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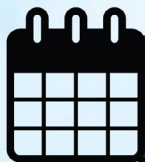
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"The more we sweat in peace, the less we bleed in war"

UPSC-CSE

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Message



An officer with a right mindset is an officer that a nation aspires for. A right mindset doesn't necessarily comprise unlimited jargon of knowledge rather a right amount of knowledge and its appropriate execution. Especially, when it comes to UPSC and State PSCs preparation, the crux is not to accumulate the knowledge but its effective implementation and utilization in tackling any situation. The situation here can be anything from UPSC CSE Prelims to the major issues that need to be addressed. The journey is hard but it is worth.

Perfect 7 has been part of many UPSC and State PSCs aspirants in their journey of becoming well reputed officers serving nationally and internationally. The magazine itself had gone through constant ebb and flows of change and improvements. Now, that the magazine is in its monthly era, I hope it becomes your perfect preparation partner and guides you through this ever learning endeavor of Civil Services Preparation.

With Best wishes.

Vinay Singh
Founder
Dhyeya IAS

Team Perfect 7

Founder	: Vinay Singh
Managing Editor	: Vijay Singh
Editor	: Ashutosh Mishra
Sub-Editor	: Bhanu Pratap
	: Rishika Tiwari
Designing	: Arun Mishra
Cover Design	: Sonal Tiwari

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-: For any feedback Contact us :-

+91 9369227134

perfect7magazine@gmail.com

PERFECT



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Indian Society & Art and Culture

Ayushman Bharat: Challenge of Strengthening India's Public Health System

Context:

Launched in 2018, the Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) is India's flagship health insurance scheme designed to provide universal health coverage and reduce the financial burden of hospitalisation on poor and vulnerable families. Over the last seven years, it has transformed India's healthcare landscape by making secondary and tertiary care more accessible.

However, the latest National Health Authority (NHA) annual report (2025) reveals an important paradox — even though government hospitals make up a majority of the empanelled facilities, private hospitals remain the primary beneficiaries of the scheme. This trend highlights the continued dominance of the private sector in India's health ecosystem, raising questions about public health infrastructure and financing.

Key Highlights from the NHA Report:

▪ **Private Sector Dominance**

- » Out of 31,005 hospitals empanelled under AB-PMJAY, only 45% are private. Yet, these hospitals account for 52% of all hospitalisations — more than 9.19 crore treatments — and received 66% of the total expenditure of Rs.1.29 lakh crore under the scheme.
- » This means that while public hospitals are numerically higher, most patients continue to prefer private institutions,

possibly due to better infrastructure, shorter waiting times, and perceived higher quality of care.

▪ **Treatment Trends**

- » The most frequently availed treatment under Ayushman Bharat is haemodialysis, which makes up 14% of all treatments since 2018. This is followed by common ailments like fever (4%), gastroenteritis (3%), and animal bites (3%).
- » In 2024–25, the top three specialities used under the scheme were General Medicine, Ophthalmology, and General Surgery. The high share of haemodialysis reflects the growing burden of chronic kidney disease in India and the recurring nature of the treatment — patients often require dialysis two to three times per week.

▪ **Inter-State Patient Mobility**

- » One of the key strengths of Ayushman Bharat is its portability feature, which allows beneficiaries to receive treatment in any state or union territory, irrespective of where their card was issued.
- » **Top In-Migration States:**
 - Chandigarh – 19% of all portability cases
 - Uttar Pradesh – 13%
 - Gujarat – 11%
 - Uttarakhand and Punjab – 8% each

» **Top Out-Migration States:**

- Uttar Pradesh – 24% of total outbound cases
- Madhya Pradesh – 17%
- Bihar – 16%
- Punjab and Himachal Pradesh – 7% each

❖ These figures show how portability is enabling patients from underserved regions to seek care in better-equipped states, especially where private or tertiary care hospitals are concentrated.

▪ **Digital Health Ecosystem: ABHA and Integration**

- » The report also highlights major progress under the Ayushman Bharat Digital Mission (ABDM), aimed at creating an integrated digital health infrastructure.
 - 50 crore health records have been linked digitally.
 - Nearly 60% of Indians now have an ABHA (Ayushman Bharat Health Account) number — a 14-digit ID that enables individuals to store and share their medical data securely.
 - So far, 3.8 lakh healthcare facilities (38% of total) and 5.8 lakh health professionals (26%) have been registered on the platform.
- » This growing digital network is expected to streamline data sharing, reduce duplication of tests, and improve the continuity of care across public and private facilities.

About Ayushman Bharat–PMJAY:

- ❖ The Ayushman Bharat initiative was conceived as a two-pronged approach to achieve Universal Health Coverage (UHC):
- ❖ **Ayushman Arogya Mandirs (AAMs):**
 - » Aim to establish 1.5 lakh health and wellness centres providing free and comprehensive primary care — including non-communicable diseases, mental health, palliative and rehabilitative services, and basic diagnostics.
- ❖ **Pradhan Mantri Jan Arogya Yojana (PMJAY):**
 - » Offers Rs.5 lakh health insurance

per family per year for secondary and tertiary hospitalisation.

- » Covers 12 crore families (approx. 55 crore people), targeting the poorest 40% of India's population.
- » Beneficiaries are identified through the Socio-Economic Caste Census (SECC) 2011 and earlier RSBY lists.
- ❖ The scheme is fully government-funded, with cost-sharing between the Centre and states in the ratio of 60:40 (for most states), 90:10 (for North-Eastern and Himalayan states), and 100% central funding for Union Territories without legislatures.

Achievements So Far

- ❖ Over 9 crore treatments facilitated since 2018, worth Rs.1.29 lakh crore.
- ❖ 35 crore Ayushman cards issued across 33 states and UTs.
- ❖ 49% of cardholders are women, showing a significant push toward gender inclusion.
- ❖ Out-of-pocket expenditure (OOPE) has declined by 21%, and health-related loans by 8%, indicating reduced financial stress on households.
- ❖ District hospitals have reported positive financial returns, improving their capacity to deliver better services.
- ❖ Overall, Ayushman Bharat has strengthened the financial protection net for millions who earlier faced catastrophic health expenses.

Challenges and Structural Gaps:

- ❖ **Low Public Health Spending:** India's public health expenditure remains at 1.84% of GDP, far below the National Health Policy 2017 target of 2.5%. This limits investments in infrastructure, human resources, and quality care in government hospitals.
- ❖ **Skewed Towards Hospitalisation:** AB-PMJAY focuses mainly on hospital-based secondary and tertiary care, while primary and outpatient care — which constitutes the bulk of out-of-pocket costs — remains under-covered.
- ❖ **The “Missing Middle”:** Millions of citizens who are neither poor enough for government subsidies nor rich enough for private

insurance remain outside any financial protection net.

- ❖ **Rural–Urban Imbalance:** A majority of doctors and health professionals work in urban areas, leaving rural regions understaffed. This shortage pushes rural patients to travel long distances for even basic services.
- ❖ **Private Sector Overdependence:** With two-thirds of Ayushman Bharat funds going to private hospitals, the scheme has inadvertently strengthened private dominance instead of building public capacity.
- ❖ **Regulatory Weakness:** Lack of uniform quality standards, pricing regulations, and accountability mechanisms in the private sector has led to overcharging, variable quality, and ethical concerns in some cases.

The Way Forward:

- ❖ **Boost Public Health Financing:** Increase government spending to 2.5% of GDP, focusing on strengthening primary healthcare and preventive services through Ayushman Arogya Mandirs.
- ❖ **Expand Insurance Coverage:** Extend PM-JAY benefits to cover the missing middle, and include outpatient care, diagnostics, and medicines under the insurance umbrella.
- ❖ **Build and Retain Health Workforce:** Expand medical and nursing institutions in underserved areas, incentivise rural

postings, and invest in community health workers and paramedical training.

- ❖ **Use Technology Effectively:** Integrate telemedicine and ABHA-based digital platforms to provide remote specialist consultations and improve data-driven health planning.
- ❖ **Strengthen Regulation and Governance:** Enforce the Clinical Establishments Act, 2010 to ensure quality, standardised treatment, and transparent pricing in private hospitals. Develop robust health data systems to improve monitoring, evaluation, and accountability.

Conclusion:

Ayushman Bharat has emerged as a transformative policy step towards universal health coverage, shielding millions from financial distress and widening access to hospital care. Yet, the growing dominance of private hospitals within the scheme underscores the urgent need to rebuild public trust in government healthcare facilities. For long-term sustainability, India must focus on strengthening public infrastructure, regulating private participation, and bridging the rural–urban divide. Only then can the promise of Ayushman Bharat — “No one should be denied healthcare for lack of money” — become a true reality.

Short Issues

India Crime Report 2023

Context:

The National Crime Records Bureau (NCRB) released its Crime in India 2023 report on September 30, 2025, which showed a 7.2% overall increase in registered cognizable crimes compared to 2022. The report highlighted significant surges in cybercrimes, economic offences, and crimes against vulnerable sections

of society, while traditional violent crimes saw a decline.

Key findings from the report

- **Overall crime statistics**
 - » **Total cases:** A total of 6.24 million cognizable crimes were recorded in 2023, up from 5.82 million in 2022. This translates to a crime occurring every 5 seconds.
 - » **Shifting crime patterns:** The report noted

a shift away from traditional violent crimes toward technology-driven and urban offences.

- » **Metropolitan areas:** Crime in 19 major metropolitan cities rose by 10.6% over 2022.

▪ **Trends in specific crimes:**

- » **Cybercrime:** Cybercrime cases surged by 31.2%, with 86,420 cases reported in 2023.

- **Leading motives:** The primary motive was fraud (68.9%), followed by sexual exploitation and extortion.

- **Crimes against women:** There was a marginal increase of 0.7% in crimes against women, totaling 448,211 cases.

- **Primary offences:** The most frequently reported offences were cruelty by a husband or relatives, kidnapping, and assault with intent to outrage modesty. In 97.5% of rape cases, the perpetrator was known to the victim.

- » **Crimes against children:** A 9.2% rise was recorded, with 177,335 cases. Kidnapping and abduction (45%) and cases under the Protection of Children from Sexual Offences (POCSO) Act (38.2%) were the main drivers.

- » **Crimes against Scheduled Tribes (STs):** Cases saw a significant spike of 28.8%, rising to 12,960 cases.

- **Ethnic violence:** The dramatic increase was largely attributed to ethnic conflicts in states like Manipur.

- » **Crimes against Scheduled Castes (SCs):** These crimes showed a marginal increase of 0.4%.

- » **Murders and abductions:** Murder cases declined by 2.8%, but cases of kidnapping and abduction rose by 5.6%.
- » **Economic offences:** These crimes increased by 6%, reaching 204,973 cases.

- **Leading categories:** The majority of cases involved forgery, cheating, and

fraud.

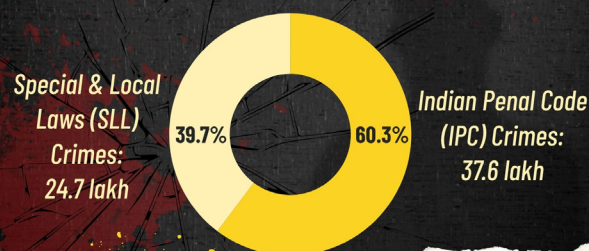
India Registers Over 62 Lakh Cognizable Crimes in 2023

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Total cognizable crimes registered in 2023: **62,41,569**

Cognizable crimes are those for which police can make an arrest without a warrant.

This represents a **7.2% increase** over the **58.2 lakh cases** registered in 2022.



Source: NCRB 'Crime in India 2023' Report

▪ **State-specific data:**

- » **Crime rates:** Uttar Pradesh, Maharashtra, and Madhya Pradesh registered the highest number of cases in absolute terms. However, states like Kerala and Delhi had the highest crime rates per lakh population.
- » **High-volume states (cybercrime):** Karnataka, Telangana, and Uttar Pradesh reported the most cybercrime cases.
- » **High-volume states (crimes against women):** Uttar Pradesh, followed by Maharashtra and Rajasthan, registered the highest number of cases.
- » **High-volume states (crimes against children):** Madhya Pradesh, Maharashtra, and Uttar Pradesh accounted for the majority of cases.

Conclusion:

The NCRB's 2023 report underscores the need for reforms in India's policing and justice

system to address the evolving nature of crime, particularly in the digital space. The data points to increasing digital vulnerabilities and systemic challenges in prosecuting cybercrimes, highlighted by low chargesheeting rates in high-incidence states. With the adoption of the new criminal codes, future reports will reflect a new framework for classifying and tracking criminal offences.

The State of Social Justice: A Work in Progress

Context:

International Labour Organization (ILO) recently released "The State of Social Justice: A Work in Progress" report ahead of the Second World Summit for Social Development marking 30 years since the 1995 Copenhagen Summit.

Key findings of the report:

- **Poverty Reduction:** Extreme poverty has decreased from 39% in 1995 to 10% in 2025.
- **Child Labour:** The incidence of child labour among children aged 5–14 years has fallen from 250 million in 1995 to 106 million in 2025.
- **Working Poverty:** The percentage of workers living in poverty has declined from 28% in 2000 to 7% in 2025.
- **Social Protection:** Over 50% of the global population is now covered by some form of social protection.

Persistent Inequalities:

- Despite these advancements, significant disparities remain:
 - » **Wealth Distribution:** The top 1% of the global population controls 20% of global income and 38% of global wealth.
 - » **Gender Wage Gap:** Women earn, on average, 78% of what men earn; at the current pace, it will take 50–100 years to close this gap.
 - » **Inequality by Birth:** 55% of income

inequality is determined by the country of birth, indicating a global location bias.

Emerging Global Challenges:

- The world is undergoing rapid environmental, digital and demographic transformations that are reshaping labour markets.
- Climate policies and environmental transitions threaten workers in carbon-intensive sectors, especially without adequate just transition plans.
- Meanwhile, digital divides risk increasing inequalities in access to technology and decent jobs.
- Demographic changes, including ageing populations and youth surges in certain regions, further strain social protection systems and labour markets.

India's Progress and Challenges:

- India has made notable strides in several areas:
 - » **Poverty Reduction:** Multidimensional poverty in India has decreased from 29% in 2013–14 to 11% in 2022–23.
 - » **Education:** The secondary school completion rate reached 79% in 2024, with female literacy at 77%.
- However, challenges persist in India:
 - » **Gender Inequality:** The gender wage gap remains significant, and gender-based violence continues to be a concern.
 - » **Caste-Based Discrimination:** Disparities in access to education, healthcare, and employment opportunities persist among different caste groups.
 - » **Digital Divide:** Access to digital technologies is uneven, with disadvantaged groups facing barriers to digital inclusion.

Recommendations:

- The ILO calls for a renewed and decisive commitment to social justice. It urges inclusive policymaking that integrates social justice across finance, industry, climate, and health sectors.

- Strengthening social contracts, investing in skills training, fair wage-setting, and robust social protection are critical.
- Global cooperation is essential to manage transnational challenges and ensure that economic gains are distributed equitably, thereby fostering resilient and inclusive societies.

Conclusion:

The State of Social Justice 2025 underscores the importance of integrating social justice into policymaking to ensure equitable and inclusive development. While global progress is evident, the report calls for sustained efforts to address systemic inequalities and promote social justice for all.

PM SETU Yojana

Context:

The Central government has recently launched PM SETU Yojana, aimed at transforming Industrial Training Institutes (ITIs) to make them industry aligned, modern, and employability oriented.

Background & Rationale:

- Many existing ITIs (Industrial Training Institutes) in India have outdated infrastructure, limited industry linkages, and curricula that may not match current market demands.
- There exists a gap between what is taught in vocational/technical institutions and what industries expect, leading to underemployment or unemployability of graduates.
- Given India's large youth population, equipping them with relevant, high quality skills is central to economic growth and reducing unemployment.
- The scheme is designed to modernize the ITI ecosystem so that it can better serve youth across urban and rural areas.

Key Features & Structure:

- **Budget & Scale:** PM SETU is backed by an investment of around Rs. 60,000 crore.
- **Number of ITIs:** The scheme plans to upgrade 1,000 government ITIs across India, using a "hub and spoke" model.
- **Hub and Spoke Model:**
 - » Among the 1,000 ITIs, 200 will be "Hub" ITIs and 800 will be "Spoke" ITIs.
 - » On average, each Hub will link with about 4 Spoke ITIs, forming clusters.
 - » Hubs will host advanced infrastructure: modern trades, digital learning systems, innovation and incubation centers, production units, and placement support.
 - » Spoke ITIs will broaden access, especially in more remote or underserved areas.
- **Industry Managed Model:** The scheme envisions that while the ITIs remain government owned, their management and operations would be carried out in collaboration with industry partners ("industry managed"). This is to align training outcomes with actual industry needs.

WHAT IS PM-SETU?

Prime Minister's Skill and Employability
Transformation through Upgraded ITIs

A ₹60,000 Crore investment to upgrade
1,000 ITIs into modern skill hubs for youth



Objectives & Expected Outcomes:

- Enhancing the quality of training in ITIs
- Making curricula aligned to industry needs (so that students acquire skills demanded by employers)
- Strengthening industry linkages and partnerships
- Promoting innovation and entrepreneurship through incubation and production units
- Increasing access and reach of vocational training, especially in underserved or remote areas
- Creating employment opportunities and improving employability of youth
- Over the next few years, it is estimated that about 2 million (20 lakh) youth will gain employable skills through this scheme.

Benefits & Potential Impact:

- **Better Employability:** Graduates of ITIs will have relevant, updated skills making them more attractive to industries.
- **Industry–Institution Linkage:** With industry playing a role in managing and guiding ITIs, the training will stay in sync with real market needs.
- **Efficient Use of Resources:** The hub and spoke model allows pooling of advanced infrastructure (in hubs) while extending reach through spokes.
- **Innovation & Entrepreneurship:** Incubation centers and production units in hubs can spur start-ups and small businesses by trained youth.
- **Inclusivity & Access:** Spoke ITIs and vocational labs in remote/tribal zones reduce the barrier of distance and bring training closer to learners.

Conclusion:

PM SETU is a bold and ambitious attempt to reimagine the ITI system in India — not just as schools, but as dynamic, industry aligned hubs of vocational excellence. If implemented rigorously and monitored well, it has the potential to impact millions of young Indians by elevating their skills, bridging the gap between education and employment, and fueling

inclusive growth.

Global Burden of Disease (GBD) Report

Context:

The Global Burden of Disease (GBD) Report recently launched at the World Health Summit in Berlin and published in The Lancet. The report underscores a crucial transition: from infectious diseases to non-communicable diseases (NCDs) as the leading causes of death in India.

Major Findings from the Recent GBD Report:

- **Mortality & Life Expectancy Trends**
 - » Global life expectancy has recovered from the COVID 19 dip. For 2023, life expectancy stands at 76.3 years for women and 71.5 years for men. The age standardized mortality rate has declined by about 67% globally since 1950.
 - » All 204 countries and territories recorded declines in overall death rates.
- **Rise of Non Communicable Diseases (NCDs)**
 - » Non communicable diseases now account for nearly two thirds of global mortality and morbidity.
- **Youth & Adolescents: An Emerging Concern**
 - » Despite overall mortality decline, the death rates among adolescents and young adults have either stagnated or risen in certain regions.
 - » In North America and parts of Latin America, increases are linked to suicide, drug use, alcohol, especially among young women.
 - » In sub Saharan Africa, infectious diseases, unintentional injuries, and maternal causes remain prominent among youth mortality.

About India's findings:

- The report reveals a major epidemiological shift in India — from infectious diseases to non-communicable diseases (NCDs) as the leading causes of death.
- In 1990, diarrhoeal diseases were the top cause of death, with an Age-Standardized Mortality Rate (ASMR) of 300.53 per lakh.
- By 2023, ischaemic heart disease became the leading cause (ASMR: 127.82 per lakh), followed by:
 - » Chronic Obstructive Pulmonary Disease (COPD) – ASMR: 99.25 per lakh
 - » Stroke – ASMR: 92.88 per lakh
- COVID-19, the top cause of death in 2021, fell dramatically to 20th position by 2023.
- This transition aligns with global trends, as NCDs now account for nearly two-thirds of global mortality and morbidity, led by heart disease, stroke, and diabetes.

About Global Burden of Disease Report:

- The Global Burden of Disease (GBD) is coordinated by the Institute for Health Metrics and Evaluation (IHME) in the U.S., involving a global network of over 16,500 scientists using more than 300,000 data sources.
- It provides comprehensive quantitative estimates of deaths, disability (DALYs), disease prevalence, and risk factor attribution by age, sex, location, and time.

Implications for Policy and Governance:

- **Public Health Planning:** The transition demands a realignment of healthcare infrastructure towards NCD screening, early diagnosis, and long-term care.
- **Preventive Healthcare:** Emphasis on awareness campaigns, lifestyle modification, and community-based interventions is essential.
- **Health Financing:** Increased investment in primary healthcare, especially for rural and underserved populations, to manage chronic illnesses.

Conclusion:

India's health profile is undergoing a significant

transformation. While infectious diseases are no longer the dominant cause of mortality, the rising tide of NCDs such as heart disease, stroke, and COPD poses a new challenge. This epidemiological shift necessitates a comprehensive, preventive, and integrated healthcare strategy to ensure not just longer, but healthier lives for India's 1.4 billion citizens.

Vital Statistics of India (2023)

Context:

The Registrar General of India (RGI) recently released the Vital Statistics of India (2023) based on the Civil Registration System (CRS) report. The Civil Registration System (CRS) is a continuous, permanent, and compulsory recording of vital events such as births and deaths under the Registration of Births and Deaths Act, 1969.

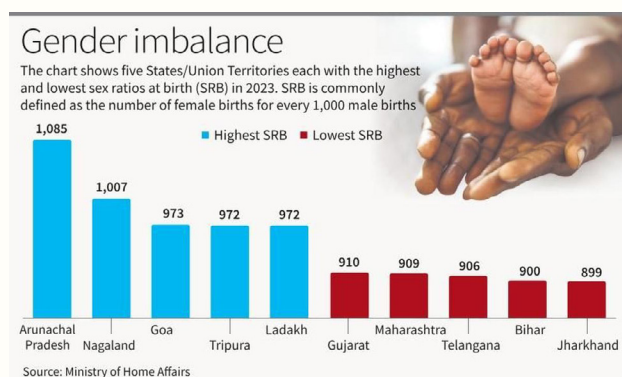
Key Highlights:

Indicator	Value / Trend	Notes / Observations
Registered Births	2.52 crore	About 2.32 lakh fewer than in 2022
Registered Deaths	86.6 lakh	Marginal increase from 86.5 lakh in 2022
Birth Registration Coverage	98.4 %	Close to complete; indicates robust registration system
Institutional Births	74.7 %	~ three quarters of registered births occurred in institutions
Sex Ratio at Birth (SRB)	Lowest:	Persistent regional disparities in gender balance at birth
Timely Registration (within 21 days)	11 States/UTs > 90 %	Gujarat, Tamil Nadu, Goa, Punjab, etc.

	5 States 80–90 %	Odisha, Mizoram, Maharashtra, Chhattisgarh, Andhra Pradesh
	14 States 50–80 %	Many large states lag behind, e.g. Uttar Pradesh, Bihar, West Bengal

Analysis and Observations:

- **India's Ongoing Demographic Transition:** The decline in registered births reflects India's slow but steady movement toward population stabilization, influenced by urbanization, rising education levels, and better access to contraception.
- **Health System & Institutional Deliveries:** A high percentage of institutional births indicates improved access to healthcare, yet gaps in certain states suggest continued efforts are needed to reduce maternal and child mortality.
- **Gender Bias and Societal Challenges:** Persistently low sex ratios at birth in several states underscore the prevalence of gender-biased sex selection. It signals the need for stricter enforcement of the PCPNDT Act and deeper social reform initiatives.



Policy Implications:

- Strengthen digital platforms to ensure seamless data entry and avoid glitches.
- Enhance awareness campaigns at grassroots levels, especially in rural areas.
- Link CRS data with health and welfare programs to identify vulnerable populations

- State-specific strategies to improve SRB and reduce under-registration.
- Ensure mandatory medical certification of causes of death to aid health policy planning.

Conclusion:

The CRS 2023 report is a critical tool for understanding India's demographic and health landscape. While the country has made commendable progress in registration coverage, challenges remain in ensuring timeliness, data quality, and gender equity. Bridging state-level disparities and strengthening institutional capacity are essential to make the civil registration system not just a bureaucratic exercise, but a foundation for evidence-based governance and inclusive development.

Global Pension Index 2025

Context:

Recently, the Mercer CFA Institute's Global Pension Index was released which placed India among the bottom tier of pension systems worldwide, awarding it a D grade, with an overall score of 43.8 out of 100.

About the Global Pension Index:

- The Mercer CFA Institute Global Pension Index 2025 is the seventeenth edition of an annual benchmarking of retirement income (pension) systems around the world.
- It currently covers 52 retirement systems, representing about 65 % of the world's population.

Methodology & Framework:

The Index evaluates each country's pension or retirement income system using three core pillars:

Pillar	Weight in overall score	What it captures
--------	-------------------------	------------------

Adequacy	40 %	The extent to which pensions provide adequate income in retirement (replacement rates, coverage, social assistance)
Sustainability	35 %	Whether the system is financially viable long-term—considering demographic change, fiscal pressures, investment returns
Integrity	25 %	Governance, regulation, transparency, costs, trust in the system

Key Findings:

- **Top Performers / A Grade Systems:** The countries that achieved A grades (scores above 80) in 2025 include:
 - » Netherlands (85.4)
 - » Iceland (84.0)
 - » Denmark (82.3)
 - » Singapore (80.8) — for the first time, Singapore has broken into the A grade tier, becoming the only Asian country to do so in 2025.
 - » Israel (80.3)
- **India's Performance:**
 - » **Overall Score & Grade:** 43.8, Grade D. Slightly down from 44.0 in 2024.
 - » **Adequacy:** Worst among its dimensions. India received an E grade in adequacy (score ~34.7) reflecting very low income replacement levels and very limited social assistance for elderly poor.
 - » **Sustainability:** Also weak. Demographic ageing, limited pension participation especially in informal sector, low savings, and exposure to risks (including climate) are flagging concerns.
 - » **Integrity:** Relatively better, but still needing improvement. Regulatory

oversight, transparency, and governance are not at the level seen in top pension systems.

TOP 10 Pension Systems • Global Pension Index 2025

Ranking	Adequacy	Sustainability	Integrity
 1. Netherlands (85.4)	2. (86.1)	3. (83.5)	5. (86.8)
 2. Iceland (84.0)	6. (83.0)	1. (85.7)	12. (83.3)
 3. Denmark (82.3)	8. (82.9)	2. (85.0)	22. (77.6)
 4. Singapore (80.8)	11. (79.4)	7. (75.5)	2. (90.4)
 5. Israel (80.3)	17. (75.6)	4. (83.2)	11. (83.6)
 6. Sweden (78.2)	15. (76.8)	6. (76.3)	14. (83.0)
 7. Australia (77.6)	24. (69.0)	5. (81.1)	8. (86.4)
 8. Finland (76.6)	14. (77.4)	13. (65.6)	1. (90.6)
 9. Chile (76.6)	21. (71.9)	8. (74.9)	7. (86.6)
 10. Norway (76.0)	13. (77.8)	15. (65.2)	4. (88.4)

Challenges Behind the Poor Rating:

- **Low coverage of informal sector:** A large proportion of India's workforce is in the informal economy, which is not covered adequately by formal pensions. Many workers have no pension, or what they have is token.
- **Inadequate pension amounts/low replacement ratio:** The income retirees get (from EPFO, NPS, etc.) often falls short of what is needed to maintain a decent standard of living. The replacement rate (income during working age vs income after retirement) is too low.
- **Fragmentation in pension architecture:** Multiple pension schemes (Old Pension Scheme, EPFO, NPS), overlapping responsibilities, different rules and benefits – lead to inefficiencies and confusion.

Conclusion:

India's D grade in Global Pension Index 2025 is a clarion call: while economic growth continues, the retirement security of millions remains vulnerable. With its elderly population growing, there is limited time to address these gaps. Policymakers must push for reforms — universal assistance, better coverage, stronger regulation — to build a pension system that is not just financially sustainable, but also socially just.

Regulating Deepfakes: India's Proactive Initiative for AI Governance

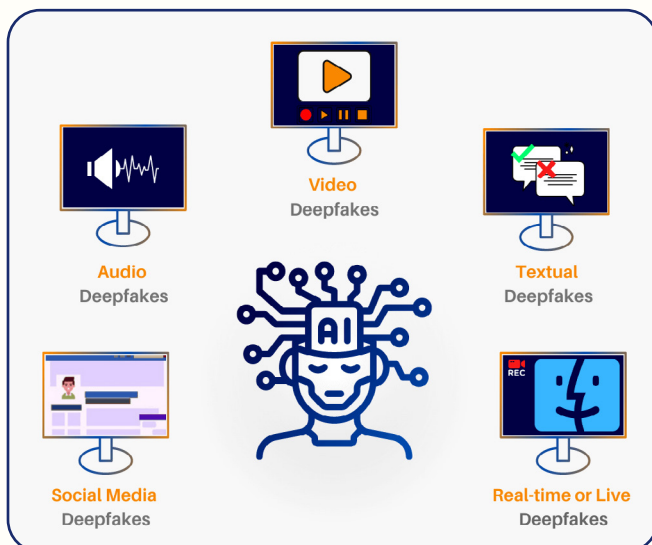
Context:

Artificial Intelligence (AI) has changed the way people create and share information online. It can write, paint, speak, and even mimic humans. But this same power has also created a dangerous problem — deepfakes. These are videos, images, or audio clips that look completely real but are actually fake, made using AI. They can easily mislead people and spread false information. To control this growing misuse, the Government of India has proposed draft amendments to the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021. These rules aim to make it compulsory for social media platforms like YouTube and Instagram to clearly label any content that is made using AI.

