM filings and the interruption of application processing may delay the acquisition of Green Cards.
  - » **Career-Related Uncertainty:** Prolonged delays in obtaining permanent residency may affect employees' ability to change jobs, live with their families, and plan their long-term careers.
  - » **Changes in Talent Migration Patterns:** Some professionals may explore opportunities in India or other countries.
  - » **Increase in Corporate Costs:** Companies may incur higher expenditure on legal compliance, employee retention, and alternative human resource strategies.
- However, the impact will depend on each employee's immigration status and the stage of their application.

Impact on India-US Relations:

- Information technology, trade, investment, and the mobility of skilled professionals are important areas of cooperation between India and the United States. Indian IT companies provide American businesses with services such as software development, digital transformation, cybersecurity, and technical consulting.
- Stricter immigration policies may put pressure on the operations of Indian companies and the mobility of their professionals. On the other hand, the United States argues that protecting domestic workers' interests and ensuring compliance with immigration regulations are essential. Therefore, both countries need to maintain a balance between workers' rights, fair competition, and commercial cooperation.

Way Forward:

India should focus on the following measures:

- **Strengthening the Domestic IT Sector:** Increase investment in areas such as artificial intelligence, semiconductors, cloud computing, and cybersecurity.
- **Diversification of Export Markets:** Expand IT services in Europe, Japan, South Korea, Australia, and Southeast Asia.
- **Skill Development:** Train Indian youth in emerging technologies and in accordance with global certification standards.
- **Diplomatic Dialogue:** Promote institutional dialogue between India and the United States on issues related to professional mobility and immigration procedures.
- **Strengthening Compliance Mechanisms:**

Indian companies should ensure strict compliance with US labour laws, wage standards, and immigration regulations.

Conclusion:

The US suspension from the PERM programme reflects growing tensions between global labour mobility, domestic employment protection, and technological competition. For India, this challenge also presents an opportunity to strengthen domestic technological capabilities while safeguarding its IT exports, employment generation, and foreign-exchange earnings. In the long term, skill development, market diversification, and rules-based international cooperation can make India better equipped to respond to changing global immigration policies.

UNCTAD Trade and Development Report 2026

Context:

Recently, The United Nations Conference on Trade and Development (UNCTAD) released its Trade and Development Report 2026, highlighting the impact of geopolitical tensions, trade fragmentation and technological changes on the global economy. The report also draws attention to the growing concentration of strategic investments in developed regions.

Key Findings of the Report:

- **Global economic slowdown:** Global GDP growth is projected at 2.6% in 2026, compared with 2.9% in 2025.
- **Trade growth:** Global trade in goods and services reached a record value of approximately $35 trillion in 2025.
- **Geoeconomic fragmentation:** Trade policies are increasingly influenced by national security, strategic competition and geopolitical alliances.
- **Unequal AI benefits:** The gains from artificial intelligence are concentrated among a limited number of countries and corporations.
- **Financial vulnerability:** High borrowing costs, debt burdens and energy-price shocks disproportionately affect developing economies.

What is Geoeconomics?

- Geoeconomics refers to the use of economic instruments, such as tariffs, export controls, investment restrictions and subsidies, to achieve geopolitical objectives. It is reshaping global supply chains and international economic relations.



India's Position in Global Greenfield Investment:

- According to the investment findings cited in the report, India accounted for 5.7% of global greenfield investments during 2020–2025, compared with China's 2.8%, Malaysia's 4% and Indonesia's 3.8%.
- Greenfield investment refers to establishing a new business operation or facility in another country.
- Strategic sectors increased their share of global greenfield investment from 16% in 2020 to 44% in 2025. AI infrastructure and related technologies, semiconductors, and energy-transition technologies attracted significant investment.

- However, strategic investment remains concentrated in Europe and North America, highlighting the challenges faced by developing countries in accessing capital and advanced technologies.

Major Challenges:

- **Trade fragmentation:** Tariffs, export restrictions and geopolitical tensions disrupt global supply chains.
- **Technology divide:** Developing countries face limited access to advanced technologies, research and skilled workers.
- **Investment concentration:** Capital is concentrated in economies with strong infrastructure and established industrial ecosystems.
- **Financial constraints:** High borrowing costs and debt burdens restrict development expenditure.
- **Unequal development:** Least developed countries risk remaining excluded from high-value global production networks.

Significance for India:

- India can benefit through manufacturing expansion, employment generation, technology transfer, export growth and reduced dependence on imported strategic goods. Initiatives such as Make in India, Production Linked Incentive schemes, the India Semiconductor Mission and the National Green Hydrogen Mission can support these objectives.
- Nevertheless, attracting investment must be accompanied by domestic value addition, skill development and stronger research capabilities.

Way Forward:

- Improve infrastructure, logistics and ease of doing business.
- Promote research and development and advanced manufacturing.
- Strengthen MSMEs and integrate them into global value chains.
- Develop industry-oriented skills and technical education.
- Maintain predictable investment policies.
- Enhance regional cooperation and sustainable industrial development.

Conclusion:

The UNCTAD report highlights how geopolitics is reshaping global trade, investment and development. India should leverage its investment potential to build resilient supply chains, strengthen technological self-reliance and promote inclusive economic growth.

India–Canada Relations

Context:

Recently, Canadian Foreign Minister Anita Anand's meetings with Prime Minister Narendra Modi and External Affairs Minister S. Jaishankar highlighted efforts to rebuild India–Canada relations. The discussions focused on trade, energy, defence, security, technology and people-to-people ties. The engagement reflects a diplomatic and economic reset following tensions in 2023–2024, with both countries seeking to restore dialogue and expand cooperation.

Background and Historical relations:

- India and Canada established diplomatic relations in 1947, with early ties shaped by Commonwealth links and Canadian development assistance. However, relations deteriorated after India's 1974 nuclear test, Smiling Buddha, prompting Canada to halt nuclear cooperation in 1976.
- The 1985 bombing of Air India Flight 182 by Sikh extremists further heightened security concerns. Following India's economic liberalisation in the 1990s, bilateral engagement expanded through trade, investment and technology cooperation. In 2015, the two countries elevated their relationship to a Strategic Partnership.
- Relations faced a major setback in 2023–2024 following Canadian allegations concerning the killing of Hardeep Singh Nijjar, which India rejected. Diplomatic expulsions

and restrictions deepened tensions and weakened bilateral engagement.
- Despite these differences, both countries have sought to rebuild ties through dialogue and cooperation in trade, technology, energy, and security.

Major Areas of Cooperation:

- **Civil nuclear energy:** India and Canada have pursued uranium cooperation. A reported long-term Cameco contract worth approximately US$2.6 billion for uranium ore concentrates, covering 2027–2035, could support India's nuclear energy programme and low-carbon electricity goals.
- **Trade and economy:** Both countries are seeking to expand bilateral trade, with a reported target of US$50 billion by 2030. The proposed Comprehensive Economic Partnership Agreement (CEPA) could reduce trade barriers and promote investment.
- **Critical minerals and clean energy:** Cooperation can strengthen critical mineral supply chains, energy storage and renewable energy. Canada's participation in initiatives such as the International Solar Alliance and Global Biofuels Alliance can create further opportunities.
- **Defence and security:** Institutional dialogue, maritime cooperation and counterterrorism engagement can address shared security concerns.
- **Diaspora and education:** More than 1.8 million Canadians of Indian origin contribute to cultural, commercial and social ties. Education and skilled-worker mobility have also been important components of the relationship.

Major Challenges:

- **Khalistani extremism:** India has expressed concerns about pro-Khalistan separatist activities on Canadian soil.
- **Diplomatic tensions:** Canadian allegations concerning the Nijjar killing led to serious diplomatic friction, including diplomatic expulsions. India rejected the allegations.
- **Trade barriers:** Differences over agricultural products, including pulses, and investment and intellectual-property rules complicate economic negotiations.
- **Trust deficit:** Security disagreements and divergent interpretations of sovereignty and freedom of expression hinder cooperation.

Way Forward:

- Revive regular high-level diplomatic consultations.
- Advance CEPA negotiations and address non-tariff barriers.
- Strengthen cooperation against terrorism through evidence-based law-enforcement mechanisms and due process.
- Expand collaboration in nuclear energy, critical minerals, artificial intelligence and clean technology.
- Protect diaspora interests while respecting the sovereignty and laws of both countries.

Conclusion:

India–Canada relations demonstrate the complexity of partnerships between democracies with strong societal links but differing security concerns. Sustained dialogue, economic interdependence and mutual respect can help transform the 2026 diplomatic reset into a durable strategic partnership.

France Protests and Economic Crisis

Context:

Recently, France is witnessing widespread protests over the rising cost of living, deteriorating public services and economic difficulties. The crisis has intensified pressure on President Emmanuel Macron's government amid political fragmentation and the approaching 2027 presidential election.

Major Economic Problems of France:

- **High Fiscal Deficit and Public Debt:** France's fiscal deficit stood at 5.1% of GDP in 2025,

while public debt reached 115.5% of GDP. Persistent expenditure exceeding revenue forces the government to borrow, increasing interest payments and reducing funds available for public services.

- **Slow Economic Growth:** France's average economic growth has been around 1.4% since 2023. Modest growth limits tax revenue generation and makes debt reduction more difficult.
- **Rising Pension Expenditure:** France has an ageing population, with people living longer and pension obligations increasing. The government's proposal to raise the retirement age from 62 to 64 has faced strong opposition. Higher pension expenditure also puts pressure on spending on education, healthcare and infrastructure.
- **Cost-of-Living Crisis:** Rising living expenses and concerns over declining public-service quality have increased public dissatisfaction, particularly among students and workers. Economic growth does not necessarily translate into improved living standards for all citizens.



Political Dimensions of the Crisis:

- Political polarisation between the far right, the left and centrist forces has complicated fiscal reforms.
- A fragmented Parliament makes it difficult to build consensus on taxation, pension reform and expenditure cuts. Consequently, political instability increases economic uncertainty and may discourage private investment.

Why Can France Not Borrow Indefinitely?

- Higher public debt can increase borrowing costs as investors demand greater returns to compensate for perceived risks. Rising interest payments reduce fiscal space and may crowd out productive expenditure.
- Moreover, as a member of the euro area, France cannot independently issue its own currency; monetary policy is conducted by the European Central Bank.

Impact on the European Union:

- France's economic difficulties may affect eurozone financial stability, investor confidence and compliance with EU fiscal rules. They also highlight tensions between national fiscal autonomy and shared monetary policy.

India's Perspective:

- India and France established a strategic partnership in 1998. Their relationship was upgraded to a Special Global Strategic Partnership in February 2026. Cooperation covers defence, nuclear energy, space, technology and the Indo-Pacific.
  - » **Defence cooperation:** France is a major supplier of defence equipment, including Rafale aircraft. Any crises in France may have far greater effect on India's safety and security.
  - » **Civil nuclear energy:** Cooperation, including the proposed Jaitapur nuclear power project, supports India's energy security and low-carbon development. Any effects of French fiscal constraints on project costs or timelines require project-specific evidence.
  - » **Trade, investment and technology:** Economic uncertainty may influence business decisions and investment. India should encourage technology

transfer, domestic value addition and diversified economic partnerships.

» **Indo-Pacific and strategic autonomy:** France is an important partner in maritime security and India's pursuit of a multipolar international order. Its stability matters for sustained bilateral cooperation.

Lessons for India:

- **Fiscal discipline:** Maintain a credible medium-term fiscal consolidation path.
- **Welfare reforms:** Improve expenditure efficiency without weakening essential social protection.
- **Pension sustainability:** Prepare for population ageing and strengthen long-term pension financing.
- **Democratic consultation:** Communicate reforms transparently and consult stakeholders.
- **Economic resilience:** Expand manufacturing, employment, productivity and the tax base.

Pakistan, Türkiye, Qatar and Indonesia Sign Badr Defence Accord

Context:

Recently, Pakistan, Türkiye, Qatar and Indonesia signed the Badr Memorandum of Understanding (MoU) in Doha, Qatar, to strengthen defence cooperation and enhance their defensive capabilities.

Background of the Badr MoU:

- The agreement comes amid escalating tensions in the Gulf region and concerns over a possible renewed confrontation between the United States and Iran.
- It also follows the Makkah Joint Defence Agreement, signed by Pakistan, Saudi Arabia and Türkiye in August 2026, under which an attack against one participating country would be treated as an attack against all three.
- The Badr MoU appears to focus on defence-industrial cooperation rather than establishing an automatic collective-defence obligation. Its name reportedly refers to the Battle of Badr, the first major military engagement between early Muslims and the tribes of Makkah.

Key Features of the Agreement:

- The agreement aims to promote cooperation in defence manufacturing, strengthen military capabilities, and expand technical training, research and development (R&D).
- It seeks to combine the four countries' industrial and technological strengths to develop modern defence solutions.
- The agreement also has economic significance, as joint production and technology cooperation could strengthen domestic defence industries, create employment and improve the participating countries' ability to meet the requirements of allied and friendly nations.



Strategic Significance:

- The MoU reflects a broader trend towards diversified defence partnerships and greater indigenous military production. Türkiye has developed capabilities in drones, naval platforms and armoured vehicles, while Pakistan has pursued defence manufacturing through international partnerships.
- Qatar has invested in defence cooperation,

and Indonesia seeks technology transfer and domestic industrial development. However, the agreement should not automatically be interpreted as an anti-India alliance or a unified military bloc.

Implications for India:

- For India, the agreement warrants attention because enhanced defence-industrial cooperation involving Pakistan could influence regional security dynamics.
- India should strengthen indigenous defence manufacturing under Aatmanirbhar Bharat, expand defence exports and deepen strategic partnerships with Gulf and Southeast Asian countries. Diplomatic engagement and careful assessment of the agreement's actual implementation remain essential.

Challenges:

- Differences in national interests, technology-sharing restrictions, financing, intellectual-property rights and export controls could hinder implementation. The agreement's practical significance will depend on concrete projects and sustained cooperation.

Conclusion:

The Badr MoU highlights the growing importance of defence-industrial partnerships in an uncertain geopolitical environment. Its implications will depend on how effectively the four countries translate the agreement into joint production, technology development and stronger defence capabilities.

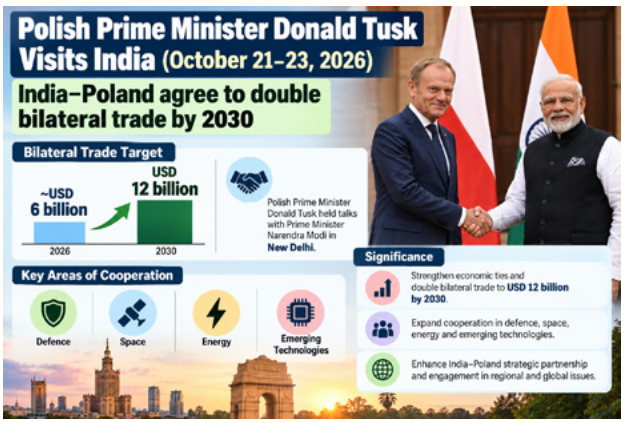
India-Poland Strategic Partnership: Vision 2030

Context:

Recently, Polish Prime Minister Donald Tusk visited India from October 21–23, 2026. During this visit, he held talks with Prime Minister Narendra Modi in New Delhi. The two leaders agreed to double bilateral trade from approximately USD 6 billion to USD 12 billion by 2030, while expanding cooperation in defence, space, energy and emerging technologies.

Background:

- India and Poland established diplomatic relations in 1954. Their relationship was elevated to a Strategic Partnership in August 2024, during PM Modi's visit to Warsaw.
- Poland is an important economic partner for India in Central and Eastern Europe, while India offers Poland access to a large market and expanding Asian opportunities.



Major Outcomes of the 2026 Summit:

- **Trade and Investment:** Both countries committed to doubling bilateral trade by 2030. They called for the early implementation of the India–European Union Free Trade Agreement (FTA) to unlock opportunities for businesses, investment and market access.
- **Defence Cooperation:** The leaders agreed to strengthen defence industrial cooperation through a proposed Defence Industry Dialogue, promoting technology partnerships, joint development and co-production. An agreement on the mutual protection and exchange of classified information remains important for advancing sensitive defence collaboration.
- **Technology and Innovation:** Cooperation will expand in artificial intelligence (AI),

semiconductors, cybersecurity, digitisation and space technology. The two countries also agreed to establish the India–Poland Startup Bridge and organise technology hackathons.

- **Energy and Critical Minerals:** Both sides identified opportunities in nuclear energy, renewable energy, coal gasification, battery recycling, rare-earth processing and mining.
- **Connectivity and Supply Chains:** The leaders supported exploring additional direct flights and cooperation in shipping, ports and resilient supply chains, including opportunities linked to the India–Middle East–Europe Economic Corridor (IMEC).
- **Multilateral Cooperation:** Poland reiterated support for India's candidature for a non-permanent UN Security Council seat for 2028–29 and permanent membership in a reformed Council. Both countries also discussed terrorism and the Russia–Ukraine conflict.

Significance for India:

- **Economic diversification:** Stronger links with Poland can diversify supply chains and expand access to European markets.
- **Defence indigenisation:** Cooperation in maintenance, repair and manufacturing can support Atmanirbhar Bharat.
- **Diplomatic outreach:** Polish support can strengthen India's engagement with European institutions and multilateral forums.

Challenges Ahead:

- **Security sensitivities:** Poland's concerns over India-Russia defence ties and India's sensitivities regarding Poland-Pakistan defence relations complicate defence cooperation.
- **Logistical constraints:** Connectivity and transport costs may limit trade expansion.
- **Geopolitical differences:** Both countries have different immediate security priorities.

Way Forward:

- India and Poland should move beyond buyer-seller relations towards joint production, research and innovation. Finalising the classified-information agreement, advancing the India-EU FTA, improving logistics and expanding academic-industrial exchanges will be crucial to achieving the 2030 trade target and strengthening their strategic partnership.

Conclusion:

The 2026 summit reinforces India–Poland relations as an important dimension of India's European outreach, economic diplomacy and strategic diversification. Converting political convergence into sustained economic and technological cooperation will determine the partnership's long-term success.

UN Climate Loss and Damage Fund Earmarks $20 Million for Nepal

Context:

Recently, The United Nations' Fund for Responding to Loss and Damage (FRLD) has agreed to earmark $20 million for Nepal following devastating floods in August 2026. The decision marks a significant milestone in international climate finance, as the Fund has set aside resources specifically in response to a sudden-onset disaster for the first time. However, Nepal must submit a formal project proposal before the money can be disbursed.

Background:

- On 26 August 2026, severe flooding in Nepal's Bhotekoshi–Trishuli region followed an ice-and-rock avalanche in the Himalayan border region near Tibet, China.
- The disaster affected approximately 60,000 people across 15,000 households.
- Official reports indicated more than 1,400 deaths, with thousands still missing.
- Estimated direct economic losses reached approximately $2.7 billion, while recovery and reconstruction requirements could

exceed $4.7 billion.

- The disaster highlights the vulnerability of Himalayan communities to floods, glacial hazards and other climate-related risks.

What Is the Loss and Damage Fund?

- Established at COP27 in 2022 and operationalised at COP28 in 2023, the FRLD supports developing countries facing the economic and non-economic consequences of climate change that cannot be avoided through mitigation or adaptation alone.
- Its key objectives include:
  - » Supporting recovery and reconstruction after climate-related disasters.
  - » Addressing both economic losses, such as damaged infrastructure, and non-economic losses, such as loss of lives, cultural heritage and livelihoods.
  - » Strengthening climate justice by assisting vulnerable countries with limited resources to manage climate impacts. The Fund is hosted by the World Bank.



Significance of the Decision:

- **Climate justice:** Nepal contributes relatively little to global greenhouse gas emissions but faces severe climate risks, highlighting the principle of common but differentiated responsibilities and respective capabilities (CBDR-RC).
- **Institutional credibility:** The allocation demonstrates the Fund's potential to respond to sudden disasters rather than relying exclusively on lengthy project-based processes.
- **Support for vulnerable countries:** It provides an important precedent for least developed countries (LDCs), small island developing states (SIDS) and other climate-vulnerable nations.
- **Himalayan resilience:** The disaster underscores the need for early-warning systems, climate-resilient infrastructure and regional cooperation on glacial and flood risks.

Challenges and Concerns:

- **Inadequate financing:** The $20 million allocation represents less than 1% of Nepal's estimated disaster losses.
- **Delayed disbursement:** Earmarking funds does not mean immediate payment; Nepal must complete the required proposal and approval process.
- **Funding gap:** Pledges to the Fund remain insufficient compared with the scale of developing countries' needs.
- **Accountability:** Transparent allocation, effective utilisation and monitoring are essential to ensure assistance reaches affected communities.

Conclusion:

The Nepal allocation is an important step towards operationalising climate justice, but its limited scale exposes the gap between global commitments and actual needs. A well-funded, accessible and responsive Loss and Damage Fund is essential to ensure that vulnerable developing countries can recover from climate disasters without bearing a disproportionate economic burden.

4 Environment & Ecology

State of the World's Forests Report 2026: From Forest Restoration to Climate Security and Sustainable Development

Context:

Recently, the Food and Agriculture Organization (FAO) of the United Nations released its biennial report, The State of the World's Forests 2026. The theme of this year's report is "Restoring Forests and Landscapes: The Way Forward for a Sustainable Future." The report comes at a time when the world is facing interconnected challenges such as climate change, biodiversity loss, land degradation, and food insecurity. The central message of the report is that forest restoration is not merely a measure for environmental protection but also a long-term investment in economic stability, food security, and rural development.



Status of Global Forest Resources:

- The FAO's State of the World's Forests Report 2026 highlights the gap between the current status of global forest resources and the progress made in forest restoration. The major findings of the report are as follows:
  - » **Global Forest Area:** The world has approximately 4.14 billion hectares of forest area, accounting for about 32% of the Earth's total land area.
  - » **Carbon Storage:** The world's forests store approximately 714 gigatonnes of carbon, playing a significant role in mitigating climate change.
  - » **Biodiversity Conservation:** Forests provide habitats for a large proportion of terrestrial biodiversity and help maintain ecological balance.
  - » **Forest Restoration:** According to the report, approximately 206.5 million hectares of forest area are under restoration.
  - » **Forest Loss:** Since 1990, more than 489 million hectares of forest area have been lost worldwide.
  - » **Restoration Commitments:** Various global initiatives have made commitments to restore more than one billion hectares of

land, but significant challenges remain in their effective implementation.

- These figures clearly indicate that international commitments alone are insufficient for forest conservation and restoration. Greater attention must be given to effective implementation, adequate financing, local community participation, and scientific monitoring.

Need for Forest Restoration:

- **Mitigation of Climate Change:** Forests act as natural carbon sinks. They absorb carbon dioxide from the atmosphere and help limit the rise in global temperatures. Healthy forest ecosystems also regulate rainfall patterns, local temperatures, and water balance. However, considering tree planting alone as a climate solution is insufficient. The conservation of natural forests, restoration of degraded ecosystems, and long-term forest management are more important.
- **Biodiversity Conservation:** Forests are natural habitats for countless plant species, animals, and microorganisms. Forest fragmentation affects the movement, reproduction, and genetic diversity of species. Forest restoration can help maintain the continuity of wildlife corridors, preserve ecological balance, and promote the conservation of endangered species.
- **Food and Water Security:** Forests play an important role in maintaining soil fertility, groundwater recharge, and the conservation of watersheds. Promoting agroforestry, native tree species, and sustainable land management can make food production more resilient to climate-related risks. Thus, forest conservation and agricultural development are not conflicting objectives but complementary goals.
- **Rural Economy and Livelihoods:** Forest-based livelihoods are particularly important for tribal and rural communities. Minor forest produce, medicinal plants, honey, bamboo, and other forest products provide income and employment. Community-based restoration can generate environmental benefits while also promoting local economic empowerment.



Economic Significance of Forest Restoration:

- According to the Food and Agriculture Organization (FAO), restoring more than one billion hectares of degraded land could generate benefits worth approximately US$1.8 trillion annually. Under favourable conditions, every dollar invested in restoration could generate returns of up to US$30.
- This indicates that environmental protection should be viewed as an investment in natural capital rather than a burden on economic development. However, these are potential benefits, and actual outcomes will depend on local conditions, financing, and effective management.

Relevance for India:

- In India, forest conservation is linked not only to environmental security but also to livelihoods, tribal rights, and climate commitments.
- According to the India State of Forest Report 2023 published by the Forest Survey of India, the country's total forest and tree cover is approximately 25.17%. However,

an increase in forest cover alone cannot be considered complete evidence of ecological improvement. The quality of natural forests, species diversity, and ecosystem services must also be evaluated.

- India has promoted forest conservation through initiatives such as the Green India Mission, CAMPA, Joint Forest Management, and agroforestry. In addition, the Forest Rights Act, 2006, provides an important framework for recognising traditional rights over forest resources and promoting community participation.
- Nevertheless, developmental projects, mining, forest fires, and land-use changes continue to exert significant pressure on the Himalayas, the Western Ghats, central Indian forest regions, and arid ecosystems.

Major Challenges to Forest Restoration:

- **Lack of Financial Resources:** Restoration projects require long-term investment, whereas many programmes remain focused on short-term budgets and tree-planting targets.
- **Neglect of Ecological Quality:** Plantations of a single species may increase green cover, but they do not necessarily develop biodiversity comparable to that of natural forests.
- **Limited Participation of Local Communities:** Unclear land rights and the exclusion of communities from decision-making processes affect the long-term sustainability of restoration projects.
- **Conflict Between Development and Conservation:** Infrastructure development, industrialisation, and mining projects can increase the fragmentation of natural habitats.
- **Weak Monitoring Mechanisms:** Instead of measuring only the number of trees planted, it is necessary to assess their survival rates, carbon storage, and the restoration of biodiversity.

Way Forward:

- The FAO report presents four complementary strategies for implementing forest restoration on a large scale:
  - » **Empowerment of Communities:** The rights, traditional knowledge, and participation of tribal and local communities in decision-making must be ensured.
  - » **Landscape-Based Restoration:** Forests, agricultural land, water resources, and biodiversity should be restored through an integrated approach.
  - » **Long-Term Green Financing:** The use of public investment, private capital, payments for ecosystem services, and responsible carbon finance should be expanded.
  - » **Policy and Institutional Coordination:** Coordination among policies related to forests, agriculture, water, rural development, and climate change should be strengthened.
- India should develop region-specific restoration plans in line with these strategies. In addition, priority must be given to satellite-based monitoring, scientific assessment, and the participation of Gram Sabhas.

Conclusion:

The State of the World's Forests Report 2026 makes it clear that human development and environmental protection cannot be treated as separate objectives. Forest restoration offers a common opportunity to address climate change, strengthen food security, and make rural economies more sustainable. For India and other countries, the priority should no longer be limited to increasing tree-planting figures. Instead, the focus must be on developing healthy ecosystems that are rich in biodiversity and beneficial to local communities. True sustainable development is one in which forest conservation, economic prosperity, and social justice complement one another.

Short Issues

India's 2026 Monsoon Ends with 13% Rainfall Deficit

Context:

India's 2026 southwest monsoon ended on September 30 with rainfall about 13% below normal, making it the driest monsoon since 2015 and the fourth-lowest since 2001. India received around 759.4 mm rainfall against the Long Period Average (LPA) of 868.6 mm, or about 87% of LPA.

What is the Indian Monsoon?

- The word monsoon comes from the Arabic mausim, meaning "season". It refers to the seasonal reversal of winds, mainly caused by differential heating of land and sea.
- India experiences two major monsoon systems:
  - **Southwest Monsoon (June–September):** Provides roughly 75–80% of India's annual rainfall and has two branches — Arabian Sea and Bay of Bengal.
  - **Northeast Monsoon (October–December):** Winds reverse from land to sea, pick up moisture over the Bay of Bengal and bring important rainfall to Tamil Nadu, coastal Andhra Pradesh, Rayalaseema and parts of Kerala and Karnataka.

Major Driving Forces:

- The Indian monsoon is influenced by:
  - Differential heating of land and sea
  - Inter-Tropical Convergence Zone (ITCZ) shift
  - Tibetan Plateau heating
  - Withdrawal of the subtropical westerly jet and establishment of the tropical easterly jet
  - Mascarene High over the southern Indian Ocean
  - ENSO, IOD and Eurasian snow cover

Why Was the 2026 Monsoon Deficient?

- **El Niño:** The major factor was El Niño, involving abnormal warming of the central and eastern tropical Pacific Ocean. It generally weakens the Indian summer monsoon by altering atmospheric circulation. IMD reported strengthening El Niño conditions during the season.
- **Uneven Spatial Distribution:** The deficit was not uniform. South Peninsular India received about 76% of its LPA, while the East and Northeast region received about 74%, indicating severe regional variation. At the same time, low-pressure systems over the Bay of Bengal helped bring rainfall to some central and eastern areas and prevented the national deficit from becoming larger.



Understanding Long Period Average (LPA) and Rainfall Classification:

- The Long Period Average (LPA) is the average rainfall over a long reference period. For India, the current seasonal LPA is 868.6 mm (about 87 cm), based on 1971–2020.
- All-India classification:
  - **Excess:** >110% of LPA
  - **Above Normal:** 104–110%
  - **Normal:** 96–104%
  - **Below Normal:** 90–95%
  - **Deficient:** <90%
- Thus, the 2026 rainfall at about 87% of LPA

falls in the deficient category.

Impact on India:

- **Agriculture:** Prolonged dry spells can affect paddy, cotton and maize yields, particularly in rain-fed regions.
- **Water Security:** Lower rainfall can reduce groundwater recharge and reservoir storage.
- **Hydropower:** Reduced reservoir levels may affect hydroelectric generation.
- **Inflation:** Crop losses can increase food prices.
- **Rural Economy:** Lower agricultural income can affect rural demand and employment.
- **Ecology:** Water-stressed forests, wetlands and ecosystems become more vulnerable to climatic stress.

Way Forward:

- Expand micro-irrigation and rainwater harvesting.
- Promote drought-resistant and short-duration crop varieties.
- Strengthen groundwater recharge and watershed management.
- Improve district-level weather forecasting and early-warning systems.
- Expand crop insurance and climate-resilient agriculture.
- Use programmes such as Mission Mausam to improve observations and numerical weather prediction.