The New Proposal:

- ❖ The proposed rules are India's first strong step against deepfake misuse. The main points are:
 - » **User Declaration:** Every user must declare whether the content they upload is "synthetically generated information."
 - » **Mandatory Labelling:** Platforms must ensure such content is clearly marked with a label or permanent digital tag.
 - » **Label Requirements:**
 - **For videos or images:** Label must cover at least 10% of the surface area.

- **For audio:** Label must be heard during the first 10% of the duration.
- » **Verification by Platforms:** Social media platforms must use technical tools to check if users' declarations are correct.
- » **Accountability:** If platforms fail to verify or label such content, they may lose legal protection and be held responsible for the AI-generated content uploaded by users.



What Are Deepfakes?

- ❖ Deepfakes are pieces of media — videos, photos, or audio — that seem real but are actually made or changed using deep learning, a branch of artificial intelligence.

- » **How They Work:** AI models learn from thousands of real images or recordings and then use this data to replace faces, copy voices, or change actions, creating very realistic results.
- » **Where They Are Used:**
 - **Entertainment:** For creating movie scenes or visual effects.
 - **E-commerce:** For virtual clothing trials or digital ads.
 - **Communication:** For translating speech or generating voiceovers.

Why India Needed Such a Regulation?

- ❖ The danger of deepfakes became clear in 2023 when a fake video of actor Rashmika Mandanna went viral. It showed her entering an elevator, but the entire clip was generated using AI. The video spread widely before being debunked, sparking public outrage.
- ❖ Prime Minister Narendra Modi later warned that deepfakes pose a new “crisis” for society. Following this, many actors such as Amitabh Bachchan, Aishwarya Rai Bachchan, Akshay Kumar, and Hrithik Roshan have filed legal cases to protect their personality rights — that is, their name, image, and voice.
- ❖ However, India does not have specific laws that recognise personality rights. Protection comes indirectly through a mix of laws like the Information Technology Act and the Copyright Act, which do not fully address AI-created impersonations. This gap makes legal protection weak and inconsistent.

What Other Countries Are Doing?

- ❖ **European Union (EU):** The AI Act makes it compulsory to label any content — image, video, audio, or text — created or changed using AI. The labels must be machine-readable so that anyone can detect whether the content is artificial.
- ❖ **China:** Introduced strict AI labelling rules that require all AI-generated material to display visible symbols or watermarks.

Platforms must monitor AI content and alert users when deepfakes are detected.

- ❖ **Denmark:** Is planning a new law to give citizens copyright over their own likeness, meaning they can demand removal of any deepfake created without their consent.
- ❖ **United States:** As of 2024, 23 U.S. states have passed laws against deepfakes, especially targeting fake political content, misinformation, and non-consensual sexual videos

The Current Legal and Institutional Framework in India:

- ❖ Although India has no specific deepfake law yet, some existing laws and institutions help in tackling such problems:
 - » **Information Technology Act, 2000:** This Act governs digital communication in India. It applies to content made using AI and provides a legal framework for prosecuting cybercrimes, though it doesn't mention deepfakes specifically.
 - » **Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021:** These rules regulate social media platforms and online publishers. They require companies to set up grievance mechanisms and remove harmful or misleading content when reported.
 - » **CERT-In (Indian Computer Emergency Response Team):** CERT-In monitors cyber threats, issues advisories, and runs the Cyber Swachhta Kendra — a centre for cleaning and analysing malware and botnets.
 - » **Indian Cyber Crime Coordination Centre (I4C):** I4C coordinates with law enforcement agencies to handle cybercrimes and operates the National Cyber Crime Reporting Portal, along with the helpline number 1930.
- ❖ These institutions form India's basic defence against AI-related cyber risks, but their approach is still fragmented and largely reactive — responding after harm

has occurred.

Concerns Associated with Deepfakes:

- ❖ **Threat to National Security:** Fake videos can provoke violence, spread misinformation, or harm diplomatic relations. Manipulated political videos or speeches can mislead voters and damage democratic credibility.
- ❖ **Cyberbullying and Reputation Damage:** False images or clips can ruin a person's public image or mental health. Studies show that 90–95% of deepfakes online involve non-consensual sexual content, often targeting women.
- ❖ **Identity Theft:** AI tools can be used to create fake identification or impersonate real people online.
- ❖ **Public Unawareness:** Even when deepfakes are exposed, many people continue to believe them, increasing the spread of misinformation.
- ❖ **High Cost of Detection:** Detecting deepfakes requires huge data, advanced computing systems, and expert algorithms — which are costly and complex.

Industry Efforts to Label AI Content:

- ❖ Some major technology companies have already started taking steps to identify and label AI-generated content:
 - » **Meta (Instagram, Facebook):** Uses the “AI Info” label for content created or modified with AI tools.
 - » **YouTube:** Uses a label called “Altered or Synthetic Content” and provides information on how the video was made.
 - » **Collaboration Efforts:** Companies like Meta, Google, Microsoft, Adobe, and OpenAI are working together through the Partnership on AI (PAI) to develop shared standards and invisible watermarks for identifying AI-generated material.
- ❖ However, these measures are often reactive. Labels are usually added only after users or authorities flag suspicious content. India's draft rules aim to make the process proactive, requiring verification and labelling

before such content is published.

The Way Forward:

- ❖ **Strengthen the Legal Framework:** India should move from reactive to preventive action. A new law should clearly define offences, responsibilities, and penalties related to deepfakes and AI misuse.
- ❖ **Build Institutional Capacity:** Dedicated agencies should be equipped with skilled professionals and technology to detect and remove deepfakes in real time.
- ❖ **Use Advanced Technology:** Adopt AI tools and algorithms that can detect deepfakes based on context and metadata. For instance, MIT's Detect Fakes project helps users learn to identify fake videos by noticing small visual details.
- ❖ **Promote Cyber Literacy:** People should be trained to think critically before trusting what they see online. Awareness campaigns in schools and colleges can help build this digital literacy.
- ❖ **Strengthen Collaboration:** Government, technology companies, law enforcement, and civil society must work together to set strong procedural guidelines and penalties for misuse.

Conclusion:

Deepfakes represent one of the most serious digital threats of our time. They blur the line between truth and falsehood, damaging trust, privacy, and security. India's proposal to make labelling of AI-generated content mandatory is a welcome step toward building transparency and accountability online. But regulation alone is not enough. Combating deepfakes will require a combination of strong laws, smart technology, public awareness, and ethical responsibility. Only then can India protect both creativity and truth in the age of artificial intelligence.

Ethics, Autonomy and Parenthood: Judicial Perspectives on the Surrogacy Debate in India

Context:

In a landmark judgment on October 9, 2025, the Supreme Court of India ruled that the age restrictions introduced under the Surrogacy (Regulation) Act, 2021 would not apply to couples who had frozen embryos before the law came into effect. The Bench, comprising Justices B.V. Nagarathna and K.V. Viswanathan, held that couples who had initiated the surrogacy process before the Act's enforcement could not be denied the right to parenthood merely due to new statutory limits.

The Court observed that the right to reproductive choice, including the decision to have a child through surrogacy, is an integral part of personal liberty and privacy under Article 21 of the Constitution. This judgment balances the intent of the law—to prevent commercial exploitation—with the constitutional right of individuals to make reproductive decisions.

About Surrogacy (Regulation) Act, 2021:

- ❖ Enacted alongside the Assisted Reproductive Technology (Regulation) Act, 2021, the Surrogacy Act provides a comprehensive framework for ethical surrogacy in India.
- ❖ The primary goal of these laws is to regulate surrogacy procedures, prevent exploitation, and prohibit commercial surrogacy, which had earlier become a multi-million-dollar industry often accused of commodifying women's reproductive labour.

Key Features of the Act:

❖ Type of Surrogacy Allowed:

- » Only altruistic surrogacy is permitted, where the surrogate mother does not receive monetary compensation beyond medical expenses and insurance coverage.
- » Commercial surrogacy, involving payment or profit, is strictly banned and punishable.

❖ Eligibility Criteria for Couples:

- » Only Indian married couples can avail of surrogacy.
- » The wife must be aged 23–50 years, and the husband 26–55 years.
- » The couple must not have a surviving biological or adopted child.
- » A certificate of essentiality and certificate of eligibility must be obtained before proceeding.

❖ Eligibility for Surrogate Mother:

- » Must be a married woman aged 25–35 years with at least one child of her own.
- » Can act as a surrogate only once and cannot use her own gametes.

THE SURROGACY (REGULATION) ACT, 2021

Regulates surrogacy and protects rights of surrogate mothers and children

■ Altruistic Surrogacy:

- Surrogate mother carries a child without financial gain; only medical expenses and insurance allowed.

■ Eligibility for Intended Parents

- Indian married heterosexual couples: women 23–50, men 26–55.
- Must provide infertility proof.
- Only one child via surrogacy per couple.

■ Surrogate Mother Eligibility

- Indian woman, 25–35, already has a child.
- Can act as surrogate only once.

■ Guidelines & Legal Oversight

- Written agreement required.
- Surrogacy Boards at central and state levels approve and regulate procedures.

■ Child's Rights

- Child has same legal rights as natural-born children.
- Parentage legally recognised.

■ Prohibitions

- Commercial surrogacy banned.
- Single individuals, same-sex couples, and foreign nationals cannot opt for surrogacy.



❖ Parental Rights:

- » The child born through surrogacy is

legally and biologically deemed the child of the intending couple, entitled to all rights of a natural-born child.

❖ **Regulatory Mechanisms:**

- » Establishment of the National and State Surrogacy Boards (NSB & SSB) to supervise clinics and enforce ethical standards.
- » Only registered surrogacy clinics may perform procedures.
- » Strict penalties for commercial surrogacy, exploitation, or sale of embryos, with imprisonment up to 10 years and fines up to Rs.10 lakh.

Types of Surrogacy and Key Concepts:

- ❖ **Traditional Surrogacy:** The surrogate uses her own egg, fertilised with the intended father's sperm, making her the biological mother. This method is not legally permitted in India.
- ❖ **Gestational Surrogacy:** The surrogate carries an embryo created through IVF using the gametes of the intending couple or donors. The child shares no genetic link with the surrogate, which is the only permitted form under Indian law.
- ❖ **Altruistic vs. Commercial Surrogacy:** Altruistic surrogacy is based on compassion or kinship, without profit.
 - » Commercial surrogacy, previously common in India, involved payments to the surrogate and is now illegal due to ethical and human rights concerns.

Why the Law Was Introduced:

- ❖ India was once dubbed the “surrogacy capital of the world,” attracting many foreign couples due to lower costs and lenient regulations. However, reports of exploitation, unsafe medical practices, and legal uncertainties prompted the government to step in.
- ❖ **The 2021 Act was thus enacted to:**
 - » Protect women from exploitation and trafficking.
 - » Ensure medical and legal safeguards.
 - » Prevent the commodification of childbirth.

- » Restrict the practice to Indian couples facing genuine infertility.

TRADITIONAL SURROGACY

vs

GESTATIONAL SURROGACY

The father's sperm is used to fertilize the surrogate's egg.

The intended father's sperm and the intended mother's eggs are combined, creating an embryo, which is then implanted into a surrogate.

Typically costs less than gestational surrogacy.

Typically costs more than traditional surrogacy, which may require careful financial planning.

May pose more legal issues since the baby is genetically related to the surrogate, which is why it's important to have a legally-binding surrogacy agreement.

The baby is genetically related to both parents, making this method a more safe and risk-free option.

The surrogate undergoes IUI, Intrauterine Insemination, where the sperm cells are placed in the surrogate's uterus.

IVF, In-Vitro Fertilization is used, where the egg is harvested from the intended mother or donor and fertilized with the father's sperm outside of the womb.

Offers a viable alternative to adoption, but comes with some risks.

Has a high rate of success and is used to help many individuals create the family of their dreams.

Arguments Before the Supreme Court:

❖ **Petitioners' Arguments:**

- » The couples argued that they had a vested right to proceed with surrogacy since they had frozen embryos before the law came into force.
- » Applying age restrictions retrospectively violated Article 14 (equality before law) and Article 21 (right to life and personal liberty).
- » They contended that reproductive autonomy—the right to decide when and how to have children—is a fundamental aspect of personal liberty.
- » They also challenged the exclusion of unmarried single women, calling it arbitrary and discriminatory.

❖ **Government's Arguments:**

- » The Centre maintained that the age limits were medically justified, based on expert recommendations.
- » It argued that surrogacy is not a fundamental right, but a statutory privilege subject to regulation.
- » The transitional clause (Section 53) was designed only to protect existing surrogate mothers, not couples with frozen embryos.

- » The government also cited concerns about health risks associated with advanced parental age and the well-being of the child.

Supreme Court's Observations:

- ❖ The Court disagreed with the government's narrow interpretation and ruled that the law could not operate retrospectively unless explicitly stated. It observed that a new law should regulate future actions, not past ones.
- ❖ Couples who had already initiated the surrogacy process before the law came into effect could not be denied parenthood merely because of the new age restrictions.
- ❖ The Bench emphasised that the intent of the Act was to curb commercial surrogacy, not to obstruct genuine cases of parenthood. It also questioned why surrogacy should be denied to older couples willing to take the same risks as those associated with natural late-age pregnancies.
- ❖ The Court further clarified that the transitional provision under Section 53 could not be interpreted in a way that nullifies existing rights. The rights of intending couples who had already created embryos before the law's commencement were held to remain valid and unaffected by the new statutory limits.

Significance of the Judgment:

- ❖ **Reinforces Reproductive Autonomy:** The ruling affirms that reproductive choice, including surrogacy, is an essential facet of personal liberty and privacy under Article 21.
- ❖ **Ensures Fair Transition:** The Court's interpretation introduces a "grandfather clause" principle, protecting couples already in process when new regulations come into effect.
- ❖ **Sets a Precedent on Legislative Fairness:** The judgment upholds the principle that laws should not operate retrospectively to take away vested rights, unless explicitly provided.
- ❖ **Balances Regulation with Compassion:**

By distinguishing between exploitative commercial surrogacy and genuine parenthood, the Court underscores the human dimension of reproductive rights.

Challenges and Ethical Concerns Ahead:

- ❖ Despite the progressive ruling, the surrogacy ecosystem in India still faces several challenges:
 - » **Exclusion of Unmarried and LGBTQ+ Individuals:** The current law restricts surrogacy to married heterosexual couples, leaving out single parents and same-sex couples.
 - » **Ambiguity in Parental Rights and Citizenship:** Children born through surrogacy, especially involving donor gametes, often face legal uncertainties over parentage and nationality.
 - » **Health and Emotional Support for Surrogates:** Even in altruistic arrangements, surrogates need access to medical, psychological, and social support to ensure their well-being.
 - » **Need for Greater Awareness and Regulation:** Clearer guidelines and public education are essential to eliminate stigma and prevent misuse of assisted reproductive technologies.

Conclusion:

The Supreme Court's decision in October 2025 is a milestone in India's evolving reproductive rights jurisprudence. It reaffirms that while the state has the authority to regulate medical practices, it cannot override individual autonomy and dignity. By shielding couples who had begun the surrogacy process before the 2021 law, the Court has struck a vital balance between ethical governance and human compassion. The ruling not only restores the hopes of many intending parents but also sets a precedent for fair legislative interpretation—one that values both the letter of the law and the spirit of justice.

Short Issues

Personality Rights

Context:

Bombay High Court has issued two recent interim orders protecting veteran singer Asha Bhosle and actor Suniel Shetty from unauthorized use of their images, voices, likenesses, and other personal attributes, particularly in AI generated content, deepfakes, and social media platforms. These orders restrain web portals, social media intermediaries, and other entities from misusing or exploiting these personalities' identities without consent.

Background:

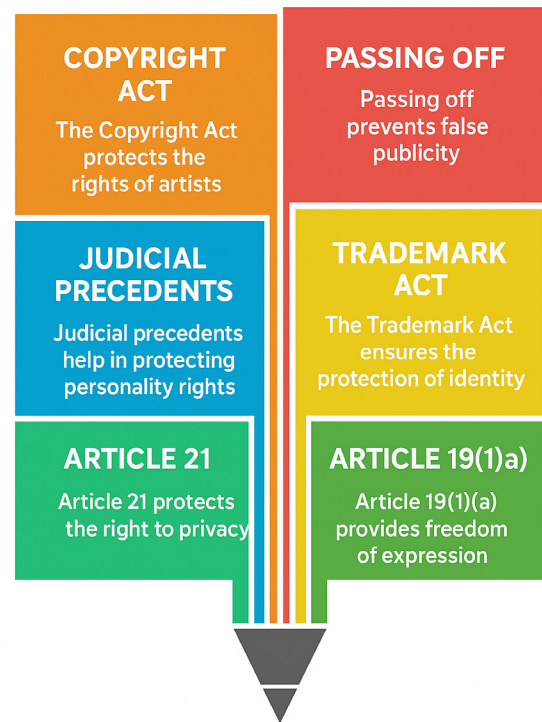
- The 91 year old playback legend approached the Bombay High Court seeking ad interim protection against platforms that allegedly used AI voice cloning, manipulated her vocal style, images, merchandise featuring her likeness, and allowed impersonations without authorization.
- **Suniel Shetty's Case:** Shetty sought the Court's intervention against alleged deepfake images, impersonation, misuse of his photograph and name in commercial endorsements, and false claims of endorsements on real estate, gambling, and astrology websites using his likeness.

Observations by Court:

- **Prima facie infringement:** Unauthorized AI-based cloning of voice or misuse of image, likeness, or persona (e.g. Asha Bhosle's voice, Suniel Shetty's image) was held to prima facie violate personality and publicity rights.
- **Irreparable harm:** The Court held that such misuse can irreparably damage a celebrity's reputation, goodwill, and dignity, justifying urgent relief — including ex parte (without hearing the other side) injunctions.
- **Scope of injunctions:** Defendants were restrained from using any element of the celebrity's identity (voice, mannerisms, persona, etc.) for commercial or personal gain without consent.

- **Platform accountability:** Social media platforms, websites, and intermediaries were directed to remove infringing content, block access, and share logs/data to help trace offenders.
- **Recognition of moral rights:** The Court also acknowledged the overlap with copyright law, particularly moral rights under Section 38B of the Copyright Act, enhancing protection for artists beyond traditional IP.

Protection of Personality Rights



About Personality rights:

- Personality rights protect individuals from the unauthorized use of their identity, including name, image, voice, likeness, or distinct traits—especially for commercial or malicious purposes. These rights are crucial for celebrities and public figures, though not limited to them.
- In India, there is no standalone statute for personality rights. Instead, protection comes from:
 - » Article 21 of the Constitution (Right to

Privacy)

- » Article 19(1)(a) (Freedom of Speech – balanced against misuse)
- » Judicial precedents (e.g., Amitabh Bachchan and Rajinikanth cases)
- » Intellectual Property laws, including:
 - Trademarks Act, 1999 (Section 14)
 - Copyright Act, 1957 (Section 38 – Performer's Rights)
 - Tort of passing off (to stop false endorsements)
- Indian courts have actively protected these rights, issuing injunctions to block unauthorized use, including against AI-generated content and deepfakes.

Conclusion:

The Bombay High Court's decision to protect Asha Bhosle and Suniel Shetty's personality rights marks a significant step in safeguarding celebrities' rights in the digital era. By recognizing the unauthorized use of AI-generated content as a violation of personality rights, the court has set a crucial precedent for future cases.

District Judge Appointments

Context:

Recently, the Supreme Court delivered a landmark ruling that changes who can vie for direct recruitment as District Judges (and Additional District Judges) under Article 233 of the Constitution.

What the Supreme Court Held:

- **Eligibility Expanded for In Service Officers:** The Court ruled that a judicial officer who before entering judicial service had practiced as an advocate for some years should be eligible to compete under the direct recruitment quota, if the combined experience (as advocate + as judge) totals at least 7 years.
- **Assessment at Application Stage:** Eligibility is to be determined at the time of application, not at earlier cutoffs. Minimum Age Floor To ensure parity and maturity, the Court

fixed a minimum age of 35 years for all candidates (whether from Bar or service) for direct recruitment.

- **Overruling Earlier Decisions:** The judgments in Satya Narain Singh and Dheeraj Mor were held as incorrectly interpreting Article 233 and thus are overruled, at least prospectively.
- **Prospective Application: No Retrospective Disturbance:** The new rule will apply to future recruitments. Past appointments and ongoing selection processes will not be disturbed.
- **Rule Amendments Mandated:** All State governments, in consultation with their High Courts, must amend their judicial service rules to conform within three months.
- **"Catch 'Em Young" Philosophy:** The Court observed that denying early opportunity to meritorious officers may lead to mediocrity. The idea is to identify and nurture talent early rather than waiting decades

Implications:

- **Breaking Stagnation:** Many judicial officers felt their careers plateaued; this decision injects fresh opportunities and motivation.
- **Promoting Merit Over Exclusivity:** The Court embraces merit as the guiding principle, rather than rigid pedigree or exclusive tracks.
- **Larger Talent Pool:** By merging eligibility paths, more capable judges can contend, enriching the quality of district judiciary.
- **Constitutional Harmony:** The Court opted for a purposive, organic interpretation that prevents parts of Article 233 from being rendered meaningless.

About appointment of District judge:

- Article 233 of the Indian Constitution governs the appointment, posting, and promotion of District Judges in the states. The Governor of a state makes these appointments in consultation with the High Court of that state.
- **Key Constitutional Provisions:**

- » **Article 233(1):** Empowers the Governor to appoint District Judges.
- » **Article 233(2):** Sets eligibility criteria for direct recruitment:
 - Must be an advocate or pleader with at least 7 years of practice.
 - Must not be in government service.
 - Must be recommended by the High Court.
- In a landmark ruling, the Supreme Court expanded eligibility under Article 233(2) by allowing judicial officers (in-service) who had prior experience as advocates (7 years cumulatively) to apply for direct recruitment as District Judges.

Conclusion:

With its “catch ‘em young” stance, the Supreme Court has reoriented the trajectory of judicial careers, affirming that talent and merit must not be held back by technical classifications. The judgment not only empowers serving judicial officers but also stresses that constitutional provisions must be read dynamically, to serve the evolving demands of justice and governance.

Article 20(3) of the Indian Constitution

Context:

The Supreme Court recently held that judicial magistrates have the power to direct witnesses, not only the accused, to give voice samples. The Court ruled that such direction does not violate the protection against self incrimination under Article 20(3) of the Indian Constitution.

About Article (20(3)) of the Indian Constitution:

- Article (20(3)) of the Indian Constitution is a fundamental right protecting against self-incrimination, meaning no person accused of an offense can be forced to be a witness against themselves.
- This right is based on the maxim "nemo tenetur prodere accusare seipsum" ("no

man is obliged to be a witness against himself") and ensures that confessions or evidence are not obtained through coercion.

- The protection applies to those formally accused and is not absolute, as it doesn't extend to compulsory production of material objects or bodily evidence like fingerprints.

Key observation by SC:

- The Court classified voice samples as material evidence, akin to fingerprints, handwriting, or DNA, rather than testimonial evidence. This distinction is crucial as it determines the applicability of Article 20(3).
 - » The judgment extends the power to direct voice samples to witnesses, not just accused individuals.
 - » This is based on the Court's interpretation of the term "person" in the context of investigation, which includes both accused and witnesses.
 - » The Court emphasized that providing a voice sample does not amount to testimonial compulsion. The incriminating element, if any, arises only after comparison with other evidence, not from the act of providing the sample itself.



Implications:

- The judgment expands investigative powers by allowing magistrates to compel both accused and witnesses to provide voice samples. It clarifies that such samples are material evidence, not testimonial, and thus

do not violate Article 20(3).

- This position is now legally reinforced by Section 349 of the BNSS, 2023, providing much-needed statutory backing. It also strengthens the foundation for using other non-testimonial evidence like fingerprints, handwriting, and DNA.

Limitations:

- Potential misuse by police if voice samples are demanded without clear justification.
- Risk of violating privacy (Article 21) if proper judicial safeguards are not followed.
- If the sample requires the person to say meaningful content (not neutral words), it may become testimonial, triggering Article 20(3).
- Practical issues like forensic backlog, poor chain of custody, or lack of comparison evidence may reduce effectiveness and fairness.

Conclusion:

The Supreme Court's judgment marks a significant development in India's criminal jurisprudence, balancing the need for effective investigation with constitutional safeguards. By empowering magistrates to direct voice samples from both accused and witnesses, the Court has provided a valuable tool for criminal investigations while ensuring that individual rights are protected. This decision is expected to have far-reaching implications for the administration of justice in India.

“Model Youth Gram Sabha” in Schools

Context:

The Union Government has decided to roll out the Model Youth Gram Sabha (MYGS) initiative in schools across the country starting October 2025, to nurture democratic skills and civic consciousness among youth.

About Model Youth Gram Sabha:

- The Model Youth Gram Sabha (MYGS)

is a national-level educational initiative launched by the Ministry of Panchayati Raj, in collaboration with the Ministries of Education and Tribal Affairs, to promote grassroots democratic awareness among school students.

- Inspired by the success of the Model United Nations (Model UN), this programme aims to replicate the functioning of a Gram Sabha, the cornerstone of India's Panchayati Raj system, in schools across the country.
- Through this initiative, students from classes 9 to 12 will take on the roles of village-level leaders and officials such as the Sarpanch, Ward Members, Village Secretary, Anganwadi Worker, Nurse, and Engineer, among others.

MODEL YOUTH GRAM SABHA

**A platform where
students learn, lead,
and strengthen
democracy at the
grassroots**



Educate students on the Panchayati Raj system



Encourage active participation in Gram Sabhas



Foster young leadership in governance



Empower youth voices in decision making

Purpose and Objectives:

- To provide practical exposure to the Panchayati Raj system.
- To nurture a new generation of responsible, participative citizens.
- To strengthen students' leadership, communication, and problem-solving skills
- To inspire youth to actively engage in local development and planning

How It Works:

- Students conduct a mock Gram Sabha within the school
- They discuss village issues, create budgets, and draft development plans
- Resolutions are passed through debate, consensus, or voting — just like a real village assembly.

Constitutional Provisions of Gramsabha:

- The 73rd Constitutional Amendment Act, 1992 added Part IX (Articles 243–243O) to the Indian Constitution, establishing the Gram Sabha as a permanent body of village-level voters and mandating the creation of Panchayats at village, intermediate, and district levels.
- It defines their composition, powers, term (5 years), and ensures reservations for SCs, STs, women, and optionally, Backward Classes.
- States can assign Panchayats powers for self-governance (Article 243G) and allow them to raise funds (Article 243H).
- A State Finance Commission (Article 243I) reviews their finances. The Eleventh Schedule lists 29 subjects under Panchayats' jurisdiction.

Conclusion:

While students study Panchayati Raj in their textbooks, MYGS gives them a real-life simulation of how democracy functions at the grassroots. It's a powerful step toward building a generation that values transparency, accountability, and inclusive governance.

Two Major Agricultural Schemes

Context:

Prime Minister Narendra Modi recently launched the PM Dhan Dhaanya Krishi Yojana and the Mission for Aatmanirbharta in Pulses, two major agricultural schemes with a combined outlay of Rs.35,440 crore. The schemes were officially unveiled at a special agricultural program held

at the Indian Agricultural Research Institute in New Delhi.

About Pradhan Mantri Dhan Dhaanya Krishi Yojana (PMDDKY):

- Pradhan Mantri Dhan Dhaanya Krishi Yojana (PMDDKY) is a centrally approved, focused agricultural programme spanning six years (from 2025-26 onward) targeted at 100 districts across India.
- It aims to modernize agriculture in underperforming regions by converging multiple schemes, strengthening infrastructure, enhancing productivity, and promoting crop diversification.