Conclusion:

The 2026 monsoon demonstrates that India's rainfall challenge is not merely about the quantity of rainfall, but also its timing, duration and spatial distribution. Strengthening climate-resilient agriculture, water management and forecasting capabilities is essential for reducing the socioeconomic impact of increasingly variable monsoon behaviour.

WWF Living Planet Report 2026

Context:

Recently, The World Wide Fund for Nature (WWF) has released its latest Living Planet Report 2026, reporting that the average size of monitored wildlife populations declined by 73% between 1970 and 2022. The assessment analysed 35,803 population trends covering 5,790 vertebrate species.

Major Findings:

- The decline varies significantly across ecosystems:
  - **Freshwater populations:** 85% decline
  - **Terrestrial populations:** 69% decline
  - **Marine populations:** around 59% decline in the latest assessment.
- The report identifies habitat loss and degradation as the most frequently reported threat, followed by overexploitation, climate change, pollution, invasive species and disease. These pressures are linked to broader problems in food, energy and financial systems.

Why is Freshwater Ecosystems Most Vulnerable?

- Freshwater biodiversity faces multiple simultaneous pressures:
  - River fragmentation through dams and infrastructure
  - Water extraction
  - Pollution
  - Wetland degradation
  - Unsustainable fishing
  - Climate change
- The 85% decline makes freshwater ecosystems a major conservation priority.

India's Conservation Experience:

- Despite the global decline, India demonstrates that targeted conservation can produce population recovery in several species.
- Recent reporting on the WWF assessment highlights gains involving tigers, greater one-horned rhinoceroses, Asiatic lions and Ganga river dolphins. India's experience demonstrates the importance of:

» Protected areas
» Species-specific conservation programmes
» Habitat restoration
» Anti-poaching measures
» Community participation
» Scientific population monitoring

Major Threats to Biodiversity:

- **Habitat loss:** Agricultural expansion, deforestation, mining and infrastructure development.
- **Overexploitation:** Unsustainable hunting, fishing and extraction of biological resources.
- **Climate change:** Temperature rise, altered rainfall and extreme weather events.
- **Pollution:** Chemicals, plastics, sewage and agricultural pollutants.
- **Invasive alien species:** Competition and predation affecting native species.

Global Significance:

- The report reinforces the urgency of implementing the Kunming-Montreal Global Biodiversity Framework (GBF), which seeks to halt and reverse biodiversity loss by 2030 and achieve a nature-positive world by 2050.
- The findings are also relevant to the Convention on Biological Diversity (CBD), Sustainable Development Goals (SDGs) and India's biodiversity commitments.

About WWF:

- The World Wide Fund for Nature (WWF) is an international NGO founded on 29 April 1961, headquartered in Gland, Switzerland. Originally called the World Wildlife Fund, it adopted the name World Wide Fund for Nature in 1986, while retaining the WWF acronym.
- Its mission is to conserve nature and address threats to biodiversity. Its major focus areas include climate, food, forests, freshwater, oceans and wildlife.
- Its iconic logo is the giant panda.
- The Living Planet Report is published biennially and uses the Living Planet Index to examine trends in biodiversity.

WWF Initiatives:

- Important WWF-linked initiatives include:
  » **Earth Hour** — launched in Sydney in 2007 to promote environmental awareness.
  » Debt-for-Nature Swaps — mechanisms linking debt relief with conservation investments.
- WWF also helped establish the Marine Stewardship Council (MSC).
  » **WWF-India:** WWF-India was established in 1969 as a charitable public trust, with its secretariat in New Delhi. Its conservation priorities include species such as the tiger, elephant, rhinoceros, red panda, snow leopard and Nilgiri tahr, along with landscapes such as the Terai Arc Landscape.

Conclusion:

The WWF report highlights that biodiversity loss is increasingly an ecosystem-level crisis. Conservation must therefore move beyond protecting individual species towards habitat restoration, sustainable production systems and addressing the underlying drivers of nature loss.

Wild Water Buffalo Reintroduction in Madhya Pradesh

Context:

Recently, Madhya Pradesh Chief Minister Dr Mohan Yadav released eight wild water buffaloes into a 17-hectare enclosure in the Supkhar range of Kanha Tiger Reserve. The animals were brought from Assam's Kaziranga National Park under a phased programme to restore the species in Madhya Pradesh, where it had disappeared from forests about a century ago.

About Wild Water Buffalo:

- The wild water buffalo (Bubalus arnee) is a large bovine native to South and Southeast Asia. It is classified as Endangered on the IUCN Red List and is listed in Schedule I of the Wildlife (Protection) Act, 1972.
- The species inhabits grasslands, wetlands and forested areas with adequate water resources. It plays an important role in maintaining the ecological balance of its habitat.
- Kanha Tiger Reserve is located in the Maikal range of Madhya Pradesh. Kanha National Park was established in 1955 and was included in Project Tiger in 1973. Kaziranga National Park, located in Assam, is an important protected area and the source of the buffaloes.

Translocation and Acclimatisation:

- The first group of four buffaloes, comprising three females and one male, arrived at Kanha on 28 April 2026. A second group of four, with the same sex composition, arrived on 9 May 2026. The current group consists of six females and two males.
- Initially, the animals were kept in a one-hectare enclosure for quarantine and acclimatisation before being shifted to the larger 17-hectare enclosure.
- Quarantine helps prevent the transmission of infectious diseases between animal populations. The animals are expected to be prepared gradually for release into their natural habitat after the monsoon season.

Reintroduction Programme:

- Madhya Pradesh aims to reintroduce 50 wild buffaloes in the Kanha region over three years. Assam has agreed to supply the animals in phases. The eight buffaloes currently in the enclosure are part of this programme and have not yet been released into the open forest.

Significance and Challenges:

- The initiative aims to restore local biodiversity, support the conservation of an endangered species and strengthen inter-state cooperation in wildlife management. However, its success depends on suitable habitat, adequate food and water, genetic diversity, disease prevention and long-term monitoring.
- Potential challenges include human-wildlife conflict, habitat degradation and hybridisation with domestic buffaloes. Scientific monitoring and community participation will be essential for the programme's long-term success.

Conclusion:

The reintroduction of wild water buffaloes into Kanha is an important step towards ecological restoration in Madhya Pradesh. Its success will depend not merely on relocating animals but also on ensuring their survival, breeding and adaptation to the natural habitat.

The Kigali Amendment 10th Anniversary

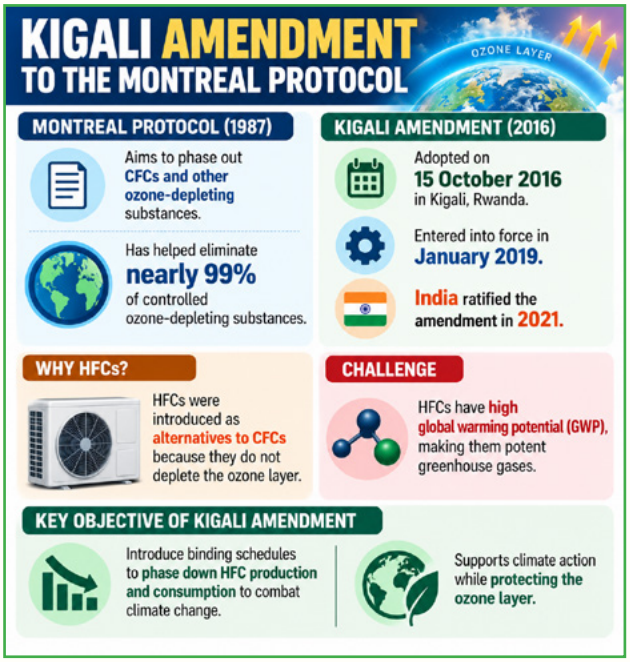
Context:

Recently, The Kigali Amendment to the Montreal Protocol marks its 10th anniversary on 15 October 2026. Adopted in 2016, it aims to phase down hydrofluorocarbons (HFCs), powerful greenhouse gases used in refrigeration and air-conditioning. It could prevent up to 0.5°C of global warming by 2100. With India's cooling demand projected to more than double by 2035, energy-efficient appliances and better refrigerant management are crucial.

Background:

- The Kigali Amendment to the Montreal Protocol was adopted in Kigali, Rwanda, on 15 October 2016, and entered into force in January 2019. The Montreal Protocol, adopted in 1987, aims to phase out chlorofluorocarbons (CFCs) and other ozone-depleting substances and has helped eliminate nearly 99% of controlled ozone-depleting substances.
- Hydrofluorocarbons (HFCs) were introduced

as alternatives to CFCs because they do not deplete the ozone layer; however, their high global warming potential (GWP) makes them potent greenhouse gases. Therefore, the Kigali Amendment introduced binding schedules to phase down HFC production and consumption to combat climate change. India ratified the amendment in 2021.



Key Provisions and India's Commitments:

- **HFC phase-down:** Gradually reduce HFC production and consumption according to differentiated national schedules.
- **India's targets:** Freeze HFC production and consumption in 2028, reduce them by 10% below the agreed baseline in 2032, and achieve an 85% reduction by 2047.
- **Financial assistance:** The Multilateral Fund supports developing countries in adopting alternative technologies and meeting compliance costs.
- **Technology transition:** Encourage climate-friendly refrigerants and improved cooling efficiency.

Significance for India:

- India's rising temperatures, urbanisation and growing incomes are increasing demand for air-conditioners and refrigeration. Efficient appliances can reduce electricity consumption, household expenditure and pressure on power infrastructure.
- The transition also offers opportunities for green manufacturing, technological innovation and employment. Better refrigerant recovery and recycling can further reduce greenhouse gas emissions.

Major Challenges:

- Rapidly increasing demand for affordable cooling.
- High initial costs of energy-efficient equipment.
- Safety and technical requirements associated with alternative refrigerants.
- Leakage of refrigerants during servicing and disposal.
- Financing and technology-access constraints for manufacturers and small enterprises.

Way Forward:

- India should strengthen minimum energy-performance standards, promote efficient cooling technologies and expand refrigerant recovery, recycling and safe disposal. Skill development for technicians, financial support for small businesses and investment in sustainable cooling infrastructure are essential.
- Passive cooling, improved building design, urban green spaces and district cooling can reduce dependence on energy-intensive air-conditioning.

Conclusion:

The Kigali Amendment demonstrates how international cooperation can address environmental challenges through binding targets, technological innovation and financial assistance. For India, combining HFC phase-down with energy-efficient cooling and responsible refrigerant management can reconcile rising cooling needs with climate commitments.

Sukhna Lake and Sauj Jheel Granted Ramsar Site Status

Context:

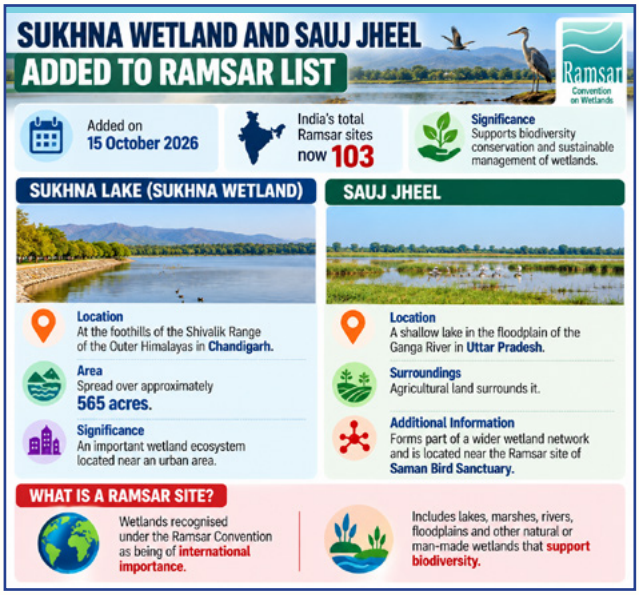
On 15 October 2026, Sukhna Wetland in Chandigarh and Sauj Jheel in Uttar Pradesh were included in the Ramsar List of Wetlands of International Importance. As a result, the total number of Ramsar sites in India increased to 103. This achievement is significant for biodiversity conservation and the sustainable management of wetlands in India.

Sukhna Lake (Sukhna Wetland):

- **Geographical Location:** Sukhna Lake is located at the foothills of the Shivalik Range of the Outer Himalayas in Chandigarh. Spread over approximately 565 acres, this wetland is an important ecosystem located near an urban area.
- **Ecological Significance:**
  - » It provides feeding, breeding, resting and wintering habitats for migratory birds travelling along the Central Asian Flyway.
  - » Endangered species such as the Common Pochard (Aythya ferina), Pallas's Fish Eagle (Haliaeetus leucoryphus) and Black Pond Turtle (Geoclemys hamiltonii) are found here.
  - » It helps regulate the flow of water and sediment entering from the surrounding catchment area.
  - » It is an important centre for recreation, environmental education and connecting Chandigarh's residents with natural resources.

Sauj Jheel:

- **Geographical Location:** Sauj Jheel is a shallow lake located in the floodplain of the Ganga River in Uttar Pradesh. Agricultural land surrounds it. It forms part of a wider wetland network and is located near the Ramsar site of Saman Bird Sanctuary.
- **Ecological Significance:**
  - » Aquatic and wetland vegetation, such as the lotus (Nelumbo nucifera) and wild sugarcane (Saccharum spontaneum), is found here.
  - » The lake regularly provides habitat to more than 30,000 waterbirds.
  - » BirdLife International has recognised it as an Important Bird and Biodiversity Area (IBA).
  - » Bird species such as the Vulnerable Sarus Crane (Grus antigone) and Greater Spotted Eagle (Clanga clanga) are found here.



What Is the Ramsar Convention?

- The Ramsar Convention is an international treaty concerning the conservation and wise use of wetlands. It was adopted on 2 February 1971 in the Iranian city of Ramsar and came into force in 1975. India became a party to the Convention in 1982.
- Its objective is to maintain the ecological character of wetlands, conserve biodiversity and promote the sustainable use of natural resources.

Major Challenges:

- **Siltation:** Soil and sediment entering Sukhna Lake from its catchment area can affect its water-holding capacity.

- **Invasive Species:** The spread of non-native plant species poses a threat to local biodiversity.
- **Human Pressure:** Urbanisation, tourism, pollution and agricultural activities can adversely affect natural habitats.
- **Habitat Degradation and Destruction:** Urbanisation, land reclamation, encroachment & infrastructure development affect the natural habitats of wetlands.
- **Pressure on Biodiversity:** Unregulated fishing and the movement of livestock in Sauj Jheel can affect the habitats of birds and other wildlife.
- **Lack of Effective Management and Monitoring:** Inadequate regular monitoring of wetlands, limited availability of scientific data, poor coordination among different departments and ineffective implementation of conservation plans are also major challenges.

Measures Required for Conservation:

- Promote soil and moisture conservation in catchment areas.
- Conduct regular monitoring of water quality and biodiversity.
- Control invasive species and restore natural habitats.
- Introduce measures such as seasonal fishing restrictions and controls on the use of fine-mesh fishing nets in Sauj Jheel.
- Promote conservation and environmental awareness through the participation of local communities.

Conclusion:

The designation of Sukhna Lake and Sauj Jheel as Ramsar sites is an important achievement in India's efforts to conserve wetlands. However, international recognition will be meaningful only when the ecological integrity of these wetlands is maintained through scientific management, effective monitoring and public participation. This will contribute to achieving the goals of sustainable development, water security and biodiversity conservation.

Keralam Wildlife Survey Records 36 New Species

Context:

Recently, A four-day wildlife survey conducted from October 8 to 11, 2026, by the Kerala Forest and Wildlife Department in collaboration with the Travancore Nature History Society (TNHS) documented 36 new wildlife records across three sanctuaries in Kerala. The survey recorded 395 species of birds, butterflies and odonates, including 24 species endemic to the Western Ghats.

Key Findings of the Survey:

- The survey covered ten base camps across:
  - » Chimmony Wildlife Sanctuary
  - » Peechi–Vazhani Wildlife Sanctuary
  - » Chulannur Peafowl Sanctuary
- The major findings were:
  - » **Birds:** 165 species, including eight checklist additions.
  - » **Butterflies:** 174 species, including 22 checklist additions.
  - » **Odonates:** 56 species, including six checklist additions.
- The survey also recorded 52 moth species, 22 ant species, five cicada species and around 30 spider species. Tigers, leopards, Asian elephants and gaur were also reported in the landscape.

Important Species Recorded:

- Notable species included the Malabar Lark, Purple Heron, Siberian Stonechat and Eastern Yellow Wagtail.
- Western Ghats endemics recorded included the Malabar Grey Hornbill, Malabar Parakeet, Malabar Banded Peacock, Malabar Rose and Travancore Bambootail.
- These findings improve knowledge of regional biodiversity. The new records represent additions to existing checklists, not necessarily species newly discovered by science.

Significance for Biodiversity Conservation:

- **Western Ghats biodiversity:** The Western Ghats are a global biodiversity hotspot characterised by high species richness and endemism.
- **Ecosystem health:** Butterflies contribute to pollination, while dragonflies and damselflies help regulate insect populations and can indicate freshwater habitat conditions.
- **Scientific research:** Verified species inventories improve understanding of distribution patterns and help identify habitats requiring conservation attention.
- **Evidence-based management:** Reliable biodiversity data support habitat restoration, protected-area management and long-term wildlife monitoring.

Challenges:

- Major challenges include habitat fragmentation, climate change, human–wildlife conflict, inadequate baseline data and difficulties in identifying rare species. Single-season surveys may also miss migratory or seasonal species.

Legal and Constitutional Framework:

- **Article 48A:** Directs the State to protect and improve the environment and safeguard forests and wildlife.
- **Article 51A(g):** Establishes the fundamental duty of citizens to protect the natural environment and show compassion for living creatures.
- **Wild Life (Protection) Act, 1972:** Provides the legal framework for wildlife protection, hunting restrictions and protected areas. Its 2022 amendment strengthened provisions concerning invasive alien species and international wildlife trade.
- **Biological Diversity Act, 2002:** Promotes biodiversity conservation, sustainable use and equitable benefit-sharing. The 2023 amendment updated its regulatory framework.
- **Environment (Protection) Act, 1986:** Provides broad powers to the Central Government to protect and improve environmental quality.

Conclusion:

The documentation of 36 additional wildlife records highlights the ecological importance of Kerala's forest landscapes. Regular, scientifically verified and seasonal biodiversity surveys can strengthen conservation strategies and support the long-term protection of the Western Ghats.

Emissions Gap Report 2026

Context:

Recently, The United Nations Environment Programme (UNEP) released its Emissions Gap Report 2026, warning that limiting global warming to 1.5°C above pre-industrial levels without significant overshoot is no longer achievable.

What is the Emissions Gap Report?

- Published annually by UNEP, it assesses the gap between projected global greenhouse gas (GHG) emissions and the levels required to meet the Paris Agreement temperature goals.
- The 2026 edition is the 17th edition of the report.

Key Findings of the Report:

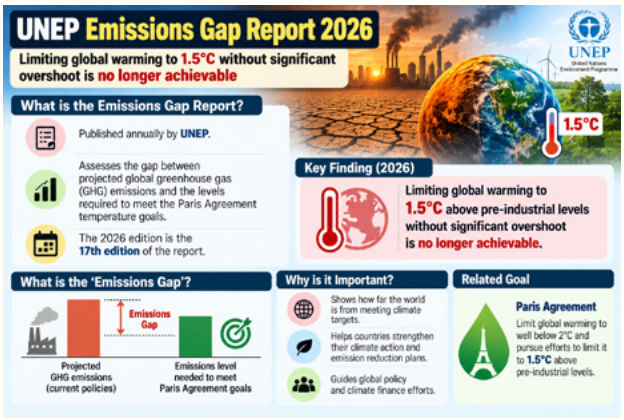
- **Global emissions:** GHG emissions reached 58.4 gigatonnes of CO_2 equivalent ($GtCO_2e$) in 2025, a marginal decline of 0.1 $GtCO_2e$ from 2024.
- **Fossil fuel emissions:** CO_2 emissions from coal, oil and gas continued to rise despite the slight decline in overall emissions.
- **Major contributors:** G20 members, excluding the African Union, accounted for 76% of global emissions; their emissions excluding land-use change increased by 0.7% in 2025.
- **Emission trends:** Over the past decade, 63 countries reduced emissions, while 124 recorded increases.
- **Temperature records:** Global temperatures crossed the 1.5°C mark in 2024, highlighting the urgency of climate action.

Why Is the 1.5°C Target Important?

- The 1.5°C threshold under the Paris Agreement aims to limit climate risks. Exceeding it increases the likelihood of extreme heatwaves, floods, droughts, sea-level rise and biodiversity loss.

What Lies Ahead?

- To return to the 1.5°C pathway with the lowest possible overshoot, global GHG emissions must fall relative to 2025 levels by:
  - » 18% by 2030
  - » 45% by 2035
  - » 69% by 2040
- Large-scale carbon dioxide removal will also be necessary to bring temperatures back to or below 1.5°C by the end of the century.



Challenges:

- Continued dependence on fossil fuels.
- Inadequate climate policies and emission-reduction commitments.
- Unequal historical responsibility and emissions across countries.
- Financial and technological constraints in developing nations.
- Difficulty monitoring and upgrading emission-intensive infrastructure.

Way Forward:

- Accelerate the transition to renewable energy and phase down fossil fuel dependence.
- Strengthen Nationally Determined Contributions (NDCs) under the Paris Agreement.
- Increase climate finance and technology transfer to developing countries.
- Promote energy efficiency, sustainable transport and forest conservation.
- Develop credible carbon-removal technologies while prioritising immediate emission cuts.

Significance for India:

- India must balance climate action with development and energy security. Expanding renewable energy, improving energy efficiency, promoting green hydrogen and protecting forests can support its climate commitments.
- Developed countries must provide adequate finance and technology in line with climate equity and the principle of Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC).

Conclusion:

The report signals that preventing all overshoot of 1.5°C is no longer realistic. The priority must now be to minimise the extent and duration of overshoot through urgent emission cuts, international cooperation and equitable climate action.

New Flowering Plant in Assam's Manas National Park

Context:

Recently, Researchers Barnali Das and Namita Nath have identified a new flowering plant species, Osbeckia assamensis, in Manas National Park, Assam. The findings were published in the scientific journal Phytotaxa on October 22, following extensive field surveys conducted between 2021 and 2025.

Key Features of the Species:

- Osbeckia assamensis belongs to the family Melastomataceae and is a perennial shrub

that grows approximately 2–2.5 metres tall. It produces pink flowers measuring 3–3.5 cm, with around 30–35 flowers in each inflorescence. Its flowering and fruiting period extends from September to February.

- The species resembles the closely related Osbeckia nayarii but differs in morphological characteristics, including stem structure, flower arrangement, hairy calyx margins and seed size.
- The type specimen was collected from Manas National Park on October 8, 2022, while another specimen was documented in October 2025.

About Manas National Park:

- Manas National Park is located in Assam, along the foothills of the eastern Himalayas, bordering Bhutan. It was designated a UNESCO World Heritage Site in 1985 and forms part of the Manas Biosphere Reserve. It is also recognised as a tiger reserve and an elephant reserve.
- The Manas River, a tributary of the Brahmaputra, flows through this landscape. The park comprises tropical forests, alluvial grasslands and riverine ecosystems, supporting rich biodiversity. Important fauna include the Bengal tiger, Asian elephant, Indian rhinoceros and golden langur.

Ecological and Scientific Significance:

- The discovery demonstrates the importance of systematic botanical surveys, taxonomic research and herbarium studies in identifying previously undocumented species.
- It improves scientific understanding of plant diversity and highlights the ecological significance of grassland habitats, which support specialised plant communities and wildlife.
- Such discoveries can also inform conservation planning by identifying species whose distribution and ecological requirements need further investigation.

IUCN Conservation Status:

- The researchers have categorised Osbeckia assamensis as Data Deficient (DD) under the International Union for Conservation of Nature (IUCN) criteria because it is currently known only from its type locality and sufficient information is unavailable to assess its extinction risk. Data Deficient does not necessarily mean that a species is threatened or safe.

Badrinath Hanging Glaciers

Context:

Recently, a peer-reviewed study published in the journal Landslides on October 28, 2026, assessed the vulnerability of three hanging glaciers above Badrinath in Uttarakhand. The research was conducted by scientists from the Indian Institute of Science (IISc), the University of Cambridge and DRDO.

What are Hanging Glaciers?

- Hanging glaciers are masses of ice located on steep mountain slopes or terminating abruptly at bedrock cliffs, without being connected to the valley floor. Their stability depends on temperature, slope angle, ice thickness and basal resistance.
- When these glaciers become unstable, portions of ice may detach and fall downslope, triggering ice avalanches. Such events can carry rocks, snow, water and debris, causing extensive damage to settlements and infrastructure.

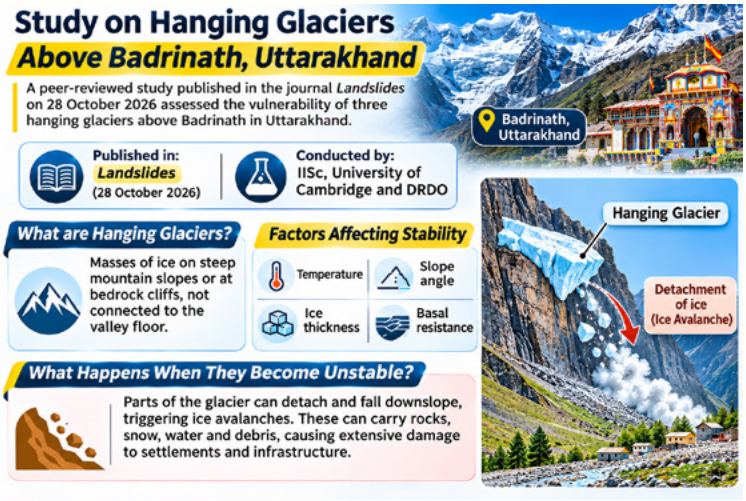
Key Findings of the Study:

- According to the worst-case scenario developed by researchers, an avalanche triggered by the collapse of the most hazardous hanging glacier could damage nearly 398 buildings, 2.66 km of roads, two bridges, a helipad and a parking area.
- The study found that the Badrinath temple is not expected to be directly hit; however, accumulated rocks and debris could

potentially affect the shrine.

Why Is Badrinath Vulnerable?

- Badrinath is situated in Chamoli district of Uttarakhand at approximately 3,415 metres above mean sea level, along the banks of the Alaknanda River, a major tributary of the Ganga. It is one of India's most important pilgrimage destinations and received around 1.7 million visitors during the 2025 Char Dham Yatra.
- Its location amid steep Himalayan slopes, glaciers and fragile mountain ecosystems increases its exposure to natural disasters. Growing tourism and infrastructure development further increase the potential consequences of such hazards.



Assessment of the Three Hanging Glaciers:

- Researchers used high-resolution satellite imagery and elevation models to identify glaciers with average slopes of 30 degrees or more. They subsequently assessed their ice volume, thickness and vulnerable portions through numerical simulations.
- Among the three glaciers, the second glacier site was found to have the highest damage potential, with an estimated ice volume of 5.32 million cubic metres and a slope of 34.57 degrees. In a simulated collapse, the avalanche could attain a peak velocity of 78.5 metres per second and a flow height of approximately 73.5 metres.

Climate Change and Glacier-Related Risks:

- Climate change is increasing the vulnerability of the Himalayan cryosphere, which includes glaciers, snow cover and permafrost. Rising temperatures accelerate glacier melting and alter ice stability.
- Permafrost degradation can weaken mountain slopes, while glacier retreat may contribute to the formation and expansion of glacial lakes, increasing the risk of Glacial Lake Outburst Floods (GLOFs).
- These processes can trigger interconnected disasters such as landslides, ice avalanches and flash floods. An earlier study identified 219 hanging glaciers, approximately 30% of which were located in the Alaknanda basin.

Major Challenges:

- The management of glacier-related disasters faces several challenges, including limited scientific monitoring, difficult geographical accessibility, inadequate hazard mapping and unplanned infrastructure development. Moreover, uncertainty in estimating ice thickness, release volumes and friction parameters can affect the accuracy of avalanche simulations. Therefore, continuous field observations and scientific validation are essential.

Conclusion:

The Badrinath study highlights the growing vulnerability of Himalayan settlements to climate change and glacier-related hazards. Although the findings do not predict an imminent glacier collapse, they provide an important scientific basis for disaster preparedness. Scientific monitoring, risk-sensitive land-use planning and sustainable infrastructure development are essential to protect Himalayan communities and pilgrimage destinations.

5 Science & Technology



ISRO's NVS-03 Mission: Strengthening India's Indigenous Navigation System 'NavIC'

Context:

Recently, on 30 October 2026, the Indian Space Research Organisation (ISRO) successfully launched the next-generation navigation satellite NVS-03 using its GSLV-F18 launch vehicle. The satellite was launched from the Second Launch Pad of the Satish Dhawan Space Centre (SDSC), Sriharikota. NVS-03 has been placed in a Geosynchronous Transfer Orbit (GTO). This is an important achievement towards making India's indigenous satellite navigation system, 'Navigation with Indian Constellation' (NavIC), more reliable. The mission also demonstrates India's strategic self-reliance, technological capabilities and growing role in the space sector.

What is NavIC?

- NavIC (Navigation with Indian Constellation) is India's indigenous regional satellite navigation system. It was earlier known as the Indian Regional Navigation Satellite System (IRNSS).
- The system has been developed by ISRO. Its objective is to provide India with independent services related to Positioning, Navigation and Timing (PNT).
- NavIC has been developed to provide services across the entire Indian landmass and up to approximately 1,500 kilometres beyond its borders. It primarily provides two types of services:
  - » **Standard Positioning Service (SPS):** This service is available for civilian users. It can be used for mobile navigation, transportation, maritime activities and other civilian applications.
  - » **Restricted Service (RS):** This is a more secure and encrypted service, intended for use by defence and other authorised strategic agencies.

Why was NavIC Developed?

- The need to develop an independent satellite navigation system in India was primarily driven by national security concerns and strategic self-reliance.
- During the Kargil War in 1999, India experienced the limitations of depending on foreign navigation systems. At that time, India sought assistance from the United States for GPS (Global Positioning System), but the US refused to provide precise GPS data for military use. This experience highlighted that complete dependence on another country's navigation system could be risky during national security operations, defence missions and emergency situations.
- Keeping this requirement in mind, India took steps towards developing its own independent regional navigation system. The IRNSS project was approved in 2006, followed by the development and launch of satellites. In 2016, the system was renamed NavIC.

Key Features of the NVS-03 Mission:

NVS-03 is the third satellite in the second-generation series of NavIC satellites. This generation comprises a total of five satellites (NVS-01 to NVS-05). Their objective is to replace the first-generation satellites and improve the continuity and reliability of navigation services.

- **GSLV-F18 Launch Vehicle:** NVS-03 was launched using the GSLV-F18 launch vehicle. Under this mission, the satellite, weighing approximately 2,250 kg, was placed in a Geosynchronous Transfer Orbit. NVS-03 has been designed with an operational lifespan of approximately 12 years. It uses the I-2K satellite bus architecture developed by ISRO's U R Rao Satellite Centre (URSC), which helps integrate various instruments and systems of the satellite.
- **Indigenous Atomic Clock:** NVS-03 incorporates an atomic clock developed in India, along with some other imported atomic clocks. It uses an indigenous rubidium-based atomic clock developed by ISRO's Space Applications Centre (SAC). This clock enables highly precise timekeeping, which is essential for the reliability of satellite-based navigation systems.
- **Inclusion of the L1 Frequency Band:** In addition to the existing L5 and S bands, NVS-03 also incorporates the L1 frequency band. This will improve NavIC's compatibility with modern civilian navigation devices. In particular, it is expected to increase the possibilities of NavIC being used in smartphones and other consumer devices that support the L1 band.



- **Improved Navigation Capabilities:** This satellite will help strengthen India's positioning, navigation and timing services. It is expected to improve the continuity of services for both civilian and strategic applications.

How Does a Satellite Navigation System Work?

- A satellite navigation system is based on a network of satellites placed in Earth's orbit.

These satellites continuously transmit radio signals containing information about their precise location and time.

- When a smartphone, vehicle or navigation device receives signals from these satellites, it estimates its distance from each satellite based on the time taken by the signals to reach it.
- The receiver then analyses signals received from multiple satellites to determine its geographical position. This process is known as Trilateration.
- Generally, signals from at least four satellites are required to determine a three-dimensional position (latitude, longitude and altitude) and correct the receiver's clock error.
- Thus, a satellite navigation system not only provides location information but also helps determine speed, direction and precise time.

Why is NVS-03 Important for NavIC?

- The availability of a sufficient number of operational satellites is essential for maintaining the functionality of NavIC. Over time, technical failures in the atomic clocks of some older satellites affected the operational capabilities of the system.
- Additionally, the NVS-02 satellite, launched in January 2025, could not reach its designated operational orbit due to a technical problem in its propulsion system. This reduced the number of operational NavIC satellites and affected the availability of independent positioning services.
- The successful launch of NVS-03 is an important step towards addressing this gap. It represents progress towards strengthening the NavIC constellation and restoring the minimum required satellite configuration. However, placing the satellite in its designated orbit, conducting tests and activating it for operational services are also necessary steps.

Comparison of India's Navigation System with Other Global Navigation Systems:

- Currently, some major countries and regional organisations have developed their own independent satellite navigation systems.

Country/Region	Navigation System
United States	GPS (Global Positioning System)
Russia	GLONASS
European Union	Galileo
China	BeiDou
Japan	QZSS
India	NavIC

- Among these systems, GPS, GLONASS, Galileo and BeiDou provide services at the global level, whereas NavIC is primarily a regional system focused on India and its surrounding areas.
- Thus, NavIC provides India with an independent technological capability comparable to those of major global navigation systems. It also helps reduce India's dependence on foreign systems.

Major Applications of NavIC:

- **Defence and National Security:** It helps determine the location of military vehicles, naval ships, aircraft and other defence systems. This can reduce dependence on foreign navigation systems during strategic operations.
- **Transportation and Traffic Management:** It can improve vehicle tracking and route planning in road transportation, railways, aviation and public transport.
- **Maritime Security:** It can help fishermen determine their location at sea, identify safe routes and obtain information about activities near maritime boundaries.
- **Agriculture Sector:** Navigation technology can be useful in precision agriculture for field mapping, operating agricultural machinery, irrigation and the efficient use of fertilisers.
- **Disaster Management:** During natural disasters such as floods, cyclones and earthquakes, it can help determine the locations of rescue teams and enable them to reach affected areas.
- **Telecommunications and Financial Services:**

Accurate timekeeping is required in telecommunications networks, banking and digital transactions. NavIC's timing services can be useful in these sectors.

Strategic and Economic Significance of the NVS-03 Mission for India:

- **Technological Self-Reliance:** The inclusion of an indigenous atomic clock in NVS-03 is an important step towards making India self-reliant in advanced space technology.
- **Strategic Autonomy:** An independent navigation system can reduce India's dependence on external countries for sensitive defence and national security-related activities.
- **Promotion of the Digital Economy:** The use of NavIC in smartphones, transportation, logistics, telecommunications and other digital services can promote the domestic technology industry.
- **India's Global Role in the Space Sector:** This mission demonstrates India's capabilities in satellite manufacturing, launch operations and the development of advanced space technologies.
- **One Nation, One Time Initiative:** Accurate satellite-based timing services can support the development of a uniform and reliable time reference across the country.

Major Challenges Facing the NavIC System:

- **Technical Problems in Older Satellites:** Failures in the atomic clocks of some older NavIC satellites have affected its operational capabilities. Therefore, regular monitoring and timely replacement of satellites are essential.
- **Limited Regional Coverage:** NavIC is primarily limited to India and an area extending approximately 1,500 kilometres beyond its borders. In comparison, systems such as GPS provide global coverage.
- **Limited Adoption in Civilian Devices:** For the success of NavIC, it is necessary to increase the availability of compatible chipsets and receivers in smartphones, vehicles and other consumer devices.
- **Technological Self-Reliance:** Indigenous production of atomic clocks, high-quality electronic components and other critical equipment needs to be promoted.
- **Signal Security:** In the context of modern warfare and cybersecurity, it is also necessary to protect NavIC against challenges such as Jamming and Spoofing.

Way Forward:

- To make the NavIC system more effective and reliable, India needs to ensure the timely launch of next-generation satellites, including NVS-04 and NVS-05. Along with this, indigenous manufacturing of atomic clocks, navigation chipsets and other electronic equipment must be encouraged to reduce dependence on foreign technology.
- In this direction, the participation of startups, research institutions and private companies should be increased to accelerate the development of NavIC-based products and services. Additionally, the use of NavIC should be expanded in sectors such as smartphones, automobiles, railways and maritime transportation so that ordinary citizens can also benefit from it. At the same time, investment in Research and Development (R&D) needs to be increased to address challenges related to signal accuracy, cybersecurity, jamming and spoofing.

Conclusion:

The NVS-03 mission is an important achievement in strengthening India's space technology and strategic self-reliance. NavIC is not merely a navigation system but also an important foundation for national security, the digital economy and technological sovereignty. However, its long-term success will depend not only on the successful launch of satellites but also on their operational reliability, indigenous technological capabilities and wider acceptance among ordinary citizens. India should move forward towards developing NavIC as a robust, secure and commercially viable navigation system.

Short Issues

2026 Nobel Prize in Medicine

Context:

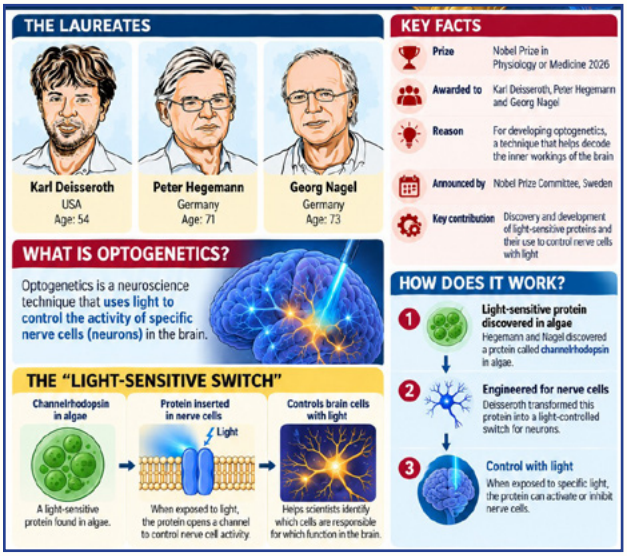
On 5 October 2026, Sweden announced the Nobel Prize in Physiology or Medicine for the year 2026. This prestigious award has been jointly given to three scientists- Karl Deisseroth (USA), Peter Hegemann (Germany), and Georg Nagel (Germany). They have been honoured for their important contributions to the development of 'light-gated ion channels' and optogenetics (Optogenetics), and through these, to understanding the activity of nerve cells.

What is Optogenetics?

- Optogenetics is a modern technique in neuroscience in which the activity of specific nerve cells is controlled with the help of light. It uses light-sensitive proteins known as opsins.
- Scientists induce the expression of these proteins in specific neurons. Then, by using a particular wavelength of light, these neurons can be activated or deactivated. This helps scientists understand how neurons present in a particular part of the brain influence behaviour, memory, emotions, and other biological processes.

Contribution of the Scientists:

- Peter Hegemann and Georg Nagel made important contributions to the study of light-sensitive proteins found in microorganisms. Their research helped in understanding how the electrical activity of cells can be influenced through light.
- Karl Deisseroth played an important role in applying these discoveries to the field of neuroscience. His work provided scientists with a practical method to control specific neurons in the brain with the help of light. This made it possible to study neural circuits and their relationship with behaviour more precisely.



Importance in the Field of Medicine and Science

- **Understanding Brain Function:** The brain is one of the most complex organs of the human body. Optogenetics helps scientists understand how specific cells in the brain control our memories, emotions, decisions, and behaviours.
- **Treatment of Neurological Disorders:** This technique has opened new avenues for the treatment of serious diseases such as Parkinson's, Alzheimer's, epilepsy, depression, and blindness. Through light, damaged neurons can be targeted and potentially reactivated or controlled.
- **Precision:** Traditional medicines or drug treatments affect the entire brain, which can cause side effects. In contrast, optogenetics affects only those cells that are specifically targeted.
- Optogenetics has strengthened the ability of neuroscience to understand "cause and effect." Merely observing that the activity of a particular neuron is associated with a certain behaviour is not sufficient. Through optogenetics, scientists can control that neuron and examine what changes occur in behaviour when it is activated or deactivated. Thus, this technique can

prove to be an important scientific tool for understanding the relationship between the brain, behaviour, and diseases.

Conclusion:

The 2026 Nobel Prize demonstrates how modern science is using a simple physical phenomenon like light to open new avenues for understanding the extremely complex biological system of the human brain. Optogenetics can play an important role in the future in improving the understanding of neurological diseases and developing potential treatments.

Nobel Prize in Physics 2026

Context:

Recently, the Royal Swedish Academy of Sciences announced on 6 October 2026 that the Nobel Prize in Physics would be awarded to Belgian-American physicist Francis Halzen. He has been honoured for his visionary leadership in the development of the IceCube Neutrino Observatory and his decisive contribution to the discovery of high-energy neutrinos of astrophysical origin. This achievement is considered significant in the development of modern astrophysics and multi-messenger astronomy.

Prof. Francis Halzen and His Contribution:

- Francis Halzen was born in Belgium in 1944. He obtained his PhD from the University of Leuven. He is currently a distinguished professor of physics at the University of Wisconsin–Madison and the Principal Investigator of the IceCube project.
- His most important idea emerged in 1988, when he proposed that the deep and highly transparent ice of Antarctica could be used as a giant neutrino detector. This idea later became the foundation of the IceCube Observatory.

IceCube Neutrino Observatory:

- IceCube is one of the world's most unique and largest neutrino observatories. It is located near the Amundsen–Scott South Pole Station in Antarctica. Its detector is spread across nearly one cubic kilometre of deep Antarctic ice, approximately 1.5 to 2.5 kilometres below the surface. It consists of more than 5,000 Digital Optical Modules installed along 86 vertical cables.
- When high-energy neutrinos arriving from outer space interact with atoms in the ice, they can produce charged particles such as muons. These particles travel through the ice at speeds greater than the speed of light in ice and generate a faint blue glow known as Cherenkov radiation. The sensors of IceCube record this light and use it to estimate the direction and energy of the neutrinos.



Why Are Neutrinos Called 'Ghost Particles'?

- Neutrinos are extremely tiny subatomic particles. They carry no electric charge and interact only very weakly with matter. As a result, billions and trillions of neutrinos pass through our bodies and through the Earth every second with almost no obstruction. This is why they are often called 'ghost particles'.
- Neutrinos are also highly important because they can carry information to Earth from extremely energetic cosmic events such as

supernovae, black holes and active galactic nuclei. Since they are electrically neutral, they are largely unaffected by magnetic fields and can therefore provide more direct information about their sources.

Scientific Significance:

- The achievement of Francis Halzen and the IceCube Observatory has given a new direction to multi-messenger astronomy. Scientists can now study the universe not only through light, X-rays and other forms of electromagnetic radiation, but also through particles such as neutrinos.
- This is helping researchers understand cosmic events that remained invisible to conventional telescopes. Thus, the IceCube Observatory has provided humanity with a new way of observing the universe and has further strengthened the connection between modern physics and astronomy.

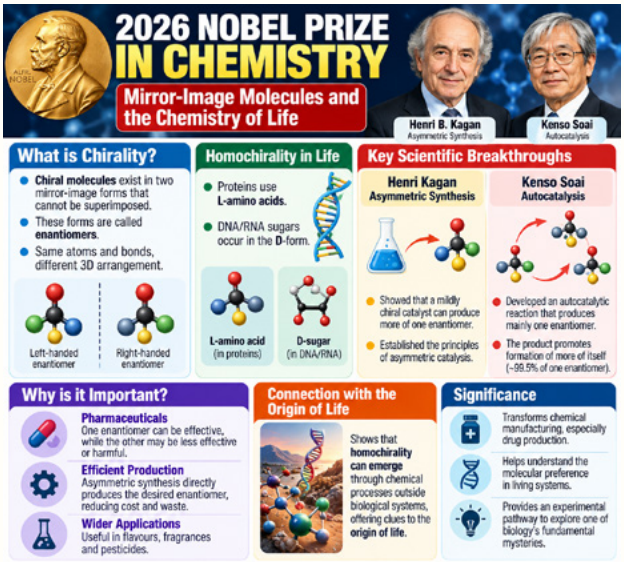
Nobel Prize in Chemistry 2026

Context:

The 2026 Nobel Prize in Chemistry has been awarded to Henri B. Kagan and Kenso Soai for pioneering work on chirality and asymmetric synthesis, demonstrating how a chemical reaction can preferentially produce one mirror-image form of a molecule. Their work has major implications for pharmaceuticals and understanding the chemistry underlying life.

What is Chirality?

- Chiral molecules exist in two forms that are mirror images of each other but cannot be superimposed, analogous to the left and right hands. These forms are called enantiomers.
- Although they contain the same atoms and chemical bonds, their three-dimensional arrangement differs.
- Biological systems display homochirality - a strong preference for one enantiomer.
  - » Proteins predominantly use L-amino acids.
  - » DNA/RNA sugars predominantly occur in the D-form.



Key Scientific Breakthroughs:

- **Henri Kagan – Asymmetric Synthesis**
  - » Earlier, ordinary chemical reactions generally produced both enantiomers in nearly equal amounts. Kagan demonstrated that this was not necessarily the case.
  - » In the 1980s, he showed that even a mildly chiral catalyst could generate a much larger imbalance between the two enantiomers.
  - » This established important principles of asymmetric catalysis, enabling chemists to selectively produce a desired molecular form.
- **Kenso Soai – Autocatalysis:**
  - » Soai subsequently explored autocatalytic reactions, in which the product of a reaction itself acts as a catalyst.
  - » He developed an autocatalytic reaction capable of producing predominantly one enantiomer.
  - » The selected enantiomer could promote formation of more of itself — a self-reinforcing/self-replicating process.

» The reaction achieved about 99.5% of one enantiomer, approaching the strong molecular preference observed in biological systems.

Why is it Important?

- **Pharmaceutical Applications:**
  - » Chirality is crucial in drug development because biological receptors and enzymes can distinguish between enantiomers.
  - » One enantiomer may provide the desired therapeutic effect while the other may be less effective or potentially harmful.
  - » Earlier, pharmaceutical manufacturers often produced mixtures and subsequently separated the desired enantiomer.
  - » Asymmetric synthesis can directly produce the required enantiomer, reducing cost, waste and processing complexity.
  - » The significance extends beyond medicines to flavours, fragrances and pesticides, which interact with biological systems.
- **Connection with the Origin of Life:**
  - » The work shows that homochirality can emerge through chemical processes outside biological systems. However, it does not by itself explain why life selected one particular molecular orientation. It provides an experimental pathway for investigating this long-standing question.

Conclusion:

The 2026 Chemistry Nobel highlights how controlling the three-dimensional orientation of molecules can transform chemical manufacturing, particularly drug production, while also offering clues to one of biology's fundamental mysteries — why life overwhelmingly prefers one mirror-image form of certain molecules.

Astronomers discovered Green White Dwarf Star WD J1330+6435

Context:

Recently, astronomers have identified a star with an unusual yellowish-green glow, challenging what scientists know about the colours of stars. The white dwarf, WD J1330+6435, exhibits this unusual colour due to the interaction of sodium with helium under the extreme density conditions of its atmosphere. The discovery highlights how atomic physics and spectroscopy help explain unusual astronomical phenomena and improve our understanding of stellar evolution.

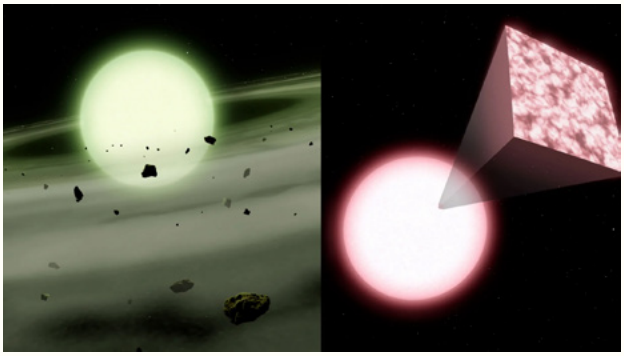
What Is a White Dwarf?

- A white dwarf is the extremely dense, hot stellar remnant left behind after a low- or intermediate-mass star, such as the Sun, exhausts its nuclear fuel and sheds its outer layers. It forms when the star evolves into a red giant and expels its outer material, often creating a planetary nebula.
- A white dwarf typically has a mass comparable to the Sun but a size similar to Earth, making it one of the densest objects in the universe. It no longer produces energy through nuclear fusion and is supported against gravitational collapse by electron degeneracy pressure, a consequence of the Pauli Exclusion Principle.
- The Chandrasekhar limit, approximately 1.4 times the Sun's mass, represents the maximum mass a white dwarf can stably support. Beyond this limit, it may trigger a Type Ia supernova under suitable conditions.
- Over billions of years, a white dwarf gradually cools and may theoretically become a black dwarf. However, the universe is not yet old enough for any black dwarfs to have formed.

Why Does the Star Look Green?

- Under extreme atmospheric density,

interactions between sodium and helium alter sodium's light-absorption spectrum. Greater absorption of certain yellow, orange and red wavelengths produces a yellowish-green appearance. Spectroscopy helps scientists identify atmospheric elements and understand stellar evolution.



Other Stellar Remnants:

- **Neutron Star:** Formed when the core of a sufficiently massive star collapses, usually during a supernova. Protons and electrons combine to form neutrons. A neutron star may contain more than the Sun's mass within a sphere roughly 20 kilometres across. Pulsars emit regular beams of radiation, while magnetars possess exceptionally powerful magnetic fields.
- **Black Hole:** Forms when a stellar core collapses beyond the mass that neutron-star matter can support. Within its event horizon, the escape velocity exceeds the speed of light. The Schwarzschild radius describes the event-horizon radius of a non-rotating, uncharged black hole.

Comparison:

Feature	White Dwarf	Neutron Star	Black Hole
Supporting force	Electron	Neutron-star matter pressure	No known pressure halts collapse in the classical model
Approximate size	Earth-sized	City-sized	Defined by event horizon
Key concept	Chandrasekhar limit	TOV limit	Event horizon

Conclusion:

The greenish white dwarf demonstrates how established physical laws can produce unexpected cosmic phenomena, expanding our understanding of the life cycles of stars.

Aditya-L1 Mission Reveals Solar Eruption Dynamics

Context:

Recently, India's first dedicated solar mission, Aditya-L1, generated new Doppler velocity images of the solar corona using its Visible Emission Line Coronagraph (VELC) payload. These images provide insights into the direction in which solar plasma moves during eruptions, improving scientists' understanding of Coronal Mass Ejections (CMEs) and their potential impact on Earth.

About Aditya-L1 Mission:

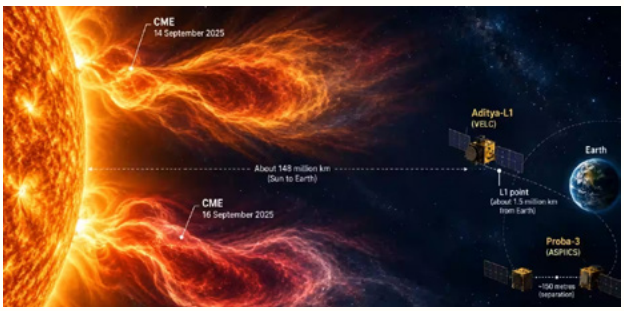
- Aditya-L1 was launched on 2 September 2023 by the Indian Space Research Organisation (ISRO) aboard PSLV-C57. It operates in a halo orbit around the Sun–Earth Lagrange Point 1 (L1), approximately 1.5 million kilometres from Earth.
- Its primary objective is to study the Sun's outer atmosphere, solar activity, solar wind and related space-weather phenomena.
- The spacecraft carries seven scientific payloads for remote sensing and in-situ observations. The L1 location provides a relatively uninterrupted view of the Sun, enabling continuous monitoring of solar activity.

Key Scientific Findings:

- The Visible Emission Line Coronagraph

(VELC) helps scientists investigate solar plasma movement through Doppler velocity imaging.

- These observations indicate whether plasma is moving towards or away from the observer and provide information about the propagation of solar material during eruptions.
- By complementing conventional images with velocity measurements, Aditya-L1 improves scientific understanding of solar dynamics. The mission also demonstrates India's growing indigenous capabilities in solar observation and scientific data processing.



About Coronal Mass Ejections:

- Coronal Mass Ejections are large expulsions of plasma and magnetic fields from the Sun's outer atmosphere, known as the corona. They are associated with changes in the Sun's magnetic field and can release enormous quantities of charged particles into space.
- When Earth-directed CMEs interact with Earth's magnetosphere, they can trigger geomagnetic storms. Such disturbances may affect satellites, radio communications, navigation systems and electricity transmission networks.

Role of the Doppler Effect:

- The Doppler effect refers to the change in the observed wavelength or frequency of a wave due to relative motion between the source and the observer. In solar observations, a blueshift generally indicates plasma moving towards the observer, while a redshift indicates movement away from the observer.
- Analysing these spectral shifts enables scientists to estimate plasma velocities and investigate the direction of solar eruptions, providing information that ordinary images alone cannot fully reveal.

Significance for India:

- Aditya-L1 can contribute to improved space-weather assessment and preparedness. Better understanding of solar eruptions can help satellite operators anticipate potential disturbances and protect communication and navigation services.
- It can also improve assessments of geomagnetic storms that may affect power grids and other critical infrastructure.
- Furthermore, the mission strengthens India's self-reliance in space science, promotes advanced solar research and enhances the country's contribution to international scientific cooperation.

Conclusion:

Aditya-L1 represents a significant advancement in India's solar research capabilities. Its observations of plasma motion can deepen understanding of Coronal Mass Ejections and improve space-weather assessments. Continued research and effective application of mission data can help protect critical infrastructure and reinforce India's position in space science.

PHP2Shell Vulnerabilities

Context:

Recently, Two critical vulnerabilities in PHP, a programming language used by millions of websites, triggered emergency security updates and precautionary shutdowns worldwide on October 21, 2026. Several services, including Japan’s Finance Ministry, US human-resources platform BambooHR, the Port of Rotterdam and the Wikimedia Foundation, temporarily went offline as organisations worked to secure their systems.

About PHP and why is it so widely used?

- PHP (Hypertext Preprocessor) is a free, open-source programming language that operates behind the scenes on roughly 70% of websites whose server-side language is identifiable. It processes tasks such as logins, applications and online purchases.
- WordPress, which powers more than 40% of websites worldwide, also uses PHP. Its widespread use means vulnerabilities can affect websites across governments, businesses and media organisations.

What is PHP2Shell, and why is it dangerous?

- PHP2Shell refers to two critical vulnerabilities in PHP that could allow attackers to execute malicious code remotely without logging in or access sensitive information in server memory.
- According to cybersecurity experts, the flaws occur within PHP itself, before individual websites' login checks or security systems can operate.
- Researchers identified two problems:
  - » A problem when PHP runs out of memory: When a request causes a memory error, PHP may incorrectly treat incomplete or invalid information as legitimate, creating an opportunity for exploitation.
  - » A problem with leftover information: PHP may mistakenly reuse outdated references to internal information from earlier requests, potentially causing subsequent requests to be processed incorrectly.
- Attackers could exploit these weaknesses to steal customer data, database passwords and login credentials, modify websites, install backdoors or gain access to internal networks. AI tools could also help attackers develop exploits more quickly.

Why did websites go offline?

- Cybersecurity agencies advised organisations to install security updates immediately. Websites that could not be patched promptly were advised to go offline temporarily to reduce the risk of compromise.
- Updating PHP can be complicated because it operates across hosting platforms, content-management systems and third-party products. Older devices may also depend on vendors for updates.
- CERT-EU and India's CERT-In issued warnings urging affected organisations to apply the fixes.



Implications for India:

- The incident highlights risks to Digital India services, e-governance platforms, financial systems and critical information infrastructure. It reinforces the importance of CERT-In advisories, coordinated vulnerability disclosure and robust cyber incident-response mechanisms.

Legal and Institutional Framework in India:

- **IT Act, 2000:** Section 70 addresses protected systems, Section 70A provides for protection of critical information infrastructure, and Section 70B establishes CERT-In's incident-response role.
- **CERT-In:** Issues cybersecurity advisories and coordinates responses to cyber incidents. Its 2022 directions require specified incidents to be reported within six hours of being noticed or brought to an organisation's attention.
- **DPDP Act, 2023:** Section 8(5) requires data fiduciaries to implement reasonable security safeguards to prevent personal data breaches.

Conclusion:

PHP2Shell demonstrates how vulnerabilities in widely used open-source infrastructure can create systemic cyber risks. Strengthening software security, responsible AI governance and institutional preparedness is essential to building a resilient digital ecosystem.

Shamonda Virus: First Human Infection Reported in France

Context:

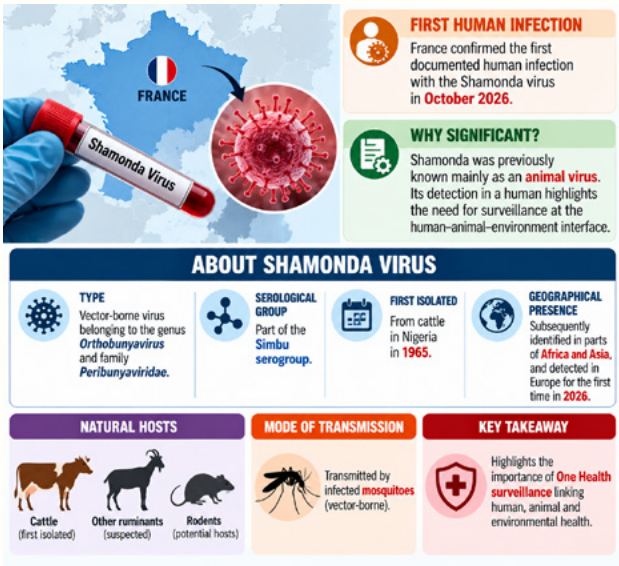
Recently, France confirmed the first documented human infection with the Shamonda virus in October 2026. The case is significant because Shamonda was previously known primarily as an animal virus. Its detection in a human highlights the importance of surveillance at the intersection of human, animal and environmental health.

What is the Shamonda Virus?

- The Shamonda virus is a vector-borne virus belonging to the genus Orthobunyavirus and family Peribunyaviridae. It is part of the Simbu serogroup and was first isolated from cattle in Nigeria in 1965.
- It has subsequently been identified in parts of Africa and Asia, and was detected in Europe for the first time in 2026.
- The virus primarily affects cattle, although infections have also been reported in sheep, goats, horses and alpacas. Its full epidemiological characteristics and long-term impact remain uncertain.

How is the Virus Transmitted?

- Shamonda virus is believed to spread primarily through the bites of infected Culicoides midges, which are small, biting, fly-like insects. These insects act as vectors, transmitting the virus between susceptible animals.
- Direct animal-to-animal transmission through ordinary contact has not been established, although transmission from an infected mother to her foetus can occur.



Zoonotic Spillover and Public Health Concerns:

- Zoonotic spillover occurs when a pathogen crosses the species barrier from animals to humans. Factors that may increase the risk include changes in pathogen characteristics, increased contact between humans and animals, ecological changes, vector distribution and the vulnerability of individuals with weakened immune systems.
- In the French case, authorities considered infection through an infected midge bite the leading hypothesis. The patient was severely immunocompromised and developed neurological complications.

Role of the World Organisation for Animal Health (WOAH):

- WOAH supports international animal-health surveillance, scientific collaboration, laboratory diagnosis and information-sharing.
- In the Shamonda case, it is working with reference centres, experts and the World Health Organization to improve understanding of the virus and its potential implications for human and animal health.

Way Forward:

- The One Health approach recognises that human health, animal health and environmental health are interconnected. India should strengthen veterinary surveillance, laboratory testing, vector monitoring and information-sharing between public-health and animal-husbandry authorities.
- Early detection of unusual livestock illnesses, research into emerging pathogens and international cooperation can help identify potential threats before they become wider public-health problems.

Conclusion:

The first documented human Shamonda virus infection in France is an important development in emerging-disease surveillance, but it does not by itself indicate an imminent public-health emergency. Continued research, transparent reporting and coordinated human, animal and environmental health surveillance are essential to assess the risk accurately.