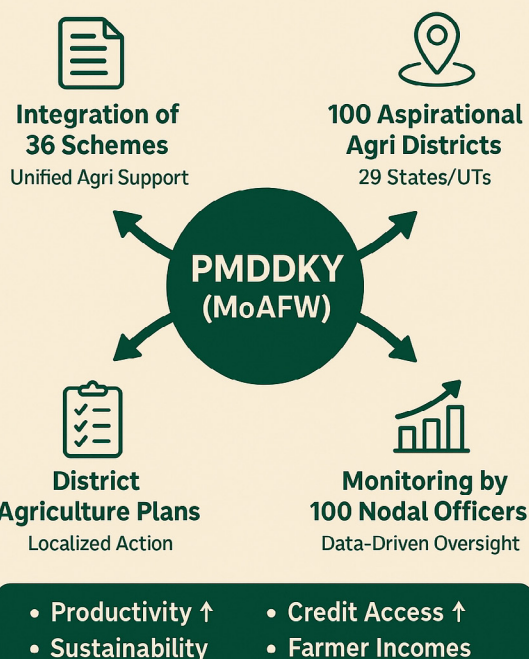
Key Features & Components

Component	Description / Targeted Intervention
Outlay & Duration	The scheme will run for six years, with an annual outlay of Rs.24,000 crore.
Convergence of Existing Schemes	The scheme will bring together 36 existing central schemes from 11 departments, along with state and local efforts, for better coordination.
Crop Diversification & Sustainability	Encouragement of moving away from mono cropping, adoption of sustainable practices, intercropping, balanced fertiliser use, and more resilient cropping systems.
Credit Access	Provide both short term and long term credit more readily, especially to farmers in those low-performing districts.
District Planning & Governance	Each district will have a "District Dhan-Dhaanya Samiti" which, with participation from progressive farmers, local officials, etc., will prepare a District Agriculture & Allied Activities Plan.

Beneficiaries	It is estimated to benefit around 1.7 crore farmers across the 100 districts.
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Area under pulses	310 lakh hectares (i.e. 31 million hectares)
Additional area expansion	35 lakh hectares via rice fallows and other diversifiable lands
Procurement	100% procurement of Tur, Urad, Masoor for four years under the Price Support Scheme (PSS) / PM AASHA, via agencies such as NAFED & NCCF

PM Dhan-Dhaanya Krishi Yojana (PMDDKY)



- Additionally, the mission aims to benefit ~2 crore farmers through improved seed availability, post harvest facilities, assured procurement, and other supports.

Journey Towards Aatmanirbharta in Pulses



About Mission for Aatmanirbharta in Pulses:

- The Union Cabinet has approved the "Mission for Aatmanirbharta in Pulses" for the period 2025-26 to 2030-31, with a total outlay of Rs.11,440 crore.
- The purpose is to drive self reliance (aatmanirbharta) in pulses by boosting domestic production, strengthening the value chain, and reducing dependence on imports.
- Objectives & Goals:**

Metric	Target by 2030-31
Production of pulses	350 lakh tonnes (35 million tonnes)

Conclusion:

These two schemes represent one of the largest interventions in Indian agriculture in recent times. By targeting lagging districts and focusing on self reliance in pulses, the government aims to reduce regional inequality, strengthen nutritional security, and insulate farmers from

global commodity swings. If implemented well, the impact could be transformative: improved farmer incomes, less import burden, more resilient rural economies, and a renewed vision for India's agricultural future.

The Alarming Pendency of Execution Petitions in Indian Courts

Context:

The Supreme Court of India has expressed deep concern over the massive pendency of execution petitions in district courts across the country.

About Execution Petition:

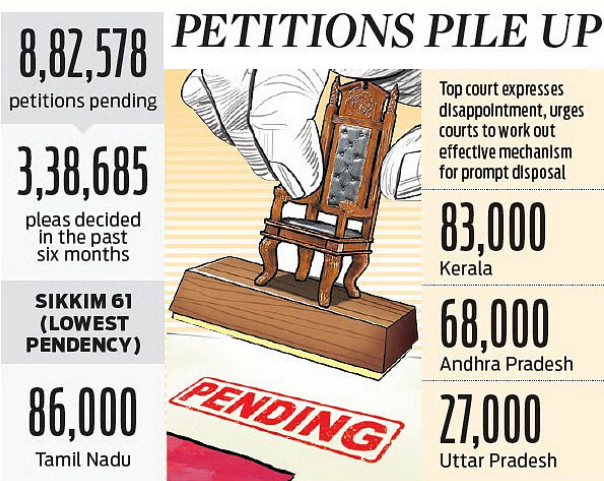
- An execution petition is a legal tool used to implement a decree, and it is the final and most crucial stage of a lawsuit.
- Despite winning court cases, many litigants are stuck in a second battle, to get what a court has held they are legally owed.

Key Findings:

- **Over 8.82 lakh execution petitions pending:** The Supreme Court's review of nationwide data revealed that over 8.82 lakh execution petitions are pending across district courts.
- **Delays in disposal:** The average time taken to dispose of an execution petition is 3.97 years, adding to the already lengthy duration of civil suits.
- **Reasons for delay:** The top reasons for delay include legal counsel not being available (38.9%), stay on proceedings by a court (17%), and awaiting documents (12%).

Implications:

- **Travesty of justice:** The Supreme Court noted that the massive backlog renders justice futile, making it a travesty of justice.
- **Loss of trust in judiciary:** Litigants who have already spent years and resources fighting their cases are forced to wait even longer, leading to a loss of trust in the judiciary.



Way Forward:

- **Additional six months granted:** The Supreme Court has granted an additional six months to all High Courts to follow up with their district courts and expedite the disposal of execution petitions.
- **Monitoring progress:** The court will monitor progress and take further action as needed to address the pendency crisis.

Conclusion:

The pendency of execution petitions is a complex issue that requires a multifaceted approach to address the systemic inefficiencies and procedural hurdles. The Supreme Court's intervention is a step in the right direction, but sustained efforts are needed to ensure timely justice for litigants.

53rd Chief Justice of India

Context:

Justice Surya Kant has been appointed as the 53rd Chief Justice of India (CJI). He will succeed Chief Justice Bhushan Ramakrishna Gavai. The appointment has been notified by the Department of Justice, Union Law Ministry, under Article 124(2) of the Constitution, after the President's assent. Justice Surya Kant will assume charge on November 24, 2025, while the term of the incumbent Chief Justice will

end on November 23, 2025.

Legal & Judicial Career:

- Appointed as the youngest Advocate General of Haryana on 7 July 2000.
 - » Designated Senior Advocate in March 2001.
 - » Elevated as permanent Judge of the Punjab & Haryana High Court on 9 January 2004.
 - » Became Chief Justice of the Himachal Pradesh High Court with effect from 5 October 2018.
 - » Elevated to the Supreme Court on 24 May 2019.
 - » Currently serves (since 12 November 2024) as Chairman of the Supreme Court Legal Services Committee.



About CJI:

- The Chief Justice of India is the highest judicial officer in India, heading the Supreme Court of India.
- **Key responsibilities include:**
 - » Allocating cases and constituting benches in the Supreme Court.
 - » Administrative leadership of the Supreme Court and the wider judicial system (to the extent institutional norms permit).

- » Representing the judiciary in dealings with other branches of government and in some ceremonial functions.
- » Upholding the Constitution, legal processes and judicial independence.

▪ **Constitutional Basis:**

- » The appointment of the CJI is governed by Article 124(2) of the Constitution of India, which provides that the President shall appoint judges of the Supreme Court “after consultation” with such judges as he deems necessary.
- » The retirement age for a Supreme Court judge (including the CJI) is 65 years.

How Is the CJI Appointed?

- **Seniority convention:** Tradition holds that the senior-most judge of the Supreme Court (after the outgoing CJI) is appointed as the next CJI, if they are considered fit for the role.
- The specific procedural details (though not absolutely binding law) are set out in a document called the Memorandum of Procedure (MoP) for appointment of Supreme Court judges.
- **Initiation:** About a month (or thereabouts) before the current CJI's retirement, the Ministry of Law & Justice sends a communication to the current CJI asking for a recommendation for the next CJI.
- **Recommendation:** The outgoing CJI consults as required and recommends the next CJI to the government.
- **Government process:** The recommendation goes from the Law Minister to Prime Minister to President. The President then issues the warrant of appointment.

Centre Approves Terms of 8th Central Pay Commission

Context:

The Union Cabinet has approved the establishment of the 8th Central Pay Commission, which will review and recommend

salary structures, allowances, and other benefits for central government employees. This move aims to modernize the pay structure and improve the welfare of government employees. Former Supreme Court judge Ranjana Prakash Desai has been appointed as the chairperson of the 8th Central Pay Commission.

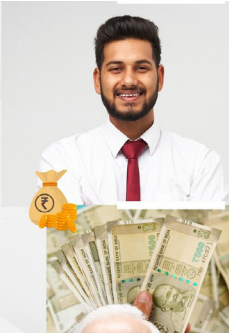
Background & why it matters:

- The last pay revision for central government employees was effected under the 7th Central Pay Commission, whose recommendations came into force from 1 January 2016.
 - » Pay Commissions are typically instituted roughly every ten years to ensure that salary and pension structures of government employees remain aligned with inflation, cost of living, evolving service conditions and broader economic realities.
 - » With rising inflation, higher cost of living, changing work-profiles and demand for public sector competitiveness, there has been strong expectation for the 8th CPC.
 - » Central government employees (~50 lakh) and pensioners (~65 lakh) stand to benefit from this revision.

CABINET DECISION

CABINET APPROVES TERMS OF REFERENCE FOR THE 8TH PAY COMMISSION

- Commission to submit recommendations within 18 months of constitution
- Pay, pensions and service benefits of Central Government employees to be reviewed
- New structure likely effective from 1 January 2026




Key features of the Terms of Reference (ToR) of the 8th CPC:

- The 8th CPC is constituted as a temporary

body comprising:

- » One Chairperson (Ranjana Prakash Desai)
- » One Member (Part-time) (Prof. Pulak Ghosh)
- » One Member-Secretary (Pankaj Jain).
- The Commission has been directed to submit its recommendations within 18 months from its date of constitution.
- The revised pay structure is expected to be implemented from 1 January 2026 (or at least that is the target date) for central government employees.
- While framing its recommendations, the Commission must take into account:
 - » The prevailing economic conditions and the need for fiscal prudence.
 - » The unfunded liabilities of non-contributory pension schemes.
 - » The implications for state governments (since they typically adopt similar pay revisions) and central public sector undertakings (CPSUs), private sector benchmark pay etc.
 - » Unlike the 7th CPC, one clause referring to “global best practices” has reportedly been omitted this time.

Conclusion:

The establishment of the 8th Central Pay Commission is expected to have significant implications for central government employees and the overall government workforce. The commission's recommendations are likely to impact the government's expenditure on salaries and allowances, and could also influence the government's ability to attract and retain talent.

SIR 2.0

Context:

The Election Commission of India (ECI) has recently launched the second phase of its nationwide “Special Intensive Revision” of electoral rolls, often referred to as SIR 2.0, aimed at cleaning, updating and rationalising

the voter lists in selected 9 States and 3 UTs.

Why SIR 2.0?

- The ECI has cited multiple factors motivating this special revision exercise:
 - » Large-scale internal migration (both rural→urban and inter□state), resulting in voters being registered in multiple locales, and many voters unregistered in their new places.
 - » Outdated rolls: Some elector entries date back many years and may include persons who have died, shifted permanently, or are otherwise ineligible.
 - » Political and administrative concerns over the “quality” of rolls: Several parties and election stakeholders have raised concerns about inflated, inflated or duplicate entries, and absence of periodic large□scale revisional process.

 Pure Electoral Rolls Strengthen Democracy		
SPECIAL INTENSIVE REVISION		
Sr.No	Description	Date
1.	Printing/Training	28th Oct to 3rd Nov 2025
2.	House to House Enumeration Phase	4th Nov to 4th Dec 2025
3.	Publication of Draft Electoral Rolls	9th Dec 2025
4.	Claims & Objection Period	9th Dec 2025 to 8th Jan 2026
5.	Notice Phase (Hearing & Verification)	9th Dec 2025 to 31st Jan 2026
6.	Publication of Final Electoral Rolls	7th Feb 2026



Coverage:

- The SIR 2.0 (Phase□2) will cover 12 States and Union Territories, as announced by the

ECI:

- » **States:** Andhra Pradesh (not in list), correction: Actually the 12 are: Chhattisgarh, Goa, Gujarat, Kerala, Madhya Pradesh, Rajasthan, Tamil Nadu, Uttar Pradesh, West Bengal.
- » **Union Territories:** Andaman and Nicobar Islands, Lakshadweep, and Puducherry.

Key Features:

- Each eligible citizen can verify their inclusion, request corrections (e.g., change of name, shift of address), apply for fresh inclusion, or object to entries (duplicate, deceased, shifted) during the claims/objections phase.
 - » Aadhaar is accepted as one of the optional valid documents for identity/verification (though not mandatory).
 - » New polling stations will be considered/created in high□density areas (e.g., high□rise buildings, RWAs, slums) to ensure manageable elector□counts per station and better administrative oversight.
 - » One of the objectives is to ensure no polling station has more than ~1,200 electors (though exact cap may differ by State).

Conclusion:

SIR 2.0 represents a major push by the Election Commission of India to update and cleanse electoral rolls in selected States and UTs ahead of upcoming electoral events. While it offers an opportunity to strengthen the democratic foundation—by ensuring that each eligible citizen is included and duplicates/ineligible entries removed—it also poses significant administrative, operational and political challenges.



International Relations

India–Afghanistan Relations: India's Pragmatic Realism in Afghan Diplomacy

India's engagement with Afghanistan has taken a notable turn following the Taliban's return to power in August 2021. On October 2025, Afghanistan's Foreign Minister, Amir Khan Muttaqi, undertook an eight-day visit to New Delhi, marking the highest-level Taliban official visit since the group assumed control of Kabul. During this visit, India announced the re-establishment of its Embassy in Kabul, which had functioned as a downgraded "technical mission" since June 2022. This move highlights a nuanced approach: engagement with the Taliban without extending formal recognition.

India's Strategy:

- ❖ **Distinction Between Recognition and Diplomacy:** Recognizing a government (de jure recognition) signifies acceptance of its legitimacy and the means through which it came to power. India avoids formal recognition of the Taliban, thereby not endorsing the violent takeover of 2021.
 - » However, diplomatic engagement with a de facto government is legal under international law. The Vienna Conventions on Diplomatic and Consular Relations (1961, 1963) allow diplomatic missions to function without necessarily recognizing a government.
- ❖ **India's Modus Operandi in Afghanistan:** Even before reopening its embassy, India allowed Afghan diplomatic missions in New Delhi to transition gradually under Taliban oversight. Former diplomats continued

essential consular functions in coordination with the Taliban, maintaining continuity despite political changes.

- » This "engagement without recognition" strategy has precedents in India's diplomacy, including relations with Taiwan and Myanmar's military government, where India maintains functional diplomatic channels without formal recognition.



Geopolitical Drivers of India's Engagement:

India's decision to engage the Taliban strategically balances security, diplomacy, and economic interests. Three key factors explain New Delhi's cautious yet proactive stance:

- ❖ **Taliban's Proactiveness in Engagement:** The Taliban has actively sought Indian engagement since 2021, emphasizing that Afghanistan will not serve as a base for

anti-India groups. Notably, Taliban officials condemned the Pahalgam terror attack in May 2025, signaling a separation from Pakistan-backed terror networks. This reassurance strengthens India's confidence in limited engagement.

- ❖ **Pakistan-Afghanistan Dynamics:** The deterioration of Taliban-Pakistan ties has offered India strategic space. Unlike the initial period after 2021, the Taliban has resisted fully aligning with Pakistan, rejecting the Durand Line as a settled border and maintaining cautious distance from the Tehreek-e-Taliban Pakistan (TTP). This independence reduces the risk of Taliban-Pakistan cooperation against Indian interests.
- ❖ **Economic and Development Opportunities:** India's extensive development and humanitarian investment in Afghanistan—exceeding \$3 billion—provides leverage. With the cessation of US assistance in 2025, the Taliban seeks regional investment, creating openings for Indian engagement in infrastructure, mining, and connectivity projects. Initiatives like the Turkmenistan-Afghanistan-Pakistan-India (TAPI) gas pipeline and Chabahar port transit are central to India's strategic and economic interests. Reopening diplomatic missions enhances investor confidence and reinforces India's commitment to long-term development cooperation.

Significance of India-Afghanistan Relations:

- ❖ **Geopolitical and Security Partnership:** Afghanistan holds strategic importance for India in countering regional threats, particularly from Pakistan. Historical support for the Northern Alliance in the 1990s, combined with extensive infrastructure and development projects, reflects India's long-term strategic commitment. The Taliban's pledge to prevent anti-India activities on Afghan soil is central to evolving counterterrorism cooperation.
- ❖ **Development and Reconstruction Contributions:** India has played a significant

role in Afghan reconstruction, including the Salma Dam, Zaranj-Delaram highway, Kabul's parliament, hospitals, and power substations. Humanitarian assistance during droughts and the COVID-19 pandemic further demonstrates India's commitment to Afghan development.

- ❖ **Economic and Trade Connectivity:** Afghanistan's estimated mineral wealth, valued between \$1–3 trillion, offers India economic opportunities. Participation in regional connectivity projects like the Chabahar Port (Iran-Afghanistan-India corridor) bypasses Pakistan and promotes trade integration.

India's Infrastructure Contributions to Afghanistan



- ❖ **Cultural and Civilizational Bonds:** India and Afghanistan share deep historical and cultural connections. Bollywood's popularity, Indian scholarships for Afghan students, and cultural exchanges reinforce India's soft power and people-to-people ties.
- ❖ **Diplomatic Engagement Amid Political Shifts:** India's engagement strategy—upgrading its mission to full embassy status while refraining from formal recognition—reflects pragmatic diplomacy. This approach allows India to balance ethical concerns with realpolitik, countering China's growing influence and Pakistan's destabilizing activities in the region.

Challenges in India-Afghanistan Relations:

- ❖ **Security Concerns and Terrorism:** Despite diplomatic engagement, terrorism remains a pressing challenge. The Taliban's historic links with groups such as Lashkar-e-Taiba and Jaish-e-Mohammed raise concerns about Afghanistan becoming a safe haven for anti-India militants. Skepticism persists despite the Taliban's 2025 pledge not to allow Afghan territory to be used for attacks against India.
- ❖ **Pakistan's Influence and Proxy Dynamics:** Pakistan's strategic rivalry complicates peace and stability in Afghanistan. The Taliban's refusal to act against Tehrik-i-Taliban Pakistan (TTP) and ongoing tensions with Pakistan create risks for regional security, which India must navigate carefully.
- ❖ **Governance and Human Rights Concerns:** The Taliban's non-democratic governance, suppression of dissent, and restrictions on women's rights conflict with India's support for an inclusive Afghan political process. Incidents like the exclusion of women journalists during Muttaqi's visit highlight ethical and diplomatic challenges.
- ❖ **Economic and Infrastructure Constraints:** Afghanistan's weak economy and security risks impact Indian investments and projects. International sanctions and governance issues hinder project continuity and trade, though initiatives like Chabahar Port and the India-Afghanistan Air Freight Corridor provide cautious optimism.
- ❖ **Rising Chinese Influence:** China's expanding role in Afghanistan, including infrastructure investments and dialogue with the Taliban, challenges India's strategic leverage in the region.
- ❖ **Narcotics and Regional Stability:** Afghanistan's position as the largest opium producer in the Golden Crescent (Afghanistan, Iran, Pakistan) poses cross-border security and health challenges for India, particularly in regions like Punjab, where drug abuse is a pressing concern.

International and UN Perspective:

- ❖ **UN Non-Recognition:** The UN continues to withhold recognition from the Taliban, citing three unmet conditions:
 - » Inclusive governance
 - » Dismantling of terrorist networks
 - » Respect for human rights, especially women's rights
- ❖ Taliban requests for Afghanistan's UN seat have been repeatedly rejected. Travel exemptions, such as the one allowing Muttaqi's visit to India, are granted by the UN Security Council on a case-by-case basis.
- ❖ **Regional Trends:** Several countries have adopted engagement-without-recognition strategies:
 - » **Russia:** Recognized the Taliban formally in July 2025.
 - » **China, UAE, Central Asian states:** Host Taliban-appointed diplomats or ambassadors.
 - » **Pakistan:** Upgraded its diplomatic mission in Kabul to ambassadorial level in May 2025.
- ❖ These arrangements reflect pragmatic considerations—territorial control, security threats, and regional influence—rather than full political endorsement.

Conclusion:

India-Afghanistan relations are entering a new chapter defined by pragmatic diplomacy, strategic engagement, and humanitarian commitments. Through high-level visits, restoration of its embassy, targeted development projects, and a careful approach of engagement without recognition, India is navigating a complex geopolitical landscape. Balancing security, economic interests, cultural ties, and human rights, India aims to maintain influence in Afghanistan, counter regional rivalries, and foster stability, while adhering to international norms. The evolving diplomatic framework demonstrates India's capacity for nuanced and flexible foreign policy, positioning it as a key player in shaping South Asia's future amid uncertainty.

India–UK Comprehensive Economic and Trade Agreement: A New Chapter in Bilateral Relations

Context:

The recent visit of the United Kingdom's Prime Minister Keir Starmer to India has opened a new phase in India–UK relations. Accompanied by a strong delegation of over a hundred business leaders, cultural representatives, and university heads, Starmer's visit underscored the growing importance of the Comprehensive Economic and Trade Agreement (CETA) — a landmark pact that seeks to deepen trade and investment between the two countries.

This visit comes at a critical time for India, which is facing external trade challenges such as the 50 per cent tariff imposition by the United States under President Donald Trump. The strengthening of economic ties with the UK thus serves not only as good diplomacy but also as smart economic strategy.

About the India–UK CETA:

- ❖ The India–UK Comprehensive Economic and Trade Agreement (CETA) is an ambitious and wide-ranging trade deal aimed at enhancing bilateral commerce, investment, and technology cooperation. The agreement covers over 99 per cent of tariff lines in both industrial and agricultural products — making it one of India's most comprehensive trade pacts to date.
- ❖ The CETA seeks to double bilateral trade in goods and services, which currently stands at \$56 billion, to \$120 billion by 2030. This includes around \$23 billion in goods and \$33 billion in services traded between the two nations. India currently enjoys a trade surplus with the UK in both categories, but there remains vast untapped potential for growth.

India–UK Trade at a Glance:

- Bilateral trade (2024): \$56 billion
- India's exports to the UK (goods): \$12.9 billion
- India's exports to the UK (services): \$19.8 billion

- India's imports from the UK: \$8.4 billion in goods and \$13 billion in services
- ❖ While India's share of the UK's total imports remains modest — about 1.5% in goods and 4.6% in services — the potential for expansion is immense. The CETA provides the framework to unlock that potential.



Why the CETA Matters for India?

- ❖ The UK is one of the world's top importers, with total goods imports valued at \$815 billion and services imports at \$423 billion in 2024. Currently, the UK's main import partners include China, the US, Germany, France, and Italy. For India, this creates an opportunity to expand its presence in sectors where it has existing capabilities but a limited market share.
- ❖ **Gems and Jewellery:** The UK imported \$92.8 billion worth of gems and jewellery in 2024, but India's contribution was just \$0.6 billion. Given India's strong base in diamond cutting and jewellery exports, this sector represents a clear opportunity for diversification — especially when India faces uncertainty in the US market due to tariffs.

- ❖ **Textiles and Apparel:** In 2023, the UK imported \$22.3 billion worth of apparel and made-ups, while India's exports accounted for only \$1.59 billion. Before CETA, Indian apparel faced 9–12% tariffs, while competitors like Bangladesh and Vietnam enjoyed duty-free access. Under the new deal, Indian exporters will now be on par with these countries, removing a major cost disadvantage.
- ❖ **Leather and Footwear:** The UK imported \$8.5 billion worth of leather and footwear, with India's share just \$453 million. Earlier, India faced 8% import duty on footwear, while China and Vietnam faced even higher rates. With CETA reducing these duties, India's competitive position will strengthen considerably.
- ❖ **Pharmaceuticals and Machinery:** The UK's imports of pharmaceuticals and machinery are dominated by the US, Germany, and China. CETA can open new channels for Indian firms in these high-value sectors, particularly for generic drugs, active pharmaceutical ingredients (APIs), and precision engineering goods.
- ❖ **High-Level Business Delegation:** Over 100 entrepreneurs and industry leaders accompanied the UK Prime Minister, highlighting London's renewed interest in India's fast-growing economy.
- ❖ **Investment Commitments:** Around 64 Indian companies have pledged investments worth £1.3 billion in the UK, reinforcing mutual confidence in the bilateral relationship.
- ❖ **Defence Cooperation:** The visit also facilitated a £350 million missile supply deal, supporting India's defence acquisitions and signalling stronger security cooperation.
- ❖ **Cultural and Educational Partnerships:** The iconic Yash Raj Films will shoot three major films in the UK, strengthening cultural ties. Additionally, two British universities are set to establish campuses in India, deepening educational collaboration.



How the UK Benefits?

- ❖ The agreement is not one-sided. The UK also gains greater access to India's large and growing market. One of the most visible outcomes of the deal is the phased reduction in India's steep import duties on alcoholic beverages, particularly Scotch whisky and gin, from 150% to 75% immediately, and then to 40% over ten years.
- ❖ Other areas of UK interest include:
 - » Advanced machinery and defence equipment
 - » Clean-energy technologies
 - » Medical devices
 - » Higher education and research collaborations
- ❖ These sectors align closely with India's domestic priorities of modernising its defence industry, transitioning to clean energy, and building human capital.

Key Outcomes of Keir Starmer's Visit:

India's Domestic Challenges and Reforms:

- ❖ While the CETA opens new markets, the real test lies in India's ability to deliver competitively. Tariff reduction alone cannot ensure higher exports; domestic reforms are critical.
 - » **Trade Facilitation:** India's logistics and customs processes remain cumbersome. According to the World Bank Enterprise Survey, the average customs clearance time for exports in India is 17.3 days, compared to 6.7 days in Bangladesh and

3.3 days in China. Streamlining port operations, digitisation of paperwork, and better coordination between agencies can significantly reduce transaction costs.

- » **Access to Finance:** Small and medium enterprises — key players in labour-intensive sectors like textiles, gems, and footwear — often face difficulties in accessing affordable credit. Improving financial inclusion, simplifying collateral requirements, and expanding credit guarantee schemes can help these exporters scale up.
- » **Regulatory Reforms:** Economist Manish Sabharwal has described India's complex compliance system as "regulatory cholesterol." Simplifying business registration, labour laws, and tax compliance would encourage investment and boost productivity.
- » **Industrial Clusters and Infrastructure:** India needs to strengthen its manufacturing clusters by investing in common testing facilities, quality certification centres, and better logistics. Shared infrastructure reduces costs and enhances the reliability of Indian products in global markets.

Strategic Implications:

- ❖ The CETA has a broader strategic dimension. As global trade realigns, India is seeking to diversify its export destinations. The deal with the UK sends a signal to both Washington and Brussels that India is capable of negotiating balanced, mutually beneficial trade pacts.
- ❖ For India, the UK can serve as a gateway to Europe — especially as negotiations for an India-EU Free Trade Agreement continue. For the UK, post-Brexit realities make India an essential partner for access to large, emerging markets.

Way Forward:

- ❖ **Faster Implementation:** India should consider shortening tariff reduction timelines,

particularly in sectors like beverages, to show commitment and attract goodwill.

- ❖ **Focus on Competitiveness:** Addressing structural bottlenecks in manufacturing and exports will ensure India truly benefits from lower tariffs.
- ❖ **Leverage Services Trade:** India's strength in IT, digital services, and finance can be further harnessed through mutual recognition of professional qualifications and easier movement of skilled workers.
- ❖ **Innovation and Collaboration:** The education and research partnerships initiated under the Vision 2035 framework should be leveraged for co-innovation in clean energy, AI, and biotechnology.

Conclusion:

The visit of Prime Minister Keir Starmer marks a turning point in India-UK relations. The Comprehensive Economic and Trade Agreement represents a major step toward a deeper, more balanced partnership that goes beyond trade — encompassing investment, defence, technology, and education. For India, this is both an opportunity and a test. With structural reforms, better logistics, and policy support, India can turn the UK market into a strategic hedge against global trade volatility — and showcase its ability to engage the world on equal terms in a new era of economic diplomacy.

“Reimagining Global Governance Indicators: India's Initiative Towards a Fair Assessment System”

Context:

India has proposed the creation of a new International Governance Index under its presidency of the International Institute of Administrative Sciences (IIAS), headquartered in Brussels. The proposal comes in the backdrop of India's declining performance in various global governance and democracy indices and its long-standing concerns about their methodology, data sources, and transparency.

India assumed the presidency of the IIAS for the first time in June 2025, after winning a contested election against Austria. As it completed 100 days of its three-year term, the IIAS highlighted the progress made under India's leadership, including steps taken toward developing an international governance index aimed at ensuring a fairer and more representative assessment of governance systems worldwide.

About the International Institute of Administrative Sciences (IIAS):

- ❖ The International Institute of Administrative Sciences (IIAS) was established in 1930 and is headquartered in Brussels, Belgium. It functions as an international non-profit organization dedicated to promoting research, dialogue, and training in public administration and governance.
 - » IIAS currently has 31 member countries, including India, Japan, China, Germany, and Saudi Arabia.
 - » While it is not a United Nations body, it collaborates closely with institutions such as the United Nations Department of Economic and Social Affairs (UN DESA) and the Organisation for Economic Cooperation and Development (OECD).
 - » It serves as a global forum for the exchange of ideas among scholars, administrators, and policymakers on governance, ethics, and administrative

reform.

- ❖ India has been associated with the IIAS since 1998 through the Department of Administrative Reforms and Public Grievances (DARPG). The presidency for the 2025–2028 term marks India's first-ever leadership role in this body.
- ❖ Under its presidency, India aims to promote the principle of “maximum governance, minimum government” and to foster greater cooperation between developed and developing nations on governance reforms.