Double Fortified Salt (DFS)

Context:

- In recent times, The Government of India's renewed 7X7X7 strategy under Anaemia Mukt Bharat (AMB) has brought renewed focus on underutilised preventive interventions, particularly Double Fortified Salt (DFS), as an affordable, population-scale solution to address persistent iron deficiency and strengthen India's efforts to reduce anaemia.

What Is Anaemia?

- Anaemia is a condition characterised by insufficient haemoglobin or healthy red blood cells, reducing the oxygen-carrying capacity of blood.
- Iron deficiency is a major cause, although folate and vitamin B12 deficiencies, infections, blood loss, and genetic disorders also contribute. Anaemia affects maternal and child health, learning outcomes, economic productivity, and overall human development.



What Is Double Fortified Salt (DFS)?

- DFS is edible salt fortified with both iron and iodine. Iron supports haemoglobin production and helps prevent iron-deficiency anaemia, while iodine prevents iodine-deficiency disorders such as goitre and impaired neurodevelopment.
- Since salt is consumed regularly across income groups and geographical regions, DFS offers a practical means of delivering micronutrients at population scale while complementing supplementation and dietary diversification.

Potential and Significance of DFS:

- India's Universal Salt Iodisation programme provides an established foundation, with approximately 95% of households consuming iodised salt. DFS is reportedly reaching around 76 million people across four states through government safety-net programmes.
- Evidence from trials in Bengaluru, Darjeeling, and Punjab, alongside implementation experience in Uttar Pradesh, indicates potential improvements in iron status and consumer acceptability when appropriate formulations are used. A global review cited in the article suggests that DFS may reduce anaemia by up to 21%.

- At an estimated annual cost of Rs.14–20 per person, DFS offers an affordable preventive intervention. Existing salt-processing facilities, fortification technologies, and laboratory infrastructure can facilitate large-scale production and quality monitoring.

Existing Regulatory and Institutional Framework:

- The Food Safety and Standards Authority of India (FSSAI) establishes applicable standards for fortified foods, including DFS. The Anaemia Mukt Bharat strategy follows the 7X7X7 approach, covering seven beneficiary groups, seven interventions, and seven institutional mechanisms.
- PM POSHAN and Anganwadi Services provide platforms for improving child and maternal nutrition. The Public Distribution System (PDS) offers a further opportunity to extend affordable DFS access to vulnerable households. The precise procurement and implementation requirements should be verified against current programme guidelines.

Major Challenges and Bottlenecks:

- The principal barriers to wider adoption are institutional and operational. DFS integration into the PDS remains uneven because implementation, financing, and procurement depend significantly on state-level decisions.
- Limited retail availability and price premiums may constrain household access. Inadequate formulation or packaging can cause discolouration and undesirable flavours, while moisture and chemical interactions may affect nutrient stability.
- Public health communication must also balance fortification with sodium reduction and ensure appropriate clinical screening for haemoglobinopathies such as thalassaemia and sickle cell disease.

Conclusion:

Double Fortified Salt offers India an affordable and scalable opportunity to address iron and iodine deficiencies. Building on the success of Universal Salt Iodisation, nationwide DFS adoption could accelerate progress towards Anaemia Mukt Bharat and the vision of Viksit Bharat 2047. Strong political commitment, adequate financing, quality assurance, and last-mile delivery are essential to convert its technological potential into measurable public health gains.

Diamondiyne: New Carbon Allotrope

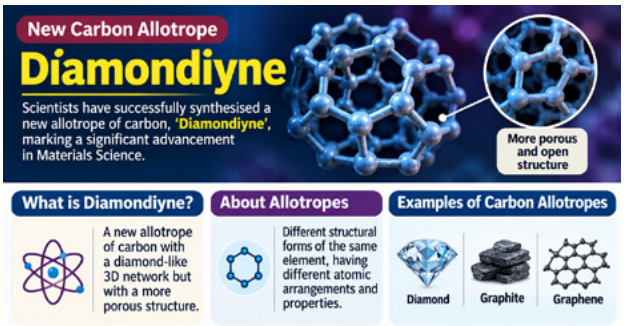
Context:

Recently, scientists have successfully synthesised a new allotrope of carbon called 'Diamondiyne'. This achievement is considered significant in the field of Materials Science. Its structure resembles the three-dimensional (3D) network of diamond; however, it has a more porous and open structure. This discovery has expanded the possibilities for developing new carbon-based materials.

What is Diamondiyne?

- Diamondiyne is a new allotrope of carbon. Allotropes are different structural forms of the same chemical element in which atoms are arranged in different configurations. For example, diamond, graphite and graphene are all made of carbon, but their atomic structures differ, resulting in different physical and chemical properties.
- The major characteristics of Diamondiyne are as follows:
  - » It is a material with a three-dimensional network structure composed of carbon atoms.
  - » Its structure contains a strong three-dimensional network similar to diamond, but it is relatively more porous.
  - » It contains both carbon-carbon single bonds and triple bonds.
  - » It exhibits a combination of sp and sp^3 hybridisation of carbon atoms.

» Its unique atomic arrangement distinguishes it from other carbon allotropes.



How Was Diamondiyne Synthesised?

- The synthesis of Diamondiyne has long been a challenge for scientists. Its theoretical possibility was proposed nearly three decades ago, but synthesising it in the laboratory was difficult.
- Researchers used the liquid-liquid interface formed between water and chloroform for its synthesis. In this process, carbon atoms were arranged in a specific sequence through controlled chemical reactions. As a result, a thin carbon film containing Diamondiyne and small crystals was obtained.
- Modern scientific techniques, such as electron microscopy and spectroscopy, were used to confirm its atomic structure.

Comparison of Major Carbon Allotropes:

The unique characteristic of carbon is its ability to form diverse structures through different types of chemical bonds.

Carbon Allotrope	Major Characteristics
Diamond	Three-dimensional structure, extremely hard and an electrical insulator
Graphite	Hexagonal layered structure and a good conductor of electricity
Graphene	A single two-dimensional layer of carbon atoms
Fullerene	Cage-like closed molecular structure
Carbon Nanotubes	Cylindrical nanostructures
Diamondi-yne	Porous three-dimensional structure with sp and sp^3 hybridisation

Scientific and Technological Significance of Diamondiyne:

- The discovery of Diamondiyne is not limited to identifying a new carbon allotrope; it may also prove important for the development of advanced materials in the future.
  - » **In the Field of Electronics:** Due to its unique atomic structure and electronic properties, researchers are exploring its potential applications in the development of electronic devices.
  - » **In Nanotechnology:** Its porous structure may be useful for studying the movement and behaviour of materials at the nanoscale.
  - » **In Energy and Materials Science:** It may open new avenues for developing novel structures and advanced functional materials.
  - » **Synthesis of New Materials:** The technique used for its synthesis may also facilitate the development of other three-dimensional carbon structures.

Conclusion:

The synthesis of Diamondiyne is a significant achievement in the fields of carbon chemistry and materials science. It demonstrates that new materials with distinct properties can be developed by modifying the structural arrangement of atoms. Although its practical applications are still in the early stages of research, it may play an important role in the future development of electronics, nanotechnology and advanced materials. This discovery also highlights the importance of innovation and interdisciplinary collaboration in scientific research.

6 Economy

Changing Nature of Labour in India: Need to Recognise the Gig Economy and Domestic Work

Context:

Recently, the Ministry of Statistics and Programme Implementation (MoSPI) has proposed comprehensive changes to the Periodic Labour Force Survey (PLFS). The objective is to better incorporate the rapidly growing gig and platform-based workers, as well as unpaid domestic and care-related work performed by women, into employment statistics. The proposed changes are scheduled to be implemented from January 2027. The Ministry has also invited suggestions from experts, researchers and the general public. This initiative is an important step towards understanding the changing realities of India's labour market and developing a more inclusive definition of employment.



Current Framework for Employment Measurement in India:

- The economic progress of any country cannot be assessed solely on the basis of Gross Domestic Product (GDP) or industrial development. It is equally important to examine how many people participate in economic activities and the nature of employment available to them. This requires reliable labour-related data.
- In India, the Periodic Labour Force Survey (PLFS) is the primary source of data on employment and unemployment. It was launched in 2017-18 by the National Statistical Office (NSO). Its objective is to assess key indicators such as employment, unemployment, the Labour Force Participation Rate (LFPR) and the Worker Population Ratio (WPR).
- Under the existing framework, employment statistics are primarily based on categories such as regular wage or salaried employment, self-employment and casual labour. However, new forms of employment are emerging in the changing economy. Workers engaged through digital platforms and unpaid activities performed within households have not received adequate

representation in traditional employment measurement systems. Consequently, the assessment of the actual labour market situation remains incomplete.

Expansion of the Gig Economy and Emerging Employment Relationships:

- The expansion of digital technology, the internet and smartphones has rapidly transformed the nature of employment in India. A growing number of people are now providing services through digital platforms rather than working in traditional offices or regular workplaces. This arrangement is known as the gig economy.
- The gig economy includes workers who provide services on the basis of specific tasks, assignments or projects rather than through permanent employment. It includes taxi drivers, food delivery workers, online service providers and independent professionals. Platforms such as Ola, Uber, Zomato, Amazon and Urban Company are prominent examples.
- According to the NITI Aayog report of 2022, India had approximately 7.7 million gig and platform workers during 2020-21. Their number is projected to increase to 23.5 million by 2029-30. This growth highlights the increasing importance of the gig sector in the Indian economy.
- However, accurately estimating the actual number of these workers and assessing their working conditions remain challenging. The primary reason is that gig work is often irregular, and many people undertake it in addition to their primary occupation. Consequently, such workers may remain unidentified in traditional surveys.

Major Proposed Changes in PLFS:

- Under the proposed changes, a separate Second Stage Stratum (SSS) will be developed to identify digital platform workers. For this purpose, households in both rural and urban areas will be asked whether any member of the household has worked through a digital platform during the preceding 365 days.
- Additionally, information will be collected from workers regarding the services they provide, whether they work across multiple platforms, their reasons for choosing this form of employment, and the challenges they face while working.
- These challenges include long working hours, adverse weather conditions such as extreme heat and rainfall, uncertain income, lack of protection against accidents and inadequate social security facilities.
- Thus, the proposed changes are not limited to estimating the number of gig workers but will also help in understanding the quality of their employment and their working conditions.

Need to Give Economic Recognition to Unpaid Domestic Work:

- The second important aspect of the proposed reforms is to better record unpaid domestic and care-related work performed by women.
- In Indian society, activities such as cooking, cleaning, childcare, assisting elderly people and fulfilling the needs of other family members are primarily performed by women. These activities require considerable time and labour, but they do not generate direct monetary payments. Consequently, they are often not recorded as employment in traditional labour surveys.
- According to the Time Use Survey 2024 conducted by the Ministry of Statistics and Programme Implementation, women aged six years and above spent an average of more than four and a half hours per day on unpaid domestic and care-related services. In contrast, men spent only 37 minutes on these activities. This disparity reflects the unequal distribution of domestic responsibilities in Indian society.
- Under the proposed changes, information will be collected from individuals aged 15 years and above regarding the production of goods for self-consumption, unpaid domestic work, care-related activities, voluntary work and unpaid training. This will help identify activities that contribute to

the economy but have not received adequate recognition so far.

Economic and Social Significance of the Proposed Reforms:

- **Improved Coverage of Employment Statistics:** Better recording of gig workers and unpaid activities will provide a more realistic picture of the labour market. It will also help distinguish between traditional and emerging forms of employment.
- **Women's Empowerment:** Assessing women's contribution to domestic work will help in understanding gender inequality, the unequal distribution of time and issues related to women's economic participation.
- **Expansion of Social Security:** Reliable data on the number, working conditions and challenges of gig workers will help make insurance, pensions, healthcare facilities and other social security measures more effective.
- **Inclusive Development:** Identifying diverse forms of employment in rural and urban areas will help the government formulate policies according to region-specific requirements.
- **Improvement in Policy Decisions:** Reliable labour statistics can make policies related to skill development, employment generation, women's labour force participation and labour reforms more effective.

Major Challenges Facing the Reforms:

- The foremost challenge is the accurate identification of gig workers. Many workers operate across multiple platforms simultaneously or undertake gig work in addition to their regular employment. Consequently, their work may be missed during surveys.
- It may not be easy for every individual to accurately recall irregular work undertaken during the preceding 365 days. This may lead to errors in survey responses.
- The economic valuation of unpaid domestic work is also a challenge. It is not sufficient to know whether an individual performs domestic work; it is equally important to understand how much time they spend on these activities. Better coordination between the Time Use Survey and PLFS is therefore essential.
- Changes in survey methodology and employment categories may make direct comparisons between old and new data difficult. Therefore, clear information regarding comparable statistics and the revised methodology must be made available.
- Furthermore, the changing working conditions of gig workers, accountability of platform companies and social security rights of workers must also receive adequate attention in policymaking.

Way Forward:

- India needs to modernise its employment measurement system in accordance with the changing realities of the labour market. First, the proposed changes in PLFS should be implemented in a scientific and practical manner. Along with simplifying the survey questionnaire, survey investigators should also receive appropriate training.
- Coordination among digital platform companies, the Ministry of Labour and the Ministry of Statistics must be strengthened to ensure the reliability of data related to gig workers. Better integration with existing mechanisms such as the e-Shram Portal can help extend the benefits of social security schemes to workers.
- The Time Use Survey should be conducted at regular intervals to assess unpaid domestic work. At the same time, public childcare centres, elderly care services, clean cooking fuel and drinking water facilities should be expanded to reduce women's domestic workload.
- The quality of employment should receive the same importance as the quantity of employment. Effective provisions for minimum income security, accident insurance, health protection and social security must be ensured for gig workers.

Conclusion:

Modernising labour statistics in accordance with the changing nature of employment in India is the need of the hour. The proposal to better record the gig economy and unpaid domestic work is not merely a statistical reform but also an important initiative towards economic and social justice. In any economy, only those contributions that are properly recognised and measured can become the basis for effective policymaking. Therefore, India must develop a labour measurement system that recognises not only wage-earning workers but also those engaged in the digital economy and individuals whose unpaid labour contributes to the well-being of families and society. This will serve as the foundation for inclusive, equitable and sustainable development.

Short Issues

RELIEF Scheme Component II Extended Till March 2027

Context:

Recently, The Department of Commerce has extended the eligibility and validity period under Component II of the RELIEF scheme until 31 March 2027. The extension aims to support Indian exporters facing continuing geopolitical and maritime-logistics disruptions in West Asia.

What is the RELIEF Scheme?

- RELIEF stands for Resilience & Logistics Intervention for Export Facilitation. It was launched on 19 March 2026 under the Export Promotion Mission (EPM).
- The scheme was introduced to assist Indian exporters affected by:
  - » Extraordinary freight escalation
  - » Higher insurance premiums
  - » War-related export risks
  - » Disruptions in the Gulf and wider West Asian maritime corridor
- The Export Credit Guarantee Corporation (ECGC) plays a key role in implementing the intervention.

Component II of RELIEF:

- Component II focuses on insurance support for upcoming export shipments.
- Under the extended framework:
  - » Exporters can obtain 95% risk coverage through eligible ECGC cover.
  - » It applies to Stand Alone Policies and Whole Turnover Policies obtained on or after 16 March 2026.
  - » The eligibility timeline has been extended up to 31 March 2027.
- The premium paid by exporters will not exceed the pre-disruption level during the eligible period.

Eligible Cargo:

- The support covers:
  - » Full Container Load (FCL)
  - » Less than Container Load (LCL)
  - » Reefer containers
- However, energy shipments are excluded from this component.



Significance for Indian Exports:

- West Asia is an important maritime corridor for India's international trade. Disruptions in the region can increase: Geopolitical

tensions, shipping risks, freight costs, insurance costs, higher export costs
- The extension therefore provides exporters greater certainty while dealing with continuing logistical and geopolitical uncertainties.

Related Export Support:

- Alongside RELIEF, the government has also extended the RoDTEP (Remission of Duties and Taxes on Exported Products) scheme until 31 December 2026. Existing rates and value caps remain unchanged.
- RoDTEP seeks to refund eligible embedded Central, State and local duties, taxes and levies that are not otherwise refunded to exporters.

Conclusion:

The extension of Component II of RELIEF demonstrates the importance of trade-risk management and resilient supply chains amid geopolitical uncertainty. By providing enhanced insurance coverage and maintaining premium protection, the measure seeks to reduce risks faced by Indian exporters and sustain international trade flows.

Next-Gen GST and India's Next Phase of Growth

Context:

Recently, Next-Gen GST reforms, implemented on September 22, 2025, have completed one year. The reforms saw taxable supplies rise 25.8%, while gross GST collections reached Rs.12.46 lakh crore in H1 FY27, growing 11.6% year-on-year. The GST Council meeting on October 7, 2026 is expected to consider further reforms in e-invoicing, ITC, registration, refunds and compliance.

What is Next-Gen GST Rate Rationalisation?

- Next-Gen GST seeks to simplify the multi-slab GST structure, reduce rate distortions, lower consumer costs, correct inverted duty structures and ease compliance.
- Its core structure is centred primarily around 5% and 18% slabs, with a 40% demerit rate for specified luxury and sin goods.
- Key measures include:
  - Lower GST on essential goods, medicines and selected agricultural and renewable-energy equipment.
  - Reduction of GST from 28% to 18% on specified automobiles, consumer durables and cement.
  - Exemption of individual life and health insurance premiums.
  - Correction of inverted duty structures to reduce accumulated Input Tax Credit (ITC).

Economic Impact:

- The reform has been accompanied by significant expansion in economic activity:
  - **Taxable supplies:** Increased by 25.8%.
  - **Gross GST collection:** Rs.12.46 lakh crore in H1 FY27, growing 11.6% year-on-year.
  - **B2C sales:** Increased by 26.7%, indicating stronger consumer demand.
  - **GST registrations:** Rose to around 1.71 crore by August 2026.
  - **State GST revenue:** Increased by approximately 16%.
  - **GST refunds:** Rs.1.80 lakh crore, improving business liquidity.
- These trends suggest that lower and simpler tax rates can coexist with revenue buoyancy when accompanied by formalisation and improved compliance.

Next Agenda for GST Reform:

- The proposed reform agenda includes risk-based digital registration, automated return filing, faster refunds, faceless appeals and seamless ITC flow.
- Strengthening the GST Appellate Tribunal (GSTAT) is also important for reducing litigation and ensuring consistency in tax interpretation.

Key Challenges:

- Despite progress, important issues remain. Petroleum products, natural gas, ATF and real estate largely remain outside the GST framework, creating tax cascading.
- MSMEs continue to face working-capital pressures due to tax payment being linked to invoicing rather than actual receipt of payments. Classification disputes, divergent advance rulings and fake invoicing also pose compliance challenges.

Way Forward:

- The GST Council should consider the gradual inclusion of natural gas and ATF, simplify compliance for small service providers, operationalise GSTAT benches nationwide and explore cash-based GST payment options for eligible micro-enterprises.

Conclusion:

Next-Gen GST demonstrates how tax rationalisation, formalisation and technology-driven compliance can support economic growth while maintaining revenue buoyancy. The next phase should focus on reducing compliance costs, expanding the GST base, resolving disputes and improving ITC and refund mechanisms. A simpler and more predictable GST regime can strengthen investment, consumption, MSME competitiveness and the broader goal of Viksit Bharat.

Union Cabinet Approves Rs.10,000-Crore SME Growth Fund to Boost Manufacturing

Context:

Recently, The Union Cabinet has approved the Government's Rs.10,000-crore commitment towards establishing the SME Growth Fund (SGF) to provide long-term growth capital to promising Small and Medium Enterprises (SMEs), particularly those engaged in manufacturing.

About SME Growth Fund:

- The SME Growth Fund will provide direct equity investment through an Alternative Investment Fund (AIF). Unlike conventional bank loans, equity capital does not create an immediate repayment burden and can therefore provide patient capital to enterprises seeking to expand.
- The fund is expected to support manufacturing enterprises in expanding production capacity, adopting advanced technologies, improving productivity, entering international markets and integrating into global value chains.
- It will also encourage the development of industrial clusters, including those located in Tier-II and Tier-III cities, thereby promoting more balanced regional industrialisation.

Significance for the Indian Economy:

- The initiative is significant because MSMEs form the backbone of India's non-farm economy. They contribute around 31.1% of India's GDP, 35.4% of manufacturing output and 48.58% of exports.
- MSMEs also function as important suppliers of components, raw materials and sub-assemblies to major sectors such as automobiles, textiles and pharmaceuticals.
- By providing growth-stage equity capital, the SME Growth Fund can help enterprises scale up, modernise machinery, adopt new technologies and improve their productivity. This can strengthen domestic supply chains, enhance export competitiveness and generate employment.

MSME Classification:

- Under the revised MSME classification, enterprises are categorised on the basis of investment and annual turnover, without distinguishing between manufacturing and service enterprises.
- A micro enterprise is defined by investment of up to Rs.2.5 crore and turnover of up to Rs.10 crore; a small enterprise has investment of up to Rs.25 crore and turnover

of up to Rs.100 crore; while a medium enterprise has investment of up to Rs.125 crore and turnover of up to Rs. 500 crore.

- The higher thresholds allow enterprises to expand their operations while continuing to access government support.



Major Challenges:

- Despite their importance, MSMEs face several structural challenges. Limited access to formal credit, collateral requirements and working-capital shortages constrain business expansion. Delayed payments from large companies and government agencies further weaken their cash flows.
- MSMEs also face technology and infrastructure gaps, shortage of skilled workers, regulatory compliance burdens and difficulties in meeting emerging environmental, social and governance standards and carbon-related requirements in international markets. Therefore, access to equity capital needs to be accompanied by broader institutional and infrastructural reforms.

Government Initiatives:

- The government has undertaken several measures to address these challenges. CGTMSE facilitates credit guarantees for eligible micro and small enterprises, while PM MUDRA Yojana provides institutional credit to micro enterprises.
- TReDS helps MSMEs obtain financing against trade receivables and address delayed-payment problems.
- Udyam Registration promotes digital formalisation, while the RAMP Scheme seeks to improve MSME performance, market access and Centre-State linkages.
- The Public Procurement Policy provides for 25% annual procurement from MSEs by Central Ministries and Public Sector Enterprises.
- Other initiatives such as GeM, PM Vishwakarma, SFURTI and the CHAMPIONS Portal support market access, traditional artisans, cluster development and grievance redressal.

Way Forward:

- The SME Growth Fund can become an important instrument for transforming high-potential Indian SMEs into globally competitive enterprises. However, its success will depend on transparent beneficiary selection, professional fund management and effective monitoring.
- Equity support must be complemented by better infrastructure, technology adoption, skill development, timely payments and easier market access. India therefore needs an integrated "capital + technology + skills + markets + infrastructure" approach to strengthen its MSME ecosystem.

RBI MPC Meeting: Repo Rate Raised to 5.50%

Context:

Recently, The Reserve Bank of India (RBI) Monetary Policy Committee (MPC) has raised the policy repo rate by 25 basis points to 5.50% and changed its monetary policy stance from

"neutral" to "calibrated tightening, signalling a shift towards tighter monetary conditions.

Key MPC Decision:

- The MPC raised the repo rate to 5.50%, while the Standing Deposit Facility (SDF) rate stands at 5.25% and the Marginal Standing Facility (MSF) and Bank Rate at 5.75%.
- The RBI also raised its FY 2026–27 real GDP growth projection to 7.1%, indicating confidence in the resilience of domestic economic activity. At the same time, the CPI inflation projection was raised to 5.2%, reflecting concerns over emerging price pressures.



Why is the Repo Rate Important?

- The repo rate is the rate at which the RBI lends short-term funds to commercial banks against eligible securities. When the RBI raises the repo rate, borrowing by banks becomes relatively more expensive, which can transmit into higher lending rates for households and businesses.
- This may moderate excessive demand and inflationary pressures. Conversely, a reduction in the repo rate can lower borrowing costs, encourage consumption and investment and support economic activity. Thus, monetary policy involves balancing the objectives of price stability and economic growth.

What is the Monetary Policy Committee?

- The Monetary Policy Committee is a six-member statutory body established under Section 45ZB of the RBI Act, 1934, following the recommendations of the Urjit Patel Committee and the adoption of the Flexible Inflation Targeting framework.
- Its primary responsibility is to determine the policy repo rate required to achieve the inflation objective while keeping growth considerations in view. The MPC consists of three RBI representatives and three external members appointed by the Central Government.

Inflation Targeting Framework:

- Under the Flexible Inflation Targeting (FIT) framework, the RBI seeks to maintain headline CPI inflation at 4%, with a tolerance band of 2% to 6%. The inflation target is reviewed periodically by the government.
- If inflation remains outside the tolerance band for three consecutive quarters, the RBI is required to submit a report to the Central Government explaining the reasons for the deviation and proposing remedial measures.
- The MPC therefore uses the repo rate as its principal policy instrument to influence inflation and economic activity. The framework gives greater predictability to monetary policy while retaining flexibility to respond to growth and supply-side shocks.

Reasons behind the Rate Hike:

- The major reason for the rate hike is the renewed risk of inflation. Rising crude oil prices, geopolitical tensions and possible supply disruptions can increase India's import bill and generate imported inflation.
- Higher oil prices can also put pressure on the rupee, thereby making imports more

expensive. Since India remains highly dependent on crude-oil imports, persistent external price shocks can have significant implications for domestic inflation.

- The RBI's decision also reflects the strength of the Indian economy. With GDP growth projected at 7.1%, the central bank has greater policy space to prioritise price stability without severely damaging economic momentum. The shift towards a calibrated tightening stance indicates that the RBI is prepared to take further measures if inflationary pressures become persistent.

Impact on the Economy:

- A higher repo rate generally increases the cost of funds for commercial banks, which can subsequently raise lending rates. This may increase EMIs on floating-rate home, vehicle and personal loans, while potentially improving returns on deposits.
- Higher borrowing costs may moderate excessive credit demand and investment, helping control inflation. However, prolonged monetary tightening could also affect private investment and consumption.
- The policy may also provide some support to the Indian rupee by making rupee-denominated assets relatively more attractive. Nevertheless, exchange-rate movements will continue to depend on global interest rates, capital flows and crude-oil prices.

Conclusion:

The October 2026 MPC meeting marks an important shift in India's monetary-policy cycle. By raising the repo rate to 5.50% and adopting a calibrated tightening stance, the RBI has signalled that controlling inflation is becoming a priority while maintaining confidence in India's growth prospects. The effectiveness of this approach will depend on the evolution of inflation, crude-oil prices, global financial conditions and domestic demand.

Government Approves Setting Up of Integrated Transport & Logistics Authority

Context:

The Union Cabinet on 6 October 2026 approved the setting up of the Integrated Transport & Logistics Authority (ITLA) as a Special Purpose Vehicle (SPV) to strengthen research, planning, project appraisal, monitoring and impact assessment in the transport and logistics sectors. The move seeks to address fragmented planning across multiple transport ministries and agencies and promote multimodal integration.

What is ITLA?

- ITLA will function as the national apex institution for integrated transport and logistics planning, research, project appraisal, monitoring, policy support and data analytics.
- It will cover roads, railways, ports and shipping, civil aviation, inland waterways, coastal shipping, urban mobility and logistics.



Key Functions:

- **National Transport Master Plan:** ITLA will prepare a comprehensive National Transport Master Plan with a planning horizon of 10 years or more. It will also evaluate five-year sectoral and annual plans of transport ministries to ensure their alignment with the long-term plan.
- **Project Appraisal and Monitoring:** It will

undertake technical appraisal of Central Government infrastructure projects costing Rs.500 crore or more. Financial appraisal will continue through existing mechanisms. ITLA will also monitor projects above □500 crore and conduct post-implementation impact assessments.

- **National Transport Data Repository:** ITLA will develop a National Transport Data Repository (NTDR) by integrating data from sources such as GSTN e-way bills, FASTag, VAHAN, GPS-based systems and urban traffic-management systems. This will facilitate freight-flow and origin-destination analysis and support evidence-based planning.
- **Logistics Policy and Capacity Building:** ITLA will assist in reviewing and updating the National Logistics Policy, 2022, while promoting research, innovation, training and skilling in the logistics sector.

ITLA and PM GatiShakti:

- ITLA will complement PM GatiShakti. While PM GatiShakti provides an integrated, GIS-based framework for infrastructure planning and multimodal connectivity, ITLA will provide institutional support for long-term transport planning, technical appraisal, monitoring, data analytics and impact assessment.
- Thus, GatiShakti focuses on coordinating infrastructure planning, while ITLA strengthens transport-sector planning and evaluation.

Significance:

- ITLA can help overcome silo-based planning, improve inter-ministerial coordination and enhance multimodal connectivity.
- Better integration of road, rail, waterways, ports and aviation can improve infrastructure utilisation, reduce logistics costs and strengthen India's manufacturing and export competitiveness. It also supports the broader objective of Viksit Bharat @2047.

Challenges:

- Key challenges include overlap with existing institutions, inter-ministerial coordination, data interoperability, privacy concerns and translating integrated plans into timely implementation. Its effectiveness will depend on clear division of responsibilities and outcome-based monitoring.

Conclusion:

The establishment of ITLA marks a shift from fragmented, mode-specific transport planning towards integrated, multimodal and data-driven governance. By combining long-term planning with project appraisal, monitoring and impact assessment, ITLA can strengthen India's logistics ecosystem, improve infrastructure efficiency and contribute to India's Vision 2047.

World Bank Report 2026 on India's AI Readiness

Context:

Recently, The World Bank's report, India and Artificial Intelligence: Seizing the Development Opportunity, places India among the top 10 emerging-market performers in AI readiness. India's strengths include a large technical workforce, a well-established IT sector and digital public infrastructure (DPI). However, gaps in computing infrastructure, finance and AI adoption continue to constrain its potential.

Key Findings of the Report:

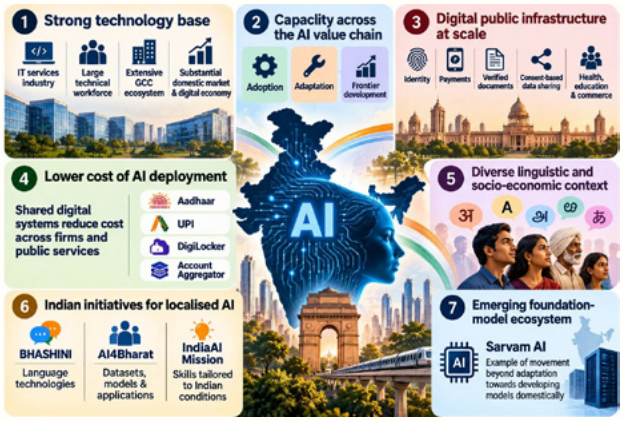
- **Rising investment:** Private AI investment increased from $1.2 billion in 2024 to $4.1 billion in 2025.
- **Growing employment:** Professionals employed by Global Capability Centres (GCCs) increased from 1.9 million in 2024 to 2.36 million in 2025.
- **AI adoption:** Around 23% of Indian firms reported using AI, compared with approximately 43% in the United States.
- **Infrastructure gap:** India accounted for about 1% of global installed data-centre capacity

in 2025.

- **Employment exposure:** Around 22% of Indian employment is highly exposed to AI, although exposure does not necessarily imply job losses.

What Is Artificial Intelligence?

- Artificial Intelligence (AI) refers to technologies that enable machines to perform tasks associated with human intelligence, including learning, reasoning, language processing and decision-making.
- As a general-purpose technology, AI can improve productivity, expand access to specialised skills and transform sectors such as healthcare, agriculture, education, manufacturing and finance.



India's Advantages in AI:

- **Digital Public Infrastructure:** Aadhaar, UPI, DigiLocker and Account Aggregator provide digital foundations for scalable AI applications.
- **Human capital:** India's large engineering workforce and IT-services industry support software development, analytics and AI deployment.
- **Domestic market:** India's linguistic and cultural diversity creates opportunities for locally relevant AI solutions.
- **Government initiatives:** The IndiaAI Mission, BHASHINI and AI4Bharat support AI infrastructure, language technologies, datasets, research and skill development.

Major Challenges:

- **Infrastructure deficit:** Limited affordable computing, data-centre capacity and reliable electricity.
- **Unequal adoption:** Smaller enterprises and informal businesses face financial and technical barriers.
- **Skills gap:** Shortages of specialised AI researchers and professionals.
- **Data limitations:** Inadequate high-quality, locally relevant datasets.
- **Employment concerns:** AI may transform occupations, displace certain tasks and widen skill-based inequalities.
- **Ethical risks:** Bias, privacy violations, misinformation and lack of accountability.

Way Forward:

- India should expand affordable cloud computing, strengthen broadband and electricity infrastructure, promote AI literacy and provide targeted support to MSMEs.
- Public-sector data should be made more accessible with strong privacy safeguards. Investment should prioritise multilingual AI, healthcare, agriculture and low-cost solutions for underserved communities.
- Risk-based regulation, AI safety evaluations, worker reskilling and stronger institutional capacity are essential for responsible deployment.

Conclusion:

India has the potential to become a major AI innovator by combining its technical talent, digital infrastructure and domestic market. The priority should be to bridge infrastructure gaps, promote inclusive adoption and develop trustworthy, locally relevant AI systems that support economic growth and social development.

Global Innovation Index 2026

Context:

Recently, World Intellectual Property

Organization (WIPO) released Global Innovation Index (GII) 2026 in which, India ranks 38th among 139 economies. India ranks first among lower-middle-income economies and in Central and Southern Asia. This achievement reflects India's capacity in digital services, entrepreneurship, and technological development. However, there remains a need to strengthen investment in research and development and institutional capabilities.

What is the Global Innovation Index?

- The Global Innovation Index is a major index that assesses the performance of various countries in the field of innovation. It was launched in 2007. The year 2026 marks its 19th edition.
- The index evaluates countries based on approximately 80 indicators. It has two major sub-indices:
- Innovation Inputs: Institutions, human capital and research, infrastructure, market sophistication, and business sophistication.
- Innovation Outputs: Knowledge and technology outputs and creative outputs.
- Equal weight is given to both sub-indices. Thus, the index measures not only the resources available for innovation but also the actual outcomes obtained from them.



Key Findings of GII 2026:

- Globally, Switzerland ranks first, Sweden second, and the United States third. South Korea ranks fourth, while Singapore ranks fifth. China remains in tenth place.
- India's position is particularly noteworthy because it is performing better in innovation outputs despite limited resources. In 2026, India ranks 49th in innovation inputs and 25th in innovation outputs.
- This indicates that India has the capacity to convert available resources into economic and technological achievements.

Major Achievements of India:

- **Digital Services:** India ranks first globally in ICT services exports. This has strengthened India's role in the global digital economy.
- **Startups and Investment:** India ranks fourth in late-stage venture capital deals, reflecting the growth potential of innovation-based enterprises.
- **Regional Leadership:** India ranks first in Central and Southern Asia and also holds the top position among 36 lower-middle-income economies.
- **Innovation-Based Development:** India's capabilities in digital services, software, entrepreneurship, and technology are strengthening its innovation outputs.

Major Challenges Before India:

- **Investment in Research and Development:** Adequate financial resources are required for scientific research and the development of new technologies.
- **Coordination Between Education and Industry:** It is necessary to increase cooperation among universities, research institutions, and private companies.
- **Commercialisation of Innovation:** The process of converting technologies developed in laboratories into useful products and large-scale industries must be simplified.
- **Lack of Infrastructure:** It is essential to ensure equal access to advanced research facilities, technological equipment, and innovation centres.
- **Regional Inequality:** Instead of limiting innovation activities to a few major cities, they must be extended to smaller cities and

rural areas.

Way Forward:

To transform India into an innovation-driven economy, the following steps should be taken:

- Public and private investment in research and development should be increased.
- Research and skill development aligned with industry requirements should be encouraged in universities.
- Startups should be provided with financial assistance, technical guidance, and facilities for the protection of intellectual property rights.
- Indigenous technologies should be developed in emerging fields such as artificial intelligence, semiconductors, biotechnology, and clean energy.
- Innovation centres, incubation hubs, and research institutions should be developed in Tier-2 and Tier-3 cities.
- Initiatives such as the National Education Policy, Startup India, and the Atal Innovation Mission should be better aligned with research and commercial requirements.

Conclusion:

India's position in the Global Innovation Index 2026 reflects its technological capabilities and progress in entrepreneurship. However, it is necessary to reduce the gap between innovation outputs and investment. India should not limit itself to becoming a major exporter of digital services; rather, it should also develop leadership in fundamental research, indigenous technology, and high-value-added manufacturing. This will help achieve the goals of Atmanirbhar Bharat, Viksit Bharat @2047, and inclusive economic development.

Nobel Prize in Economics 2026

Context:

Recently, the Royal Swedish Academy of Sciences awarded the 2026 Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel to American economists Robert E. Hall and Michael Woodford. Both economists were recognised for their work on the "Microeconomic Foundations of Macroeconomic Stabilisation." The main objective of their research is to understand how the decisions of individuals and businesses affect the economy as a whole and how policies should be formulated to reduce economic instability.

What is the Nobel Prize in Economics?

- The award is officially known as the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel.
- **Established:** 1968 by Sveriges Riksbank, Sweden's central bank, to mark its 300th anniversary.
- **First awarded:** 1969.
- **Purpose:** To recognise outstanding contributions to economic sciences.
- **Selection:** The Royal Swedish Academy of Sciences selects the laureates.



Contributions of the Laureates:

- **Robert E. Hall:** An American economist associated with Stanford University,

Hall's research focused on household consumption, saving decisions, labour markets and unemployment. He highlighted how expectations about future income influence present spending and overall economic activity.

- **Michael Woodford:** An American economist and professor at Columbia University, Woodford's work significantly influenced modern monetary economics. His research examined interest-rate policy, inflation management and the role of expectations and central bank communication in influencing economic decisions.

Understanding the Core Concept:

- Macroeconomic stabilisation refers to government and central bank measures to reduce excessive fluctuations in economic growth, inflation and employment. During a recession, policymakers may reduce interest rates or increase public expenditure.
- During excessive inflation, they may increase interest rates or reduce fiscal stimulus. Microeconomic foundations of macroeconomics connect individual economic decisions with overall economic outcomes.

Microeconomics	Macroeconomics
Studies individual consumers, households and firms.	Studies the economy as a whole.
Examines individual consumption, saving and pricing decisions.	Examines aggregate consumption, inflation, employment and GDP.
Focuses on individual economic behaviour.	Focuses on overall economic outcomes.

For example, when households expect their future income to decline, they may reduce current spending. If many households behave similarly, aggregate demand, production and employment may decline. Therefore, understanding individual decisions helps policymakers analyse economic fluctuations and formulate effective monetary and fiscal policies.

Significance of the Research:

- **Improvement in monetary policy:** Their research provides a theoretical foundation for analysing how interest-rate changes affect consumption, investment and inflation.
- **Role of expectations:** Economic decisions depend not only on present conditions but also on expectations about future prices, income and policy measures.
- **Importance of central bank communication:** Clear and credible communication can influence economic behaviour even before a policy change takes effect.
- **Better management of economic shocks:** The framework helps policymakers analyse how events such as energy-price shocks, sudden changes in household consumption and global economic disruptions affect the economy.
- **Understanding business cycles:** The research helps explain why economies experience periods of expansion and contraction, and how policy can moderate these fluctuations.

Conclusion:

The 2026 Nobel Prize in Economics highlights that studying indicators such as inflation, output, and employment alone is not sufficient for formulating effective economic policies. It is also essential to understand the behaviour of households and businesses and their expectations about the future. This approach is important for achieving economic stability and sustainable development.

Henley Passport Index 2026

Context:

Recently, The Henley Passport Index released its October 2026 edition. The index ranks passports according to the number of destinations their holders can access without

obtaining a visa in advance. India was reported at 84th position in the October edition, with access to 55 destinations.

What Is the Henley Passport Index?

- The Henley Passport Index, published by Henley & Partners, ranks passports according to the number of destinations their holders can access without obtaining a traditional visa in advance.
  - » **Data source:** International Air Transport Association (IATA) data.
  - » **Coverage:** 199 passports and 227 destinations.
  - » **Methodology:** Visa-free access, visa on arrival and electronic travel authorisation (ETA) generally contribute to the score.
- A higher ranking indicates greater international travel freedom under the index's methodology.



Key Findings of the 2026 Edition:

- **India:** Reported 84th, with access to 55 destinations.
- **Singapore:** Ranked first, with access to 193 destinations.
- **Japan, South Korea and the UAE:** Jointly ranked second, with access to 188 destinations each.
- **Sweden:** Ranked third, with access to 187 destinations.

India's Performance:

- India improved from 85th position in October 2025 to 84th in October 2026. However, the number of destinations accessible without obtaining a traditional visa beforehand declined from 57 to 55.
- This demonstrates that a country's relative ranking may improve even when its absolute score declines, depending on changes in the scores of other countries.

Significance for India:

- **Diplomatic relations:** Visa liberalisation agreements can strengthen bilateral cooperation.
- **Economic growth:** Easier travel supports tourism, business visits, trade and professional exchanges.
- **People-to-people ties:** Mobility facilitates education, cultural interaction and family connections.
- **Global integration:** Passport mobility provides an indicator of India's international connectivity, though it does not measure overall national power.

Conclusion:

The Henley Passport Index highlights the growing importance of international mobility in an interconnected world. India can improve travel access through sustained diplomatic engagement and mutually beneficial agreements.

India's 1% SAF Blending Target for International Flights

Context:

Recently, The Government of India has outlined progressive, indicative targets for Sustainable Aviation Fuel (SAF) blending in international flights: 1% from January 2027, 2% from 2028

and 5% by 2030. The initiative aims to reduce aviation-related emissions and promote cleaner fuels.

What is Sustainable Aviation Fuel (SAF)?

- SAF is an alternative to conventional fossil-based Aviation Turbine Fuel (ATF). It is produced from sustainable feedstocks and can reduce greenhouse gas emissions over its life cycle.
- SAF is a "drop-in fuel", meaning it can be blended with conventional jet fuel and used in compatible aircraft engines and existing airport fuel infrastructure without major modifications, subject to applicable fuel specifications.

Key Features of India's SAF Initiative:

- **Progressive targets:** 1% blending in 2027, 2% in 2028 and 5% by 2030.
- **Initial scope:** The rollout focuses on international flights rather than immediately applying uniformly to domestic flights.
- **Regulatory framework:** In April 2026, the government issued a notification recognising SAF under the relevant ATF regulatory framework to facilitate blending.
- **Domestic production:** Indian Oil Corporation (IOC) and Bharat Petroleum Corporation Limited (BPCL) are among the public-sector companies pursuing SAF production pathways, including those using used cooking oil.

Feedstocks and Production:

- SAF can be produced from used cooking oil (UCO), waste fats, agricultural residues, municipal and industrial waste, and alcohol-to-jet (ATJ) pathways. Sustainable production depends on feedstock availability, conversion technology and life-cycle emissions.
- Using waste materials can support circular-economy objectives while reducing dependence on fossil fuels. However, feedstock sustainability and traceability are essential to prevent environmental damage.

Significance of SAF Blending:

- **Environmental benefits:** SAF can reduce life-cycle greenhouse gas emissions by up to 80% in certain pathways, depending on feedstock and production methods. This can help decarbonise aviation, a sector that is difficult to electrify.
- **International commitments:** The Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), developed by the International Civil Aviation Organization (ICAO), is a global market-based mechanism addressing CO_2 emissions from international aviation. Eligible SAF can contribute to airlines' emissions-reduction efforts under its rules.
- **Energy security:** Domestic SAF production could diversify India's aviation fuel sources and reduce exposure to fossil-fuel price volatility.
- **Economic opportunities:** SAF can create opportunities in waste management, bio-refining, agricultural residue utilisation, research and green-energy investment.



Challenges:

- Major challenges include the higher cost of SAF compared with conventional ATF, limited commercial-scale production,

inadequate collection of waste feedstocks, certification requirements and the need for investment in supply chains. Poorly managed feedstock production could also create competition for land, water and food crops.

Way Forward:

India should promote research and development, incentivise sustainable domestic production, establish reliable certification and monitoring systems, and strengthen cooperation among fuel producers, airlines and regulators. A phased approach can balance emission reduction with affordability and airline competitiveness.

Conclusion:

India's SAF initiative represents a step towards cleaner aviation, improved energy security and climate-action goals. Its success will depend on affordable production, sustainable feedstocks, effective regulation and credible emissions accounting.

World Bank Report: India's Extreme Poverty Falls to 2.6%

Context:

Recent, World Bank's October 2026 Poverty and Equity Brief highlighted that India's extreme poverty rate declined significantly from 27.1% in 2011 to 2.6% in 2023. However, income disparities remain a concern, as the median earnings of the top 10% of workers are approximately 13 times those of the bottom 10%.

About Extreme Poverty:

- The World Bank defines extreme poverty using an international poverty line of $3 per person per day in 2021 Purchasing Power Parity (PPP) terms.
- It represents the minimum level of consumption required to meet basic needs such as food, clothing, shelter and essential services.
- The $3 threshold is adjusted for differences in the cost of living across countries. It is not equivalent to converting three US dollars directly into Indian rupees at the market exchange rate.
- The World Bank also uses a $4.20 per day poverty line for lower-middle-income countries and an $8.30 per day line for upper-middle-income countries.



Key Findings of the Report:

- **Sharp Decline in Monetary Poverty:** India's extreme poverty rate declined from 27.1% in 2011 to 2.6% in 2023, using the World Bank's $3 per day poverty line (2021 PPP). Poverty under the $4.20 line also fell from 57.7% to 16.1%, with approximately 496 million people moving above this threshold. However, around 35 million people remained in extreme poverty and 232 million below

the $4.20 poverty line.

- **Decline in Multidimensional Poverty:** India's MPI, published by OPHI, declined from 53.8% in 2005–06 to 16.4% in 2019–21. The World Bank's multidimensional poverty measure stood at 15.5% in 2022–23, reflecting improved access to education, healthcare, sanitation and other basic services.
- **Persistent Income Inequality:** Despite poverty reduction, income disparities remain significant. The median earnings of the top 10% of workers were approximately 13 times those of the bottom 10% in 2023–24. India's Gini index was reported at 23 in 2023, highlighting the need to distinguish overall consumption inequality from wage disparities.
- **Employment Growth Without Proportionate Wage Growth:** India added around 134 million employed people between 2017 and 2023, partly due to increased rural women's employment. However, real earnings remained broadly unchanged, while youth unemployment rose from 14.6% in Q1 FY2026 to 15.9% in Q1 FY2027. This highlights the need for productive, secure and adequately paid jobs.
- **Rural–Urban and Regional Disparities:** At the $4.20 poverty line, rural poverty stood at 19.3%, compared with 8.6% in urban areas. States stretching from Uttar Pradesh to West Bengal accounted for approximately 57% of India's poor population, indicating the persistence of regional and socio-economic disparities.

Reasons behind Poverty Reduction in India:

- The World Bank identified strong consumption growth, rising employment, particularly among women, and expanded social transfers, including food subsidies, as important drivers of poverty reduction.
- Government initiatives such as MGNREGA, the National Food Security Act, PM Jan Dhan Yojana, Direct Benefit Transfer (DBT), PM Awas Yojana and Ayushman Bharat have also contributed to improving household welfare and access to basic services.

Conclusion:

India's reduction in extreme poverty represents significant progress towards inclusive development. However, poverty reduction alone does not guarantee economic equality. The focus must shift towards creating productive employment, improving real wages, reducing regional disparities and ensuring equitable access to opportunities.

Social Security Boards for Unorganised, Gig and Platform Workers

Context:

Recently, the Union Ministry of Labour and Employment notified the constitution of two statutory bodies: the National Social Security Board for Unorganised Workers, comprising 40 members, and the National Social Security Board for Gig and Platform Workers, comprising 22 members. These boards aim to design, recommend and monitor targeted welfare schemes for different categories of workers.

About the National Social Security Boards:

- The both boards have been constituted under the statutory framework of the Code on Social Security, 2020. Their major functions include:
  - » Recommending suitable social security schemes for unorganised, gig and platform workers.
  - » Advising the Union Government on the administration of the Social Security Code.
  - » Monitoring the implementation of welfare schemes.
  - » Reviewing state-level record-keeping mechanisms and expenditure from relevant funds.
  - » Recommending measures to improve social security coverage.

- Both boards are required to meet at least three times a year. Union Labour and Employment Minister Mansukh Mandaviya will serve as the chairman of both boards, while the Union Labour Secretary will be the vice-chairperson.
- Their membership includes representatives from Central and State governments, aggregator companies, employers, trade unions and civil society organisations.

About Code on Social Security, 2020:

- The Code on Social Security, 2020, consolidates and simplifies existing social security laws and aims to extend social protection to organised and unorganised workers.
- Important provisions include:
  - **Section 6:** Provides for the constitution of the National Social Security Board for unorganised workers and State-level boards.
  - **Section 109:** Empowers the Central Government to formulate social security schemes for unorganised workers.
  - **Section 113:** Provides for registration of unorganised, gig and platform workers to facilitate access to welfare benefits.
  - **Section 114:** Empowers the Central Government to formulate social security schemes for gig and platform workers, covering life and disability insurance, accident insurance, health and maternity benefits, old-age protection and crèche facilities.

About Gig and Platform Workers:

- **Gig Workers:** Individuals undertaking work arrangements outside the traditional employer-employee relationship, such as freelancers and independent service providers.
- **Platform Workers:** Individuals engaged in work through online platforms, such as food delivery partners and app-based drivers.
- **Unorganised Workers:** Workers engaged in home-based, self-employed or wage-based activities in the unorganised sector.



Significance of the Development:

- **Social Security Coverage:** Extends institutional support to workers who often lack health insurance, pensions and accident protection.
- **Recognition of the Gig Economy:** Recognises changing employment patterns and the welfare requirements of digital platform workers.
- **Institutional Coordination:** Brings governments, employers, aggregators and workers' organisations onto a common platform.
- **Shared Responsibility:** Encourages aggregator companies to contribute towards workers' social security.
- **Improved Welfare Delivery:** Monitoring and reviewing welfare schemes can strengthen transparency and accountability.

Conclusion:

The constitution of these boards represents an important step towards inclusive social protection in India's changing labour market. However, their success will depend on effective implementation, adequate financial resources and the actual delivery of benefits to workers.

7 Defence and Internal Security

Cybersecurity Crisis in Digital India: Challenges of Data Privacy, Digital Trust and Artificial Intelligence

Context:

Recently, in October 2026, several cybersecurity incidents targeting India's digital infrastructure came to light simultaneously, shaking the foundations of the country's digital sovereignty, national security and financial ecosystem. The leakage of encryption private keys associated with eMudhra, a national digital certification authority, and the exposure of customer data belonging to the country's largest public sector bank, the State Bank of India (SBI), on the dark web are not merely two separate technical incidents. They highlight significant gaps in the internal security and regulatory framework of India's Digital India initiative. In a digital economy, cybersecurity is not merely a matter of technical arrangements; it is closely linked to national security, economic stability, citizens' privacy and public trust in digital governance.

Growing Importance of Digital Transformation and Cybersecurity

- Over the past few years, India has made remarkable progress in the field of Digital Public Infrastructure (DPI). Aadhaar, UPI, digital banking, DigiLocker, online government services and e-commerce have made interactions between citizens and the government more convenient.
- This transformation has promoted financial inclusion, improved access to services and enhanced administrative efficiency. However, as more services become dependent on the internet, the potential impact of cyberattacks is also increasing. Therefore, the success of digital development should not be assessed solely on the basis of the number of online services available, but also in terms of their security, reliability and ability to continue functioning during a crisis.



eMudhra Incident: Digital Trust Chain and Encryption

- In cybersecurity, Public Key Infrastructure (PKI) forms the foundation of digital trust. HTTPS and TLS certificates play an important role in establishing secure communication between websites and users and verifying website identities. Organisations that issue these certificates are known as Certificate Authorities (CAs). In India, the Controller of Certifying Authorities (CCA) plays an important role in regulating certification authorities and the digital certificate framework.
- According to reports that emerged in October 2026, insufficient cryptographic randomness was identified in the generation of private keys associated with

eight intermediate Certificate Authority certificates linked to eMudhra. Such a weakness can create the risk of private keys being guessed or recovered. If these keys are misused, attackers may attempt to create fraudulent digital certificates, impersonate websites or compromise the reliability of secure communications.

- This incident makes it clear that the security of organisations issuing digital certificates is not merely a technical issue; it is a matter of trust across the entire digital ecosystem. It is essential to strengthen the secure generation, storage and use of private keys, independent security audits and mechanisms for timely certificate revocation.

SBI Incident: Data Privacy and Financial Security

- According to a report dated October 21, 2026, the bank initiated an investigation into an incident involving the leakage of customer data. Preliminary information mentioned the leakage of records relating to 3,897 customers. The bank also stated that an independent cybersecurity agency would investigate the incident.
- It is important to understand the relationship between the dark web and data breaches. The dark web is a part of the internet where access to certain services requires specialised software or networks. Although it can also be used for legitimate privacy-related purposes, it is frequently associated with the trade in stolen data and cybercrime.
- The exposure of customers' personal information can create several risks:
  - **Phishing:** Criminals may impersonate bank officials and ask customers to share OTPs, passwords or other confidential information.
  - **Identity Theft:** Personal details may be used to create fake identities or facilitate fraudulent activities.
  - **Targeted Financial Fraud:** Actual customer information may be used to send fraudulent messages that appear more convincing and trustworthy.
  - **Loss of Trust:** Citizens' confidence in the banking system may weaken.
- Banking security should not be evaluated solely on the basis of the security of accounts and transactions, but also on the basis of the protection of customers' personal information.

Major Cybersecurity Challenges in India:

- **Technological Dependence and Weak Security Standards:** Many organisations continue to rely on outdated software, weak passwords, insecure configurations and inadequate security testing.
- **Supply Chain-Related Risks:** A security lapse at a single service provider or software company can affect numerous clients. Therefore, securing an organisation's own systems alone is not sufficient.
- **Lack of Institutional Accountability:** In many cases, security breaches are detected after a delay. This can increase the extent of the damage and make it difficult to alert affected citizens in a timely manner.
- **Need for Skilled Professionals:** Trained human resources, modern technological tools and regular training are not equally available across all institutions in the field of cybersecurity.
- **Cross-Border Cybercrime:** Cybercriminals, their servers and stolen data may be located in different countries. This creates difficulties in investigations, evidence collection and legal action.

Legal and Institutional Framework for Cybersecurity in India:

- **Information Technology Act, 2000:** Provides the principal legal foundation for addressing cybercrimes and matters related to the security of digital systems.
- **CERT-In:** The Indian Computer Emergency Response Team is the national agency responsible for responding to cybersecurity incidents, issuing alerts and facilitating coordination.
- **NCIIPC:** The National Critical Information

Infrastructure Protection Centre focuses on protecting information infrastructure in critical sectors such as energy, banking, telecommunications and other essential services.

- **Digital Personal Data Protection Act, 2023:** Provides a legal framework for the processing of digital personal data and the accountability of data fiduciaries.
- **National Cyber Coordination Centre (NCCC):** Assists in identifying cyber threats and coordinating among relevant agencies.
- The government has also promoted cybersecurity awareness and protection against malicious software through initiatives such as the Cyber Swachhta Kendra. However, the mere existence of laws and institutional frameworks does not automatically ensure effective security. Their successful implementation requires regular audits, timely action, trained personnel and mechanisms to establish accountability.

Way Forward:

India must accord cybersecurity the same priority as digital development. The following measures are essential:

- **Security by Design:** Security should be incorporated into the fundamental architecture of a digital service during its development, rather than being added as an additional measure after a problem arises.
- **Regular Security Audits:** Government websites, banks, certificate-issuing organisations and digital service providers should undergo independent technical assessments. The generation, storage and use of cryptographic keys should also be reviewed regularly.
- **Timely Notification and Response:** In the event of a data breach, affected organisations should assess the severity of the incident and notify the relevant agencies and affected individuals within the prescribed time limits.
- **Clear Rules for the Safe Use of AI:** AI-based tools should be granted only the minimum permissions necessary to perform their functions. Their activities should be logged, access to sensitive data should be restricted, and appropriate human oversight should be ensured before any significant action is taken.
- **Data Minimisation:** Organisations should collect only the amount of personal data necessary for a legitimate purpose. This can reduce the potential damage in the event of a data breach.
- **Public Awareness:** Citizens should be encouraged to avoid unfamiliar links, adopt multi-factor authentication, never share OTPs and immediately report suspicious banking activities.
- **Self-Reliance in Cybersecurity:** Indigenous cybersecurity solutions, research, professional training and public-private partnerships should be promoted. At the same time, global standards and international cooperation must also be given due importance.

Conclusion:

The future of Digital India depends not only on technological innovation and widespread internet access but also on how secure citizens feel about their personal information, financial transactions and digital services. The certificate security vulnerability associated with eMudhra, the investigation into the leakage of SBI customer records and the growing technological capabilities of AI are separate developments. However, they convey a common message: security, transparency and accountability must be accorded the highest priority to maintain trust in the digital ecosystem. India must develop a cybersecurity framework that does not merely respond after attacks occur but identifies potential threats in advance, limits the damage and restores normal operations quickly after a crisis. This will form the foundation of a secure, inclusive and trustworthy Digital India.

Short Issues

Fleet Support Ship-1 (FSS-1)

Context:

Recently, Raksha Mantri Shri Rajnath Singh launched Fleet Support Ship-1 (FSS-1), laid the keel of FSS-5, and inaugurated the upgraded Slipway-4 and 300-tonne Goliath Crane at Hindustan Shipyard Limited (HSL), Visakhapatnam. The developments mark an important milestone in India's efforts towards Aatmanirbharta in defence and indigenous shipbuilding.

What is a Fleet Support Ship?

- A Fleet Support Ship (FSS) is a specialised naval logistics vessel designed to replenish deployed warships at sea with fuel, water, ammunition, spare parts and provisions. It functions as a floating logistics base, enabling warships to undertake Replenishment at Sea (RAS) and remain operational for longer periods without returning to harbour.
- Thus, FSSs significantly enhance a navy's operational endurance, mobility and strategic reach, which are essential for a blue-water navy.

About India's FSS Programme:

- The Indian Navy is undertaking an indigenous project to construct five Fleet Support Ships through Hindustan Shipyard Limited (HSL), Visakhapatnam. The first vessel, FSS-1, was launched on 6 October 2026.
- The ships are expected to have a displacement of approximately 43,500–45,000 tonnes and will support sustained naval operations across the Indian Ocean Region (IOR) and beyond.
- The keel-laying of FSS-5 represents progress towards series production and strengthens India's ability to undertake complex naval shipbuilding projects domestically.

Modernisation of HSL:

- The upgraded Slipway-4, along with the 300-tonne Goliath Crane, will enhance HSL's capacity to construct and launch larger vessels. Such infrastructure is important for developing a robust domestic shipbuilding ecosystem and reducing dependence on foreign shipyards.



Strategic Significance:

- **Aatmanirbhar Bharat:** Indigenous construction strengthens self-reliance in defence manufacturing.
- **Blue-water capability:** FSSs allow naval combatants to remain deployed for longer durations, enhancing India's maritime presence.
- **Indo-Pacific security:** Greater logistical endurance supports India's role as a net security provider and contributes to maritime stability.
- **Strategic autonomy:** Reduced dependence on foreign shipyards and shore-based replenishment facilities strengthens India's freedom of action during prolonged deployments.
- **Maritime logistics:** Reliable replenishment capability is crucial for protecting sea lanes, securing India's maritime interests and supporting Humanitarian Assistance and Disaster Relief (HADR) operations.

Challenges:

- India needs to further strengthen shipbuilding technology, skilled manpower, domestic supply chains, component manufacturing and project execution to develop a globally competitive maritime-industrial ecosystem.

Conclusion:

The Fleet Support Ship programme is not merely an addition to the Indian Navy's inventory; it represents India's transition towards self-reliant maritime power. By combining naval logistics with indigenous shipbuilding infrastructure, India can enhance its blue-water capabilities, strategic autonomy and ability to contribute to a secure and stable Indo-Pacific.

INS Mangrol

Context:

Recently, the Indian Navy commissioned INS Mangrol (P82), the third Mahe-class Anti-Submarine Warfare Shallow Water Craft (ASW-SWC), at the Naval Dockyard in Mumbai. Built by Cochin Shipyard Limited (CSL), Kochi, the vessel strengthens India's coastal defence, underwater surveillance and anti-submarine warfare capabilities.