India's Proposal for an International Governance Index:

- ❖ India has proposed the creation of a new International Governance Index (IGI) as part of the IIAS's research and analytical agenda. The proposal seeks to develop a globally accepted framework for measuring governance performance using transparent, evidence-based, and context-sensitive methods.
- ❖ In September 2025, discussions were held with the IIAS Research Advisory Committee on advancing this initiative. The deliberations focused on:
 - » Strengthening IIAS's scientific strategy by including the creation of an international governance index and trend analysis as a core research activity.
 - » Collaborating with established international organizations such as the World Bank, OECD, and UN DESA to leverage existing work and avoid duplication.
 - » Establishing a dedicated working group within IIAS to design and refine the index's methodology.
 - » Placing the proposal for discussion and approval at the IIAS Annual Conference in 2026.

- ❖ The International Governance Index would combine both quantitative data and qualitative institutional assessments to create a comprehensive and balanced tool for evaluating governance globally.

Why the Proposal Matters for India?

- ❖ India's proposal is a step towards balancing the unbalanced global governance rankings and promoting more objective, data-based evaluation systems.
- **Concerns with Existing Indices**
 - » The Varieties of Democracy (V-Dem) Institute has classified India as an “electoral autocracy” since 2017. In its 2025 report, India ranked 100 out of 179 on the Liberal Democracy Index (Denmark ranked first).
 - » The Freedom in the World Index and the Economist Intelligence Unit (EIU) Democracy Index has also downgraded India's scores in their latest editions.
- **India's Response:**
 - ❖ These rankings have been criticized for relying heavily on expert perceptions instead of measurable data.
 - ❖ A 2022 working paper by the Economic Advisory Council to the Prime Minister (EAC-PM) analysed the methodologies of these indices — including V-Dem, Freedom in the World, and EIU — and found that:
 - » India's rankings were often comparable to the Emergency era (1970s), which was misleading.
 - » The indices lacked transparency and accountability, despite influencing global opinion and economic ratings.
 - » The Council recommended encouraging Indian research institutions to develop comparable indices to challenge Western dominance in defining governance standards.

Concerns Regarding the Worldwide Governance Indicators (WGI):

- ❖ India has also raised questions about the Worldwide Governance Indicators (WGI) published by the World Bank, which cover over 200 economies. These indicators are

widely used by international organizations and credit rating agencies to assess governance quality and economic risk.

- ❖ The WGI evaluates governance performance on six parameters:
 - » Voice and Accountability
 - » Political Stability and Absence of Violence/Terrorism
 - » Government Effectiveness
 - » Regulatory Quality
 - » Rule of Law
 - » Control of Corruption
- ❖ In the 2023 WGI report, India's percentile ranks were:
 - » Voice and Accountability – 51.47
 - » Political Stability and Absence of Violence – 21.33
 - » Government Effectiveness – 67.92
 - » Regulatory Quality – 47.17
 - » Rule of Law – 56.13
 - » Control of Corruption – 41.51
- ❖ (Note: Zero indicates the lowest and 100 the highest percentile rank.)
- ❖ The Indian government has expressed concerns that many of these parameters are based on subjective expert assessments rather than ground-level data. It has argued that the organizations producing these indices often have limited local presence and may not fully understand national contexts.

Purpose and Relevance of Global Governance Indices:

- ❖ Global governance indices aim to measure the quality of governance, democratic participation, and institutional performance across countries. Their objectives include:
 - » Offering comparative benchmarks for policymakers.
 - » Encouraging accountability and reform in public institutions.
 - » Assisting investors and rating agencies in evaluating political and administrative stability.
 - » Providing a basis for academic and policy research on global governance trends.
- ❖ However, these indices face criticism for their

methodological uniformity and Western-centric frameworks. Many developing countries argue that governance cannot be assessed through a single template, as social structures, developmental stages, and administrative traditions vary widely across regions.

Significance of India's Initiative:

- ❖ **Balancing Global Narratives:** India's initiative seeks to democratize the process of global governance assessment and reduce dependence on indices controlled by a few Western institutions.
- ❖ **Introducing Contextual Evaluation:** The proposed index aims to recognize the diversity of governance models, accommodating regional contexts, policy priorities, and development stages.
- ❖ **Promoting Evidence-Based Assessment:** The index will prioritize measurable indicators and verifiable data, making governance evaluation more objective and transparent.
- ❖ **Strengthening South-South Collaboration:** Through its leadership role in IIAS, India can foster partnerships among developing nations to create a more inclusive and representative global evaluation system.

❖ **Enhancing India's Role in Global Governance**

Discourse: Leading such an initiative enhances India's credibility in the international policy sphere and reinforces its image as a reform-oriented democracy.

Conclusion:

For the International Governance Index to gain global credibility, it will need to adopt a transparent, replicable, and participatory methodology. Collaboration with global organizations like the World Bank, OECD, and UN DESA can help ensure comparability, while broad consultations with regional and national institutions can strengthen legitimacy. The working group proposed under IIAS will play a crucial role in finalizing the parameters, data sources, and weightage of indicators. The proposal will be further discussed at the IIAS Annual Conference in 2026, where a draft framework is expected to be presented for review. If implemented effectively, the index could emerge as an alternative benchmark — one that reflects not just governance quality from a Western liberal democratic lens, but also administrative innovation, citizen service delivery, and institutional resilience across diverse political systems.

Short Issues

Gaza Peace Deal

Context:

Recently, a historic ceasefire agreement was signed between Israel and Hamas in Sharm El-Sheikh, Egypt. The deal, brokered by the United States, Egypt, and Qatar, aims to end over two years of conflict and initiate a phased process of hostilities cessation, hostage exchanges, and reconstruction.

Key Provisions of the Deal:

- **Ceasefire / Pause in Hostilities**
 - » Fighting is to cease, allowing aid to flow into Gaza and reconstruction efforts to

begin.

- **Hostage Release by Hamas**
 - » All 20 living Israeli hostages held by Hamas were released.
- **Prisoner Exchange**
 - » Israel released Palestinian prisoners and detainees, numbering in the hundreds or possibly in the low thousands, including those held during the conflict.
 - » Some of these included long term prisoners.
- **Israeli Military Pullback & Humanitarian Access**
 - » Israel partially withdrew troops from Gaza zones. Aid food, medical, fuel —

will be allowed unhindered into Gaza to address the severe humanitarian crisis.

- » Reconstruction, clearing of rubble, restoring infrastructure will be among major tasks.

▪ **Guarantees & Oversight**

- » Mediators (U.S., Qatar, Egypt, Turkey) have promised to provide guarantees on implementation and monitor compliance.
- » Hamas' Gaza leadership has stated it accepted guarantees from the United States and other mediators confirming the war's end.



Challenges & Risks Ahead:

- **Implementation:** Ceasefire deals often falter. Ensuring both sides adhere to the agreement is a major challenge.
- **Trust deficit:** Years of conflict have eroded trust. People may doubt each side's willingness to stick to the terms.
- **Transition governance:** The role of Hamas, the Palestinian Authority, international oversight in governance contentious.
- **Resurgence of violence:** If any violation occurs or agreement halves, fighting could resume.
- **Reconstruction & justice:** Rebuilding

requires resources, international support, and resolving war crimes and accountability issues.

About Gaza War:

- The Gaza War was ignited on October 7, 2023, when Hamas militants launched a surprise multi-front assault on Israel, resulting in the deaths of approximately 1,200 people.
 - » In response, Israel launched a massive military counteroffensive aimed at destroying Hamas, securing the release of hostages, and ensuring national security.
 - » The conflict also saw significant regional escalations, including cross-border fighting with Hezbollah and a direct attack by Iran on Israel.
 - » After two years of devastating conflict, a U.S.-brokered peace plan culminated in a ceasefire in October 2025, including the release of all remaining living hostages held by Hamas, marking a critical step toward stabilizing the region.

Conclusion:

The Gaza declaration and the release of hostages mark a significant turning point in one of the most intractable conflicts of recent years. Yet, this is not an end but a fragile beginning. The real test will be in implementation — ensuring lives saved, dignity restored, and a long term, just peace for both Israelis and Palestinians.

India- Taliban Engagement

Context:

The Taliban foreign minister of Afghanistan, Amir Khan Muttaqi, was in India on his first official visit, from October 9 to 16 under a UN travel-ban exemption. It is a significant diplomatic moment: the first visit by such a senior Taliban leader since the Taliban took Kabul in 2021.

Background:

- When the Taliban returned to power in 2021, India was cautious. It did not immediately recognize the Taliban government.
- India instead maintained humanitarian contacts, sent aid (food, medicines, vaccines etc.), and tried to preserve its projects and diplomatic channels in a limited manner.

Why India Is Increasing Engagement:

Motivating Factor	Details / Explanation
Realism in foreign policy	The Taliban are de facto in control in Afghanistan. India recognises that influence in Kabul is better preserved through engagement than isolation. Also, ignoring Afghanistan risks losing strategic space to rivals.
Security concerns	Terrorism emanating from Afghanistan (or groups using Afghan territory) is important to India. Engaging Taliban leadership may help ensure that Afghan soil is not used by terror outfits targeting India. Also, earlier condemnations by Muttaqi after terror attacks in Kashmir are important gestures.
Connectivity, trade, transit imperatives	India wants reliable access to Central Asia and markets beyond its immediate neighbors. Pakistan has traditionally blocked land transit, so routes via Afghanistan Iran (especially Chabahar port) are increasingly seen as strategic alternatives.
Counter-ing rival influence	Pakistan has historically had strong influence over the Taliban (or at least over some Taliban structures). New Delhi does not want to be sidelined. Also, China and Iran are stepping up outreach; India wants to not fall behind in being part of Afghanistan's future regional alignment.

Preservation of prior investments	India has invested in infrastructure, development (e.g. roads, dams, schools) in Afghanistan over past decades. Engagement helps protect what remains and possibly restart some of the stalled programs.
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Constraints, Risks and Red Lines:

- **Recognition:** India still has not officially recognized the Taliban government. Formal recognition carries diplomatic, reputational risks, especially given concerns over human rights, particularly women's rights.
- **Human rights / inclusivity:** International and domestic pressures persist over Taliban's treatment of women, minorities, suppression of dissent, etc. India will face criticism if it is seen to gloss over such issues.
- **Security reliability:** There's risk in trusting any guarantees. Taliban's internal structure is not monolithic; there are elements (or affiliates) which might not be under central control and may serve as bases for militant groups.
- **Pakistan factor:** Any deepening of India Taliban ties is likely to provoke responses from Pakistan, which sees Afghanistan as part of its sphere of influence. Cross border dynamics, militant groups, bilateral tensions are all implicated.

Conclusion:

India's engagement with Taliban foreign minister Muttaqi underscores the complexity of international diplomacy, where strategic interests often require engagement with entities that may not align with one's values. By prioritizing regional stability, security, and economic cooperation, India aims to protect its interests and contribute to a more stable Afghanistan, while navigating the intricate geopolitics of the region.

India & Russia Celebrate 25 Years of Strategic Partnership

Context:

October 3, 2025, marked the 25th anniversary of the India-Russia Strategic Partnership. The foundational "Declaration on the India-Russia Strategic Partnership" was signed on October 3, 2000, by Russian President Vladimir Putin and then-Indian Prime Minister Atal Bihari Vajpayee.

Key cooperation in last 25 years:

Multi Faceted India Russia Diplomatic Ties

- » **Strategic Partnership Framework:** After the initial Strategic Partnership in 2000, in 2010 the relationship was elevated to the status of Special and Privileged Strategic Partnership. This change signaled a deeper level of trust, joint planning, and collaboration across many strategic sectors.
- » **Institutional Dialogue Mechanisms:** India and Russia engage via several formal dialogue and cooperation platforms, including:
 - Annual summits between heads of state/government.
 - "2 + 2" dialogue involving Foreign and Defence Ministers of both countries.
 - The India Russia Intergovernmental Commission on Trade, Economy, Science & Technology, and Culture.
 - Technical/military cooperation institutions, such as joint exercises (e.g. INDRA), shared R&D, and defence technology ventures.

Trade and Economic Cooperation

- » Bilateral trade has surged in recent years: for FY 2024-25, India Russia trade in goods reached approximately USD 68.7 billion. In FY 2023-24, trade was USD 65.70 billion, showing rapid growth.

- » Major Indian exports to Russia include pharmaceuticals; organic and inorganic chemicals; electrical machinery and mechanical appliances; iron & steel
- » Major Russian exports to India are dominated by oil and petroleum products; fertilizers; vegetable oils; precious stones and metals; along with mineral resources.

INDIA-RUSSIA RELATIONS

A Strategic Partnership Amid Global Realignments



EVOLUTION OF RELATIONS

- Cold War Solidarity (1950–1991)
 - Soviets support on Kashmir and Goa's liberation
- Post-Soviet Adjustment 0991–2000
 - Recalibration following the Soviet Union's dissolution to sustain defense and strategic ties
- Strategic Partnerships (2000–present)
 - Major exports follow global institutionalizing cooperation across sectors

ECONOMIC AND TRADE RELATIONS

- Bilateral trade grew by 42.7%
- Imports declined by 39.9%
- Major exports from India: 13.1 (FY 2021-22), 42.7 (FY 2023-24)
- Major Imports from Russia: 6.5 (FY 2023-24)

ENERGY COOPERATION

- Russia accounts for 35% of India's total crude imports
- European sanctions provide cheaper Russian oil cushioned from global price volatility



ENERGY COOPERATION

- Russia accounts for 35% of India's total crude imports
- European sanctions prove cheaper Russian oil cushion from global price volatility
- Assistance in the Kudankulam Nuclear Power Plant

DEFENSE CO-DEVELOPMENT

- Transition from buyer to co-developer defense partnership enhancing India's indigenous capabilities and strategic autonomy
- Flagship programs: BrahMos missiles and S-300 production
- Despite diversification to other suppliers like France and Israel

STRATEGIC WAY FORWARD

- Diversify economic engagement beyond energy
- Strengthen Defense co-development
- Expand Arctic and energy collaboration



STRATEGIC WAY FORWARD FOR INDIA

- Diversify economic

Defence & Security Cooperation

- » A clear shift has taken place from a simple buyer seller relationship to one involving joint R&D, joint production, co development of advanced systems.
- » A hallmark project is BrahMos Aerospace: a joint venture between India's DRDO and Russia's NPO Mashinostroyeniya. It jointly designs, develops, produces, and markets supersonic cruise missiles.

- » Through BrahMos, India and Russia have not only transferred technology but also co produced systems; India is undertaking greater indigenous contribution to subsystems (e.g. propulsion boosters, navigation etc.).
- **Multilateral Cooperation & Global Diplomacy**
 - » India and Russia collaborate closely in multilateral forums, e.g. UN, G20, BRICS, SCO (Shanghai Cooperation Organisation). These platforms reinforce policy alignment or mutual support on global issues such as climate, trade, security.
 - » Their strategic ties are often framed in discussions of a multipolar world order, strategic autonomy, and preserving independent foreign policy perspectives.

Challenges:

- **Trade Imbalance:** India's import heavy trade with Russia (especially in energy & petroleum) causes a large trade deficit, which India seeks to correct via boosting exports and diversifying imports/exports.
- **Diversifying Cooperation:** Beyond traditional areas like defence, energy, and hydrocarbons; cooperation in green energy, digital economy, critical minerals, AI, health tech etc. are less developed and hold promise.
- **Regulatory, logistical issues:** Non tariff barriers, payment mechanisms, technology export controls etc. need continual improvement.
- **Global Geopolitical Pressures:** Western sanctions on Russia, trade restrictions, pressure from third parties—these affect the ease of doing business, especially in certain sectors.

Conclusion:

After 25 years, the India Russia partnership is robust, diversified, and deeply institutionalised. It spans diplomacy, trade, defence, science & technology, culture, and multilateral

cooperation. While past decades laid the foundations and delivered major achievements, the future will be shaped by how well both countries navigate challenges—trade imbalances, regulatory barriers, shifting global alignments—as they expand into new frontiers of cooperative endeavour.

2025 Nobel Peace Prize

Context:

The Norwegian Nobel Committee recently awarded the 2025 Nobel Peace Prize to Venezuelan opposition leader María Corina Machado. She is recognised “for her tireless work promoting democratic rights for the people of Venezuela and for her struggle to achieve a just and peaceful transition from dictatorship to democracy.”

About María Corina Machado:

- María Corina Machado, known as the "Venezuelan Iron Lady," has been a prominent figure in Venezuelan politics, advocating for democratic rights and freedoms in the country. Her dedication to promoting peace and democracy has been recognized globally, and she is the first Venezuelan to receive the Nobel Peace Prize
- She co-founded Súmate, a Venezuelan group focused on election monitoring and transparency. In the Venezuelan political landscape, she is well known as a voice of opposition to President Nicolás Maduro's authoritarian rule. She has persistently advocated for free, fair elections, the rule of law, respect for human rights, and democratic governance.
- Despite facing political bans, persecution, and legal constraints, Machado has refused to be silenced. In 2023, she won the opposition primaries for the 2024 presidential election but was subsequently barred from running.

Reasons for this recognition:

- The Nobel Committee's decision emphasizes

several core reasons:

- » **Democratic Transition:** Machado embodies the push toward shifting Venezuela from an authoritarian regime toward democracy in a peaceful manner.
- » **Civic Courage Under Repression:** Despite threats, legal bans, and repression, she has continued to lead opposition efforts. Her personal risk amplifies the symbolic weight of her work.
- » **Uniting opposition forces:** The Committee noted how she has served as a unifying figure within a fractured opposition, giving momentum to democratic voices even when institutional space is heavily constrained.

THE NOBEL PEACE PRIZE 2025



Maria Corina Machado

About Nobel Peace Prize:

- The Nobel Peace Prize is one of the six prestigious awards established by Alfred Nobel's will in 1895. It is awarded annually to individuals or organizations who have made outstanding contributions to promoting peace, reducing armed conflict, and fostering international cooperation. The prize includes a gold medal, diploma, and cash award of 9 million Swedish kronor (approximately \$900,000)

Conclusion:

The Nobel Peace Prize is considered one of the most prestigious awards in the world, recognizing extraordinary contributions

to peace and humanity. Machado's award highlights the importance of individual efforts in promoting peace and democracy, inspiring others to continue working towards a more peaceful world

First-Ever Australia-India Defence Ministers' Dialogue

Context:

The first ever Australia-India Defence Ministers' Dialogue was recently held in Canberra, marking a significant milestone in the bilateral defence partnership between the two nations. Indian Defence Minister Rajnath Singh and his Australian counterpart, Richard Marles, led the discussions, focusing on enhancing cooperation in defence technology, maritime security, and regional stability

Key Outcomes:

- **Annual Dialogue Institutionalised**
 - » The Defence Dialogue has been formalised as an annual event. India has invited Australia to host the second edition in India in 2026.
- **Submarine Rescue and Air-to-Air Refuelling Agreements**
 - » Signed the Australia-India Implementing Arrangement on Mutual Submarine Rescue Support and Cooperation.
 - » Progress made on operationalising the 2024 air-to-air refuelling agreement.
- **Information Sharing, Maritime Security, and Logistics Support**
 - » Agreed to boost information sharing and maritime cooperation via a Joint Maritime Security Collaboration Roadmap.
 - » India offered its shipyards for repair/maintenance of Australian naval vessels in the Indian Ocean Region.
- **Support for Regional Security and Rules-Based Order**
 - » Reaffirmed commitment to a free, open, and rules-based Indo-Pacific.

- » Emphasised freedom of navigation, unimpeded trade, and respect for international maritime law (UNCLOS).
- » Strengthened regional cooperation through the Quad and the Australia-India-Indonesia trilateral framework.



Progress in India–Australia Bilateral Relations:

- **Strategic Partnership**
 - » **Comprehensive Strategic Partnership (CSP):** Established in 2020, the CSP elevated bilateral ties to a comprehensive level, encompassing defence, security, and economic cooperation.
 - » **Defence Cooperation:** The two nations engage in joint military exercises such as AUSTRAHIND and Malabar, enhancing interoperability and mutual understanding.
- **Economic and Trade Relations:**
 - » **Economic Cooperation and Trade Agreement (ECTA):** Signed in 2022, ECTA aims to reduce tariffs and enhance trade flows between the two countries.
 - » **Trade Volume:** In 2023, bilateral trade reached \$49 billion, with India becoming Australia's fourth-largest export market.
 - » **Investment Flows:** Australian investment in India totaled \$17.6 billion, while Indian investment in Australia was \$34.5 billion, indicating robust economic engagement.
- **Renewable Energy and Critical Minerals:**
 - » **Renewable Energy Partnership:** Launched

in 2024, this partnership focuses on solar PV, green hydrogen, and energy storage, aiming to advance clean energy initiatives.

- » **Critical Minerals Collaboration:** Joint efforts are underway to develop supply chains for critical minerals, supporting India's renewable energy goals and Australia's mining sector.
- **Educational and Cultural Ties:**
 - » **Student Mobility:** As of 2024, over 120,000 Indian students were enrolled in Australian institutions, making India the largest source of international students in Australia.
 - » **Institutional Cooperation:** Initiatives like the Australia-India Education and Skills Council (AIESC) promote research collaboration and academic partnerships.
 - » **Cultural Engagement:** The inaugural National Indian Film Festival of Australia in 2025 showcased over 40 films, highlighting the rich cultural exchange between the nations.

Conclusion:

The 2025 Australia–India Defence Ministers' Dialogue marks a key shift in bilateral ties, moving from shared strategic vision to concrete cooperation in operations, defence industry, and regional security. If sustained, this deepening partnership could significantly influence security dynamics and norms in the Indo-Pacific.

India and Mongolia Deepen Strategic Partnership

Context:

Recently, India and Mongolia signed ten Memorandums of Understanding (MoUs) during Mongolian President Khurelsukh Ukhnaa's state visit to India.

About Key Agreements:

Sector	What was agreed / announced	Significance
Heritage & Culture	Restoration of heritage sites in Mongolia; linking Nalanda University (India) with Gandan Monastery (Mongolia).	These efforts reinforce spiritual and civilisational ties rooted in Buddhism. They help preserve cultural heritage, promote scholarly exchange, and deepen people to people connections.
Immigration & People-to-People Ties	Free e visas for Mongolian citizens; sponsorship for young Mongolian cultural ambassadors to visit India.	Facilitates travel, tourism, and cultural exchange.
Minerals, Energy & Geology	MoUs on geology and mineral resources; India's support in India backed Oil Refinery Project via a \$1.7 billion line of credit; interest in sourcing critical minerals (copper, coal etc.) from Mongolia; exploring export routes via Vladivostok (Russia) or Tianjin (China).	Mongolia is resource rich—this gives India access to needed minerals for its industrial growth. The refinery project boosts Mongolian energy security and provides work and technology transfer. Logistics & transit remain a challenge but are being worked out.
Defence & Security Cooperation	Posting a Defence Attaché in Ulaanbaatar; capacity building for Mongolia's border security forces; shared training programmes.	Strengthens strategic and security ties. As the regional strategic landscape shifts, such cooperation enhances Mongolia's capacities and helps India extend its engagement in Central Asia's security dynamics.
Digital Solutions & Infrastructure	MoU on digital cooperation; sharing of digital public infrastructure; digitizing ancient manuscripts; exploring possibilities in digital, IT, etc.	Allows both countries to benefit from advances in digital governance, public services and heritage conservation.

INDIA – MONGOLIA 2025



\$1.7 bn
Oil Refinery Project
(India-funded)



Defence Training
+ Defence Attaché
in Ulaanbaatar



Sanskrit Teacher
& Digitisation of
1 mn manuscripts



Buddha Relics
to Mongolia
in 2026



Ladakh–Arkhangai
Cultural Exchange
MoU



Joint Work:
Rare Earths
Clean Energy
Digital Tech

India–Mongolia Relations:

- India and Mongolia established diplomatic relations in December 1955. India was the first country outside the Eastern Bloc to establish such ties with Mongolia.
- There have been several Treaties of Friendship and Cooperation signed between India and Mongolia.
- In 2015, the relationship was elevated to a Strategic Partnership during Indian Prime Minister Narendra Modi's visit to Ulaanbaatar.

Conclusion:

The signing of the 10 MoUs between India and Mongolia marks a significant step forward in strengthening their strategic partnership. As both nations continue to work together on various initiatives, the partnership between India and Mongolia is poised to reach new heights.

Signing of Thailand–Cambodia Ceasefire Deal

Context:

US President Donald Trump is set to attend the ceremonial signing of a peace agreement between Thailand and Cambodia at the upcoming ASEAN summit in Kuala Lumpur, Malaysia. The agreement aims to formalize a ceasefire brokered by Malaysia and Trump in July 2025, which put an end to the deadliest military clashes in decades between the two Southeast Asian nations.

Background:

- Thailand and Cambodia share an 817 km un-demarcated border, portions of which remain ambiguous due to legacy colonial-era treaties (notably maps drawn by the French Indochina administration).
- A focal flashpoint has been the Preah Vihear temple area, claimed by both sides.
- The International Court of Justice (ICJ) in 1962 awarded sovereignty of the temple to Cambodia, but Thailand has sometimes resisted full acceptance of ICJ decisions in broader border issues.

The 2025 Escalation:

- Clashes first flared in May 2025, when a Cambodian soldier was killed in a skirmish.
- Tensions escalated further in July. Between July 24 and 28, heavy exchanges of artillery, rocket fire, and air strikes erupted across multiple flashpoints.

First Ceasefire & Ongoing Tensions:

- On July 28, 2025, an “immediate and unconditional ceasefire” was brokered, chiefly mediated by Malaysian Prime Minister Anwar Ibrahim and influenced by diplomatic pressure, including from Trump.



Implications:

- For Thailand & Cambodia:** A durable agreement would help restore border stability, facilitate return of displaced people, and revive cross-border trade and tourism.
- For the Region (ASEAN, Southeast Asia):** Success would bolster ASEAN’s relevance in conflict resolution and reinforce norms of regional diplomacy. It may set a precedent for managing territorial disputes.
- For U.S. Foreign Policy:** A successful signing would bolster U.S. claims of peacemaking influence in Asia, enhancing diplomatic capital.
- For Global Diplomacy:** It could reinforce the idea of combining political, economic, and security tools in conflict management. It also shows how middle powers (Malaysia) and major powers (U.S.) can jointly facilitate peace.

Conclusion:

The Thailand-Cambodia ceasefire agreement is an important step toward peace and stability in Southeast Asia. The presence of US President Trump at the ASEAN summit gives this agreement further importance at the global level.

Sri Lanka's Prime Minister Visit to India

Context:

Recently, Sri Lanka's Prime Minister Harini Amarasuriya undertook her first official visit to India since assuming office.

Key highlights of the visit:

- Sri Lankan Prime Minister Dr. Harini Amarasuriya highlighted the need to upgrade the 1998 FTA to reflect contemporary realities. She observed that both economies have diversified significantly, and trade now extends beyond goods to include services, technology, digital commerce, and green industries.
- During the meeting with PM of India, discussion encompassed education, women's empowerment, innovation, development cooperation, and technology, reflecting Sri Lanka's interest in learning from India's rapid socio-economic transformation. Both countries also explored opportunities in trade, investment, tourism, and digital governance, emphasizing a knowledge-based, people-centric approach to development.
- Several Agreements and MOUs were signed or discussed covering infrastructure, education & skilling, fisheries welfare, and development cooperation.

Key Challenges:

- **Fishermen & maritime concerns:** One persistent area of tension has been the welfare of fishermen and maritime boundary issues. The two sides acknowledged the

need for a cooperative approach.

India-Sri Lanka Relations

Dr. Harini Amarasuriya, Hon'ble Prime Minister of Sri Lanka, will pay a visit to India from **Oct 16-18, 2025**



This will be PM Amarasuriya's **first** visit to India after assuming office

Sri Lanka has a central place in India's **Neighbourhood First Policy** and **MAHASAGAR (Mutual and Holistic Advancement for Security and Growth Across Regions)** vision



Economic Cooperation

Robust Trade and Investment Ties

India is Sri Lanka's **largest** trade partner, with bilateral trade totalling **USD 5.8 bn** in FY 2024-25



Largest contributor of FDI worth around **USD 2.56 bn** till 2024



PhonePe launched in May 2024



UPI launched to strengthen financial connectivity in Feb 2024

- **Ensuring implementation:** As with many high-level visits, translating agreements into on-the-ground outcomes (infrastructure, investment, connectivity) will be the real test.
- **External pressures and competing influences:**

Sri Lanka remains a region of interest to other powers as well; managing that while maintaining autonomy and the India link will continue to be delicate.

- **Sustainability of momentum:** With such visits there is a risk of high expectations without follow-through. Long-term relevance depends on steady implementation and follow-up mechanisms.

Conclusion:

The visit of the Sri Lankan Prime Minister to India marks a forward-looking phase in bilateral relations — one that emphasises education, innovation and maritime security alongside economic ties. With strategic alignment in place, the real test will be anchored in sustained implementation and addressing the underlying frictions with tact and mutual trust.