About Mahe-Class Programme:

- The Mahe-Class Programme is an Indian Navy project to build eight Anti-Submarine Warfare Shallow Water Craft (ASW-SWC) to replace the older Abhay-class corvettes. The contract was signed with Cochin Shipyard Limited on 30 April 2019, with deliveries scheduled through June 2028.
- The programme supports the modernisation of the Navy's coastal warfare capabilities and promotes indigenous warship construction under the Aatmanirbhar Bharat initiative.

About INS Mangrol:

- INS Mangrol is the third vessel in the Mahe-class series. It has more than 80% indigenous content, reflecting India's efforts to reduce dependence on imported defence equipment.
- The vessel is named after Mangrol, a coastal town and fishing harbour in Gujarat's Junagadh district. Its primary role is to detect, track and neutralise hostile submarines operating in shallow coastal waters.



Specifications and Design:

- The Mahe-class vessels are approximately 78 metres long, with a displacement of around 900–1,100 tonnes. They can achieve a maximum speed of approximately 25 knots using diesel engines and waterjet propulsion.
- Their design enables effective manoeuvrability in shallow and confined waters. The vessels are equipped with RBU-6000 anti-submarine rocket launchers, triple lightweight torpedo launchers, mine-laying rails, a 30 mm naval gun and indigenous hull-mounted sonar systems.

Key Roles and Capabilities:

- INS Mangrol is designed for littoral anti-submarine warfare, which involves countering submarine threats in coastal

waters. Its sonar systems help detect and track underwater targets, while its weapons enable it to engage hostile submarines.

- The vessel can also undertake subsurface surveillance, search and rescue (SAR), mine-laying and low-intensity maritime operations (LIMO). These capabilities strengthen the protection of ports, harbours and coastal approaches.

Significance for India:

- The programme strengthens India's coastal security and maritime domain awareness by improving its ability to detect and respond to underwater threats. It also supports India's maritime security interests in the Indian Ocean Region.
- The construction of these vessels by an Indian shipyard advances Aatmanirbhar Bharat and Make in India, promotes domestic defence manufacturing and creates opportunities for Indian suppliers and micro, small and medium enterprises (MSMEs).

Conclusion:

The commissioning of INS Mangrol represents an important step in modernising the Indian Navy's coastal warfare capabilities. The Mahe-class programme combines indigenous shipbuilding with specialised anti-submarine technology, contributing to coastal defence, maritime surveillance and India's long-term objective of defence self-reliance.

INS Samarthak Inducted into Indian Navy

Context:

INS Samarthak, an indigenously built Multi-Purpose Vessel (MPV) constructed by Larsen & Toubro (L&T), was inducted into the Indian Navy on 16 October 2026 at Karwar, Karnataka. Its induction highlights India's progress towards defence indigenisation and Aatmanirbhar Bharat.

About INS Samarthak:

- INS Samarthak has been built by Larsen & Toubro (L&T) at its Kattupalli Shipyard in Tamil Nadu. The project is part of a Rs.887 crore contract signed with the Ministry of Defence on 25 March 2022 under the Buy (Indian) category.
- The vessel incorporates more than 75% indigenous content, reflecting India's commitment to Aatmanirbhar Bharat and Make in India.
- It measures 107 metres in length, has a displacement exceeding 3,750 tonnes, can attain a maximum speed of 15 knots and has an approximate range of 4,500 nautical miles.
- INS Utkarsh is the second vessel in the project. The name Samarthak means “The Proponent” or “Supporter”, while its motto is “Victory is Our Sole Aim” (Vijayartham Ekanishthata).



Roles and Capabilities:

- INS Samarthak is a versatile platform designed to undertake multiple naval missions. Its major functions include:
  - » **Weapons and sensor trials:** Testing and evaluating indigenous weapons, sensors and combat systems.
  - » **Maritime surveillance:** Supporting reconnaissance and offshore patrolling.
  - » **Unmanned systems:** Acting as a mothership for unmanned aerial and surface vehicles.
  - » **HADR:** Providing Humanitarian Assistance and Disaster Relief.
  - » **Other operations:** Supporting towing,

salvage, pollution response and limited medical assistance.

Significance for India:

- **Defence Indigenisation:** Domestic construction reduces reliance on foreign suppliers and strengthens India's defence manufacturing ecosystem.
- **Private-Sector Participation:** L&T's contribution demonstrates the growing role of private companies in naval shipbuilding, promoting innovation, skilled employment and industrial development.
- **Maritime Security:** The vessel can support surveillance and operational preparedness in the Indian Ocean Region (IOR), which is crucial for protecting sea lines of communication, trade and energy supplies.
- **Indigenous Technology Testing:** INS Samarthak provides a platform for testing domestically developed weapons, sensors and unmanned systems, helping improve their operational effectiveness.

Conclusion:

The induction of INS Samarthak represents an important step towards a self-reliant defence sector. By strengthening indigenous shipbuilding, encouraging private-sector participation and enhancing maritime preparedness, India can improve its strategic autonomy and safeguard its interests in the Indian Ocean Region.

GSAT-7C and Varunastra

Context:

With the objective of strengthening India's defence capabilities and promoting self-reliance in the defence sector, recently the Ministry of Defence has signed two contracts worth a total of Rs.4,106 crore for the acquisition of the GSAT-7C communication satellite for the Indian Air Force and the Varunastra heavyweight torpedo for the Indian Navy. These agreements aim to enhance the security of military communication systems and strengthen anti-submarine warfare capabilities in the maritime domain.

GSAT-7C Communication Satellite:

- GSAT-7C is a dedicated military communication satellite proposed to meet the communication requirements of the Indian Air Force.
  - » **Contract Value:** Rs.2,563 crore.
  - » **Associated Organisation:** NewSpace India Limited (NSIL).
  - » **Key Objective:** To improve secure communication among various aircraft, command centres, and other military systems of the Indian Air Force.
- **Significance:**
  - » **Secure Military Communication:** Satellite-based communication can facilitate more effective information exchange among military units.
  - » **Network-Centric Warfare Capability:** Better coordination among different military platforms will help enable real-time decision-making and the effective conduct of military operations.
  - » **Strategic Autonomy:** Indigenous communication capabilities can help reduce dependence on foreign systems.
  - » **Modernisation of Air Defence:** In modern warfare, secure communication and the rapid exchange of information are essential for improving the effectiveness of air operations.

Varunastra Heavyweight Torpedo:

- Varunastra is an indigenous, ship-launched heavyweight anti-submarine torpedo developed for the Indian Navy. It was developed by the Naval Science and Technological Laboratory (NSTL) of the Defence Research and Development Organisation (DRDO).
  - » **Contract Value:** Rs.1,543 crore.
  - » **Manufacturer:** Bharat Dynamics Limited (BDL), Hyderabad.
  - » **Key Objective:** To enhance the Indian Navy's capability to detect and

engage hostile submarines operating underwater.

- **Significance:**
  - » **Anti-Submarine Warfare Capability:** Modern torpedoes play a crucial role in maritime security and in countering hostile submarines.
  - » **Protection of Maritime Interests:** Strong naval capabilities are essential for protecting India's maritime trade routes and strategic interests in the Indian Ocean Region.
  - » **Indigenous Defence Technology:** Weapons developed and manufactured domestically help reduce dependence on foreign suppliers.
  - » **Promotion of the Defence Industry:** Such contracts can strengthen the technological capabilities of Indian defence companies and their associated supply chains.

Self-Reliant India and the Defence Sector:

- India has long been promoting the indigenous design, development, and manufacturing of defence equipment. The contracts related to GSAT-7C and Varunastra are significant steps in this direction.
- The major benefits of these agreements include:
  - » **Reduced Import Dependence:** Encouraging the domestic development of critical defence systems.
  - » **Technological Advancement:** Expanding India's capabilities in space communication, electronics, and weapon systems.
  - » **Employment Generation:** Creating skilled employment opportunities in defence manufacturing and supporting industries.
  - » **Strategic Autonomy:** Strengthening domestic capabilities becomes particularly important during crises or disruptions in international supply chains.
- However, achieving genuine self-reliance requires more than merely manufacturing equipment within the country. It is also essential to develop domestic capabilities in critical components, advanced electronics, software, research, and development.

Major Challenges:

- Managing costs and timelines in the development of advanced defence systems.
- Protecting military communication systems against cyberattacks and electronic warfare.
- Ensuring the quality, reliability, and timely delivery of defence equipment.
- Establishing mechanisms for the continuous upgrading and maintenance of indigenous technologies.

Conclusion:

The contracts worth Rs.4,106 crore for GSAT-7C and Varunastra represent significant steps towards the modernisation of India's defence forces and the promotion of indigenous defence production. They aim to strengthen the secure communication capabilities of the Indian Air Force and the anti-submarine warfare capabilities of the Indian Navy, respectively. In the long term, their success will depend on timely implementation, technological reliability, and sustained investment in domestic defence research and development.

Centre Approves Defence Deals Worth Rs. 2.12 Lakh Crore

Context:

Recently, the Defence Acquisition Council (DAC), chaired by Defence Minister Rajnath Singh, approved defence acquisition proposals worth approximately Rs.2.12 lakh crore. Around 82% of the proposed procurement is intended to be sourced from Indian industry, supporting the objective of Atmanirbhar Bharat in defence.

Background:

- India faces diverse security challenges, including border disputes, cross-border

threats and maritime security concerns. Modern warfare increasingly involves drones, precision-guided weapons, advanced surveillance and integrated air-defence systems.

- India has also traditionally depended on foreign suppliers for several categories of military equipment. Therefore, defence modernisation and indigenous manufacturing have become important priorities for strengthening national security and strategic autonomy.

Key Features of the Defence Deals:

- The proposals cover the Indian Army, Indian Navy and Indian Air Force.
  - » **Indian Army:** High Mobility Vehicles, self-propelled tracked artillery guns, light multi-role helicopters, surveillance drones and counter-drone systems.
  - » **Indian Navy:** An Active Offboard Decoy System to improve protection against incoming anti-ship missiles.
  - » **Indian Air Force:** Helicopters, air-defence capabilities and mobile X-band Doppler weather radars.
- These acquisitions aim to improve operational mobility, battlefield surveillance, firepower, air defence and maritime security.

Significance for India:

- **National security:** Enhances military preparedness and the ability to respond to emerging threats.
- **Atmanirbhar Bharat:** Promotes domestic defence production and reduces reliance on foreign suppliers.
- **Economic growth:** Creates opportunities for defence industries, MSMEs, skilled employment and technological innovation.
- **Strategic autonomy:** Strengthens India's ability to maintain and upgrade military equipment independently.
- **Modern warfare:** Improves capabilities against drones, precision attacks and evolving maritime threats.

Government Initiatives:

- The approvals complement several initiatives, including the Defence Acquisition Procedure (DAP), 2020, DRDO-led research, positive indigenisation lists and defence industrial corridors in Uttar Pradesh and Tamil Nadu. These initiatives aim to encourage indigenous design, manufacturing, research and private-sector participation.



Challenges:

- Major challenges include dependence on imported critical technologies, procurement delays, cost escalation, limited research and development capabilities, and difficulties in scaling up domestic production. Effective implementation and quality assurance will be essential to achieve the intended outcomes.

Way Forward:

- India should strengthen defence research, promote public-private partnerships, support MSMEs, improve technology transfer and streamline procurement procedures. Greater investment in indigenous engines, electronics, sensors and advanced materials can further reduce import dependence.

Conclusion:

The Rs.2.12 lakh crore defence acquisition approvals represent an important step towards military modernisation and indigenous defence manufacturing. Their success will depend on timely execution, technological advancement and sustainable domestic production, contributing to India's long-term goal of strategic autonomy.

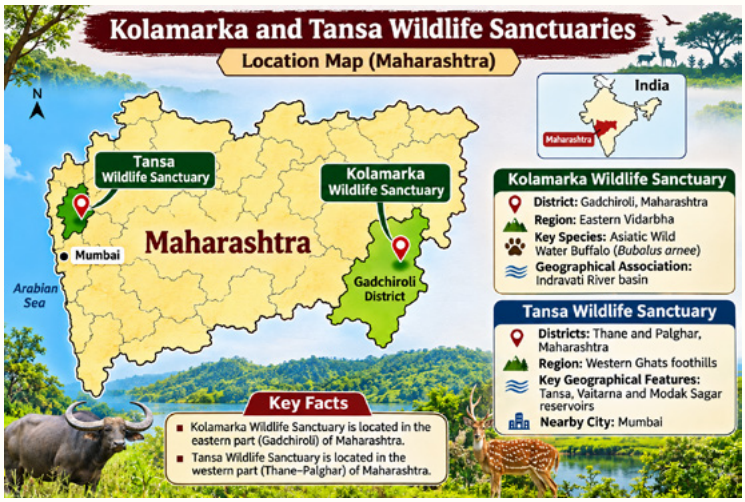
Place in News

Kolamarka and Tansa Wildlife Sanctuaries

The Maharashtra State Board for Wildlife (SBWL), chaired by the Chief Minister, approved proposals to upgrade Kolamarka Conservation Reserve into a wildlife sanctuary and expand Tansa Wildlife Sanctuary to strengthen biodiversity conservation.

About Kolamarka and Tansa Wildlife Sanctuaries:

- Kolamarka Wildlife Sanctuary is located in Sironcha taluka of Gadchiroli district (Eastern Vidarbha), Maharashtra. It comprises tropical dry deciduous forests, dense bamboo thickets and riverine grasslands. It lies within the Pranhita and Indravati river basins, near the Indravati Tiger Reserve in Chhattisgarh.
- It acts as an interstate wildlife corridor connecting forest tracts across Maharashtra, Chhattisgarh and Telangana. It is particularly important for protecting Central India's isolated, genetically pure population of the endangered Asiatic Wild Water Buffalo (Bubalus arnee).



- Tansa Wildlife Sanctuary is spread across Shahapur and Bhiwandi talukas of Thane district and Wada taluka of Palghar district, approximately 90 km northeast of Mumbai, in the foothills of the Western Ghats. Its hilly terrain has elevations of around 70–300 metres, while Mahuli Fort (762 metres) is the highest point in Thane district. Its vegetation is dominated by southern tropical moist deciduous forests, with teak, khair, kalamb and bamboo.
- The Tansa and Vaitarna rivers and catchments of Tansa, Vaitarna, Modak Sagar and Bhatsa reservoirs support Mumbai's water supply. Its fauna includes leopards, sloth bears, barking deer and the endangered Forest Owlet. It supports over 200–250 bird species.

Shintaphu (Sintaphu) Glacial Lake, Bhutan

Shintaphu Glacial Lake in Bhutan's Gasa district reportedly experienced a major Glacial Lake Outburst Flood (GLOF) on 29 October 2026, releasing large volumes of water downstream and triggering flood alerts in parts of West Bengal and Assam.

Geographical Features:

- Shintaphu Lake, also known as Sintaphu or Chintaphu Tsho, is a high-altitude glacial lake situated in the remote Gasa district of northwestern Bhutan, in the Lungo area of Laya Gewog, near the glacier snout below Wakila Mountain. It consists of two connected lakes: an upper lake (approximately 8 hectares) and a larger lower lake (approximately 23.53 hectares).



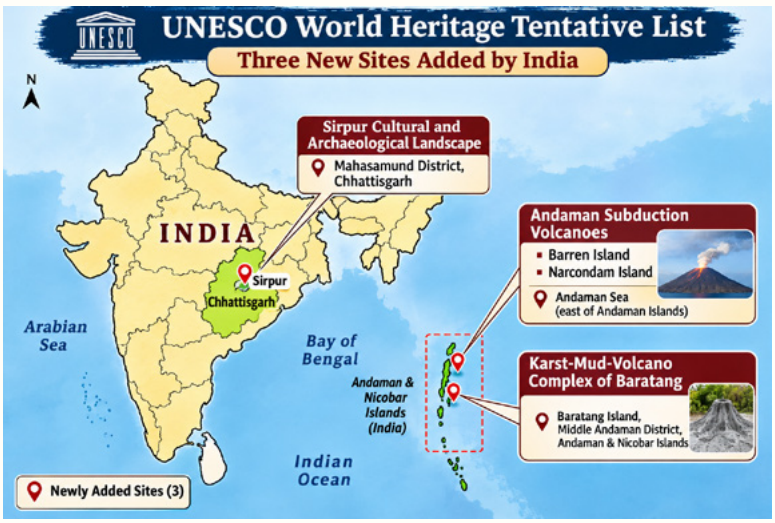
- Formed by meltwater from retreating Himalayan glaciers, the lakes are held back by natural moraine dams comprising rocks, boulders and glacial debris. The lake system lies in the headwaters of the Mo Chhu River. At Punakha, Mo Chhu joins Pho Chhu to form the Punatsangchhu, which eventually enters India through the Sankosh river system and drains into the Brahmaputra basin.

UNESCO World Heritage Tentative List

India has added three new sites to UNESCO's World Heritage Tentative List, taking the country's total to 81 sites. Inclusion in the Tentative List is a preliminary requirement before a country can submit a formal nomination for World Heritage status.

About three new additions:

- **Karst-Mud-Volcano Complex of Baratang:** Located on Baratang Island in the Middle Andaman district of the Andaman and Nicobar Islands, between South Andaman and Middle Andaman Islands. It features intricate limestone caves and speleothems, such as stalactites and stalagmites, formed through the chemical dissolution of limestone by groundwater. It also has unique mud volcanoes, locally called Jalki, which release mud, water and gases rather than molten lava due to underground gas pressure and compressed sediments. The island is characterised by tropical evergreen forests, mangroves and coastal creeks.



- **Andaman Subduction Volcanoes:** Located in the Andaman Sea, comprising Barren Island and Narcondam Island, east of the Andaman Islands. The region represents active tectonic processes associated with the subduction of the Indian

Plate beneath the Burma microplate and forms part of the Sunda–Andaman volcanic arc. Barren Island, around 135 km northeast of Port Blair, contains India's only active volcano, featuring a collapsed caldera and basaltic lava flows. Narcondam Island, located further northeast, is a dormant volcanic island with distinctive volcanic geology. It is also an important biodiversity area and habitat of the endemic Narcondam hornbill.

- **Sirpur Cultural and Archaeological Landscape:** Located in Mahasamund district of Chhattisgarh, on the eastern bank of the Mahanadi River, approximately 35 km east of Raipur. It was an important ancient riverine trade and urban centre of the Dakshina Kosala region. The site showcases rich inter-religious interactions through its Hindu, Buddhist and Jain temples and monasteries. It also lies within the Proterozoic Chhattisgarh Basin, known for stromatolite formations associated with ancient microbial activity, including cyanobacteria.

Mongla Port, Bangladesh

Bangladesh has replaced India with China in a major economic-zone development project near the Indian border. The Bangladesh Economic Zones Authority (BEZA) signed an MoU with China Civil Engineering Construction Corporation (CCECC) to develop the China–Bangladesh Mongla Port Economic Zone on 110 acres of land in Bagerhat.

Location and Geographical Features:



- Mongla Port is Bangladesh's second-largest and second-busiest seaport, located in Bagerhat district of Khulna Division in southwestern Bangladesh. It lies approximately 48 km south of Khulna city and around 60–100 km north of the Bay of Bengal coastline. It is situated near the confluence of the Pasur (Pussur) River and Mongla River, providing access to the Bay of Bengal through an extensive riverine channel system. Its approximate coordinates are 21°26.9′ N latitude and 89°34.4′ E longitude.
- The port was originally established at Chalna in 1950, but its anchorage was shifted to the present location in 1954 to accommodate larger sea-going vessels. It is naturally sheltered by the Sundarbans, the world's largest mangrove forest and a UNESCO World Heritage Site. The surrounding tidal river channels require regular dredging to maintain sufficient navigational depth for commercial shipping.

Power Packed News

Asian Games 2026

- The 20th Asian Games, officially known as Aichi-Nagoya 2026, were held in Japan from 19 September to 4 October 2026. Organised by the Olympic Council of Asia (OCA), the event featured 43 sports, 71 disciplines and 469 medal events, with participation from 45 countries and regions. The official slogan was “Imagine One Asia”.
- India participated with a 503-member contingent and secured 85 medals, comprising 21 gold, 27 silver and 37 bronze, finishing fourth in the overall medal standings. Archery emerged as a major contributor with five gold medals, while shooting and boxing secured three gold medals each. India also achieved notable success in cricket, hockey and kabaddi. The Asian Games have historical significance for India as the inaugural edition was hosted in New Delhi in 1951, highlighting India's role in promoting Asian unity through sports.

Doha Receives OCA Flag to Host 2030 Asian Games

- Recently, Doha, the capital of Qatar, officially received the Olympic Council of Asia (OCA) flag during the closing ceremony of the 20th Asian Games, Aichi-Nagoya 2026, held in Nagoya, Japan, on 4 October 2026. The handover formally confirmed Qatar's responsibility for hosting the 21st Asian Games in 2030.
- The OCA flag was received by Sheikh Mohammed bin Abdulrahman Al Thani, Prime Minister and Minister of Foreign Affairs of Qatar. The ceremony was supervised by Sheikh Joaan bin Hamad Al Thani, President of the OCA and Qatar Olympic Committee.
- During the event, Qatar also unveiled the official identity and slogan of the Doha 2030 Asian Games: “The Games We Live For.” The logo incorporates the OCA sun symbol into the letter 'O' of DOHA, representing Qatar's connection with the Asian Games movement, its cultural heritage and future generations.

Bhadohi Renames as Sant Ravidas Nagar Bhadohi

- Recently, The Uttar Pradesh government has renamed Bhadohi district as Sant Ravidas Nagar Bhadohi to honour the medieval Bhakti movement saint, Sant Ravidas. Chief Minister Yogi Adityanath announced the decision on 4 October 2026 during an event organised to inaugurate development projects worth over Rs.1,340 crore in the district.
- The renaming restores the district's earlier association with Sant Ravidas while retaining the name Bhadohi to preserve its regional identity. The decision highlights the government's effort to recognise India's cultural and spiritual heritage.
- Bhadohi district was established on 30 June 1994, after being carved out of Varanasi district. It became the 65th district of Uttar Pradesh. Over the years, its official name underwent changes, including the adoption of Sant Ravidas Nagar in the late 1990s, before Bhadohi was restored.

Exercise Mountain Guardian 2026

- The first inaugural edition of the India–UAE joint military exercise MOUNTAIN GUARDIAN 2026 commenced on 5 October 2026 at the Foreign Training Node, Chaubatia, Uttarakhand. The exercise is conducted from 5 to 18 October 2026, focusing on mountain warfare and enhancing military cooperation between the two countries.
- A total of 92 military personnel are participating, with 46 soldiers from each side. The Indian contingent is represented by the Bhairav Battalion, while the UAE contingent comprises personnel from its Mountain Infantry Battalion. Women officers and combatants from both armies are also participating in specialist roles.
- The exercise includes joint planning, tactical drills, firing practices, surveillance operations, drone deployment, rock climbing and obstacle training. It aims to strengthen interoperability, operational coordination and the exchange of military tactics and techniques.

Indian Navy Launches Its First Indigenous Fleet Support Ship 'Surya'

- Recently, Defence Minister Rajnath Singh launched the Indian Navy's first indigenous Fleet Support Ship (FSS-1), named 'Surya', at Hindustan Shipyard Limited (HSL), Visakhapatnam, on 6 October 2026. The development marks a significant milestone in India's defence manufacturing capabilities and the government's Aatmanirbhar Bharat initiative.
- The vessel has a displacement of 43,500 tonnes and measures 223.6 metres in length and 31.5 metres in width. It has 82% indigenous content, can achieve a maximum speed of 20 knots and has an operational range of 12,000 nautical miles at 15 knots. Designed for 60-day missions, it can carry 20,000 tonnes of high-speed diesel, 2,500 tonnes of aviation fuel, fresh water, provisions and ammunition. It will provide logistical support to naval warships during prolonged operations at sea.
- The project will strengthen India's naval operational readiness, reduce dependence on foreign suppliers and enhance indigenous shipbuilding capacity, supporting maritime security and strategic autonomy in the Indian Ocean Region.

Air Chief Marshal Ashutosh Dixit Takes Charge as 29th Chief of the Air Staff

- Recently, Air Chief Marshal Ashutosh Dixit assumed charge as the 29th Chief of the Air Staff (CAS) of the Indian Air Force (IAF) on 31 October 2026, succeeding Air Chief Marshal Amar Preet Singh.
- Born on 9 December 1966, Air Chief Marshal Dixit was commissioned into the fighter stream of the Indian Air Force in December 1986. He is an experimental test pilot with more than 3,500 flying hours across over 20 types of aircraft. During his distinguished career, he has held several important positions, including Vice Chief of the Air Staff, Chief of Integrated Defence Staff, Chiefs of Staff Committee (CISC), and Air Officer Commanding-in-Chief of Central Air Command.
- He has participated in significant military operations, including Operation Safed Sagar, Operation Rakshak and Operation Sindoor. His honours include the Param Vishisht Seva Medal (PVSM), Ati Vishisht Seva Medal (AVSM), Vayu Sena Medal (VM) and Vishisht Seva Medal (VSM).

10th India Mobile Congress 2026

- Recently, The 10th edition of the India Mobile Congress (IMC) 2026 was held from 7–10 October 2026 at Yashobhoomi, New Delhi, under the theme "Scale Without Boundaries". It was organised jointly by the Department of Telecommunications (DoT) and the Cellular Operators Association of India (COAI).
- The event showcased India's growing capabilities in emerging technologies, including 5G, 6G, Artificial Intelligence (AI), Internet of Things (IoT), satellite communication, quantum technology and semiconductor manufacturing.
- The four key pillars of IMC 2026 are Srishti (Building the Future), Suraksha (Strengthening Trust), Sashakt (Expanding Opportunities) and Samvardhan (Fueling Growth). The event also provided a platform for startups, investors, researchers and global technology companies to collaborate and promote indigenous innovation.

12th National Maritime Search and Rescue Exercise (SAREX-2026)

- Recently, Minister of State for Defence Sanjay Seth inaugurated the 12th National Maritime Search and Rescue Exercise (SAREX-2026) on 7 October 2026 off the Paradip coast in Odisha. Organised by the Indian Coast Guard (ICG), the exercise aimed to strengthen maritime search and rescue (SAR) preparedness through technological advancement and inter-agency coordination.
- The exercise witnessed participation from 32 observers representing 30 friendly foreign nations to promote international cooperation and interoperability. A major highlight was a simulated Mass Rescue Operation involving an aircraft carrying 228 people ditching at sea, followed by a collision with the container vessel MV Zumba. The exercise involved 15 Indian Coast Guard ships, Dornier aircraft, Advanced Light Helicopters, Indian Navy ships and Indian Air Force aircraft, including C-130J and Mi-17.
- Additionally, the 24th National Maritime Search and Rescue Board meeting was held in Bhubaneswar to review India's preparedness across its 4.6-million-square-kilometre Indian Search and Rescue Region (ISRR)

India's GDP Growth Forecast to 7.1% for FY27

- Recently, the World Bank raised India's GDP growth forecast for FY 2026–27 to 7.1% from its earlier estimate of 6.6%, according to its October 2026 India Development Update. The upward revision reflects resilient domestic demand, strong exports and better-than-expected industrial activity, despite global economic uncertainties.
- India's economy grew by 7.8% in FY 2025–26, supported by robust private consumption and investment. The World Bank expects growth to remain strong, projecting 7.2% for FY 2027–28. Key growth drivers include infrastructure investment, manufacturing, services-sector expansion, GST reforms and improved business conditions.
- However, the report highlighted several risks, including elevated global crude oil prices, El Niño-related rainfall shortages, food inflation and volatility in international financial markets.
- The report also emphasised Artificial Intelligence (AI) as an emerging driver of India's economic growth. India's technical workforce, digital public infrastructure and expanding IT sector

provide opportunities for AI adoption. Private AI investment increased from $1.2 billion in 2024 to $4.1 billion in 2025.

Uttarakhand Declared India's 6th Fully Literate State

- Recently, Uttarakhand officially became India's sixth fully literate state on 8 July 2026, following approval by Governor Lt. Gen. Gurmit Singh (Retd.). The declaration was made under the National Education Policy (NEP) 2020 and the ULLAS (Understanding of Lifelong Learning for All in Society) initiative.
- According to the Ministry of Education, Uttarakhand achieved an adult literacy rate of 98.7% among people aged 15 years and above, crossing the 95% benchmark prescribed for achieving full literacy. The state's literacy rate increased from 83.8% in 2023–24 to 98.7%.
- With this achievement, Uttarakhand joined Mizoram, Goa, Tripura, Himachal Pradesh and Sikkim as India's fully literate states.
- The ULLAS programme focuses on providing education to non-literate adults through foundational literacy, numeracy, digital literacy, financial literacy and essential life skills. It aims to promote lifelong learning and inclusive education in society.
- Significance: This achievement supports the goals of NEP 2020, strengthens social empowerment, promotes gender equality and improves access to educational opportunities, particularly among disadvantaged communities.

India-Ghana Relations: Strengthening Bilateral Cooperation

- Recently, India and Ghana exchanged two Memoranda of Understanding (MoUs) on 6 October 2026 to strengthen bilateral cooperation in science, education, academic research, capacity building and agriculture. The agreements were exchanged during the visit of India's External Affairs Minister Dr. S. Jaishankar, alongside Ghana's Foreign Minister Samuel Okudzeto Ablakwa. The two agreements focus on the following areas:
  - The first MoU was signed between the Zoological Survey of India (ZSI) and the University of Ghana to promote scientific research, academic collaboration, biodiversity conservation and institutional capacity building.
  - The second MoU was signed between the Indian Council of Agricultural Research (ICAR) and Ghana's CSIR-Crops Research Institute for an initial period of five years. It aims to promote joint agricultural research, particularly in tomato cultivation and high-yielding crop varieties, along with post-harvest management, cold-chain infrastructure and agricultural technology commercialisation.

RBI Removes Paytm Payments Bank from Second Schedule of RBI Act, 1934

- Recently, the Reserve Bank of India (RBI) formally excluded Paytm Payments Bank Limited (PPBL) from the Second Schedule of the RBI Act, 1934. The exclusion was notified on 31 July 2026 and published in the Gazette of India on 7 September 2026.
- The decision follows the cancellation of PPBL's banking licence by the RBI, effective 24 April 2026, due to persistent regulatory non-compliance and activities considered detrimental to

depositors' interests.

- Subsequently, the Delhi High Court ordered the winding up of PPBL under the Banking Regulation Act, 1949, and the Companies Act, 2013. Former SBI Chief General Manager Girikumar M. Nair was appointed as the Official Liquidator.

Reconstitution of the Press Council of India

- Recently, the Central Government reconstituted the Press Council of India (PCI) on 7–8 October 2026 by nominating 13 new members from the working journalist community. The Council is chaired by retired Justice Ranjana Prakash Desai.
- The newly nominated journalist members comprise six editors and seven non-editor journalists. The PCI is a statutory, autonomous and self-regulatory body established under the Press Council Act, 1978, to preserve press freedom and maintain standards of journalism in India.
- **Historical Background:** The First Press Commission (1952), chaired by Justice G.S. Rajadhyaksha, recommended establishing the PCI. It was initially constituted in 1966 under the Press Council Act, 1965, with Justice J.R. Mudholkar as its first chairman. It was abolished during the Emergency in 1976 and subsequently re-established under the Press Council Act, 1978.

India's First 3D-Printed Rural Housing Pilot in Andhra Pradesh

- Recently, India launched its first 3D-printed rural housing pilot in Andhra Pradesh on October 4, 2026, under the Pradhan Mantri Awaas Yojana-Gramin (PMAY-G) 2.0. The initiative aims to integrate emerging construction technology with affordable rural housing.
- The pilot covers 177 houses across Burripalem, Obulnayudupalem and Pothuru villages in Guntur district, with an estimated cost of Rs.13.93 crore. The Union Ministry of Rural Development will contribute Rs.9.44 crore, while the state government will provide Rs.4.49 crore. The project is expected to be completed within six months, with technical guidance from CSIR-Central Building Research Institute (CBRI), Roorkee.
- The technology uses robotic extrusion to construct walls layer by layer using specialised concrete based on digital designs. Foundations, roofs and utilities will continue to use conventional construction methods. This approach can potentially reduce construction time, labour requirements and material wastage while improving precision.
- The initiative represents an important step towards technology-driven rural development and the objectives of PMAY-G. If successfully scaled, 3D-printed housing can accelerate the delivery of durable and affordable homes, advancing the vision of Housing for All.

Indian Pilot Smit Machchhar to Receive Israel's Civilian Bravery Award

- Recently, Indian flydubai captain Smit Machchhar was announced as a recipient of Israel's Presidential Award for Civilian Heroism, the country's highest civilian bravery honour. Israeli President Isaac Herzog recognised his courage in preventing a serious aviation disaster during an onboard attack.
- On September 30, 2026, Machchhar was commanding flydubai Flight FZ1073 from Dubai to

Tel Aviv when his co-pilot allegedly attacked him inside the cockpit with a crash axe. Despite sustaining severe injuries, Machchhar resisted the assault and managed to open the cockpit door. Passengers and off-duty pilots intervened, restrained the attacker and helped ensure the aircraft landed safely in Tabuk, Saudi Arabia.

- President Herzog announced the award and invited Machchhar to Jerusalem to receive the medal after his recovery. The Indian pilot has also received the UAE's First Class Order of Zayed II in recognition of his actions.

Indian Coast Guard Commissioned Indigenous Fast Patrol Vessel ICGS Ajit

- Recently, the Indian Coast Guard (ICG) commissioned its indigenous Fast Patrol Vessel (FPV), ICGS Ajit, on October 9, 2026, at Goa Shipyard Limited (GSL). The commissioning marks a significant step towards strengthening India's maritime security and achieving self-reliance in defence manufacturing under the Atmanirbhar Bharat initiative.
- The vessel is 51.43 metres long and has a displacement of 330 tonnes. Built with over 65% indigenous content, it is powered by twin diesel engines with controllable pitch propellers and can achieve a maximum speed of more than 27 knots. It has an operational range of 1,500 nautical miles. Its weapon systems include a 30 mm naval gun and two stabilised machine guns. The vessel is operated by six officers and 35 sailors.
- ICGS Ajit will be based at Okha, Gujarat, and will strengthen surveillance along the Gujarat coastline and the Arabian Sea. Its major responsibilities include maritime surveillance, search and rescue operations, anti-smuggling and anti-piracy missions, fisheries protection and marine pollution response.

Indian Navy Commissioned Third Mahe-Class Anti-Submarine Warfare Craft INS Mangrol

- Recently, the Indian Navy commissioned INS Mangrol (P82), the third vessel of the Mahe-class Anti-Submarine Warfare Shallow Water Craft (ASW-SWC) series, on October 12, 2026, at the Naval Dockyard in Mumbai. The commissioning ceremony was presided over by Vice Admiral Sanjay Vatsayan, Flag Officer Commanding-in-Chief, Western Naval Command.
- Designed and constructed by Cochin Shipyard Limited (CSL), Kochi, the vessel incorporates over 80% indigenous components, reflecting India's commitment to Atmanirbhar Bharat and the Make in India initiative.
- INS Mangrol is specifically designed to detect, track and neutralise enemy submarines and underwater threats in shallow coastal waters. It is equipped with advanced weapons and surveillance systems, including the Abhay hull-mounted sonar, lightweight torpedoes, an indigenous anti-submarine rocket launcher and the Maareech torpedo decoy system.
- The vessel has been named after INS Mangrol (M85), a former minesweeper that served the Indian Navy until April 2004.

Shinzo Abe Memorial Corridor Inaugurated in Varanasi

- Recently, the Shinzo Abe Memorial Corridor was jointly inaugurated on October 7, 2026,

by Akie Abe, wife of former Japanese Prime Minister Shinzo Abe, and Uttar Pradesh Chief Minister Yogi Adityanath in Varanasi, Uttar Pradesh.

- The memorial corridor has been established at the Rudraksh International Cooperation and Convention Centre to honour the legacy of Shinzo Abe and recognise his significant contribution to strengthening India-Japan relations.
- The corridor highlights important milestones in bilateral relations, including:
  - **2007:** Shinzo Abe's address to the Indian Parliament.
  - **2014:** Signing of the Kashi-Kyoto Partner City Agreement.
  - **2015:** Joint visit of Prime Minister Narendra Modi and Shinzo Abe to Varanasi, including participation in the Ganga Aarti.
- Shinzo Abe played an important role in deepening India's strategic partnership with Japan and strengthening cooperation in infrastructure, technology, defence and economic development.

Nameri Tiger Reserve Receives CA|TS International Recognition

- Recently, Nameri Tiger Reserve in Assam received Conservation Assured | Tiger Standards (CA|TS) approval from the CA|TS International Executive Committee on September 10, 2026. With this recognition, all four tiger reserves of Assam—Kaziranga, Manas, Orang and Nameri—have achieved international recognition under the CA|TS framework.
- Located in the Sonitpur district of Assam, Nameri Tiger Reserve covers approximately 464 sq. km, including a core area of 200 sq. km. According to the Wildlife Institute of India (WII), its tiger population increased from 3 in 2022 to 12 by late 2025. The reserve also forms an important ecological corridor with Pakke Tiger Reserve in Arunachal Pradesh, supporting wildlife movement and habitat connectivity.
- To strengthen wildlife protection, the reserve has established 39 anti-poaching camps in its core area. Conservation measures include round-the-clock foot and elephant patrols, camera-trap monitoring, grassland restoration and recovery of encroached forest land.
- Conservation Assured | Tiger Standards is an international framework that evaluates the effectiveness of tiger conservation areas based on established management and protection standards.

Ladakh Launched India's First High-Altitude Snow Leopard Wildlife Safari

- Recently, Ladakh launched India's first high-altitude snow leopard wildlife safari on October 7, 2026, during Wildlife Week celebrations in Leh. The safari was flagged off by Lieutenant Governor Vinai Kumar Saxena using six specially designed open-back vehicles.
- The initiative is a joint effort of the Snow Leopard and High-Altitude Nature Conservation (SHAN) Society and the Department of Forest, Ecology and Environment, UT Ladakh.
- Initially, the safari will operate in Rumbak, Shang and Uley, while future routes are planned across Hemis National Park, Changthang, Karakoram Wildlife Sanctuary, Nubra, Zanskar, Sham, Kargil and Drass.
- According to the latest population assessment, Ladakh is home to approximately 477 snow leopards, accounting for nearly two-thirds of India's estimated population of 718. The initiative aims to promote wildlife conservation through responsible ecotourism while generating sustainable livelihood opportunities for local communities. It also includes training 20 local

youths as birdwatching and wildlife guides and developing birdwatching hides.

World Food Day 2026 Observed on October 16

- Recently, World Food Day 2026 was observed on October 16, marking the 46th annual observance led by the Food and Agriculture Organization (FAO) of the United Nations. The day aims to raise awareness about global hunger, malnutrition, food security and the need for sustainable agrifood systems.
- The theme for 2026 is "Innovate Today. Nourish Tomorrow." It highlights the role of science, technology, traditional agricultural knowledge, improved data systems and resilient supply chains in transforming food production and distribution.
- World Food Day commemorates the establishment of the FAO on October 16, 1945, in Quebec City, Canada. The idea of observing this day was proposed by the Hungarian delegation at the 20th FAO General Conference in November 1979. It was first celebrated globally in 1981 following endorsement by the United Nations General Assembly in 1980.
- According to the provided 2026 estimates, around 645 million people worldwide face hunger, while nearly 2.69 billion cannot afford a healthy diet. World Food Day promotes international cooperation to eliminate hunger, improve nutrition and ensure equitable access to safe and nutritious food. It also supports Sustainable Development Goal 2 (SDG 2: Zero Hunger), which aims to end hunger and promote sustainable agriculture by 2030.

Vice-President Inaugurated KAUMARACON-2026 in New Delhi

- Recently, Vice-President C. P. Radhakrishnan inaugurated KAUMARACON-2026, the 3rd International Conference on Kaumarabhritya (Ayurvedic Paediatrics), organised by the All India Institute of Ayurveda (AIIA) in New Delhi from October 15 to 17, 2026.
- The theme of the conference was "Shaping the Future of Child Health: Global Perspectives, Research Innovations, and Clinical Frontiers in Kaumarabhritya." It focused on child nutrition, physical growth, development, disease prevention, emotional well-being and scientific validation of traditional Ayurvedic paediatric practices. Union Minister of State (Independent Charge) for Ayush, Prataprao Jadhav, also attended the event.
- During the conference, several digital initiatives were launched, including the AYUSH Start-up Portal to promote entrepreneurship in the Ayush sector, the AIIA–iCAINE website, Ayurveda Digital Innovation and Venture Acceleration Facility (AyuDIVA), Vamana App and Panchakarma Assessment App.
- An international Memorandum of Understanding (MoU) was also exchanged between Maharishi International University (MIU), USA, and AIIA, New Delhi, to strengthen academic and research cooperation in traditional healthcare.

National Social Assistance Programme Renamed as Pradhan Mantri Samajik Sahayata Yojana

- Recently, the Union Cabinet approved the continuation of the National Social Assistance Programme (NSAP) for five years, from 2026–27 to 2030–31, with a total financial outlay of Rs.53,428 crore. The programme has been renamed Pradhan Mantri Samajik Sahayata Yojana

and aims to provide social assistance to vulnerable sections of society.

- The programme's four sub-schemes have also been renamed: Pradhan Mantri Vridhavastha Pension Yojana for senior citizens, Pradhan Mantri Vidhawa Pension Yojana for widows, Pradhan Mantri Divyangjan Pension Yojana for persons with disabilities and Pradhan Mantri Parivar Labh Yojana for bereaved families.
- A major reform concerns disability pensions. The benchmark disability threshold has been reduced from 80% to 40%, while the minimum age criterion has been removed, extending eligibility from birth. Monthly assistance has been fixed at Rs.375 for beneficiaries aged 0–79 years and Rs.625 for those aged 80 years and above. Existing assistance under old-age and widow pensions and the National Family Benefit Scheme will continue.
- The programme is expected to benefit approximately 3.20 crore people across all 36 States and Union Territories. Launched on 15 August 1995, NSAP gives effect to the spirit of Article 41 of the Constitution, which directs the State to provide public assistance in cases of old age, disability and other forms of need.

Sunil Bharti Mittal Receives France's Highest Civilian Honour

- Recently, Sunil Bharti Mittal, Founder and Chairman of Bharti Enterprises, was conferred the Chevalier de l'Ordre national de la Légion d'Honneur (Knight of the National Order of the Legion of Honour) on October 28, 2026. The honour was presented at the Embassy of France in New Delhi in recognition of his contributions to strengthening India–France economic relations and developing telecommunications and digital infrastructure.
- The Legion of Honour, established by Napoleon Bonaparte in 1802, is France's highest national order of merit. It recognises distinguished contributions to civilian and military life, irrespective of nationality.
- Mittal's recognition reflects his role in promoting business cooperation between India and France. His engagement with French companies in telecommunications and satellite communications has contributed to bilateral commercial and technological partnerships.
- He has previously received several prestigious honours, including the Padma Bhushan in 2007 and the Knight Commander of the Most Excellent Order of the British Empire (KBE) in 2024.

Ayodhya's Ram Temple Receives 'Ati Vishisht' Rating Under FSSAI Initiative

- Recently, the Shri Ram Janmabhoomi Teerth Kshetra in Ayodhya received the highest 'Ati Vishisht' rating under the Food Safety and Standards Authority of India's (FSSAI) Eat Right Place of Worship initiative on October 11, 2026. The temple scored 103 out of 114 points under the BHOG (Blissful Hygienic Offering to God) programme.
- The certification is valid for two years, from October 11, 2026, to October 10, 2028. The assessment covered several aspects of food safety, including kitchen hygiene, food storage, preparation and distribution of prasad, and food safety training for food handlers.
- The recognition aims to ensure that food offered to devotees is prepared and distributed under hygienic and safe conditions. Five other religious sites in Ayodhya also received BHOG certification, including Hanumangarhi, Kanak Bhawan, Devkali Temple and a Jain temple.

Fifth Edition of India–Australia Joint Military Exercise AUSTRAHIND

- Recently, the fifth edition of the India–Australia Joint Military Exercise AUSTRAHIND 2026 concluded on November 1, 2026, at the Foreign Training Node in Thiruvananthapuram, Kerala. Conducted from October 19 to November 1, the exercise aimed to strengthen military cooperation and interoperability between the two countries.
- The exercise focused on joint sub-conventional operations in coastal and island environments under Chapter VII of the United Nations Charter. Activities included tactical planning, maritime and air insertions, drone operations, protection of vital installations and Humanitarian Assistance and Disaster Relief (HADR). A 36-hour validation exercise tested the operational coordination developed during the training.

JWALA Missile

- Recently, JWALA-MK1, India's first indigenously developed private-sector micro-missile, has attracted attention following the successful testing of its solid rocket motor.
- Developed by IG Defence, a private Indian defence technology company, the missile is expected to undergo trials, marking an important step towards strengthening India's indigenous air-defence capabilities.
- JWALA is a short-range Surface-to-Air Missile (SAM) designed as a hard-kill interceptor to physically destroy hostile drones and Unmanned Aerial Vehicles (UAVs). It offers a cost-effective alternative to conventional air-defence missiles, particularly against the growing threat of low-cost drones.
- The missile uses a dual-pulse solid rocket motor and fin-control technology. It has an engagement range of 2–5 km and an operational altitude range of 50 metres to 5,000 metres. Its Circular Error Probable (CEP) is less than two metres at maximum range. It carries a 0.5–1.5 kg pre-fragmented high-explosive warhead with a proximity fuze and is designed to function in electronic warfare and anti-jamming environments.
- JWALA operates within IG Defence's AI-enabled GRID Defend ecosystem, integrating sensors, command systems and weapons.

World Health Summit 2026

- Recently, the World Health Summit 2026 was held from October 11–13 in Berlin, Germany, and online, bringing together global leaders, policymakers, scientists and healthcare experts to discuss emerging challenges in global health.
- The summit was organised under the theme "From Crisis to Resilience: Innovating for Health." It witnessed participation from over 4,000 on-site delegates, more than 60,000 online participants, 400 speakers and over 75 sessions. WHO Director-General Tedros Adhanom Ghebreyesus was among the prominent participants.
- The World Health Summit provides an important platform for advancing Sustainable Development Goal 3 (Good Health and Well-being) and building equitable, resilient and sustainable global health systems.

Mari ZT Lalrithangi

- Recently, Mari ZT Lalrithangi (Pi Mari-i) from Mizoram was recognised among the United Nations Food and Agriculture Organization's (FAO) 100 Women Heroes in Agrifood Systems and Rural Development for the International Year of Women Farmers 2026. She is the first Mizo woman to receive this global distinction.
- A 35-year-old former schoolteacher and postgraduate in Sociology, she belongs to Sangau village in Lawngtlai district, Mizoram. She was selected from over 600 nominees across 131 countries, with only two women from India making the list. The honour was presented on October 15, 2026, during the World Food Forum at FAO headquarters in Rome.

Ahmedabad to Host 2029 IWF Senior World Weightlifting Championships

- Recently, Ahmedabad–Gandhinagar in Gujarat was selected to host the 2029 International Weightlifting Federation (IWF) Senior World Weightlifting Championships. The announcement was made on October 25, 2026, following a meeting of the IWF Executive Board in Ningbo, China. This will be the first time in history that India will host the Senior World Weightlifting Championships, an event that dates back to 1891.
- The championship will also serve as a qualifying event for the 2030 Commonwealth Games, which are scheduled to be hosted in Ahmedabad. The development marks an important milestone for India's sporting ambitions and international recognition.
- The IWF also announced other hosting decisions, including the 2028 World Junior Weightlifting Championships in Caracas, Venezuela, the 2028 World Youth Weightlifting Championships in Prishtina, Kosovo, and the 2030 Senior World Weightlifting Championships in Moscow, Russia.

Ladakh Declared India's First 100% Organic Union Territory

- Recently, Ladakh was officially declared India's first 100% organic Union Territory on October 25, 2026, by Lieutenant Governor Vinai Kumar Saxena. This milestone marks a significant step towards promoting sustainable agriculture, environmental conservation and chemical-free farming in the Himalayan region.
- As part of this initiative, the Ladakh administration has prohibited the procurement, sale, distribution and use of chemical and synthetic fertilisers across Leh and Kargil districts. Violations attract a minimum fine of Rs.10,000. To support farmers during the transition, the government is providing 20,000 quintals of organic fertilisers, including vermicompost, PROM and potash, at an 80% subsidy under the Special Development Package.
- The initiative also focuses on individual farmer-level organic certification to improve market access and enhance agricultural incomes. It aims to promote high-value regional crops such as apricots, sea buckthorn, buckwheat, barley and peas.

Lionel Messi Receives 2026 Princess of Asturias Award for Sports

- Recently, Lionel Messi received the 2026 Princess of Asturias Award for Sports on October 23, 2026, at the Teatro Campoamor in Oviedo, Spain. With this recognition, Messi became the first individual football player in history to receive this prestigious honour.
- The award was presented during a ceremony attended by the Spanish Royal Family, including King Felipe VI, Queen Letizia, Princess Leonor and Infanta Sofia.
- The Princess of Asturias Foundation recognised Messi for his exceptional contribution to football, sustained sporting excellence, team-oriented leadership and philanthropic activities. He is widely regarded as one of the most decorated footballers in history. His humanitarian contributions include supporting healthcare and education for disadvantaged children through the Leo Messi Foundation and UNICEF.

Ashoke Sen Wins 2026 Oskar Klein Medal

- Recently, renowned Indian theoretical physicist Ashoke Sen was awarded the prestigious 2026 Oskar Klein Medal, becoming the first Indian to receive this honour. The medal is awarded by Stockholm University in association with the Nobel Committee for Physics of the Royal Swedish Academy of Sciences, recognising outstanding contributions to theoretical physics.
- Sen delivered the Oskar Klein Memorial Lecture titled “Gravity from Strings and Strings from Gravity” on October 22, 2026, at Stockholm University.
- Ashoke Sen is internationally recognised for his pioneering contributions to string theory and quantum gravity. His major scientific contributions include the development of S-duality, the formulation of the Sen Conjectures on tachyon condensation and research on black hole entropy using string theory. These contributions have significantly advanced the understanding of fundamental interactions and the relationship between gravity and quantum physics.
- Established in 1988, the Oskar Klein Medal honours distinguished contributions to theoretical physics. Its previous recipients include renowned physicists Stephen Hawking, Peter Higgs and Steven Weinberg.
- Sen currently serves as the ICTS-Infosys Madhava Chair Professor in Bengaluru. His other notable awards include the Breakthrough Prize (2012), Dirac Medal (2014), Padma Shri (2001) and Padma Bhushan (2013).

Bodhana Sivanandan Becomes the Youngest Female International Master in Chess History

- Recently, British-Indian chess prodigy Bodhana Sivanandan, aged 11 years, 7 months and 16 days, created history by becoming the youngest female International Master (IM) in chess history. She broke the 38-year-old record previously held by Hungarian chess legend Judit Polgár, established in 1988.
- Bodhana achieved her third and final IM norm at the European Women's Chess Club Cup 2026, held in Budva, Montenegro. Representing the club She Plays to Win Lionesses, she competed on Board 1 and scored 5.5 points out of seven games. Her performance included notable victories against experienced players Olga Badelka and Viktoria Johansson, helping her cross the required rating threshold.
- Earlier, in August 2026, she became the British Women's Chess Champion. She also earned recognition as the youngest-ever Woman Grandmaster (WGM) at the Chess Olympiad.

India at Asian Para Games 2026

- Recently, India delivered its best-ever performance at the 2026 Asian Para Games, held in Aichi-Nagoya, Japan, securing a record 114 medals, comprising 30 gold, 35 silver and 49 bronze. This achievement surpassed India's adjusted medal tally of 108 at the 2023 Hangzhou edition, despite a smaller contingent of 168 para-athletes compared to 309 in 2023.
- Sport-wise performance: Para athletics emerged as India's strongest discipline, contributing 65 medals, including 22 gold. Para badminton secured 16 medals, while para swimming added 11. India also performed impressively in para archery, shooting para sport, para table tennis, judo and powerlifting. The contingent's performance included world records, historic individual achievements and all-Indian medal contests in several events.

IBSAMAR IX 2026: India-Brazil-South Africa Maritime Exercise

- Recently, the 9th edition of the India-Brazil-South Africa Maritime Exercise (IBSAMAR IX 2026) concluded on 20 October 2026 at Simon's Town, South Africa. Conducted over ten days, the exercise involved the navies of India, Brazil and South Africa, strengthening maritime cooperation among the three countries.
- The exercise comprised harbour and sea phases, with the sea phase conducted from 15 to 19 October 2026. It focused on enhancing interoperability, operational coordination and mutual understanding among the participating navies.

SIMBEX 2026

- Recently, the 33rd edition of the Singapore-India Maritime Bilateral Exercise (SIMBEX 2026) commenced in Visakhapatnam, Andhra Pradesh, strengthening maritime cooperation between the Indian Navy and the Republic of Singapore Navy (RSN). Conducted from 21 to 26 October 2026, the exercise comprises harbour and sea phases in Visakhapatnam and the Bay of Bengal, respectively.
- Initiated in 1994 as Exercise Lion King, SIMBEX is the Indian Navy's longest-running uninterrupted bilateral maritime exercise with a foreign navy. Over the years, it has evolved from basic naval drills into a complex exercise covering advanced maritime operations.
- The Indian Navy is participating with indigenous stealth frigate INS Nilgiri and anti-submarine warfare corvette INS Kamorta, supported by aircraft and helicopters. Singapore is represented by the Formidable-class frigate RSS Supreme, carrying an SH-70B helicopter.

Exercise Garuda Shakti 2026

- Recently, the 11th edition of Exercise Garuda Shakti 2026, a joint military exercise between the Indian Army and the Indonesian Army, commenced at Banyuwangi, Indonesia. Scheduled from 27 October to 6 November 2026, the exercise involves personnel from the Indian Army's Parachute Regiment (Special Forces) and Indonesia's Special Forces, Kopassus.
- Launched in 2012, Exercise Garuda Shakti is a bilateral special forces exercise conducted annually on a reciprocal basis between India and Indonesia. It aims to strengthen defence cooperation, enhance interoperability and facilitate the exchange of operational experiences.

INS Srishti

- Recently, Goa Shipyard Limited (GSL) launched INS Srishti (Yard 1283), a Next Generation Offshore Patrol Vessel (NGOPV) for the Indian Navy, on 27 October 2026 at its shipyard in Goa. The name 'Srishti', derived from Sanskrit, means creation. The vessel's keel was laid on 9 June 2025.
- The launch forms part of the NGOPV programme, under which 11 vessels are being constructed following a contract signed in March 2023. Goa Shipyard Limited is building seven vessels, while Garden Reach Shipbuilders and Engineers (GRSE), Kolkata, is constructing the remaining four.
- INS Srishti is designed to strengthen India's maritime surveillance and coastal security capabilities. Its primary roles include monitoring maritime zones, protecting offshore energy installations and other strategic assets, conducting search-and-rescue operations, and undertaking anti-piracy missions. The vessel will also support Humanitarian Assistance and Disaster Relief (HADR) operations.

Orange Oakleaf Declared Chhattisgarh's First State Butterfly

- Recently, the Orange Oakleaf (Kallima inachus) was selected as Chhattisgarh's first official state butterfly following a public online poll and approval by the Chhattisgarh State Wildlife Board. The selection recognises the state's rich biodiversity and aims to promote awareness about butterfly conservation.
- The butterfly is also known as the Indian Oakleaf or Dead Leaf Butterfly. Its most distinctive feature is its remarkable camouflage: when its wings are closed, it closely resembles a dry, fallen leaf, helping it evade predators.
- The Orange Oakleaf is also the state butterfly of Madhya Pradesh. Its selection in Chhattisgarh highlights the ecological importance of protecting butterfly habitats, forests and native plant species.

MoU Between Culture Ministry and Google Arts and Culture

- Recently, The Ministry of Culture, Government of India, has signed a Memorandum of Understanding (MoU) with Google Arts & Culture to promote and preserve India's rich cultural heritage through digital technology. The partnership aims to make India's cultural resources accessible to a global audience through digitisation and innovative digital platforms.
- It will focus on digitising monuments and archaeological sites protected by the Archaeological Survey of India (ASI), museum collections, manuscripts under the Gyan Bharatam Mission, traditional crafts, performing arts and other living cultural traditions.
- It will also support the digital documentation of the proposed Yuge Yugeen Bharat Museum in New Delhi. The collaboration is expected to strengthen cultural preservation, promote tourism, encourage research and facilitate the transmission of traditional knowledge to future generations.

UPSC Personality Test

Interview Guidance by Kumud Mishra, IAS



Kumud Mishra, IAS
(AIR 69)

Particulars	Details
First Attempt	UPSC 2023 – AIR 259
First Service Allocation	Indian Revenue Service (Income Tax)
Second Attempt	UPSC 2024 – AIR 69
Second Service Allocation	Indian Administrative Service (IAS)
Educational	B.A. (Hons.), Political Science
Optional Subject	Political Science and International Relations (PSIR)
Interview Marks	193

The UPSC Civil Services Interview, officially known as the Personality Test, is an important final stage of the examination. Understanding how the board actually evaluates a candidate's personality can help aspirants significantly improve their overall marks. I appeared for the interview in both my attempts and substantially improved my marks. Based on my experience, this stage is not merely a test of factual knowledge, as your academic knowledge has already been evaluated in the Mains Examination. At this stage, the board assesses your behavioural traits, administrative mindset, emotional stability and ability to make balanced and objective decisions under pressure.

The interview board primarily evaluates the following qualities:

- Your behavioural traits and emotional intelligence.
- An unbiased, balanced and objective administrative approach.
- How calmly and logically you respond under pressure.

Based on my personal experience, I am sharing a guide that can help aspirants navigate the interview and secure good marks.

Detailed Application Form (DAF):

Your Detailed Application Form (DAF) is one of the key elements of the interview. It serves as an important document that helps the board understand your background. Questions are often asked directly from the information you provide, including your home state, district, educational background, work experience and hobbies.

For instance, during my own interview, the board's opening question focused on my previous experience in the Indian Revenue Service (Income Tax). I was asked how tax collection could be improved and what role small traders could play in this process.

I gave a structured answer to this question, highlighting key initiatives such as the Faceless Assessment System, GST integration, simplified return forms and the e-filing portal.

Stay Updated with Current Affairs:

Along with DAF preparation, it is also essential to stay updated on current affairs through reliable sources such as The Hindu, The Indian Express and PIB. Aspirants should have a sound understanding of global geopolitics. This includes topics such as India's balanced foreign policy amid the Russia-Ukraine and West Asia conflicts, as well as India's role in BRICS. Additionally, candidates should be aware of emerging national issues such as AI regulation, cybersecurity and data privacy.

A Structured Approach to Answering Questions:

When you are asked questions on complex topics (such as global conflicts or economic policies), adopt a structured approach while answering. It may be useful to begin your answer with:

"Sir/Ma'am, I would like to look at this issue from three key perspectives..."

This immediately signals to the board that you possess a clear, organised and analytical administrative outlook.

Similarly, honesty is extremely important. If you do not know the answer to a question, politely acknowledge the limits of your knowledge. Stating that you will make an effort to understand the subject demonstrates integrity and a willingness to learn.

During my interview, I was asked about a quotation by a famous personality. I could not recognise the quotation and honestly admitted that I was unaware of it. The board member then kindly informed me that the quotation had been given by Steve Jobs, the founder of Apple. The discussion then moved towards the relevance of the quotation in the context of US-China relations and contemporary supply chain resilience.

Admitting what you do not know will not lower your score. Board members often provide information about the subject themselves and smoothly move the conversation forward. Thus, even though I did not know the answer, the flow of the conversation was not interrupted, and the discussion continued smoothly with follow-up questions.

Listen Carefully and Use Simple, Clear Language:

Throughout the interview, aspirants should use simple and clear language. They should also practise listening carefully to the board members without interrupting them. When faced with difficult or provocative questions, remaining calm and composed demonstrates the emotional resilience required of a public servant.

Mock Interviews:

Appearing for approximately four to five mock interviews can help improve your body language and speaking pace while maintaining naturalness in your responses. Take four to five mock interviews to improve your body language, manage nervousness and regulate your speaking pace.

Avoid Scripted Answers:

Do not memorise answers. Adopt an authentic, logical and objective perspective that reflects your true personality. By focusing on your efforts rather than worrying about the final result, you can enter the interview room with a calm and positive mindset and deliver your best performance.