Saudi Arabia Ends Kafala System

Context:

Saudi Arabia has recently abolished the 50-year-old “kafala” (sponsorship) system, marking a major turning point in the Kingdom’s labour and human-rights landscape. The reform, first announced in June 2025, is expected to benefit about 13 million migrant workers, including over 2.6 million Indians, working across sectors such as construction, domestic work and agriculture.

About Kafala System:

- The kafala system (Arabic for “sponsorship”) tied each migrant worker’s legal and residency status to a local employer or “kafeel”.
- **Under this system:**
 - » A migrant worker could not change their employer or job without the kafeel’s approval.
 - » Leaving the country often required the employer’s permission or an exit visa.
 - » The employer held responsibility for the

worker’s visa, residency permit and legal status, giving them extensive control over the worker’s life and employment conditions.

- » The system emerged in the 1950s when Gulf states built up rapid infrastructure and needed large inflows of foreign labour.

Why Was It Criticised?

- Over the years, the kafala system drew strong criticism from human-rights organisations and labour groups:
 - » Many described it as a form of “modern-day slavery” because workers faced restricted mobility, had little recourse for abuse, and in some cases had their passports confiscated or were trapped in exploitative conditions.
 - » Domestic workers, especially women from South and Southeast Asia, were among the worst-affected, given their isolation and weaker legal protections.
 - » The system also led to reputational risk for Gulf economies and became a target of international pressure ahead of major global events and investment drives.



Key Changes in the New Labour Framework:

- Under the new reforms, Saudi Arabia is replacing the sponsor-based model with a contract-based employment system. Under

the updated rules:

- » Migrant workers can change jobs without needing approval from their current employer/sponsor.
- » Workers may leave the country without requiring a sponsor's consent or an exit visa.
- » Expanded access to labour courts and complaint mechanisms enables workers to raise issues of abuse or non-payment more easily.
- The reforms are part of the broader Vision 2030 agenda that seeks to modernise the labour market, diversify the economy and improve the Kingdom's global image.

Significance:

- The abolition of the kafala system is expected to benefit millions of migrant workers, including Indian nationals working in Saudi Arabia. For India, which has one of the largest expatriate populations in the Kingdom, this reform strengthens labour welfare and bilateral ties.
- Strategically, the move is aimed at making Saudi Arabia a more attractive destination for foreign labour and investment by aligning labour standards with international norms.

Conclusion:

By ending the kafala system, Saudi Arabia has taken a landmark step towards improving the rights and dignity of migrant workers. The reform offers greater autonomy, mobility and legal protection for millions of workers and signals a major shift in Gulf labour relations.

Japan New Strategic Plan for Indo Pacific

Context:

Sanae Takaichi, Japan's First Newly appointed Prime Minister recently declared that government will raise Japan's defence spending to 2 % of GDP by March 2026. She also emphasised that Japan would deepen multilateral security

dialogue with partners such as India, Australia, the Quadrilateral Security Dialogue (Quad) grouping and other Indo-Pacific actors.

Why This Matters?

- **Defence Spending Leap:**
 - » Japan will raise its defence spending target to 2% of GDP by March 2026, which is two years ahead of schedule, signals Tokyo's recognition of increasingly intense regional security challenges.
 - » Hitting a 2% target places Japan alongside many NATO-countries in terms of defence spending benchmark, thereby shifting long-standing post-war fiscal and defence norms in Japan.
- **Japan-India Strategic Linkage:**
 - » The deepening dialogue with India reinforces Tokyo's view of New Delhi as a key partner in the Indo-Pacific.
 - » India and Japan have already agreed to strengthen defence-industry cooperation and innovation, indicating a growing strategic inter-linkage.
 - » For India, this connection offers a chance to diversify strategic partnerships, deepen technology & defence collaboration, and reinforce its Indo-Pacific posture.
- **Quad and Multilateral Dynamics:**
 - » Japan's vow to engage more deeply with the Quadrilateral Security Dialogue (the "Quad"—Japan, India, US, Australia) and other like-minded states underlines its broader regional posture: reaffirming commitment to a "Free and Open Indo-Pacific."
- Closer coordination within the Quad aligns with Japan's aim to build deterrence and resilience across maritime and security domains, and India's participation strengthens that multilateral architecture.



China Factor:

- » While reinforcing its defence posture, Japan explicitly called China an “important neighbour” with whom stable ties are needed—indicating Tokyo intends a dual-track approach: enhanced security capability and diplomatic engagement.
- » The move highlights Japan’s balancing act: bolstering deterrence in response to regional threats (including China) while keeping engagement channels open, which has implications for India’s own China strategy and regional balance.

Conclusion:

Japan’s new leadership under Prime Minister Sanae Takaichi marks a notable strategic turning point. By accelerating defence spending and emphasising deeper dialogue with India and Quad partners, Japan signals a readiness to assume a more proactive security role in the Indo-Pacific. For India, this presents both opportunities and responsibilities—for cooperation, industrial partnership, and shaping the regional security architecture.

47th ASEAN Summit

Context:

Recently, the 47th ASEAN Summit took place in Kuala Lumpur, Malaysia from 26 to 28 October 2025. The theme was “Inclusivity and Sustainability”. Timor Leste (East Timor) was formally admitted as the 11th member of ASEAN — the first expansion since the late 1990s.

India’s Role & Key Contributions:

- PM of India addressed the Summit virtually from India. In his address, he emphasised that India and ASEAN together account for nearly one-quarter of the world’s population and are linked not only by geography but by deep historical, cultural and value-based ties. He called ASEAN the “main pillar” of India’s Act East Policy.

Key Announcements & Commitments:

- India declared 2026 as the “Year of ASEAN-India Maritime Cooperation”, signalling a major push in maritime collaboration, blue economy, maritime security, transport connectivity and related areas.
- India and ASEAN renewed their commitment to maritime security, trade connectivity, resilient supply-chains, digital inclusion, and the blue economy.
- India’s engagement also involves reviewing and upgrading the ASEAN India Trade in Goods Agreement (AITIGA) to unleash greater economic potential.
- India reaffirmed its support for ASEAN centrality and the ASEAN Outlook on the Indo-Pacific (AOIP).

22nd ASEAN India Summit:

- The 22nd meeting of the leaders of the Association of Southeast Asian Nations (ASEAN) and India (hence “ASEAN-India Summit”) was also held on 26 October 2025 in Kuala Lumpur, Malaysia. The summit’s theme emphasised sustainable and inclusive cooperation, with special focus on maritime connectivity, digital inclusion, and cultural ties.
- **History of ASEAN India Summit:**
 - » India began formal engagement with ASEAN in 1992 as a Sectoral Dialogue Partner.
 - » In 1996, India’s status was upgraded to a full Dialogue Partner.
 - » In 2002, India’s relationship with ASEAN was elevated to the Summit level, meaning that leaders (Heads of

Government/State) of India and ASEAN member states began meeting at the summit level.

History of ASEAN's membership expansion

(Year of accession in parenthesis)



Strategic Implications for India and ASEAN:

- Strengthening India-ASEAN ties aligns with India's Act East Policy and its focus on the Indo-Pacific region.
- By focusing on maritime cooperation, India enhances its role in the Indian Ocean region and wider Indo-Pacific, reinforcing connectivity and security links.
- Upgrading the trade agreement (AITIGA) and focusing on digital, green, and advanced-tech sectors aligns with India's economic ambitions.
- ASEAN accounts for a significant share of India's global trade; in 2023-24, bilateral trade was cited at ~US \$122.67 billion.

Conclusion:

Recent 47 ASEAN Summit and 22nd ASEAN-India Summit marks a milestone in India-ASEAN relations — a consolidation of past ties and a launch of a forward-looking maritime, digital, sustainable cooperation agenda. With India and ASEAN together representing a large bloc demographically and economically, their partnership is of enhanced strategic significance in a changing global landscape.

Burevestnik: Novel Nuclear-Powered Cruise Missile

Context:

Russia has recently announced the successful testing of a novel nuclear-powered cruise missile, the Burevestnik, which it claims has “virtually unlimited range”, can loiter for long durations, fly at low altitudes and follow unpredictable trajectories, thereby evading existing missile-defence systems.

Key Features & Claims:

- **Propulsion & Range:**
 - » The missile reportedly uses a miniature nuclear reactor to superheat air and generate thrust, unlike conventional turbojets or rockets.
 - » Theoretical range is cited as up to ~20,000 km, enabling strikes from anywhere in Russia to many global targets.
- **Flight Profile & Detectability:**
 - » Designed to fly at very low altitudes (~50-100 m) and take erratic paths to avoid radar and missile defence systems.
 - » Ground-launched rather than submarine/airborne launch

Strategic Significance:

- **Impact on Deterrence:**
 - » If deployable, the Burevestnik changes the calculus of nuclear deterrence: a weapon that can strike from unexpected direction, with long loiter time, complicates the adversary's early-warning and defence planning.
- **Missile-Defence Challenge:**
 - » By flying low, long and unpredictably, it mitigates traditional ballistic missile-defence systems which rely on high-altitude, predictable trajectories.
 - » The so-called “nobody can see, nobody can stop” narrative stems from this purported capability.
- **Geopolitical & Regional Implications:**
 - » For India, South Asia and the Indo-

Pacific region: while the missile is not region-specific, its deployment underscores the evolving strategic environment, especially the need to monitor advanced delivery systems and nuclear escalatory risks.

- » It may influence arms-control dialogue (e.g., future treaties), export behaviour, regional missile proliferation concerns.



Implications for India and the Region:

- **Deterrence & nuclear doctrine:** India's nuclear posture emphasises credible minimum deterrence, no-first-use and mutual vulnerability. Introduction of weapons like Burevestnik by adversaries may necessitate reassessment of surveillance, early-warning and retaliatory planning.
- **Missile-defence systems:** While India has missile-defence layers (e.g., PAD, AAD, SRBM interceptors), a weapon that flies unpredictably and loiters poses new challenges.
- **Arms race concerns:** Such developments may spur expansion or modernisation of delivery systems in the region (Pakistan, China) and complicate arms-control efforts.
- **Strategic stability:** A weapon capable of circumventing defences may reduce the window for decision-making in a crisis, raising risks of miscalculation and escalation.



Environment & Ecology



Towards a Green India: India's Emerging Leadership in the Global Forest Landscape

India has achieved a significant global milestone in environmental conservation. According to the Global Forest Resources Assessment (GFRA) 2025 released by the Food and Agriculture Organization (FAO), India now ranks 9th in total forest area and continues to hold the 3rd position globally in net annual forest area gain. The report, published during the Global Forest Observations Initiative (GFOI) Plenary in Bali, reflects India's sustained commitment to afforestation, sustainable forest management, and climate action.

About the GFRA 2025:

- ❖ The Global Forest Resources Assessment (GFRA) is a comprehensive evaluation published every five years by the FAO. It provides global data on forest area, condition, management, and use, based on official national reports. The assessment categorizes forests as naturally regenerating or planted, with further distinctions such as primary forests, plantation forests (like rubber), and other planted forests.
- ❖ The 2025 edition assessed global trends in deforestation, forest expansion, and carbon storage. It confirmed that the world's total forest area stands at around 4.14 billion hectares, covering about 32% of Earth's land surface, or roughly 0.5 hectares per person.

India's Global Ranking and Contribution:

- ❖ India's performance in the GFRA 2025 marks a steady rise in its environmental

efforts:

- » **9th in Total Forest Area:** India's forest area stands at 72.74 million hectares, accounting for about 2% of global forest cover. This represents an improvement from the 10th position in the 2020 assessment.
- » **3rd in Net Annual Forest Area Gain:** India recorded a net annual increase of 191,000 hectares of forest between 2015 and 2025, behind only China and Russia.
- » **5th among Global Carbon Sinks:** Indian forests absorbed around 150 million tonnes of CO₂ per year during 2021–2025, underlining their critical role in global climate mitigation.
- ❖ These achievements stem largely from plantation drives, afforestation efforts, and sustainable forest management under national programs.

The Global Forest Picture:

- ❖ Globally, the forest distribution is highly uneven:
 - » Europe has the largest forest area (25% of global total).
 - » South America has the highest proportion of forest cover (49% of its land area).
 - » Over half of global forest cover lies in just five countries — Russia, Brazil, Canada, the United States, and China.

- » Some countries, such as Monaco and the Vatican City, have no forest cover at all.
- ❖ The report also notes a decline in the rate of deforestation, from 17.6 million hectares per year during 1990–2000 to about 10.9 million hectares per year during 2015–2025, showing progress toward sustainable management.

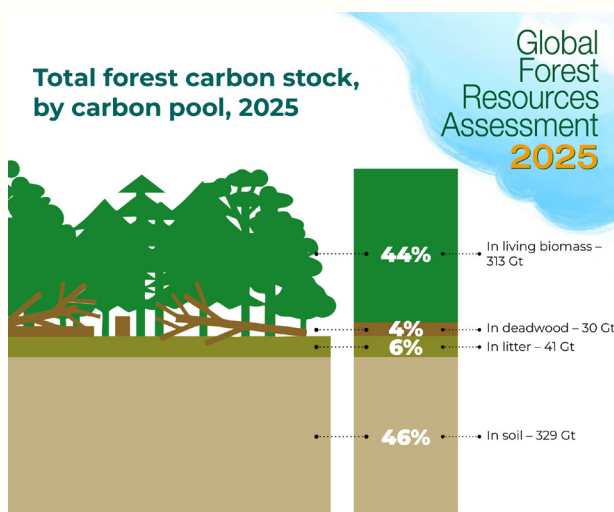
India's Forest Profile:

- ❖ According to the India State of Forest Report (ISFR) 2023:
 - » **Total Forest Cover:** 7,15,343 sq km, or 21.76% of India's geographical area.
 - » **Top States:** Madhya Pradesh (77,073 sq km), Arunachal Pradesh (65,882 sq km), and Chhattisgarh (55,812 sq km).
 - » **Mangrove Cover:** About 4,992 sq km, concentrated in the Andaman & Nicobar Islands, Gujarat, Maharashtra, and West Bengal.
 - » **Protected Areas:** India has a strong biodiversity base with 106 national parks, 573 wildlife sanctuaries, 115 conservation reserves, and 220 community reserves.
- ❖ These figures highlight that India has not only expanded its green area but also strengthened biodiversity protection and eco-restoration.

India's Strength in Planted Forests and Agroforestry:

- ❖ **Bamboo Plantations:** India holds 11.8 million hectares of bamboo forests — about 39% of global bamboo area. The overall global bamboo resource stands at 30.1 million hectares, most of which is concentrated in Asia. India and China have been major contributors to the increase in bamboo forest area over the past three decades.
- ❖ **Rubber Plantations:** India ranks 5th globally in rubber plantations, covering 831,000 hectares out of a global total of 10.9 million hectares. These plantations play a dual role — supporting livelihoods and contributing to carbon sequestration.

- ❖ **Agroforestry Expansion:** Agroforestry — integrating trees with crops and livestock — has emerged as a key factor in India's forest expansion. India and Indonesia together account for nearly 70% of the world's agroforestry area, estimated at 55.4 million hectares. In Asia, nearly the entire agroforestry area (39.3 million hectares) comes from these two nations. This approach not only increases green cover but also enhances soil fertility, water retention, and income for rural households.



Forest Carbon Trends (1990–2025):

- ❖ The FAO's analysis highlights encouraging carbon trends:
 - » Global forests acted as a net carbon sink, absorbing 3.6 billion tonnes of CO₂ annually between 2021 and 2025.
 - » Net emissions from forest conversion (deforestation) were 2.8 billion tonnes, leading to a net removal of 0.8 billion tonnes of CO₂ per year.
 - » Forest carbon sinks were strongest in Europe and Asia, removing 1.4 Gt and 0.9 Gt CO₂ per year respectively.
- ❖ India's share in this success is notable — its forests absorbed 150 Mt of CO₂ annually, reflecting the impact of sustained conservation and plantation efforts.

Key Government Initiatives Driving Forest Growth:

- ❖ **National Mission for a Green India (GIM):** Launched in 2014 under the National Action Plan on Climate Change (NAPCC), the Green India Mission aims to:

- » Increase forest and tree cover by 5 million hectares, and improve the quality of another 5 million hectares.
- » Enhance ecosystem services such as biodiversity, water, and carbon storage.
- » Improve livelihood opportunities for around 3 million forest-dependent families.

- ❖ In recent years, GIM has expanded its focus to degraded landscapes in the Aravallis, Western Ghats, Himalayas, and mangroves, aligning with India's broader restoration goals.

- ❖ **National Afforestation Programme (NAP):** This programme promotes ecological regeneration of degraded forests through a decentralized system involving:

- » State Forest Development Agencies (SFDA)
- » Forest Development Agencies (FDA) at the division level
- » Joint Forest Management Committees (JFMCs) at the village level

- ❖ It integrates local communities in afforestation and forest protection efforts.

- ❖ **Mission LiFE (Lifestyle for Environment):** A global movement launched by India, Mission LiFE focuses on individual and community action for sustainable living.

- » The "MeriLiFE" portal encourages citizens to adopt eco-friendly habits.
- » Campaigns like "Ek Ped Ma Ke Naam" promote emotional connections with tree planting.

- ❖ Mission LiFE was recognized by the UN Environment Assembly, strengthening India's role as a thought leader in environmental stewardship.

- ❖ **Budgetary Boost for Environment Sector:** In the 2025–26 Union Budget, the Ministry of Environment, Forest and Climate Change (MoEFCC) received an allocation of Rs.3,412.82 crore, a 9% rise from the previous year. This includes Rs.3,276.82

crore in revenue expenditure, supporting afforestation, forest restoration, and wildlife conservation programs.

Global Commitments and Future Targets:

- ❖ India's national climate pledge aims to:
 - » Create an additional carbon sink of 2.5–3 billion tonnes of CO₂ by 2030 through expanded forest and tree cover.
 - » Restore 26 million hectares of degraded land by 2030, as part of the Bonn Challenge and UNCCD commitments.
- ❖ Efforts under GIM, the Green Wall Project, and other afforestation initiatives will be central to achieving these goals.

Significance of Forests:

- ❖ Forests are more than just carbon sinks — they are life-support systems.
 - » They filter and recharge groundwater, acting as natural purifiers.
 - » Roots stabilize soils and prevent landslides and floods.
 - » Mangroves buffer coastal storms and erosion.
 - » Forest ecosystems support over 80% of terrestrial biodiversity, including most of the world's amphibians, birds, and pollinators.
 - » They sustain local communities by providing fuel, food, medicine, and livelihood resources.

Conclusion:

India's rise to the 9th position globally in forest area and its continued 3rd rank in forest area gain demonstrate that sustained policy focus, community participation, and science-based afforestation yield tangible results. While global deforestation continues in several regions, India's consistent expansion of forest cover and its ranking among the top global carbon sinks highlight its leadership in balancing development with ecological responsibility. By linking people, policy, and nature, India is steadily moving toward a greener and more resilient future — one where forests remain central to both environmental security and human well-being

Short Issues

Red Sanders Conservation

Context:

The National Biodiversity Authority (NBA), headquartered in Chennai, has sanctioned Rs. 82 lakh to the Andhra Pradesh Biodiversity Board (APBB) for a conservation initiative focused on Red Sanders (*Pterocarpus santalinus*). This funding comes under the Access and Benefit Sharing (ABS) mechanism, as envisaged in the Biological Diversity Act, 2002.

Objectives of the Funds:

- The initiative plans to raise 1 lakh saplings of Red Sanders, which will then be distributed to farmers under a Trees Outside Forests (ToF) programme. This links conservation with livelihood opportunities.
- The approach is bottom up: involving local stakeholders, Biodiversity Management Committees (BMCs), and farmers in nursery development, planting, maintenance, and monitoring.
- The broader goal is to reduce pressure on wild populations (thus curbing illegal extraction/smuggling) by providing legal, locally supported regeneration pathways.

Significance:

- This sanction exemplifies how the ABS mechanism enables users to fund conservation, embodying the principle “users pay, communities benefit.”
- By distributing Red Sanders saplings under ToF, it links ecological restoration with rural livelihoods. Legally grown plantations may reduce illegal harvesting.
- The step aligns with India’s commitments under the CBD and the Kunming–Montreal Framework on benefit sharing and ecosystem restoration.

About India’s Access and Benefit Sharing (ABS) mechanism:

- India’s Access and Benefit Sharing (ABS) mechanism, governed by the Biological Diversity Act, 2002, regulates access

to biological resources and associated traditional knowledge for commercial and research use. It operates through two key principles:

- » **Prior Informed Consent (PIC):** Mandatory approval from the National Biodiversity Authority (NBA) or State Biodiversity Boards (SBBs) before accessing resources.
- » **Mutually Agreed Terms (MAT):** Negotiated agreements between users and resource providers on how benefits—monetary or non-monetary—will be shared.

The potential and the problem



1,000 metric tonnes

The annual market demand for Red Sanders

Rs 50 lakh - 1 cr

The price commanded by a tonne of this timber in international markets

50-80%

The population decline in this species over the last 3 generations



Distribution of Red sanders in India

1,000 sq km

The area of occupancy by Red Sanders that’s endemic to the Rayalaseema region of Andhra Pradesh

117

Smuggling cases of Red Sandalwood registered in 2011



60-100 years

For Red Sanders to reach good harvestable width

About Red Sanders:

- Red Sanders is an endemic and endangered tree species found only in the Eastern Ghats of Andhra Pradesh. It is ecologically significant due to its restricted habitat and endangered status (IUCN Red List: Endangered).
- Economically, it holds high value for its rich red wood, used in cosmetics, medicines, furniture, and musical instruments,

particularly in export markets like China and Japan.

▪ **Red Sanders is protected under multiple legal frameworks:**

- » **Indian Wildlife Protection Act, 1972:** Listed in Schedule IV, offering legal protection from exploitation.
- » **Andhra Pradesh Forest Act (Amended 2016):** Makes offences related to Red Sanders cognisable and non-bailable.
- » **CITES (Appendix II):** Controls international trade to prevent exploitation.

- These legal instruments aim to address smuggling, habitat loss, and illegal trade, all of which threaten the species' survival.

Conclusion:

The NBA's sanctioning of Rs. 82 lakh for Red Sanders conservation in Andhra Pradesh is a notable step in translating ABS policy from principle into practice. It bridges the gap between utilising biodiversity and reinvesting in its conservation, while involving local communities.

'Guardians of the Wild' Report

Context:

The Wildlife Trust of India (WTI) recently published "Guardians of the Wild", a report that pays tribute to the Van Rakshak / frontline forest staff cadre across India.

About the report:

- "Guardians of the Wild" is a documentary-style compilation of real-life narratives, case studies, and photographs that detail the experiences of forest guards, mahouts, trackers, and local community members working on the frontlines of wildlife conservation in India. It offers a rare glimpse into their day-to-day challenges, ranging from:
 - » Human-wildlife conflict situations
 - » Anti-poaching patrols

- » Natural disasters
- » Long hours of surveillance and protection in extreme terrains

A Call for Recognition and Reform:

- The report comes at a critical time when India's protected areas are under increasing stress from habitat loss, climate change, and encroachment. Yet, the first line of defense — forest frontline workers — remain under-resourced, underpaid, and under-recognized.
- **Key demands highlighted in the publication include:**
 - » Better insurance coverage and health benefits
 - » Adequate training and safety equipment
 - » Mental health support
 - » Inclusion in formal policymaking discussions

About Wildlife Trust of India (WTI):

- The Wildlife Trust of India (WTI) is a premier charitable trust dedicated to wildlife conservation in India. Established in 1998 in New Delhi, WTI operates under the Government of India Act as a registered trust, with its headquarters based in Noida, Uttar Pradesh. WTI is recognized as one of India's most impactful organizations working towards the protection and preservation of wildlife.
- **Core Services:** WTI's multifaceted approach includes:
 - » Emergency Rescue of injured or distressed wildlife
 - » Species Recovery programs focused on endangered and threatened species
 - » Conservation Action through habitat restoration and community engagement
 - » Wildlife Rehabilitation aimed at releasing rescued animals back into the wild
 - » Enforcement and Law support to combat poaching and illegal wildlife trade

Conclusion:

The launch of Guardians of the Wild is more than a publication — it is a movement to humanize

conservation and shift the focus toward those who implement it on the ground. WTI calls on government bodies, civil society, and the general public to extend greater institutional support and dignity to India's forest frontline force.

Typhoon Bualoi

Context:

The death toll in Vietnam from Typhoon Bualoi and the ensuing floods has climbed to 36, according to recent reports from the nation's disaster management agency. Over 210,000 houses have been damaged or inundated, and economic losses have been pegged at roughly US \$435.8 million in the latest assessment.

About Typhoon Bualoi:

- Typhoon Bualoi was a tropical cyclone in the Northwest Pacific region, known locally in the Philippines as Typhoon Opong. At its peak, it reached intensity roughly equivalent to Category 2 (on the Saffir Simpson scale) before weakening over land.
- It was the 20th named storm and the 9th typhoon in the 2025 Pacific typhoon season.

About Origin & Path:

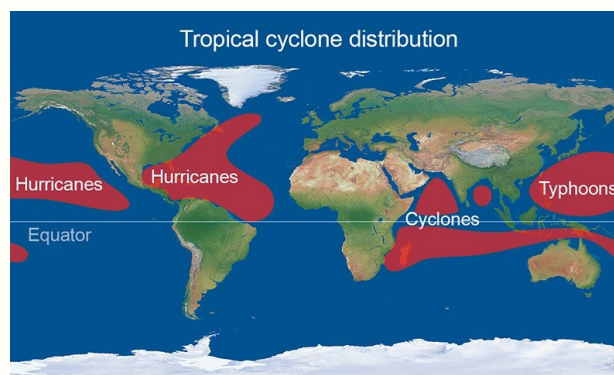
- The system originated from a disturbance north of Yap (in the western Pacific).
- It was named Opong by PAGASA in the Philippines, and Bualoi by the Japan Meteorological Agency (JMA).
- It made multiple landfalls in Philippine islands, causing damage and displacement there, before intensifying and heading toward Vietnam.
- The storm brought torrential rainfall, storm surges, and strong winds, triggering widespread flooding and landslides.

About Tropical Cyclone:

- A tropical cyclone is a large, rotating low pressure system that develops over warm tropical or subtropical ocean waters.
- It comprises organized thunderstorms, wind circulation around a central "eye" (in strong

systems), and heavy rainfall.

- The energy source is the warm ocean — evaporation helps feed the system, and as moist air rises and cools, latent heat is released, fueling the cyclone.
- A tropical cyclone goes through intensity stages:
 - » Tropical Depression (winds below ~34 knots / ~62 km/h)
 - » Tropical Storm (winds ~34–63 knots / ~62–117 km/h)
 - » When sustained winds reach ~64 knots (~119 km/h or ~74 mph), it is classed as a full cyclone / hurricane / typhoon (depending on region)
 - » Thus, hurricane, typhoon, and cyclone are names for the same kind of phenomenon (a strong tropical cyclone), but the name changes according to where it occurs.



Terminology: Hurricane, Typhoon, Cyclone

Term	Region / Ocean Basin	Notes / Usage
Hurricane	North Atlantic, Eastern & Central North Pacific	Tropical cyclone with sustained winds ≥ 74 mph (119 km/h) in these regions
Typhoon	Northwest Pacific (west of the International Date Line)	Same threshold; storms in the western Pacific are called typhoons.

Cyclone	Indian Ocean, South Pacific	In these basins, tropical cyclones (of all strengths) are commonly called cyclones (or severe cyclonic storms).
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National 'Red List' of India

Context:

Recently, Government of India launched National Red List Assessment (NRLA), aiming to evaluate the extinction risk of roughly 11,000 species (about 7,000 kinds of flora and 4,000 fauna). This will be done over the next five years (2025-2030) at the IUCN World Conservation Congress held in Abu Dhabi. This marks India's first comprehensive, coordinated assessment of its biodiversity at this scale.

What the Assessment will do?

- The assessment will follow IUCN aligned scientific guidelines, ensuring that the methodology for classifying species into categories like Critically Endangered, Endangered, Vulnerable, Near Threatened etc. is consistent with international standards.
- By 2030, the goal is to publish National Red Data Books for flora and fauna, and maintain a living, upgradable Red List system. The initiative is part of India's commitment under international biodiversity mechanisms: the Convention on Biological Diversity (CBD) and the Kunming Montreal Global Biodiversity Framework (KM GBF).

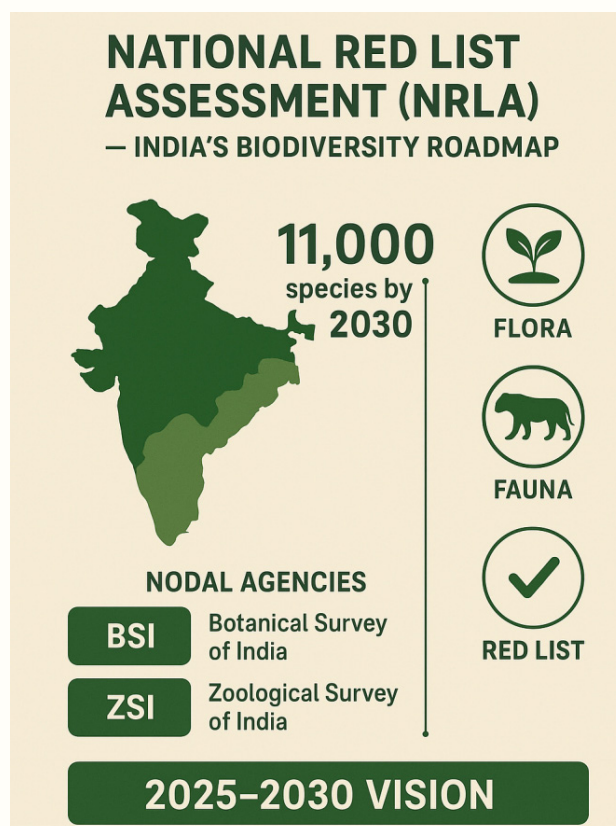
Significance:

- India is one of the world's megadiverse countries, harboring a very high number of species relative to its land area. Although it covers only about 2.4% of Earth's land area, it hosts nearly 8% of global plant species and about 7.5% of global animal species.
- A large share of India's species are endemic.