The Right Mindset:

During my second attempt, I adopted an attitude of detachment towards the final outcome: "If I get selected, that is great; if not, that is fine too."

Focusing only on the things that are within your control, such as your efforts, preparation and self-improvement, helps reduce performance-related pressure. Enter the interview room with a positive and cheerful mindset. Try to give your best performance without worrying about the final result.

Brief Checklist for Interview Day

1. Know your DAF thoroughly.
2. Organise your answers logically and present them in a point-wise manner.
3. If you do not know the answer to a question, acknowledge it honestly.
4. Do not enter the interview room with any preconceived notions about a particular board. Simply maintain a positive and cheerful attitude, and you will see good results.
5. Adopt an optimistic and solution-oriented approach towards problems and analytical questions. If you feel that a problem requires a long-term solution, try to present an appropriate approach to arrive at a solution.
6. Remain calm and maintain your inner composure, even when faced with difficult questions.
7. Focus on the process and your efforts rather than the result.

MCQs Based on Current Affairs

1. Consider the following statements regarding the Henley Passport Index (October 2026 edition):

1. India is ranked 84th globally, sharing the position with Algeria and Mauritania.
2. The index is compiled using exclusive data provided by the International Air Transport Association (IATA).
3. A country's rank can improve even if the total number of visa-free destinations accessible to its passport holders decreases.

Which of the statements given above are correct?

A: 1 and 2 only
B: 1 and 3 only
C: 2 and 3 only
D: 1, 2, and 3

2. Consider the following statements regarding the UNESCO Tentative List and the recent additions to it:

1. Inclusion on the UNESCO Tentative List is a mandatory prerequisite before a property can be officially nominated for World Heritage status.
2. Recently, five new heritage proposals were added, taking India's total count on the Tentative List to 78.
3. All five of the newly added properties are exclusively located within the state of Madhya Pradesh.

Which of the statements given above is/are correct?

A: 1 and 2 only
B: 2 only
C: 2 and 3 only
D: 1, 2, and 3

3. Consider the following statements regarding the United Nations Educational, Scientific and Cultural Organization (UNESCO):

1. It is a specialized agency of the United Nations established in 1945 and its foundational mandate includes building peace through intellectual and moral solidarity.
2. The 1972 World Heritage Convention provides the formal framework for identifying and conserving cultural and natural heritage of Outstanding Universal Value (OUV).
3. UNESCO is a principal organ of the United Nations and possesses the sole authority to legally bind member states to its cultural conventions without domestic ratification.

Which of the statements given above is/are correct?

A: 1 and 2 only
B: 1 and 3 only
C: 2 and 3 only
D: 1, 2, and 3

4. Consider the following statements regarding the Minimum Support Prices (MSP) for Rabi crops for the 2027–28 Marketing Season:

1. The Cabinet Committee on Economic Affairs (CCEA) approved MSP hikes for all six mandated Rabi crops.
2. The highest absolute increase in MSP has been registered for Safflower, followed by Rapeseed & Mustard.
3. The pricing policy aligns with the Union Budget 2018–19 announcement of setting the MSP at a minimum of 1.5 times the all-India weighted average cost of production.

Which of the statements given above are correct?

A: 1 and 2 only
B: 1 and 3 only
C: 2 and 3 only
D: 1, 2, and 3

5. Consider the following statements regarding the Bankers' Books Evidence Act, 2026:

1. It replaces the 135-year-old Bankers' Books Evidence Act, 1891.
2. It adopts a technology-neutral approach by recognising banking records maintained in physical, electronic, digital, virtual and cloud-based formats.
3. It permits the Central Government to extend its provisions to any entity or class of entities operating in the financial sector through a notification.

Which of the statements given above are correct?

A: 1 and 2 only
B: 1 and 3 only
C: 2 and 3 only
D: 1, 2, and 3

6. Consider the following statements regarding the recent withdrawal of U.S. forces from Iraq:

1. The U.S.-led military mission officially ended after the final troops departed from Erbil Air Base in Iraq's semi-autonomous Kurdish region.
2. The counter-ISIS campaign known as Operation Inherent Resolve lasted for approximately 12 years, having been launched in 2014.
3. Following this full military exit, all U.S. and coalition counter-terrorism operations and military personnel have been completely withdrawn from the entire Middle East region.

Which of the statements given above is/are correct?

A: 1 and 2 only
B: 1 and 3 only
C: 2 and 3 only
D: 1, 2, and 3

7. Consider the following statements regarding the Indian monsoon:

1. The term 'monsoon' is derived from the Arabic word 'mausim', which means 'season' or 'weather'.
2. The primary cause of the monsoon is the differential heating and cooling of landmasses and the surrounding oceans throughout the year.
3. Upon reaching the Indian peninsula, the southwest monsoon splits into two distinct branches—the Arabian Sea branch and the Bay of Bengal branch.

Which of the statements given above is/are correct?

A: 1 and 2 only
B: 1 and 3 only
C: 2 and 3 only
D: 1, 2, and 3

8. Consider the following statements regarding the RELIEF (Resilience & Logistics Intervention for Export Facilitation) scheme:

1. It was launched under the Export Promotion Mission (EPM).
2. Component II of the scheme provides up to 100% risk coverage for all energy and non-energy export shipments through the ECGC.
3. The Export Credit Guarantee Corporation (ECGC) acts as the nodal and implementing agency for the scheme.

Which of the statements given above is/are correct?

A: 1 and 2 only
B: 1 and 3 only
C: 2 and 3 only
D: 1, 2, and 3

9. Consider the following statements regarding the Nobel Prize in Physiology or Medicine 2026:

1. The prize has been jointly awarded to Karl Deisseroth, Peter Hegemann, and Georg Nagel.
2. They have been honoured for their pioneering work on optogenetics and light-gated ion channels.
3. The core mechanism of optogenetics involves using sound waves to switch individual nerve cells on or off in a living brain.

Which of the statements given above is/are correct?

A: 1 and 2 only
B: 2 only
C: 2 and 3 only
D: 1, 2, and 3

10. With reference to the Central Armed Police Forces (CAPFs) in India, consider the following statements:

1. The Ministry of Home Affairs (MHA) serves as the administrative authority for both the Indian Police Service (IPS) and the CAPFs.
2. Group A executive officers in CAPFs are generally recruited through the Union Public Service Commission (UPSC) as Assistant Commandants.
3. The Supreme Court in the Sanjay Prakash v. Union of India (2025) judgment directed that posts earmarked for deputation up to the Senior Administrative Grade (SAG) should be progressively increased.

Which of the statements given above is/are correct?

A: 1 and 2 only
B: 2 only
C: 2 and 3 only
D: 1, 2, and 3

11. Consider the following statements regarding

the Central Armed Police Forces (General Administration) Act, 2026:

1. It provides that all Director General (DG) and Special Director General (DG) posts in the covered CAPFs are filled through deputation.
2. It mandates that at least 50% of Inspector General (IG) posts must be filled through deputation.
3. It legally reclassifies CAPFs as All-India Services on par with the Indian Administrative Service (IAS).

Which of the statements given above is/are correct?

A: 1 and 2 only
B: 1 and 3 only
C: 2 and 3 only
D: 1, 2, and 3

12. Consider the following statements regarding the Next-Gen GST (GST 2.0) reforms:

1. The reforms streamlined the multi-slab indirect tax structure to primarily centre around two core slabs (5% and 18%), alongside a 40% demerit rate for specified luxury and sin goods.
2. Petroleum products, natural gas, Aviation Turbine Fuel (ATF), and real estate continue to remain largely outside the GST framework.
3. Individual life and health insurance premiums have been brought under the standard 18% GST slab to broaden the tax base.

Which of the statements given above are correct?

A: 1 and 2 only
B: 2 only
C: 2 and 3 only
D: 1, 2, and 3

13. Consider the following statements regarding the Great Indian Bustard (GIB):

1. It is listed as 'Critically Endangered' under the IUCN Red List and belongs to Schedule I of the Wildlife (Protection) Act, 1972.
2. It is an endemic bird species found exclusively within the dry and semi-arid grasslands of Rajasthan.
3. The recent pilot release of captive-bred GIBs into the wild took place at the Desert National Park in Jaisalmer.

Which of the statements given above are correct?

A: 1 and 2 only
B: 1 and 3 only
C: 2 and 3 only
D: 1, 2, and 3

14. Consider the following statements regarding the Nobel Prize in Physics 2026:

1. It has been awarded to Francis Halzen for his work on the IceCube Neutrino Observatory.
2. Neutrinos carry an electric charge and interact strongly with normal matter, making them easy to track using standard optical telescopes.
3. The IceCube Neutrino Observatory uses deep glacial ice at the South Pole as a medium to detect high-energy astrophysical neutrinos.

Which of the statements given above is/are correct?

A: 1 and 2 only
B: 1 and 3 only
C: 2 and 3 only
D: 1, 2, and 3

15. With reference to the recent outcomes of Swiss President Guy Parmelin's state visit to India in October 2026, consider the following statements:

1. India and Switzerland signed a Migration and Mobility Partnership providing multiple-entry visas valid for up to five years.
2. The visit marked the first bilateral Swiss presidential visit to India in nearly a decade.
3. Both countries identified defence production and civil nuclear energy cooperation as emerging focus areas to broaden their bilateral framework.

How many of the above statements are correct?

A: Only one
B: Only two
C: All three
D: None

16. Consider the following statements regarding the relations between India and the European Free Trade Association (EFTA):

1. The India-EFTA Trade and Economic

Partnership Agreement (TEPA) entered into force on October 1, 2025.
2. EFTA consists of four member countries: Switzerland, Norway, Iceland, and Liechtenstein.
3. Under TEPA, EFTA has committed an investment target of USD 100 billion into India over a period of 15 years.

Which of the statements given above are correct?

A: 1 and 2 only
B: 1 and 3 only
C: 2 and 3 only
D: 1, 2, and 3

17. Consider the following statements regarding the SME Growth Fund (SGF), recently approved by the Union Cabinet:

1. It is designed to provide direct equity and growth-oriented capital rather than conventional bank loans or debt.
2. The fund will be structured and established as an Alternative Investment Fund (AIF).
3. Its scope is exclusively restricted to micro and small manufacturing units in metropolitan cities.

Which of the statements given above is/are correct?

A: 1 and 2 only
B: 1 and 3 only
C: 2 and 3 only
D: 1, 2, and 3

18. With reference to the Micro, Small and Medium Enterprises (MSMEs) in India, consider the following statements:

1. Under the revised MSME classification, a uniform metric based on investment and annual turnover is applied without separating manufacturing and service enterprises.
2. A micro enterprise is defined as an entity with an investment of up to Rs.2.5 crore and an annual turnover of up to Rs.10 crore.
3. According to recent economic data, MSMEs contribute to more than 45% of India's total exports.

Which of the statements given above are correct?

A: 1 and 2 only
B: 2 only
C: 2 and 3 only
D: 1, 2, and 3

19. With reference to the Monetary Policy Committee (MPC) meeting of the Reserve Bank of India (RBI) held in October 2026, consider the following statements:

1. The MPC unanimously raised the policy repo rate by 25 basis points to 5.50%.
2. The policy stance was shifted from 'neutral' to 'calibrated tightening'.
3. Following this revision, the Standing Deposit Facility (SDF) rate was adjusted to 5.25%, and the Marginal Standing Facility (MSF) rate was set at 5.75%.

Which of the statements given above are correct?

A: 1 and 2 only
B: 1 and 3 only
C: 2 and 3 only
D: 1, 2, and 3

20. With reference to the Election Commission of India (ECI) and the recent Supreme Court proceedings regarding Form 6 modifications, consider the following statements:

1. The Chief Election Commissioner (CEC) can unilaterally alter statutory forms like Form 6 without consulting the other Election Commissioners if an emergency arises.
2. Form 6 is a statutory document governed under the Registration of Electors Rules, 1960, framed pursuant to the Representation of the People Act, 1950.
3. The Chief Election Commissioner and Other Election Commissioners Act, 2023 mandates a majority decision mechanism when there is a difference of opinion among members of the Commission.

Which of the statements given above is/are correct?

A: 1 and 2 only
B: 1 and 3 only
C: 2 and 3 only
D: 1, 2, and 3

21. Consider the following statements regarding the newly approved Integrated Transport & Logistics Authority (ITLA):

1. It has been set up as a statutory body

backed by a dedicated Act of Parliament.
2. It will prepare a comprehensive National Transport Master Plan with a planning horizon of 10 years or more.
3. It is mandated to undertake both technical and financial appraisal of all Government infrastructure projects costing Rs.500 crore or more.

Which of the statements given above is/are correct?

A: 1 and 2 only
B: 2 only
C: 2 and 3 only
D: 1, 2, and 3

22. Who were awarded the 2026 Nobel Prize in Chemistry?

A: Ryoji Noyori and K. Barry Sharpless
B: Henri B. Kagan and Kenso Soai
C: Karl Deisseroth and Peter Hegemann
D: Benjamin List and David MacMillan

23. With reference to asymmetric organic synthesis, consider the following statements:

1. Chirality refers to a property in which a molecule and its mirror image are not superimposable.
2. A non-linear effect occurs when the enantiomeric purity of a reaction product is not directly proportional to the enantiomeric purity of the chiral catalyst.
3. Asymmetric catalysis always produces a 50:50 mixture of two enantiomers.
4. Non-linear effects can help explain the amplification of a small chiral imbalance during a chemical reaction.

Which of the statements given above are correct?

A: 1 and 2 only
B: 1,3 and 4 only
C: 1, 2 and 4 only
D: 1, 2, 3 and 4

24. Consider the following statements regarding the Living Planet Report 2026:

1. The report tracks the absolute count of every individual animal species lost globally since 1970.
2. Freshwater ecosystems recorded the steepest average decline in vertebrate populations compared to terrestrial and marine ecosystems.
3. The Living Planet Index (LPI), featured in the report, is produced in collaboration with the Zoological Society of London (ZSL).

Which of the statements given above are correct?

A: 1 and 2 only
B: 1 and 3 only
C: 2 and 3 only
D: 1, 2, and 3

25. Consider the following statements regarding the legal and constitutional framework of inter-state river water disputes in India:

1. Article 262 of the Constitution empowers Parliament to provide for the adjudication of any dispute relating to the use, distribution, or control of inter-state rivers.
2. Parliament enacted the Inter-State River Water Disputes Act, 1956 to deal with such disputes.
3. The Supreme Court has original jurisdiction under Article 131 to decide any inter-state water dispute directly, bypassing Parliament's exclusion laws.

Which of the statements given above are correct?

A: 1 and 2 only
B: 1 and 3 only
C: 2 and 3 only
D: 1, 2, and 3

26. Consider the following statements regarding the Nobel Prize in Literature 2026:

1. The Nobel Prize in Literature 2026 has been awarded to Canadian poet and classicist Anne Carson.
2. The award is presented annually by the Royal Swedish Academy of Sciences.
3. Her notable work Autobiography of Red blends ancient Greek mythology with contemporary experiences.

Which of the statements given above are correct?

A: 1 and 2 only
B: 1 and 3 only
C: 2 and 3 only
D: 1, 2, and 3

27. With reference to the recommendations of the 57th GST Council meeting held in October

2026, consider the following statements:

1. The time period to acknowledge a GST refund claim or issue a deficiency memo has been reduced from 15 days to 10 days.
2. The Council recommended the complete deletion of Section 69 of the CGST Act, which deals with the power of tax officers to arrest.
3. The monetary threshold for criminal prosecution under the GST law has been increased from Rs.1 crore to Rs.5 crore.

Which of the statements given above are correct?

A: 1 and 2 only
B: 1 and 3 only
C: 2 and 3 only
D: 1, 2, and 3

28. Consider the following statements regarding the Goods and Services Tax (GST) and the GST Council in India:

1. The GST Council is a constitutional body established under Article 279A of the Indian Constitution.
2. The Goods and Services Tax was introduced in India via the 101st Constitutional Amendment Act, 2016.
3. Under the recent 57th GST Council recommendations, the maximum general penalty under Section 125 of the CGST Act is proposed to be increased.

Which of the statements given above are correct?

A: 1 and 2 only
B: 1 and 3 only
C: 2 and 3 only
D: 1, 2, and 3

29. Consider the following statements regarding the "Trade and Development Report 2026", recently in the news:

1. It is a flagship annual report published by the World Trade Organization (WTO) to evaluate geoeconomic vulnerabilities.
2. The report highlights that artificial intelligence (AI) related hardware and products have become a primary driver of global merchandise trade growth.
3. According to the report, global economic growth is projected to accelerate significantly in 2026 compared to 2025 due to rapid digitalization.

Which of the statements given above is/are correct?

A: 1 and 2 only
B: Only 2
C: 2 and 3 only
D: 1, 2 and 3

30. Consider the following statements regarding Navanethem "Navi" Pillay, the recipient of the Nobel Peace Prize 2026:

1. She served as the first Black woman to start a law practice in Natal Province, South Africa.
2. She served as the President of the International Criminal Tribunal for Rwanda (ICTR).
3. She was the first South African to earn a doctorate in law from Harvard University.
4. She served as the United Nations High Commissioner for Human Rights from 2008 to 2014.

How many of the statements given above are correct?

A: Only 1
B: Only 2
C: Only 3
D: All four

31. With reference to the Wild Water Buffalo, consider the following statements:

1. It is native to South and Southeast Asia and is classified as Endangered on the IUCN Red List.
2. In India, it is legally protected under Schedule II of the Wildlife (Protection) Act, 1972.
3. The majority of the global wild water buffalo population resides in the state of Assam.

Which of the statements given above is/are correct?

A: 1 and 2 only
B: 1 and 3 only
C: 2 and 3 only
D: 1, 2, and 3

32. Consider the following statements regarding the Global Innovation Index (GII) 2026:

1. It is published annually by the World Intellectual Property Organization (WIPO).
2. India is ranked 38th globally and holds the

1st position among lower middle-income economies.
3. Switzerland has topped the index for the 16th consecutive year.

Which of the statements given above are correct?

A: 1 and 2 only
B: 1 and 3 only
C: 2 and 3 only
D: 1, 2, and 3

33. Consider the following pairs of newly appointed Governors and their respective states:

1. Rajendra Vishwanath Arlekar — Tamil Nadu
2. Om Prakash Mathur — Keralam (Kerala)
3. Dr. Sudha Yadav — Karnataka
4. Dushyant Gautam — Uttarakhand

How many pairs given above are correctly matched?

A: Only one pair
B: Only two pairs
C: Only three pairs
D: All four pairs

34. With reference to the office of the Governor in India, consider the following statements:

1. Article 153 of the Constitution provides for a Governor for each State, and the same person cannot be appointed as the Governor of two or more States.
2. The Governor is appointed by the President by warrant under his or her hand and seal.
3. The Constitution specifies a fixed 5-year tenure for the Governor, and they cannot be removed by the President before the completion of their term.

Which of the statements given above is/are correct?

A: 1 and 2 only
B: 1 and 3 only
C: 2 only
D: 1, 2, and 3

35. Consider the following statements regarding INS Mangrol:

1. It is the third vessel of the Mahe-class Anti-Submarine Warfare Shallow Water Craft (ASW-SWC) series.
2. It is designed to completely replace the larger Kolkata-class destroyers of the Indian Navy.
3. The vessel features more than 80% indigenous content and was built by Cochin Shipyard Limited (CSL).

How many of the above statements are correct?

A: Only one
B: Only two
C: all three
D: None

36. Consider the following statements regarding the ULLAS – Nav Bharat Saaksharta Karyakram:

1. ULLAS stands for "Understanding of Lifelong Learning for All in Society".
2. It is a Centrally sponsored scheme targeted at covering non-literates aged 15 years and above.
3. The assessment of learners under the scheme is verified through the Foundational Literacy and Numeracy Assessment Test (FLNAT).

Which of the statements given above are correct?

A: 1 and 2 only
B: 1 and 3 only
C: 2 and 3 only
D: 1, 2, and 3

37. With reference to the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2026, consider the following statements:

1. The prize was awarded to Robert E. Hall and Michael Woodford for demonstrating how microeconomic behavioral foundations shape macroeconomic stabilization policies.
2. Robert Hall's 1978 hypothesis established that consumption decisions are purely static and rely exclusively on current disposable income rather than future income expectations.
3. The Sveriges Riksbank Prize in Economic Sciences was established under the original 1895 will of Alfred Nobel alongside Physics, Chemistry, Medicine, and Literature.

Which of the statements given above is/are correct?

A: 1 only
B: 1 and 3 only
C: 2 and 3 only
D: 1, 2, and 3

38. Consider the following statements regarding the First BIMSTEC Home Ministers' Meeting (2026):

1. The inaugural meeting was hosted by India in New Delhi and concluded with the adoption of the Delhi Declaration.
2. The mechanism to establish a Home Ministers' Meeting was first formally welcomed at the Sixth BIMSTEC Summit in Bangkok.
3. The proposed BIMSTEC Disaster Management Centre is planned to be set up in Jamnagar, Gujarat.

Which of the statements given above are correct?

A: 1 and 2 only
B: 1 and 3 only
C: 2 and 3 only
D: 1, 2, and 3

39. With reference to the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) consider the following statements:

1. It is a regional organization established in 1997 with its permanent Secretariat located in Dhaka, Bangladesh.
2. Its membership comprises countries from South Asia and Southeast Asia, including India, Thailand, Myanmar, and China.
3. It serves as a bridge connecting South Asian regionalism with Southeast Asian regionalism under India's 'Neighbourhood First' and 'Act East' policies.

Which of the statements given above are correct?

A: 1 and 2 only
B: 1 and 3 only
C: 2 and 3 only
D: 1, 2, and 3

40. With reference to the National Viral Hepatitis Control Programme (NVHCP) and India's strategy to eliminate Hepatitis B and C by 2030, consider the following statements:

1. The NVHCP was launched in 2018 by the Ministry of Health and Family Welfare to provide a comprehensive framework for prevention, diagnosis, and treatment.
2. A safe and effective vaccine is available for Hepatitis B (including a birth dose within 24 hours), whereas there is currently no vaccine available for Hepatitis C.
3. According to the WHO Global Hepatitis Report 2024, India accounts for less than 5% of the global burden of Hepatitis B and C infections.

Which of the statements given above is/are correct?

A: 1 and 2 only
B: 2 only
C: 2 and 3 only
D: 1, 2, and 3

41. With reference to the GSAT-7C communication satellite, consider the following statements:

1. It is a dedicated military communication satellite intended to enhance the operational network of the Indian Air Force (IAF).
2. The contract for its acquisition has been signed with the NewSpace India Limited (NSIL), the commercial arm of ISRO.
3. It completely replaces the older GSAT-7 (Rukmini) satellite which was exclusively built and launched for the Indian Army.

Which of the statements given above is/are correct?

A: 1 and 2 only
B: 2 and 3 only
C: Only 1 and 3
D: 1, 2, and 3

42. Consider the following statements regarding Sukhna Lake (Sukhna Wetland), which was recently designated as a Ramsar Site:

1. It is a natural alpine lake formed at the high-altitude zone of the Greater Himalayas.
2. It was created in 1958 by damming the seasonal Sukhna Choe stream originating in the Shivalik Hills.
3. It serves as a vital stopover for migratory birds traveling along the Central Asian Flyway.

Which of the statements given above is/are correct?

A: 1 and 2 only
B: 2 and 3 only
C: Only 1 and 3
D: 1, 2, and 3

43. With reference to India's performance in the

Global Hunger Index (GHI) 2026, consider the following statements:

1. India ranks 100th out of 122 countries and is placed in the "Serious" hunger category.
2. India's child wasting rate stands at 19%, which is among the highest globally.
3. Pakistan is placed in a better position than India in the GHI 2026 rankings.

Which of the statements given above are correct?

A: 1 and 2 only
B: 1 and 3 only
C: 2 and 3 only
D: 1, 2, and 3

44. Consider the following statements regarding INS Samarthak, which was recently in the news:

1. It is the first indigenous Multi-Purpose Vessel (MPV) built by an Indian private shipyard (Larsen & Toubro).
2. It features more than 75% indigenous content.
3. Its primary role is restricted exclusively to frontline anti-submarine warfare and torpedo combat.

Which of the statements given above is/are correct?

A: 1 and 2 only
B: 1 and 3 only
C: 2 and 3 only
D: 1, 2, and 3

45. Consider the following statements regarding reservation policies and religious conversion in India:

1. Under Paragraph 3 of the Constitution (Scheduled Castes) Order, 1950, a person who professes a religion other than Hinduism, Sikhism, or Buddhism cannot be deemed a member of a Scheduled Caste.
2. The Supreme Court recently ruled that voluntary conversion from Hinduism to Islam automatically entitles an individual to claim reservation benefits under a notified Backward Class Muslim community based on their pre-conversion social status.
3. Article 16(4) of the Constitution enables the State to make reservations in public employment for any backward class of citizens not adequately represented in state services.

Which of the statements given above is/are correct?

A: 1 and 2 only
B: 1 and 3 only
C: 2 and 3 only
D: 1, 2, and 3

46. Consider the following statements regarding the Henley Passport Index (October 2026 edition):

1. India is ranked 84th globally, sharing the position with Algeria and Mauritania.
2. The index is compiled using exclusive data provided by the International Air Transport Association (IATA).
3. A country's rank can improve even if the total number of visa-free destinations accessible to its passport holders decreases.

Which of the statements given above are correct?

A: 1 and 2 only
B: 1 and 3 only
C: 2 and 3 only
D: 1, 2, and 3

47. With reference to India's policy roadmap for Sustainable Aviation Fuel (SAF), consider the following statements:

1. The National Biofuel Coordination Committee (NBCC) has set a mandatory blending target of 1% SAF for all domestic and international flights starting January 2027.
2. The Government of India amended the Aviation Turbine Fuel (Regulation of Marketing) Order, 2001, to formally bring SAF-blended jet fuel under the existing regulatory framework.
3. The European Union and the United Kingdom have already introduced higher mandatory SAF blending targets starting from 2025 compared to India's 2027 timeline.

Which of the statements given above are correct?

A: 1 and 2 only
B: 1 and 3 only
C: 2 and 3 only
D: 1, 2, and 3

48. With reference to the Emissions Gap Report 2026 released by the United Nations Environment Programme (UNEP), consider the

following statements:

1. The report notes that limiting global warming to 1.5°C without overshoot is no longer achievable.
2. To follow the lowest-overshoot pathway, global greenhouse gas emissions must be reduced relative to 2025 levels by 18% by 2030, 45% by 2035, and 69% by 2040.
3. G20 members, excluding the African Union, account for less than half of global greenhouse gas emissions.

Which of the statements given above are correct?

A: 1 and 2 only
B: 2 only
C: 2 and 3 only
D: 1, 2, and 3

49. Consider the following statements regarding the Fund for Responding to Loss and Damage (FRLD):

1. It was formally established at COP27 in 2022 and operationalized at COP28 in 2023.
2. The Fund is hosted under the administrative umbrella of the World Bank.
3. It exclusively provides loans and commercial credit lines to developing countries for climate-induced mitigation projects.

Which of the statements given above is/are correct?

A: 1 and 2 only
B: 2 only
C: 2 and 3 only
D: 1, 2, and 3

50. With reference to the recently discovered 'PHP2Shell' vulnerabilities, which of the following statements is/are correct?

1. It consists of two critical memory-safety flaws (CVE-2026-109618 and CVE-2026-109619) that allow unauthenticated remote attackers to execute malicious code (RCE) on affected web servers.
2. The vulnerability is highly pervasive because PHP acts as a server-side programming language that powers approximately 70% of websites with identifiable server-side architectures.
3. Simple configuration updates (like changing the php.ini file variables) completely eliminate the vulnerability without needing to install updated core runtime versions.

Select the correct answer using the code given below:

A: 1 and 2 only
B: 2 only
C: 2 and 3 only
D: 1, 2, and 3

ANSWER

1	D	11	A	21	B	31	B	41	A
2	A	12	A	22	B	32	D	42	B
3	A	13	B	23	C	33	C	43	A
4	D	14	B	24	C	34	C	44	A
5	D	15	C	25	A	35	B	45	B
6	A	16	D	26	B	36	D	46	D
7	B	17	A	27	D	37	A	47	C
8	B	18	D	28	A	38	D	48	A
9	A	19	D	29	B	39	B	49	A
10	A	20	C	30	D	40	A	50	A

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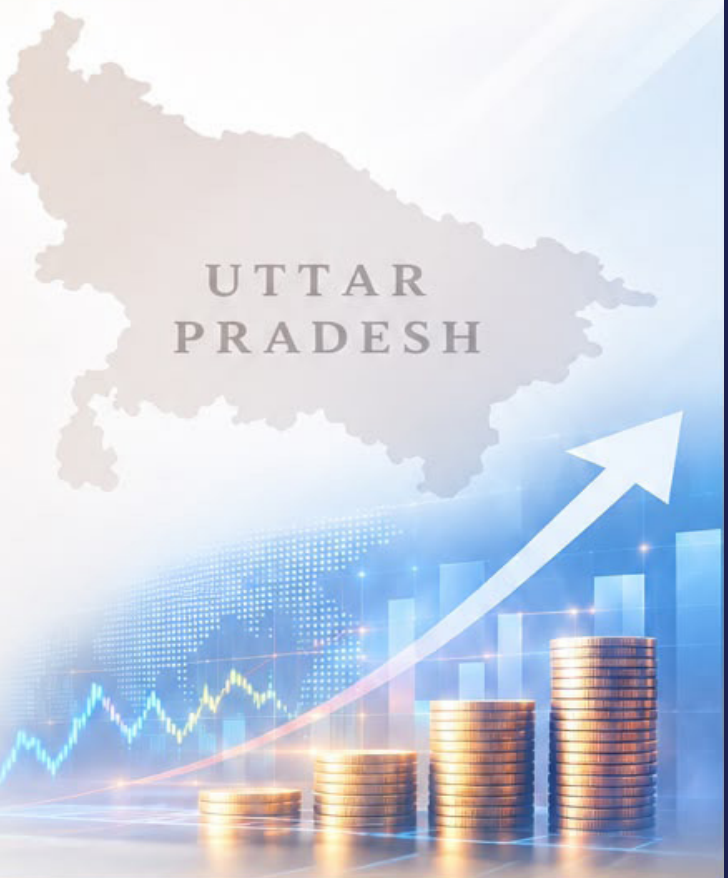
Prelims Exam-Oriented Preparation

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