The drive to assess many species will help in identifying which of them are under threat, which are doing reasonably well, which lack data, and thereby guide conservation priorities.

Implications:

- Globally, about 28% of species assessed under the IUCN Red List are regarded as threatened. India's national list will add granularity for its rich biodiversity.



About Convention on Biological Diversity:

- The Convention on Biological Diversity (CBD) is an international treaty aimed at conserving the diversity of life on Earth. It was adopted during the 1992 Earth Summit in Rio de Janeiro and entered into force in 1993. The treaty has three main objectives:
 - » **Conservation of biological diversity:** Protecting ecosystems, species, and genetic diversity.
 - » **Sustainable use of its components:** Ensuring that the use of biological

resources is sustainable.

- » **Fair and equitable sharing of benefits:** Sharing the benefits arising from the utilization of genetic resources fairly.

Kunming-Montreal Global Biodiversity Framework (GBF):

- The Kunming-Montreal Global Biodiversity Framework (GBF) is a global agreement adopted at the 15th Conference of the Parties (COP15) to the CBD in December 2022. It aims to halt and reverse biodiversity loss by 2050.
- India, as a Party to the CBD, is actively engaged in implementing the GBF. The country has initiated the National Red List Assessment to evaluate the extinction risk of approximately 11,000 species of flora and fauna.
- This initiative aligns with the GBF's targets and contributes to India's commitment to global biodiversity conservation efforts.

Conclusion:

India's National Red List Assessment aims to assess 11,000 species in 5 years, aligning with global standards to better identify and protect vulnerable biodiversity. Its impact depends on reliable data, sustained funding, timely conservation action, and long-term updates beyond 2030.

Wildlife Week 2025

Context:

Recently, 71st National Wildlife Week was celebrated across India from October 2 to 8, 2025, with the theme "Human-Wildlife Coexistence." This significant event aimed to promote harmony between humans and wildlife, emphasizing the need for shared responsibility in conservation efforts. The main event was held at the Indira Gandhi Zoological Park (IGZP) Dehradun, Uttarakhand, with launch of various projects related to wildlife conservation.

About the theme:

- The theme for Wildlife Week 2025 is "Human-Wildlife Coexistence", focusing on transitioning from a mindset of conflict to one of cooperation and shared spaces. It emphasizes:
 - » Community support for conservation
 - » Technology-driven interventions for conflict mitigation
 - » Landscape-level planning beyond protected areas
 - » Policy synergy between scientific institutions and local governance

Key Highlights of Wildlife Week 2025:

- During Wildlife Week 2025, the Environment Minister launched five national-level projects to address human wildlife conflict and species conservation:
 - » **Project Dolphin (Phase II):** Focused on cetacean conservation in freshwater and marine systems.
 - » **Project Sloth Bear:** Launched with a national implementation framework to conserve Sloth Bears and reduce bear-human encounters.
 - » **Project Gharial:** A species recovery initiative for India's endangered crocodilian.
 - » **Centre of Excellence on HWC (CoE-HWC) at SACON:** A national hub for research, policy, and field-level HWC mitigation.
 - » **Tigers Outside Tiger Reserves:** Addresses increasing tiger presence outside protected areas through landscape approaches and community engagement.

About Dolphin:

- India is home to two species of freshwater dolphins: the Ganges (Gangetic) river dolphin (*Platanista gangetica*) and the Indus river dolphin (*Platanista minor*)
 - » **Conservation status:** Endangered (IUCN Red List) and protected under Schedule I of the Wildlife (Protection) Act, 1972

About Sloth Bear (*Melursus ursinus*):

- Sloth bears are endemic to the Indian

subcontinent, found in India, Sri Lanka, and parts of Nepal.

▪ **Conservation status:**

- » Vulnerable (IUCN Red List)
- » Under Indian law, they are protected under Schedule I of the Wildlife (Protection) Act, 1972; trade in parts is prohibited (CITES Appendix I)

About Gharial (*Gavialis gangeticus*):

- Gharial is a highly aquatic crocodilian endemic to Indian subcontinent rivers (Ganges, Chambal, Yamuna, Girwa, Gandak, Mahanadi, etc.)
 - » **Conservation status:** Critically Endangered (IUCN); listed in Schedule I of the Wildlife (Protection) Act and in CITES Appendix I

About Human–Wildlife Conflict:

- Human–Wildlife Conflict refers to negative interactions between humans and wild animals, often resulting in loss of life, injury, crop damage, livestock predation, or destruction of property. In India, HWC is intensifying due to:
 - » Habitat fragmentation and encroachment
 - » Expanding agriculture and infrastructure
 - » Shrinking wildlife corridors
 - » Climate change altering species movement patterns
- India's high population density and dependence on forest-edge agriculture make such conflicts frequent, particularly with elephants, leopards, bears, and big cats.

Conclusion:

The celebrations marked a significant step towards India's transition to community-driven, technology-enabled conservation. With a focus on human-wildlife coexistence, the event highlighted the need for collaborative efforts to protect India's rich biodiversity.

Sri Lanka's Protective Role against Ocean Swell Waves

Context:

A new study by IITM Pune, INCOIS Hyderabad, and Mangalore University reveals that Sri Lanka's landmass naturally shields India's southeastern coast—especially Tamil Nadu and Andhra Pradesh—from destructive Southern Ocean swells. Without this barrier, regions in Andhra Pradesh could face higher swell heights and increased coastal flooding, highlighting the need to factor natural geography into coastal protection strategies.

About Swell Waves:

- Swell waves are surface gravity waves generated by distant storms, often thousands of kilometres away. Long-period swells (with wave periods exceeding 14–16 seconds) are especially potent, carrying significant energy even across vast oceanic expanses.
- They are known to cause:
 - » Coastal inundation
 - » Severe beach erosion
 - » Damage to infrastructure and ecosystems
- In India, the southwestern coast, particularly Kerala, frequently experiences the impact of these swells. Surprisingly, the southeastern coast, including Tamil Nadu and Andhra Pradesh, largely remains unaffected.



Key Findings:

- **Increase in Swell Heights:** Without Sri Lanka, some the swell heights impacting Andhra Pradesh could increase up to five fold.
- **More Frequent Extreme Swells:** Waves with periods over 15 seconds become much more common—events jump from ~10 in the observed scenario (with Sri Lanka) to ~24 in the no Sri Lanka simulation for Andhra Pradesh.
- **Differential Protection:**
 - » Tamil Nadu enjoys near total protection because of its position directly behind Sri Lanka relative to the origin of many Southern Ocean swells. These swells are blocked or dissipated when crossing or skirting the island.
 - » Andhra Pradesh is only partially protected. Some swell energy still reaches it due to waves traveling around Sri Lanka or refracted/diffracted paths. Thus, without Sri Lanka, Andhra Pradesh would see a much higher exposure to powerful swells.
- **Impacts on Coastal Hazards:** The increase in swell height and frequency implies greater risk of coastal erosion, flooding, damage to coastal infrastructure, and threat to communities in vulnerable low lying areas. The natural defence provided by Sri Lanka, therefore, has real life value in hazard reduction.

Significance for Coastal Risk Management

- **Coastal Planning and Infrastructure:** India's southeastern states must integrate Sri Lanka's shielding effect into:
 - » Risk assessment models
 - » Design of coastal infrastructure (e.g., sea walls, ports, roads)
 - » Disaster preparedness plans
- **Scenario Modelling:** Running "without Sri Lanka" simulations provides a worst-case baseline to estimate maximum swell impact. This can inform design safety margins for coastal defenses.

- **Long-Term Resilience:** Recognising and preserving natural protective features — such as Sri Lanka's landmass and regional vegetation — is crucial for sustainable and cost-effective climate resilience.

Conclusion:

A study by IITM Pune, INCOIS, and Mangalore University confirms Sri Lanka's landmass significantly shields Tamil Nadu and parts of Andhra Pradesh from powerful ocean swells. As coastal risks rise, integrating natural features like landforms and vegetation into planning offers a sustainable, cost-effective approach to strengthening India's coastal resilience.

NITI Aayog Report on Empowering India's Blue Economy

Context:

NITI Aayog has released a new strategy report titled "India's Blue Economy: Strategy for Harnessing Deep Sea and Offshore Fisheries" focused on unlocking the under utilised potential of its marine fisheries beyond the nearshore waters. The study outlines a phased roadmap to modernise the sector, make it ecologically sustainable, economically viable, and socially inclusive.

Key highlights:

- India is the second largest fish producer globally, supporting about 30 million livelihoods. In FY 2023 24, fish and fishery products exports were Rs.60,523 crore.
- India has a long coastline (11,098 km), 9 coastal states + 4 Union Territories, and an Exclusive Economic Zone (EEZ) of over 2 million sq. km.
- Yet deep sea and offshore fisheries (beyond coastal waters) remain largely untapped. There is an estimated potential yield of 7.16 million tonnes in deep sea and offshore fisheries (including both conventional and non conventional species).

- Currently, India has very few vessels registered for high seas fishing. For example, only 4 Indian flagged vessels are registered in the Indian Ocean Tuna Commission region, while Sri Lanka and Iran have over a thousand each.

Key Recommendations & Strategic Interventions:

Intervention	Details
Regulatory & Legal Reform	Introduce a unified law for fisheries in the EEZ (12 200 nautical miles), update vessel registration laws, define responsibilities of nodal bodies.
Institutional Strengthening & Capacity Building	Build scientific research capacity, real time data collection, mapping of fish stocks, vessel tracking and monitoring.
Fleet Modernisation & Infrastructure Upgrade	Incentives for better vessels (longer range, safety, cold storage), development of deep sea landing centres, connectivity.
Sustainability & Ecosystem based Management	Prevent overfishing, protect marine habitats, reduce by catch, use eco friendly fishing methods.
Finance & Resource Mobilisation	Dedicated Deep Sea Fishing Development Fund, leveraging PPPs, soft loans, insurance cover, aligning central and state schemes.
Community Participation & Inclusivity	Involve coastal fishing communities, fisher cooperatives, cluster models for ownership, skill development for fishers.

Challenges & Risks:

- **Regulatory gaps:** Currently, laws are fragmented. India lacks specific legislation governing fishing beyond 12 nautical miles into EEZ.

- **High costs & capital requirements:** Deep sea fishing vessels, processing, cold chains, monitoring systems are expensive. Small fishers may not afford them.
- **Environmental risks:** Deep sea ecosystems are sensitive; risk of overfishing, by catch, habitat damage. Data for stock assessments is inadequate.
- **Logistics & infrastructure deficits:** Lack of deep sea landing centres, limited cold storage, limited capacity to berth large vessels.
- **Governance & coordination:** Need for coordination between central & state governments, between maritime, fisheries, environmental, and defence agencies.

Conclusion:

NITI Aayog's report lays a well structured, phased roadmap to unlock India's deep sea and offshore fisheries potential. If implemented well, it could trigger a transformative shift in India's Blue Economy — increasing production, enhancing exports, supporting livelihoods, and preserving marine ecosystems.

Newest IUCN Red List

Context:

The International Union for Conservation of Nature (IUCN) recently released its newest Red List, painting a worrying picture for Arctic seals and bird species globally. The update, unveiled at the IUCN World Conservation Congress in Abu Dhabi on 10 October 2025, shows that climate change, habitat loss, and human activity are driving many species closer to extinction.

Key Findings:

- **Scale of Threatened Species**
 - » The Red List now includes 172,620 species evaluated, of which 48,646 are considered threatened with extinction.
 - » Among birds, 61% of all species globally are experiencing population declines — up from about 44% in 2016.

- **Seals Under Pressure:** Three Arctic seal species have had their status worsened:
 - » **Hooded seal (*Cystophora cristata*):** moved from Vulnerable to Endangered
 - » **Bearded seal (*Erignathus barbatus*):** moved from Least Concern to Near Threatened
 - » **Harp seal (*Pagophilus groenlandicus*):** also moved from Least Concern to Near Threatened
 - The primary threat is sea ice loss driven by global warming. Sea ice is essential for breeding, resting, moulting, foraging, and pup rearing.
 - As ice thins and its seasonal coverage shortens, these seals face shrinking habitat, reduced access to food, and increased exposure to human disturbances.
 - Other threats for seals include increased maritime traffic, oil and mineral extraction, industrial fishing bycatch, noise pollution, and hunting.
- **Birds in Steep Decline**
 - » Of ~11,185 bird species assessed, 1,256 (~11.5%) are now classified as globally threatened.
 - » The decline in bird populations is widespread and accelerating, with tropical regions particularly hard hit. Regions like Madagascar, West Africa, and Central America are facing serious habitat loss, especially in tropical forests, due to logging, agricultural expansion, and land use change.
 - » Among birds, there are also newer categories of “Near Threatened” and “Vulnerable” uplistings for some species, indicating worsening status.

Conclusion:

The latest IUCN Red List update is a sobering reminder that the biodiversity crisis is still intensifying. For Arctic seals, the threat is existential and tightly bound to climate change and loss of sea ice. For birds, the decline is widespread and driven by habitat loss, land use change, and human intervention. But while the outlook is grave, there are clear models of recovery and hope — if concerted global action is taken soon.

IUCN World Heritage Outlook Report

Context:

The IUCN World Heritage Outlook 4 was recently released, which found that climate change now stands as the single largest current threat to natural World Heritage sites, affecting a far greater number of them than previously understood.

Key Findings:

- 43% of sites (117 out of 271 natural World Heritage sites assessed) now face high or very high threat levels from climate change. This is up from 33% in 2020.
- Invasive alien species (IAS) are the second



most common threat, impacting about 30% of sites.

- Wildlife and plant diseases are rising threats — now affecting 9% of sites (up from 2% in 2020).
- The proportion of sites with a positive conservation outlook has dropped: only 57% are considered likely to have a positive future, down from 62% in 2020.

Impacts of Climate Change on World Heritage Sites:

- The specific impacts are multiple and interlinked:
 - » **Coral bleaching and reef degradation:** Rising ocean temperatures and acidification are damaging coral systems, such as the Great Barrier Reef.
 - » **Glacier retreat:** Melting ice reduces habitat for cold-adapted species, affects downstream water flow, disrupts ecosystems
 - » **More frequent and intense fires, droughts, and extreme weather:** These degrade ecosystems, lower resilience, and can trigger cascading ecological failures.
 - » **Shifting climates enabling spread of invasive species and pathogens:** As temperature and rainfall patterns change, organisms that were formerly limited by climate can spread, bringing new disease risks.

What Needs to Be Done:

- The IUCN report and related analyses suggest several actions:
 - » **Stronger climate adaptation:** Conservation plans need to explicitly incorporate adaptation, not just protection.
 - » Greater investment in site management, monitoring, and restoration. Many sites suffer from underfunding and weak governance.
 - » Inclusion of local and Indigenous knowledge and leadership in decision-making for conserving heritage sites.
 - » **Global cooperation** — climate change

is a transboundary problem; mitigation (reducing greenhouse gases), data sharing, and funding need international effort.

Conclusion:

The new findings from IUCN highlight an urgent warning: climate change has moved from being a looming potential threat to being a present, pervasive danger to nearly half of natural World Heritage sites. If decisive action is not taken to reduce emissions, build resilience, and invest in adaptation, many of Earth's most treasured natural landscapes and ecosystems may be lost.

India's Wild Elephant Population

Context:

India's wild Asian elephant population is now estimated at 22,446 according to the latest All India Elephant Estimation (SAIEE) 2021–25, making this the country's first comprehensive DNA based elephant census. This figure marks a reduction compared to the previous estimate of 27,312 in 2017, a drop of about 17.8%.

Spatial Distribution & State wise Numbers:

- The new data also maps elephants across India's major ecological zones:
 - » Western Ghats: 11,934 (the largest share)
 - » Northeastern Hills / Brahmaputra plains: 6,559
 - » Shivalik Hills / Gangetic Plains: 2,062
 - » Central India & Eastern Ghats: 1,891
- **In terms of states:**
 - » Karnataka: 6,013
 - » Assam: 4,159
 - » Tamil Nadu: 3,136
 - » Kerala: 2,785
 - » Uttarakhand: 1,792
 - » Odisha: 912

About threats to Elephant Conservation:

- The report highlights several ongoing challenges that threaten the viability of

elephant populations:

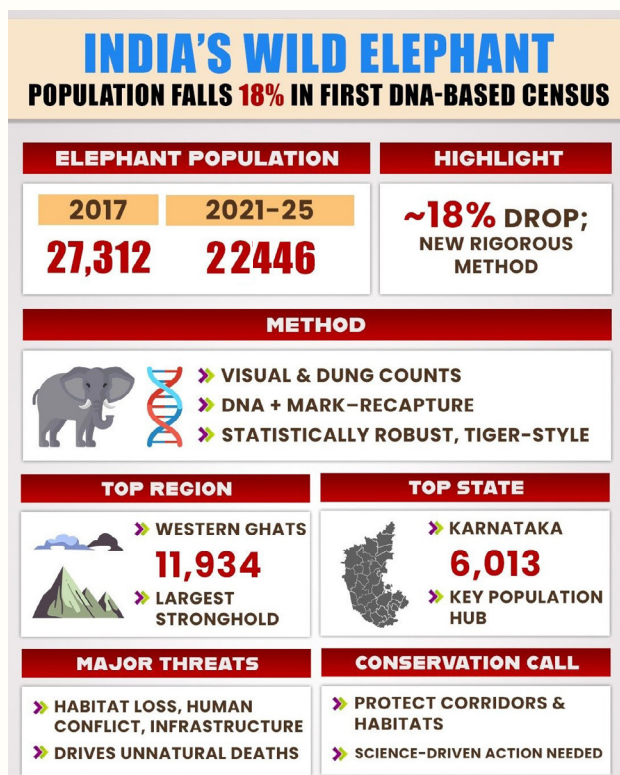
- » **Habitat loss and fragmentation:** Expanding agriculture, plantations, infrastructure (roads, railways, power lines), and urban encroachment are cutting elephant habitats into smaller, isolated patches, disrupting movement and genetic exchange.
- » **Corridor disruption:** Traditional migration corridors are blocked or degraded, impeding elephants' seasonal movements, feeding, and breeding.
- » **Human–elephant conflict (HEC):** As elephants stray into agricultural lands or human settlements, conflicts escalate, crop damage, property loss, retaliatory killings, electrocution, train collisions, and accidental deaths.

safe migratory routes.

- Launched public awareness campaigns like Gaj Yatra.
- Recognized the elephant as a National Heritage Animal, emphasizing its cultural and ecological significance.
- Initiated the creation of a genetic database for captive elephants to improve monitoring and health management.

About Asian elephant:

- The Asian elephant (*Elephas maximus*) is considered a keystone species because of its crucial role in maintaining the structure and diversity of forest ecosystems.
- By feeding on and dispersing seeds, elephants facilitate forest regeneration and maintain ecological balance.
- In India, the Asian elephant is:
 - » Listed as Endangered on the IUCN Red List due to declining population trends.
 - » Protected under Schedule I of the Wildlife Protection Act, 1972, granting it the highest level of legal protection.
 - » Included in Appendix I of CITES, which bans international trade in elephant parts.
- India has launched several initiatives, such as Project Elephant (1992) and the creation of 33 Elephant Reserves across 14 states, to safeguard elephant populations and their habitats.



Initiatives to address these threats:

- Implemented Project Elephant, which supports habitat management, anti-poaching, and conflict mitigation.
- Designated Elephant Corridors to ensure

Global Forest Resources Assessment 2025

Context:

The Food and Agriculture Organization (FAO) of the United Nations recently released the Global Forest Resources Assessment (GFRA) 2025, providing a comprehensive evaluation of the world's forest resources. This report is the 15th edition of the assessment, which has been conducted every five years since 1946.

Key Findings:

- The total global forest area is estimated at 4.14 billion hectares, which is about 32% of the Earth's land area (≈ 0.5 ha per person).
- Annual net forest loss (i.e., deforestation minus expansion) has declined: from around 10.7 million ha/year in the 1990s to about 4.12 million ha/year in 2015-25.
- Primary forests (undisturbed by humans) now cover about 1.18 billion ha, roughly one-third of total forest.
- Forest carbon stocks are estimated at 714 gigatonnes (Gt) globally, underlining the crucial role of forests in climate mitigation.
- About 20% of forests (~ 813 million ha) are legally protected, and over 55% (~ 2.13 billion ha) are under long-term management plans.
- Asia emerges as the only major region to register a net forest area gain between 1990 and 2025, largely driven by countries like China and India.
- The top five countries in terms of forest area are: Russia (~ 832.6 Mha), Brazil (~ 486 Mha), Canada (~ 368.8 Mha), United States (~ 308.9 Mha), and China (~ 227 Mha). These five together hold over half of the world's forests.

total forest area, advancing from its previous 10th place. Its forest cover is reported at about 72.7 million ha.

- India retains its 3rd position globally in terms of annual forest area gain for the period 2015-25, with a net gain of ~ 1.91 lakh ha/year.
- This improvement reflects India's afforestation programmes, community forest management, policy initiatives (Green India Mission, compensatory afforestation) and stronger monitoring using remote sensing and GIS.

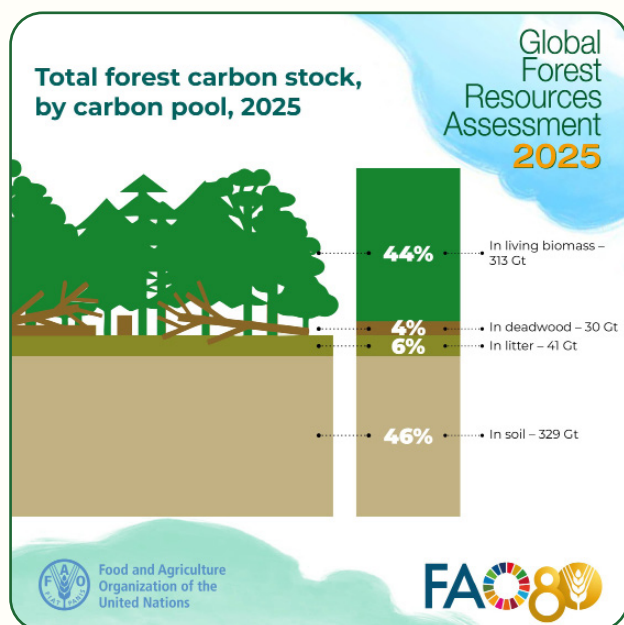
Why GFRA 2025 Matters for India & Policy?

- Forests play vital roles in carbon sequestration, biodiversity conservation, water cycle regulation, soil protection and livelihoods of forest-dependent communities.
- The data supports India's commitments under the Paris Agreement, Nationally Determined Contributions (NDCs) and the Global Biodiversity Framework.
- The slowing of global deforestation and India's performance present opportunities for India to assume leadership in forest restoration, climate mitigation and south-south cooperation.

Conclusion:

The GFRA 2025 delivers cautiously positive news: the world's forests cover about one-third of land area, and the rate of net forest loss is slowing. For India, the rise to 9th position globally and maintaining a top-3 rank in annual gain reflect sustained efforts and provide strong policy impetus. However, the real work lies ahead—ensuring forests are healthy, resilient and managed sustainably, while contributing to climate, biodiversity and human welfare goals.

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India's Performance:

- India now ranks 9th globally in terms of

State of Global Air 2025

Context:

The State of Global Air (SoGA) 2025 report was recently released by the Health Effects Institute (HEI) in collaboration with the Institute for Health Metrics and Evaluation (IHME) reveals that air pollution caused 7.9 million deaths globally in 2023.

Key findings:

- Air pollution remains the leading environmental risk factor for death worldwide, contributing to about 7.9 million deaths in 2023.
- Of those deaths, some 6.8 million (~86 %) were due to non-communicable diseases (NCDs) such as heart disease, lung cancer, chronic respiratory disease, diabetes and dementia.
- Around 36% of the world's population is exposed to annual average PM_{2.5} levels above 35 µg/m³ (the least-stringent interim target).
- Roughly 2.6 billion people (about one-third of humanity) are exposed to pollution from burning solid fuels (household cooking/heating) at home.



India-Specific Findings:

- India recorded about 2 million deaths in 2023 linked to air-pollution exposure.
- This marks about 43% rise since 2000 (when ~1.4 million deaths were recorded).
- The death-rate in India from air pollution is roughly 186 deaths per 100,000 people,

compared with about 17 per 100,000 in high-income countries.

- About 89%-90% of the air-pollution-related deaths in India are due to NCDs (heart disease, lung cancer, COPD, diabetes etc).
- Regional exposure: Approximately 75% of India's population live in areas where annual PM_{2.5} levels exceed the WHO interim target of 35 µg/m³.
- Geographic hotspots: States such as Uttar Pradesh, Maharashtra, Rajasthan, Bihar and West Bengal each recorded over 100,000 air-pollution-related deaths in 2023

Policy implications:

- The findings demand urgent, integrated action:
 - » Air-quality policy must converge with public-health policy, recognising air pollution as a core risk factor for NCDs.
 - » State-specific, locally-tailored action plans are essential, since exposure and sources vary by region.
 - » Enhanced monitoring and health-surveillance systems are critical to track progress and target interventions.
 - » Key sources like transport emissions, industrial output, crop-residue burning, urban dust and energy transitions, must be addressed for effective mitigation.

Conclusion:

The State of Global Air 2025 report paints a stark picture of the devastating impact of air pollution on global health. The report's findings underscore the need for a multi-faceted approach that includes strengthening air quality standards, investing in clean energy and transportation infrastructure, and promoting public awareness campaigns.

Cloud Seeding Over Delhi

Context:

The government of New Delhi recently initiated a pilot programme for cloud seeding over Delhi, aimed at inducing artificial rainfall to alleviate

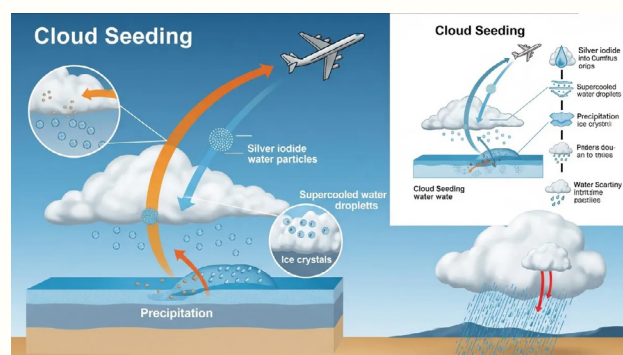
severe air pollution in the city. Flights by Indian Institute of Technology, Kanpur (IIT Kanpur) released seeding flares (silver iodide mixed with salt) into clouds over parts of Delhi. However, while the trial was carried out, no significant rainfall resulted from the operation, and the expected artificial rain did not materialise in a meaningful way.

Why Didn't It Cause Rain?

- The moisture content in the clouds was only about 15-20%, far below the ideal threshold for effective seeding. Without sufficient water content in the cloud, there will not be enough droplets to coalesce and fall as rain.
- For cloud seeding to work, clouds must have a certain vertical thickness, enough liquid water content, and favourable dynamics (e.g., updrafts, convergence).
- Delhi's skies at the time were dominated by dry, shallow cloud cover or simply lacked the right cloud type (especially in the winter/post monsoon season).

Implications:

- The trial shows the technical complexity of cloud seeding i.e. it is weather dependent, not a guaranteed rainfall machine.
- For Delhi, in its winter pollution season, the atmospheric conditions (dry air, shallow clouds) are not favourable for this method.
- Success of such interventions depends on the right meteorology + logistics + timing.



About Cloud Seeding:

- Cloud seeding is a form of weather modification aimed at enhancing

precipitation from clouds. It involves introducing certain substances into clouds to encourage condensation and increase rainfall.

- Globally, it has been used since the 1940s, with countries like the United States, China, Israel, and the UAE adopting it for water management.
- Cloud seeding relies on the principle of cloud microphysics. Clouds contain water droplets or ice crystals that may not be sufficient to precipitate naturally.
- Seeding agents such as silver iodide, potassium iodide, sodium chloride, or dry ice (solid CO_2) act as condensation or ice nuclei, facilitating droplet coalescence and precipitation.

Conclusion:

While the cloud seeding initiative in Delhi is a bold attempt to induce artificial rain and combat dangerous air quality levels, the early results remind us of the complex interplay of meteorology and technology. The absence of favourable clouds and sufficient moisture meant that rainfall did not materialise. For the city's long term pollution battle, cloud seeding may offer occasional relief—but the real victory will come from reducing emissions, improving public transport, controlling agricultural burning and managing dust and industrial sources.

8th Session of International Solar alliance the Assembly

Context:

The 8th General Assembly of the International Solar Alliance (ISA) was held in New Delhi, India, from 27 to 30 October 2025. Representatives of member countries, ministers, industry experts and civil society organizations participated in the session. Its aim is to promote the widespread use of solar energy worldwide, while ensuring that access to energy is inclusive and equitable for all.

About ISA Assembly:

- The Assembly is the apex decision-making body of the International Solar Alliance.
- It includes representatives from each member country, and convenes (typically annually) to:
 - » Set strategic direction for the Alliance.
 - » Approve budgets, work-programmes and major initiatives.
 - » Review progress of member countries and the Alliance's programmes on solar deployment.

Key Themes & Focus Areas in 2025:

- At this 8th session, the ISA has highlighted several key priorities:
 - » **Inclusive energy access:** Emphasis that solar is not only about power generation, but empowerment, especially of rural communities, women and marginalised groups.
 - » **Technology, policy and finance:** For example, the launch of ISA's "Global Floating Solar Framework" is planned at the Assembly, supporting utilisation of water bodies for solar.
 - » **Global South & vulnerable countries:** The Assembly will roll out a collective action plan that links solar energy deployment with job creation, livelihood generation, climate-resilience and social inclusion.
 - » **Environmental safeguards:** While pushing solar deployment, there is a recognition of the need to maintain ecological balance in regions being solarised.

About ISA:

- The International Solar Alliance (ISA) is a treaty based intergovernmental organisation established to promote the global deployment of solar energy, especially in countries with abundant sunlight.
- It was conceived by Narendra Modi (Prime Minister of India) and François Hollande (President of France) during the COP21 climate conference in Paris on 30 November 2015.
- Its headquarters is located in India

(Gurugram/Haryana) on the campus of the National Institute of Solar Energy.

- Membership is open to UN member states; as of now, over 100 countries are signatories or members.

Vision, Mission & Key Goals:

- **The ISA's vision:** "Let us together make the sun brighter".
- **The mission:** To deploy cost effective solar solutions globally, with a particular focus on Least Developed Countries (LDCs) and Small Island Developing States (SIDS).
- **A major strategic target:** Under the "Towards 1000" initiative, ISA aims to mobilise USD 1 trillion in solar investments by 2030, deliver energy access to 1 billion (1000 million) people, and install 1000 GW (1 terawatt) of solar capacity.

Conclusion:

The 8th Session of the ISA Assembly in New Delhi is more than a high-level gathering — it is a moment of global convergence around the role of solar energy in the clean transition, especially for underserved regions. With participation of over 120 nations and a strong agenda on inclusion, technology, finance and climate-action, the outcome of this Assembly could shape solar deployment trajectories for years to come.

Cyclone Montha

Context:

Cyclone Montha, a severe cyclonic storm, recently made landfall on the east coast of India, impacting the states of Andhra Pradesh and Odisha. The cyclone was named by Thailand, with "Montha" meaning "fragrant flower" in Thai.

Formation and Path:

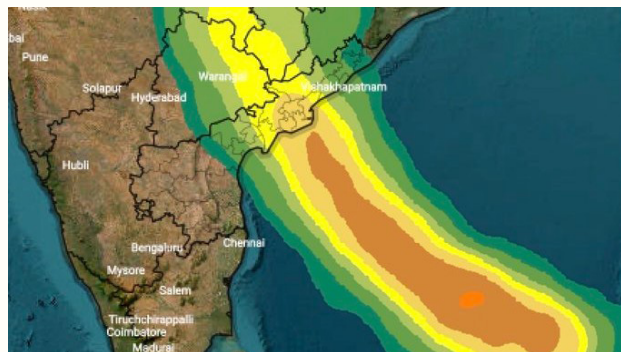
- Cyclone Montha originated from a low-pressure system over the Bay of Bengal, which gradually intensified due to high sea surface temperatures and favorable

atmospheric conditions.

- It moved north-northwestward, strengthening into a Severe Cyclonic Storm before making landfall near Kakinada, Andhra Pradesh, on October 28, 2025. IMD reported sustained wind speeds of 90–100 km/h, with gusts reaching 110 km/h.

Impact and Affected Regions:

- The cyclone caused heavy to very heavy rainfall across Andhra Pradesh, Odisha, and parts of Tamil Nadu.
- Storm surges led to flooding in several coastal areas. Over 76,000 people were evacuated to temporary shelters, and the government activated disaster response teams equipped with drones, power saws, and relief materials.
- Montha highlights how climate change and rising ocean temperatures are contributing to the increased frequency and intensity of tropical cyclones along India's eastern coast.



About cyclone:

- A cyclone is a large-scale weather system characterised by swirling winds around a region of low atmospheric pressure.
- **Key Features & Formation:**
 - » Cyclones rotate counterclockwise in the Northern Hemisphere and clockwise in the Southern Hemisphere.
 - » They typically form over warm ocean waters, where heat and moisture from the sea surface help fuel them.
 - » A classic structure of a strong tropical cyclone includes:
 - The eye: a calm, low-pressure centre.

- The eyewall: surrounding the eye, with the strongest winds and heaviest rains.
- Spiral rainbands: outward-spiralling bands of thunderstorms.
- » They draw in moist air near the sea surface, which rises, condenses and releases energy — driving the storm.

Classification & Naming:

- Cyclones come in different types depending on region and intensity: for example, in the Atlantic they are called hurricanes, in the western Pacific typhoons, in the Indian Ocean often simply cyclones.
- In India (and neighbouring areas) there's a classification system based on wind speeds.
- **For example:**
 - » Cyclonic Storm (CS): 63–87 km/h
 - » Severe Cyclonic Storm (SCS): 88–117 km/h
 - » Very Severe Cyclonic Storm (VSCS): 118–220 km/h
 - » Super Cyclonic Storm (SuCS): 222 km/h and above.

Conclusion:

Cyclone Montha underscores the urgent need for climate adaptation and disaster-resilient development in coastal India. While effective evacuation minimized casualties, the economic and ecological losses reaffirm the importance of integrating disaster preparedness, community awareness, and sustainable coastal management into national policy frameworks.



Science & Technology



Towards Digital Sovereignty: India's Quantum Cyber Mission

Introduction:

India has taken a significant step towards building quantum-resilient cybersecurity through two major developments. First, Indian scientists have successfully developed and certified a quantum technique for generating true random numbers — a process essential to the foundation of digital encryption. Second, the Government of India has released a whitepaper titled “Transitioning to Quantum Cyber Readiness”, outlining the policy roadmap for adapting to the disruptive impact of quantum computing. Together, these initiatives reflect India’s growing capability in quantum science, digital security, and strategic technology governance, areas that will shape the nation’s digital sovereignty in the coming decade.

Importance of Random Numbers in Modern Encryption:

- ❖ Random numbers are the invisible building blocks of digital security. Every encrypted password, bank transaction, and secure communication depends on randomly generated numbers to create encryption keys. These keys are meant to be unpredictable, ensuring that even powerful computers cannot reverse-engineer them.
- ❖ However, most digital systems today rely on pseudorandom numbers, which are generated through algorithms rather than through truly random physical processes. While these numbers appear random, they

are ultimately derived from a mathematical sequence, meaning they could, in theory, be reconstructed if the algorithm and its initial input values were known.

- ❖ Such pseudorandom systems have served well in the classical computing era. But with the advent of quantum computing, which can perform vast calculations at speeds unachievable by traditional machines, these encryption systems face a serious risk of becoming obsolete.



The Scientific Challenge: Achieving True

Randomness:

- ❖ In the natural world, randomness exists in processes that are fundamentally unpredictable — such as radioactive decay or the behaviour of subatomic particles. In the quantum realm, particles like photons and electrons exist in superposition, meaning they can occupy multiple states simultaneously. When measured, they randomly “choose” a definite state.
- ❖ This property forms the basis of the Quantum Random Number Generator (QRNG). By assigning numerical values ('0' or '1') to the random outcomes of quantum measurements, scientists can generate sequences of numbers that are genuinely unpredictable.
- ❖ However, a critical challenge has been certification — determining whether the randomness is indeed quantum in origin, or a result of technical noise, faulty devices, or external manipulation. A random sequence is only as trustworthy as its source. Ensuring device-independent verification of randomness, therefore, has been one of the most complex problems in quantum information science.

India's Breakthrough: Device-Independent Quantum Randomness:

- ❖ In a major achievement, Indian researchers have experimentally demonstrated device-independent quantum random number generation using a general-purpose quantum computer. This represents a global first in the certification of randomness in non-laboratory, real-world conditions.
- ❖ Traditional approaches to such experiments relied on entangled quantum particles separated by hundreds of metres to eliminate interference — an arrangement unsuitable for practical deployment. The Indian team, however, introduced a novel concept: instead of using spatial separation, they employed time separation within a single quantum particle to test violations of the Leggett–Garg inequality, a principle used to confirm the quantum nature of

randomness.

- ❖ By observing this violation, they proved that the randomness originated from genuine quantum phenomena rather than experimental imperfections. Crucially, the experiment was conducted on a commercially available quantum computer, demonstrating that the technique can function under realistic conditions with inherent noise and disturbances.
- ❖ This breakthrough marks a decisive transition from theoretical exploration to applied quantum technology, opening pathways for commercially deployable quantum-secure systems.

Implementation Strategy

Thematic Hubs (T-Hubs)

Indian Institute of Science (IISc)
Bengaluru

Indian Institute of Technology (IIT),
Madras along with the Centre for
Development of Telematics, New Delhi

Indian Institute of Technology
(IIT), Bombay

Indian Institute of Technology
(IIT), Delhi.



Quantum Domains of Four Thematic Hubs

Quantum
Computing

Quantum
Communication

Quantum
Sensing &
Metrology

Quantum
Materials &
Device

Implications of the Discovery:

- ❖ This scientific advancement carries both technological and strategic implications:
 - » **Quantum-Secure Cryptography:** True random numbers enable encryption systems that are theoretically unbreakable, laying the foundation for post-quantum cryptography.
 - » **National Security:** Military and intelligence networks could employ such systems to secure classified communications and prevent espionage

in the quantum era.

- » **Data Integrity and Privacy:** In a digital-first economy, quantum-certified randomness strengthens the protection of personal and financial data across platforms.
- » **Scientific Leadership:** The breakthrough represents a significant milestone for India's National Quantum Mission (NQM), aimed at advancing quantum computing, communication, and metrology.

Quantum Computing and the Encryption Threat Landscape:

- ❖ Modern encryption techniques such as RSA and Elliptic Curve Cryptography (ECC) rely on mathematical problems that are computationally difficult for classical computers to solve, such as prime factorization or discrete logarithms. These systems underpin global digital security.
- ❖ However, quantum computers can solve these problems exponentially faster through algorithms like Shor's algorithm. This capability could render existing encryption methods ineffective, enabling even state-level actors to decrypt sensitive information.
- ❖ The risk horizon for current encryption systems is thus rapidly advancing. The global community anticipates that within the next decade, quantum computers will be powerful enough to compromise today's digital infrastructure, from banking and healthcare to national security networks.

India's Whitepaper on Quantum Cyber Readiness:

- ❖ Recognizing this emerging threat, the Ministry of Electronics and Information Technology (MeitY), in partnership with CERT-In (Indian Computer Emergency Response Team) and a leading cybersecurity firm, has launched the whitepaper "Transitioning to Quantum Cyber Readiness."
- ❖ The whitepaper provides a comprehensive policy and technical framework for guiding India's transition towards quantum-resilient security systems. Its key objectives include:

- » **Assessment of Vulnerabilities:** Evaluating the susceptibility of existing cryptographic systems to quantum attacks.
- » **Migration Strategy:** Laying out a roadmap for adopting quantum-resistant algorithms and security protocols.
- » **Integration Framework:** Ensuring smooth incorporation of new algorithms into legacy systems while maintaining operational continuity.
- » **Sectoral Focus:** Prioritizing critical domains such as banking, finance, healthcare, and governance, where data sensitivity is highest.

CERT-In: The Pillar of India's Cyber Defence

- ❖ CERT-In functions as the national nodal agency for cybersecurity incident response under the Information Technology (Amendment) Act, 2008. Its responsibilities include:
 - » Monitoring and analysing cybersecurity incidents.
 - » Issuing forecasts, alerts, and vulnerability advisories.
 - » Coordinating national responses to major cyber threats.
 - » Publishing guidelines, whitepapers, and best practices on cyber hygiene.
- ❖ Through collaboration with private sector firms, academic institutions, and global cybersecurity networks, CERT-In plays a central role in enhancing India's readiness for quantum-era cybersecurity threats.
- ❖ The quantum readiness cannot be achieved by government efforts alone. It requires a multi-stakeholder approach combining public sector strategy, academic research, and private sector innovation.
- ❖ Private cybersecurity enterprises contribute forensic intelligence, incident response expertise, and real-world implementation capacity. This partnership model ensures a balanced ecosystem where policy guidance aligns with technological innovation, enabling a more robust and responsive

national cyber defence framework.

Quantum Readiness as a Strategic Imperative:

- ❖ India's rapid digital expansion, through initiatives like Aadhaar, UPI, and Digital India, has positioned it among the world's leading digital economies. However, this also makes the nation's infrastructure a prime target for sophisticated cyber threats.
- ❖ Becoming quantum-ready is, therefore, not just a technological goal but a strategic imperative. It ensures that the nation's economic, governance, and defence systems remain secure against future challenges.
- ❖ Moreover, quantum technologies extend beyond cybersecurity. They hold transformative potential in areas such as artificial intelligence, materials research, communication networks, and precision measurement. Investing in quantum resilience today creates the foundation for

broader technological leadership tomorrow.

Conclusion:

India's successful demonstration of true quantum-certified randomness and the release of the Quantum Cyber Readiness whitepaper together represent a comprehensive advancement — one grounded in both scientific innovation and strategic foresight. While the scientific breakthrough addresses the technical dimension of securing data through quantum laws, the policy initiative addresses the governance and institutional dimension of national preparedness. In combination, these developments reaffirm India's position as an emerging leader in the global quantum ecosystem. They embody the nation's commitment to ensuring that its digital transformation remains secure, sovereign, and future-ready in an era defined by quantum uncertainty.

Short Issues

New Siphon Powered Desalination

Context:

Researchers at the Indian Institute of Science (IISc) have recently unveiled a novel siphon powered desalination system that could transform how coastal and arid regions access clean drinking water. The design promises higher output, lower cost, and greater reliability compared to typical solar stills and other passive desalination methods.

About siphon powered desalination system:

- A siphon-powered desalination system is an advanced thermal technology that uses the principle of siphonage to convert saltwater into fresh, potable water.
- Developed by the Indian Institute of Science (IISc), it is designed to be more efficient,

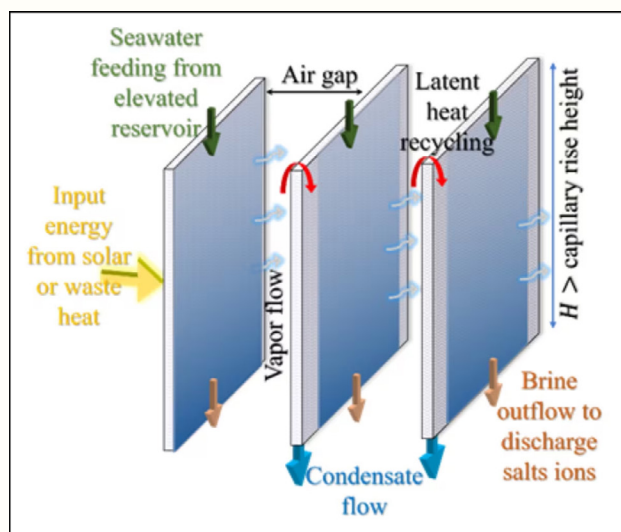
cost-effective, and scalable than traditional solar stills by eliminating issues like salt buildup.

How the system works?

- **Siphon-powered thermal process:** The system uses gravity (via a siphon) to draw in saline water, which spreads as a very thin film over a heated metal surface to encourage rapid evaporation.
- **Thin film evaporation + ultra narrow condensation gap:** Vapor produced from the heated film travels a tiny distance (about 2 mm) to a cooler surface where condensation happens, turning vapor back into freshwater.
- **Multistage setup for recycling heat:** Evaporator condenser pairs are stacked in stages so that heat from earlier stages is reused downstream, improving efficiency.

Key features and advantages:

- **High efficiency:** Produces over six liters of clean water per square meter per hour under sunlight, a significantly higher rate than conventional solar stills.
- **Scalable and sustainable:** The modular design allows for easy scaling, and the use of low-cost materials like aluminum and fabric makes it affordable.
- **Energy versatile:** The unit can operate using solar power or waste heat, making it suitable for off-grid communities, coastal regions, and disaster zones.
- **Salt resistance:** It can handle extremely high salt concentrations—up to 20%—without clogging, making it effective for treating hypersaline water and managing brine.
- **Environmental impact:** By relying on passive thermal energy sources, the system offers a sustainable and low-carbon solution for producing fresh drinking water.



Implications:

- If successful at scale, this technology could make a real difference:
 - » Boost access to potable water in remote/coastal and resource poor areas.
 - » Reduce dependence on expensive, electricity intensive reverse osmosis systems.
 - » Help communities in arid regions,

islands, or disaster areas where water infrastructure is limited.

- » Offer a greener alternative, using passive or low energy systems, thus reducing carbon footprint.

Conclusion:

The new siphon-powered desalination system offers a promising solution to the global water crisis. By providing a low-cost, efficient, and sustainable way to purify seawater, this technology could help secure safe drinking water for millions of people in water-stressed regions. With its potential to transform seawater into a dependable source of fresh water, this innovation marks an important step towards a thirst-free future.

Cough syrups with High DEG levels

Context:

Recently, three cough syrups sold in India—ColdRif, Respifresh TR, and ReLife—were found to contain very high amounts of a toxic chemical called diethylene glycol (DEG). After testing confirmed the contamination, authorities banned these syrups and started investigations. Sadly, many children who took these syrups fell seriously ill and some even died, especially in Madhya Pradesh. After testing confirmed the contamination, authorities banned these syrups and started investigations.

About Diethylene Glycol (DEG):

- Diethylene glycol (DEG) is a colorless, odorless, hygroscopic organic solvent used industrially in antifreeze, brake fluids, plastics, and other applications.
- In pharmaceuticals, excipients such as glycerine or propylene glycol may inadvertently be contaminated with DEG if low-grade or industrial-grade materials are used instead of pharmaceutical-grade. Regulatory standards generally allow DEG $\leq 0.1\%$ in medicinal preparations — above

that it is deemed unsafe.

- When people, especially children, swallow DEG, it can damage their kidneys and cause symptoms like vomiting, stomach pain, and even kidney failure. Children are more at risk because their bodies are smaller and still developing.

Lens on Quality

DEG, used in brake fluids, paints and plastics, can damage kidneys, liver, nervous system

Contaminated batch was made by Sresan Pharma in May 2025

Retailers, distributors, and hospitals told to remove stocks immediately and report any sales

Health ministry directed states to curb irrational use of cough syrups and step up quality checks



Systemic Gaps:

- Substandard or industrial-grade excipients (glycerine, propylene glycol) may be procured to cut costs, bypassing pharmaceutical-grade standards, thereby introducing DEG contamination.
- Disparities between regulations for domestic use and export: earlier, stricter testing was mandated for exported drugs, but domestic batches often escaped equivalent scrutiny.
- State drug control authorities may lack capacity, infrastructure, or technical competence to detect such contaminants at scale and with frequency.
- Delays or gaps in inspections, audits, lab testing, and follow ups allow faulty products to reach end-users.

How drugs and cough syrups regulated in India?

- In India, drug manufacturing is governed by a dual regulatory system involving both central and state authorities under the Drugs and Cosmetics Act, 1940.
- The Central Drugs Standard Control Organisation (CDSCO), led by the Drugs Controller General of India (DCGI), oversees national-level functions such as new drug approvals, clinical trials, import controls, and setting quality standards.
- At the state level, State Drug Licensing Authorities (SLAs) manage daily enforcement, including issuing manufacturing licenses, conducting factory inspections, and investigating violations within their jurisdictions.
- Manufacturers must follow Good Manufacturing Practices (GMP) outlined in Schedule M of the Drugs and Cosmetics Rules. Licenses are issued by state drug controllers after reviewing manufacturing processes and quality systems.

Way Forward:

- **Better Testing & Regulation:** Test every batch of syrups for toxins; upgrade drug labs; increase surprise inspections; enforce strict quality and vendor standards.
- **Legal Action & Accountability:** Punish offenders severely; enforce quick product recalls; provide compensation to victims.
- **Transparency & Public Awareness:** Create public databases of recalled medicines; send alerts to consumers and pharmacies; educate people about safe medicine use.
- **Focus on Children's Medicines:** Set higher safety standards for pediatric drugs; limit irrational cough syrup use in kids.
- **Improved Coordination:** Ensure central and state agencies work together; conduct regular audits; collaborate with global

health bodies to track risks.

Conclusion:

The discovery exposes serious gaps in India's drug safety system. Beyond the immediate tragedy, it highlights flaws in raw material quality, regulation, and accountability. Protecting children's health requires urgent reforms, strict actions, and constant vigilance to prevent such incidents from happening again.

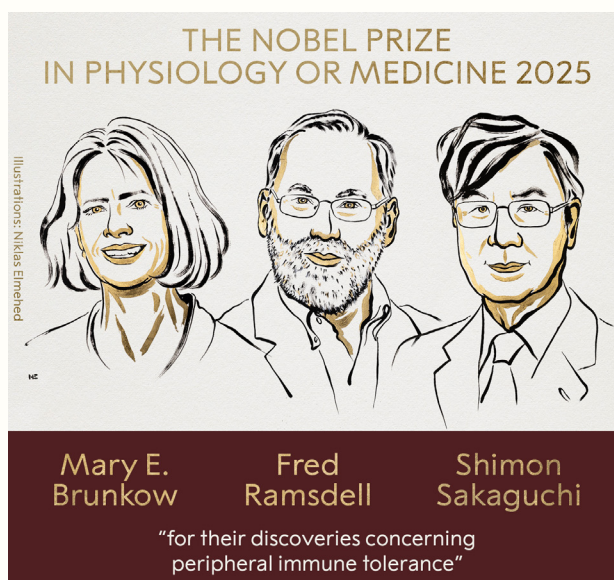
2025 Nobel Prize in Medicine

Context:

On October 6, 2025, the Nobel Prize in Physiology or Medicine was awarded jointly to Shimon Sakaguchi (Japan), Fred Ramsdell (USA), and Mary E. Brunkow (USA) for their groundbreaking discoveries related to immune tolerance, specifically, the identification and function of regulatory T cells (Tregs) and the FOXP3 gene. These findings have revolutionized our understanding of autoimmune diseases, cancer, and transplant medicine.

About Peripheral Immune Tolerance:

- The immune system must differentiate self from non self so it can attack invaders without harming normal tissue.
- Central tolerance is the elimination or inactivation of self reactive immune cells during their development (in thymus for T cells, bone marrow for B cells).
- However, some self reactive cells escape that filter. Peripheral tolerance is the system's additional safeguards outside central organs, preventing these escaped cells from mounting harmful attacks.
- The 2025 Nobel Prize in medicine specifically honors the mechanisms that regulate this peripheral check.



The Laureates' Contributions:

- **Regulatory T Cells (Tregs) – Shimon Sakaguchi**
 - » In the 1990s, Sakaguchi discovered a subset of immune cells that could suppress immune responses and prevent autoimmunity.
 - » These cells were named regulatory T cells (Tregs).
 - » His experiments showed that removing these cells in mice led to autoimmune disease, proving their critical role in peripheral immune tolerance.
- **FOXP3 Gene – Mary E. Brunkow & Fred Ramsdell**
 - » In 2001, Brunkow and Ramsdell identified the FOXP3 gene as a key regulator of Treg development and function.
 - » Mutations in FOXP3 were linked to IPEX syndrome, a rare but fatal autoimmune disorder in infants.
 - » FOXP3 is now known as the master control gene for Tregs.
 - » Together, these discoveries explain how the immune system controls itself to avoid attacking the body, while remaining capable of defending against real threats.

Implications in Health & Disease:

- **Autoimmune diseases:** Many such diseases (e.g. type 1 diabetes, lupus, rheumatoid arthritis) result from failures in immune regulation. Treg / FOXP3 insights open paths to targeted therapies that restore immune balance.
- **Transplantation:** Enhancing immune tolerance via Tregs may reduce or eliminate the need for lifelong immunosuppression, improving graft survival and reducing side effects.
- **Cancer immunotherapy:** Some tumors exploit Tregs to suppress immune attack. Modulating Treg activity could help tip the balance in favor of anti-tumor immunity.
- **Therapeutics & Clinical Translation:** Several biotech and clinical efforts are underway to harness Tregs (e.g., adoptive Treg transfer, gene editing, small molecule regulators). News reports note over 200 ongoing human trials exploring regulatory T cell therapies.

Conclusion:

The 2025 Nobel Prize in Medicine, awarded to Brunkow, Ramsdell, and Sakaguchi for unraveling how the immune system restrains itself (i.e., peripheral immune tolerance), is a landmark in immunology. It deepens our understanding of autoimmunity, transplantation, and cancer — and opens promising therapeutic paths.

2025 Nobel Prize in Physics

Context:

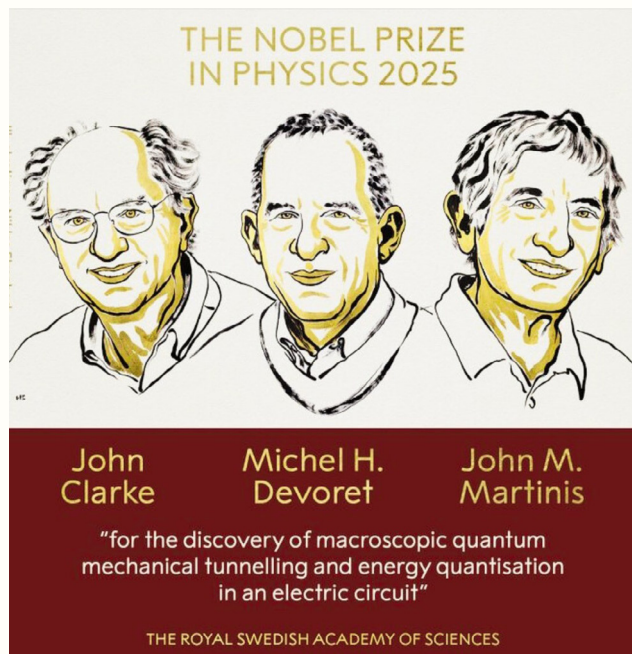
The 2025 Nobel Prize in Physics was recently awarded to John Clarke, Michel H. Devoret, and John M. Martinis for their groundbreaking experiments that demonstrated quantum mechanical phenomena on a macroscopic scale in 1980s. Their work laid the foundation for the development of quantum technologies, including quantum computing, cryptography, and advanced sensors.

Scientific Achievements of noble laureate:

- In the mid-1980s, the trio conducted experiments using superconducting circuits, particularly focusing on Josephson junctions, thin insulating barriers between two superconductors.
- These experiments revealed that quantum effects, such as tunnelling and energy quantisation, could manifest in systems large enough to be seen and touched. This was a significant departure from the traditional view that quantum phenomena were exclusive to microscopic particles.
- Their work demonstrated that large systems could behave like artificial atoms, leading to the concept of the qubit, the fundamental unit of quantum information. This realization has been instrumental in the development of quantum computing technologies.

Implications for Quantum Technologies:

- The discoveries by Clarke, Devoret, and Martinis have had profound implications for various fields:
 - » **Quantum Computing:** Their work on superconducting circuits has been foundational in the development of qubits, enabling the creation of quantum computers that can perform complex calculations beyond the capabilities of classical computers.
 - » **Quantum Cryptography:** The principles they uncovered are being applied to develop secure communication systems that are theoretically immune to eavesdropping.
 - » **Advanced Sensors:** Their research has led to the development of ultra-sensitive sensors used in various applications, including medical imaging and geological exploration.



About the Laureates:

- **John Clarke:** A professor at the University of California, Berkeley, Clarke is renowned for his work on superconducting quantum interference devices (SQUIDs), which have been pivotal in detecting extremely weak magnetic fields.
- **Michel H. Devoret:** Affiliated with Yale University and the University of California, Santa Barbara, Devoret has made significant contributions to the development of quantum circuits and the study of quantum coherence.
- **John M. Martinis:** Formerly leading Google's Quantum AI Lab, Martinis is now a professor at the University of California, Santa Barbara. He has been instrumental in advancing quantum computing technologies.

About Nobel Prize:

- The Nobel Prize is a prestigious international award established by Alfred Nobel, the Swedish inventor of dynamite. Created through his will in 1896, the prize honors individuals and organizations making outstanding contributions to humanity.
 - » First awarded in 1901, the prizes cover

six categories: Physics, Chemistry, Medicine, Literature, Peace, and Economic Sciences. Winners receive a gold medal, a diploma, and a cash prize.

- » The awards are presented annually on December 10, Nobel's death anniversary.

Conclusion:

The 2025 Nobel Prize in Physics is a testament to the importance of quantum mechanics in shaping our understanding of the world. Their groundbreaking research has paved the way for the development of new quantum technologies that will transform various aspects of our lives.

2025 Nobel Prize in Chemistry

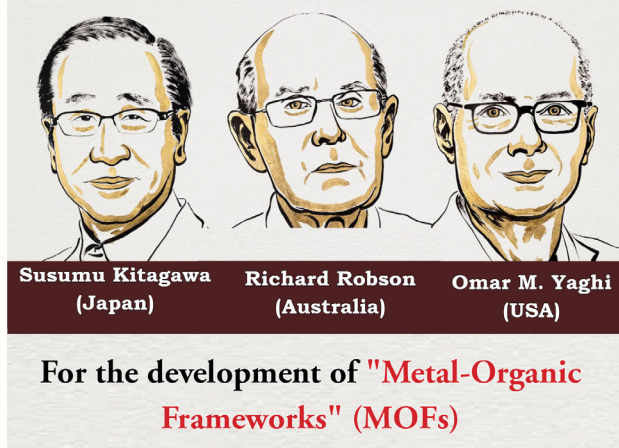
Context:

Recently, the Royal Swedish Academy of Sciences awarded the 2025 Nobel Prize in Chemistry to Susumu Kitagawa (Japan), Richard Robson (Australia) and Omar M. Yaghi (USA) "for the development of metal organic frameworks" (MOFs).

About Metal-Organic Frameworks (MOFs):

- Metal-Organic Frameworks (MOFs) are a class of crystalline porous materials made of metal ions or clusters connected by organic ligands. They are known for their exceptionally high internal surface area, low density, and tunable pore sizes, which enable a wide range of applications.
- **Key characteristics:**
 - » **High porosity and surface area:** MOFs are highly porous, with pore volumes capable of occupying over 90% of the crystal's volume. Some MOFs, like MOF-5, can have a surface area exceeding 3,000 square meters per gram.
 - » **Tunable structure:** The size and shape of a MOF's pores can be precisely controlled by choosing different organic linkers of varying lengths and geometries.

The Nobel Prize In Chemistry 2025



Contribution of laureates:

- Richard Robson's early experiments (late 1980s) with copper ions and multi armed organic ligands laid the conceptual foundation: linking nodes and linkers to build porous crystalline nets.
- However, early structures were unstable and lacked robustness. It was through subsequent work by Kitagawa and Yaghi that more stable, functional MOFs were designed and synthesised.

Key Applications & Global Significance:

The recognition of MOFs by the Nobel Prize underscores their multifaceted potential. Below are some of the key application domains and implications:

- **Carbon dioxide capture and climate mitigation**
 - » MOFs can selectively adsorb CO_2 from gas mixtures (e.g. flue gases), thus helping reduce greenhouse gas emissions and mitigate climate change.
- **Water harvesting & purification**
 - » Some MOFs have been designed to harvest moisture from arid air — extracting water vapor even at low humidity.
 - » This opens possibilities for decentralized water supply in arid regions. Further,

MOFs can help purify water by capturing toxins or contaminants.

- **Gas storage and separation**
 - » MOFs are excellent candidates for storing gases such as hydrogen or methane at mild pressures, owing to their high surface area and tunability. They can also separate gas mixtures (e.g. removing impurities, sieving).
- **Catalysis & chemical transformations**
 - » The porous frameworks can host catalytic active sites (either on metal nodes or within ligands), enabling reactions such as oxidation, reduction, or conversion of small molecules under milder conditions.
- **Energy & clean technologies**
 - » In the energy domain, MOFs are being explored for battery electrodes, supercapacitors, gas separation in fuel cells, and more.
- **Environmental & resource recovery**
 - » MOFs may assist in capturing pollutants, removing toxins or heavy metals, and enabling resource recovery from waste streams.

Conclusion:

The 2025 Nobel Prize in Chemistry, awarded to Kitagawa, Robson, and Yaghi for their pioneering work on metal organic frameworks, holds special significance in our era. It exemplifies how creative molecular architecture, when aimed toward sustainable ends, can open entirely new frontiers of chemistry and technology.

Rotavirus Vaccine

Context:

A recent study published in Nature Medicine has provided compelling evidence of the effectiveness of the indigenous rotavirus vaccine, Rotavac, in preventing gastroenteritis among children in India. The researchers conducted this observational, multicentre analysis across 31 hospitals in nine states between 2016 and

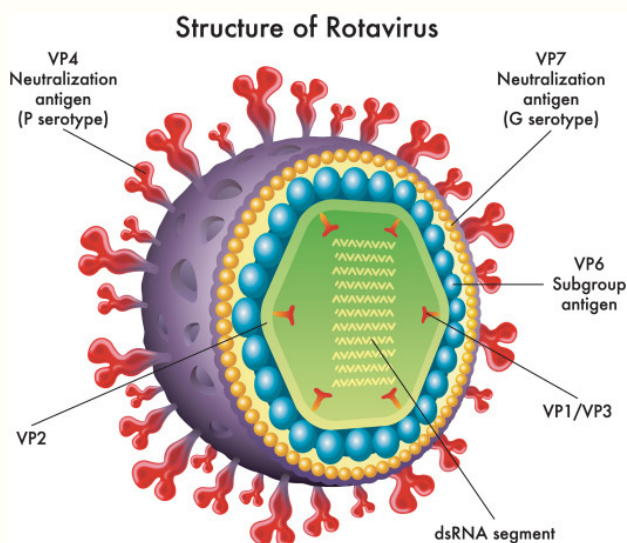
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Study Overview:

- The study aimed to evaluate the real-world effectiveness of Rotavac, an oral rotavirus vaccine introduced in India's Universal Immunization Programme (UIP) in 2016.
- Administered at 6, 10, and 14 weeks of age, the vaccine was provided free of cost to all eligible beneficiaries under the UIP.

Key Findings:

- **Vaccine Effectiveness:** The study reported an adjusted vaccine effectiveness of 54% against severe rotavirus gastroenteritis (SRVGE), aligning with the efficacy observed in earlier phase 3 clinical trials.
- **Sustained Impact:** The effectiveness remained consistent during the first two years of life, a critical period when children are most susceptible to rotavirus infections.
- **Hospitalization Rates:** A significant reduction in pediatric rotavirus-related hospitalizations was observed, indicating the vaccine's role in alleviating healthcare burdens.



About Rotavac:

- Rotavac is an oral vaccine to prevent rotavirus gastroenteritis, a highly contagious disease that causes severe diarrhea and vomiting in

infants and young children. The vaccine is given as a liquid administered by mouth.

- Rotavac was developed through a public-private partnership involving the Department of Biotechnology, Bharat Biotech, the U.S. National Institutes of Health, the Centers for Disease Control and Prevention, Stanford University, and PATH, with support from the Bill & Melinda Gates Foundation, among others.

Significance of the findings:

- Rotavirus is a leading cause of severe gastroenteritis in children under five years old, resulting in approximately 128,500 deaths annually worldwide.
- India accounts for about one-fifth of these global deaths. The introduction of Rotavac has been a significant step in reducing this mortality rate, especially in low-resource settings.

Conclusion:

The findings from this extensive study underscore the efficacy of the indigenous Rotavac vaccine in preventing severe rotavirus gastroenteritis among children in India. Its introduction into the UIP has not only contributed to a decline in hospitalization rates but also represents a significant achievement in public health, particularly in combating childhood mortality due to diarrheal diseases.

Communication Satellite CMS 03

Context:

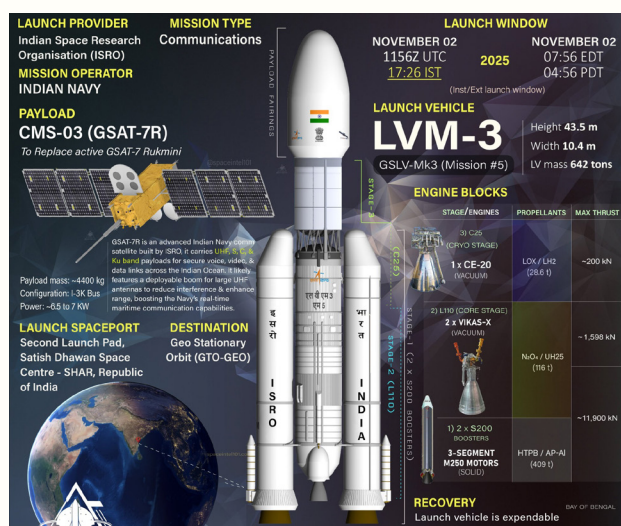
ISRO has scheduled the launch of the communication satellite CMS-03 on 2 November 2025 from its launch base at Satish Dhawan Space Centre (SDSC) in Sriharikota. The launch will be conducted using the heavy-lift rocket LVM3 M5 (also called LVM3) on its fifth operational flight.

About CMS-03:

- CMS-03 is described as a multi-band

communication satellite designed to serve India's landmass and surrounding oceanic regions, offering enhanced connectivity in C-band, extended C-band and Ku-band frequencies.

- The satellite is weigh about 4,400 kg, making it the heaviest communication satellite ever launched by India to a Geosynchronous Transfer Orbit (GTO) from Indian soil.
- The mission will place CMS-03 into GTO, from where it will manoeuvre into its geostationary position to provide continuous coverage.
- The LVM3 vehicle has already been transported to the launch pad (as of 26 October 2025) for final integration and pre-launch operations.



Strategic Importance:

- The satellite will bolster India's communication infrastructure, especially across maritime zones and remote regions, supporting both civil and strategic applications.
- From a defence perspective, CMS-03 is reported to enhance secure and resilient communications for maritime/blue-water operations. Some reports refer to it as the successor to the navy-dedicated GSAT-7 series.

- For ISRO, this mission underscores the maturity of the LVM3 rocket as the country's main heavy-lift launcher, and India's growing capability to deploy large satellites.

About LVM3 rocket:

- LVM3, formerly GSLV Mk III, is India's most powerful heavy-lift launch vehicle, developed by ISRO for deploying heavy satellites and deep-space missions.
- **Key features and capabilities**
 - » **Launch capacity:** Capable of launching approximately 4,000 kg to Geostationary Transfer Orbit (GTO).
 - » **Stage configuration:** A three-stage rocket consisting of two S200 solid strap-on motors, a L110 liquid core stage, and a C25 cryogenic upper stage.
 - » **Technology:** Features indigenous technology, including the S200 solid booster (among the largest in the world) and the CE20 cryogenic engine.
 - » **Versatility:** Has been used for both scientific missions like Chandrayaan-3 & commercial launches, demonstrating its reliability and versatility as a workhorse launcher.

Conclusion:

The upcoming launch of CMS-03 by ISRO is an important step in India's space-communications infrastructure, combining high payload mass, multi-band capability and strategic coverage across oceanic regions. Its success would strengthen India's position in space technology, heavy-lift launch capability, and secure communications for both civilian and defence purposes.

New Study on Autism Spectrum Disorder

Context:

A groundbreaking international study was recently published in Nature which shed new light on the complexities of autism

spectrum disorder (ASD). Researchers from the University of Cambridge have discovered that autism diagnosed in early childhood and autism recognized later in life may arise from distinct developmental and genetic patterns. This challenges the long-held assumption that autism is a single condition with a unified underlying cause.

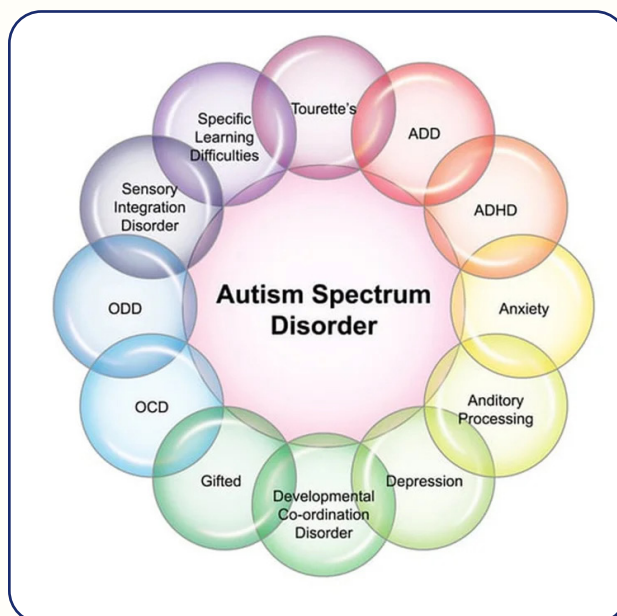
About two Pathways into Autism:

- The study analyzed data from nearly 50,000 autistic individuals and identified two distinct pathways into autism.
- One group showed difficulties in social interactions, communication, and behavior that were evident earlier in life and persisted into adulthood. These children were more often diagnosed in preschool or primary school.
- Another group showed far fewer difficulties at first, although these became more pronounced in adolescence, particularly as schoolwork and friendships became more demanding. These children tended to be diagnosed later in life.
- The genetic analysis revealed two partly distinct patterns of genetic variants across many people.
- One was linked more closely to earlier diagnoses and was associated with pronounced social and communication difficulties in early life but showed only weak genetic ties to conditions such as attention-deficit/hyperactivity disorder (ADHD) or depression.
- The other, linked to later diagnoses, carried stronger associations with ADHD, post-traumatic stress disorder, depression, and self-harm.

Implications for Diagnosis and Support:

- The study highlights the need for tailored support and awareness. Adolescents who receive a diagnosis later often struggle with mental health problems that can compound their challenges.
- Further it emphasises the need for urgent

support for co-occurring mental health conditions, which can have a huge impact on quality of life.



About Autism spectrum disorder (ASD):

- Autism spectrum disorder (ASD) is a complex neurodevelopmental disorder characterized by difficulties with social communication and interaction, and restricted or repetitive behaviors.
- It is called a "spectrum" because the symptoms, abilities, and needs vary widely from person to person.
- Symptoms generally appear in early childhood and can impact areas like social skills, learning, and behavior throughout life.
- Early intervention and support services can improve a person's health and well-being.

Conclusion:

The study highlights the complexity of autism, revealing distinct genetic roots for early and late diagnoses. By acknowledging this diversity, we can work towards better support and understanding for individuals with autism and their families.

India's Global Export Surge: An Analysis of Policy Reforms and Sectoral Diversification

Introduction:

India's export performance in 2025 marks a period of renewed confidence and strategic growth. Between April and August 2025, India's total exports—comprising both merchandise and services—rose by 5.19% compared to the same period in 2024, reaching USD 346.10 billion. This growth underscores India's expanding presence in global trade at a time when the world's overall export growth remains sluggish at around 2.5%.

India's exports have consistently outpaced global averages, reflecting the combined impact of government reforms, diversification of export destinations, technological advancement, and an increasingly competitive industrial base. The share of exports in India's GDP has risen from 19.8% in 2015 to 21.2% in 2024, highlighting the growing significance of foreign trade in national economic growth.

Overview of Trade Performance:

- ❖ In the first five months of FY 2025–26, India achieved 34.6% of its ambitious USD 1 trillion annual export target.
 - » **Merchandise exports:** USD 183.74 billion (↑2.31%)
 - » **Services exports:** USD 162.36 billion (↑8.65%)
 - » **Trade surplus in services:** USD 79.97 billion
- ❖ While merchandise exports reflect a gradual industrial recovery, the services sector remains the dominant driver of India's trade surplus.

Top Performing Sectors:

❖ **Electronic Goods:**

- » Electronic goods have emerged as India's fastest-growing export category, rising by 40.63% during April–August 2025. Exports increased by USD 5.51 billion over the previous year, reflecting the success of Make in India and Production-Linked Incentive (PLI) schemes.
- » Smartphones have been a game-changer—India has transformed from a net importer to a net exporter, with smartphone exports crossing INR 1 lakh crore in just five months of FY 2025–26, a 55% rise from the previous year. Key markets include the USA, UAE, China, Netherlands, and UK.

❖ **Other Cereals:**

- » Exports of “other cereals” such as barley, oats, quinoa, and fonio grew by 21.95%, driven by increasing global demand for nutritious and climate-resilient foods.
- » These crops, excluding rice, wheat, and maize, have opened new opportunities for Indian farmers, with major buyers being Nepal, Sri Lanka, UAE, Bangladesh, and Bhutan.

❖ **Meat, Dairy, and Poultry Products:**

- » This category recorded 20.29% growth, supported by schemes such as the Agriculture Export Policy and APEDA programs that assist in infrastructure and market development.
- » Major destinations include Vietnam, UAE, Egypt, Malaysia, and Saudi

Arabia. The rise reflects India's growing footprint in processed and high-value agri-exports.

❖ Tea:

- » Tea exports grew by 18.20% during April–August 2025, with a further 20.50% jump in August alone. India overtook Sri Lanka in 2024 to become the world's second-largest tea exporter.
- » Varieties like Assam, Darjeeling, and Nilgiri continue to dominate international markets, with black tea forming 96% of total shipments. Top buyers include UAE, Iraq, USA, Russia, and Iran.

❖ Mica, Coal, and Processed Minerals:

- » Exports of mica, coal, and other minerals rose by 16.6%, supported by global industrial demand. Major destinations include China, USA, UK, Oman, and Bangladesh.

❖ Engineering Goods:

- » Engineering goods, India's traditional export pillar, registered a 5.86% increase, from USD 46.52 billion to USD 49.24 billion. Exports include industrial machinery, valves, IC engines, boilers, and ATMs, with USA, UAE, Germany, UK, and Saudi Arabia as key markets.
- » Schemes like EPCG (Export Promotion Capital Goods) and the Market Access Initiative (MAI) continue to strengthen this sector by easing technology imports and market entry.

❖ Pharmaceuticals:

- » Pharmaceutical exports increased by 7.3%, reaching USD 12.76 billion. India remains a global supplier of affordable generics and specialty drugs, exporting to USA, UK, Brazil, France, and South Africa.
- » The Uniform Code for Pharmaceutical Marketing Practices (UCPMP) 2024 and National Medical Devices Policy, 2023 have improved quality and credibility in global markets.

❖ Textiles and Apparel:

- » India's readymade garments exports

rose by 5.78% to USD 6.77 billion. As the sixth-largest exporter of textiles and apparel globally, India holds a 4.1% share in global trade. Strong demand from USA, UK, UAE, Germany, and Spain reflects India's position in global value chains.

- » Efforts under Aatmanirbhar Bharat, promoting sustainable practices and local value addition, are further boosting the sector.



Key Export Destinations:

- ❖ **Hong Kong:** Exports grew by 26.19%, reflecting its role as a “Gateway to China”.
- ❖ **China:** Exports rose 19.65%, led by petroleum, engineering goods, and chemicals.
- ❖ **USA:** Remains India's largest single export market (USD 6.87 billion in August 2025).
- ❖ **Germany:** Growth of 11.73%, led by engineering goods and chemicals.
- ❖ **South Korea:** Exports increased by 9.69%, supported by the India-Korea CEPA.

Services Export:

- ❖ India's services exports continue to outperform, rising 8.65% in April–August 2025 and achieving a trade surplus of USD 79.97 billion. This surplus helped narrow the overall trade deficit.
- ❖ **Major growth sectors include:**

- » Information Technology and BPM services
- » Financial and consulting services
- » Tourism and professional services

❖ **Key Drivers:**

- » **Technology and Digital Economy:** India's tech sector contributes 7.3% of GDP, with the digital economy expected to form 20% of GDP by 2030.
- » **Youth Demographics:** With 65% of the population under 35, India benefits from a large skilled workforce, supported by the Skill India Mission.
- » **Liberalised FDI Regime:** Reforms such as raising the insurance FDI cap to 100% and trade negotiations like India-UK CETA are deepening market access for digital and professional services.

Government Initiatives Strengthening Exports:

- ❖ **Foreign Trade Policy (2023):** Simplifies authorisations, promotes remission-based incentives, and supports new market access.
- ❖ **RoDTEP Scheme:** Reimbursed Rs.58,000 crore till March 2025 for unrefunded taxes and levies.
- ❖ **Districts as Export Hubs:** 734 districts identified, with District Export Action Plans (DEAPs) prepared for 590.
- ❖ **Special Economic Zones (SEZs):** Generated Rs.14.56 lakh crore exports in FY 2024–25, up 7.37%.
- ❖ **TIES Scheme:** Develops export infrastructure like testing labs and warehouses.
- ❖ **PLI Scheme:** Attracted Rs.1.76 lakh crore investments, creating 12 lakh jobs and Rs.16.5 lakh crore in output by March 2025.
- ❖ **PM GatiShakti & National Logistics Policy:** Improved logistics rank to 38 (2023) from 44 in 2018, cutting costs and delivery times.
- ❖ **Digital Trade Facilitation:** Platforms such as National Single Window System, ICEGATE, and E-Commerce Export Hubs have simplified export operations, especially for MSMEs.

Challenges and Structural Bottlenecks:

- ❖ **Logistics Costs:** Still high at 13–14% of GDP compared to 8% in developed economies.
- ❖ **MSME Constraints:** Limited access to finance and export market intelligence.
- ❖ **Global Protectionism:** Rising tariff and non-tariff barriers, especially in EU markets.
- ❖ **Dependence on a Few Markets:** USA, UAE, and EU account for nearly half of total exports.
- ❖ **Skill and Technology Gap:** Value-added manufacturing remains limited outside a few sectors.
- ❖ **Volatile Global Conditions:** Geopolitical tensions, Red Sea disruptions, and slowing Western economies may moderate export demand.

Way Forward:

- ❖ Diversify export basket toward high-value segments such as semiconductors, green hydrogen, and defence manufacturing.
- ❖ Strengthen MSME linkages through credit access, digital trade facilitation, and skill training.
- ❖ Deepen trade integration via timely completion of FTAs and regional supply chain partnerships.
- ❖ Invest in logistics and ports through PPP models to cut costs and boost reliability.
- ❖ Promote sustainable exports by aligning with global ESG and carbon border norms.

Conclusion:

India's export surge in 2025–26 reflects both strategic intent and structural progress. A combination of policy reforms, digital infrastructure, sectoral diversification, and strong service-sector leadership has positioned India as an increasingly confident global trading power. However, sustaining this trajectory will depend on addressing logistical inefficiencies, boosting MSME competitiveness, and mitigating external risks. With coordinated policy action and private sector dynamism, India is poised to transform its export-led growth into a cornerstone of its long-term economic resilience.

Short Issues

RBI Constitutes Payments Regulatory Board

Context:

The Reserve Bank of India (RBI) has formally constituted a six member Payments Regulatory Board (PRB) to regulate and supervise India's payment and settlement systems. This new Board replaces the earlier Board for Regulation and Supervision of Payment and Settlement Systems (BPSS).

About Payments Regulatory Board (PRB):

- The PRB is part of a regulatory re structure aimed at strengthening oversight of India's payment infrastructure.
 - » The Board is envisaged to ensure greater accountability, clearer governance, transparency, and responsiveness in the evolving payments ecosystem.
 - » It replaces the BPSS, which was a committee under the RBI's Central Board, and which had five members.
 - » Unlike BPSS, the PRB includes representatives from the central government in its composition.

Composition & Structure:

The PRB is constituted under the Payments Regulatory Board Regulations, 2025. Its membership and functioning are as follows:

Role	Member / Nominee	Status / Notes
Chairperson	RBI Governor	Ex officio
Member	Deputy Governor in charge of Payment & Settlement Systems	Ex officio
Member	One RBI officer nominated by the Central Board	Ex officio

Members (3)	Central Government nominees	For the first time, the
Invitees	Experts in payments, IT, law, etc.	May be permanent or ad hoc invitees; the RBI's Principal Legal Adviser is a permanent invitee.

Voting, Meetings & Powers:

- **Voting:** Each member has one vote. Decisions are by majority vote. In case of a tie, the Chairperson (RBI Governor) holds the casting vote.
- **Meetings:** The PRB is to meet at least twice a year, under ordinary circumstances.
- **Invitees & Expertise:** The Board may invite domain experts in payments, IT, or law to its meetings — either as permanent or ad hoc invitees. The Principal Legal Adviser of the RBI is a permanent invitee.
- **Jurisdiction & Replacement:** The PRB will have jurisdiction over oversight, regulation, and supervision of payment systems in India, effectively stepping into the role held by BPSS.

Significance & Implications:

- **Greater Accountability & Coordination:** The inclusion of government nominees ensures closer alignment between regulatory policy (RBI) and government objectives (DFS, MeitY) especially in digital payments, financial inclusion, and tech regulation.
- **Regulatory Clarity in Payments:** As the payments ecosystem gets more complex — UPI, prepaid instruments, tokenization, settlement networks, payment aggregators, etc. — a dedicated, empowered board offers clearer oversight.
- **Room for Innovation & Expertise:** The

ability to invite experts in technology, law, and payments allows the Board to tap specialized knowledge crucial to a rapidly evolving domain.

Conclusion:

The RBI's decision to constitute the PRB demonstrates its commitment to strengthening the regulatory framework for digital payments in India. With its enhanced powers and independent structure, the PRB is well-equipped to oversee the rapidly evolving payments landscape and ensure the stability and security of transactions.

Trade Watch Quarterly

Context:

On 6 October 2025, NITI Aayog released the fourth edition of its flagship trade monitoring publication, Trade Watch Quarterly (Q4, FY25), in New Delhi. This edition offers a comprehensive assessment of India's trade performance in the fourth quarter, sectoral trends, export diversification prospects, and policy insights to strengthen India's external sector resilience.

Key Highlights from Q4 FY25 Trade Watch:

■ **Trade Numbers & Growth:**

- » India's total trade for Q4 FY25 stood at USD 441 billion, registering about 2.2% year-on-year growth.
- » Merchandise exports showed pressure because of subdued global demand in some commodity sectors, but selective sectors like electrical machinery, pharmaceuticals, cereals delivered strong performance.
- » Imports rose modestly, driven by demand for capital goods and intermediate inputs.

■ **Leather & Footwear:**

- » A focused chapter examines the leather & footwear sector—an employment-intensive segment (employing ~4.4 million).

- » While India holds strengths in processed leather and niche segments, its share in the global leather & footwear market is modest (~1.8%).
- » The report recommends cluster-based modernization, greater adoption of sustainable and design-driven practices, and better R&D linkage.

■ **Trade Diversification & Strategy:**

- » The report emphasizes the urgency of export diversification—both in markets and products—to reduce risk from dependence on a few geographies or commodity segments.
- » It also notes that services exports continue to perform robustly, helping cushion merchandise volatility.
- » The report highlights the need for agility in adapting to shifting global demand, reworking supply chains, and tapping emerging sectors (EV components, green tech, electronics).

About NITI Aayog:

- **NITI Aayog**, short for the National Institution for Transforming India, is the premier public policy think tank of the Government of India. Established on January 1, 2015, it replaced the erstwhile Planning Commission. Unlike its predecessor, NITI Aayog adopts a bottom-up approach, emphasizing cooperative federalism by actively involving State Governments in the economic policy-making process.
- **Key Functions:** NITI Aayog operates through various divisions and initiatives:
 - » **Policy and Programme Framework:** Develops strategic and long-term policy and programme frameworks and initiatives.
 - » **Cooperative Federalism:** Fosters cooperative federalism through structured support initiatives and mechanisms with the States on a continuous basis.
 - » **Monitoring and Evaluation:** Actively monitors and evaluates the

implementation of programmes and initiatives.

- » **Think Tank, and Knowledge and Innovation Hub:** Acts as a think tank and knowledge and innovation hub, providing advice and encouraging partnerships between key stakeholders and national and international think tanks.
- » **State Support Mission:** An umbrella initiative aimed at fostering structured and institutionalized engagement with States and Union Territories to assist them in achieving their socioeconomic goals by 2047

Conclusion:

The "Trade Watch Quarterly" report underscores India's cautious resilience in the face of global economic challenges. With a focus on strategic policymaking, innovation, and market diversification, India is well-positioned to capitalize on emerging opportunities and strengthen its trade performance. The report serves as a valuable resource for policymakers, industry, and academia, offering actionable insights to navigate the complexities of global trade.

Roadmap on AI for Inclusive Societal Development

Context:

NITI Aayog has recently released a report titled "AI for Inclusive Societal Development," developed in collaboration with Deloitte. The report outlines a strategy for deploying artificial intelligence (AI) and other frontier technologies to benefit India's 490 million informal workers, who constitute nearly half of the nation's GDP.

Key Highlights of the Report:

- **Mission Digital ShramSetu:** A national mission proposed to create a roadmap and ecosystem that makes AI accessible, affordable, and impactful for every worker.
- **Leveraging Frontier Technologies:** The report emphasizes the potential of AI, blockchain, immersive learning, and other frontier technologies to address structural barriers faced by informal workers, such as financial insecurity, limited market access, and lack of skilling.
- **Inclusive Growth:** The report highlights the need for inclusive growth, warning that delays in AI adoption and digital skilling could result in informal workers' average annual income stagnating around \$6,000 by 2047, far below the \$14,500 threshold required for India to achieve high-income status.

Objectives of Mission Digital ShramSetu:

- **Digital Skilling:** Provide adaptive, accessible, and demand-driven learning opportunities for informal workers.
- **Promoting Digital Dignity:** Position technology as a tool for empowerment rather than exclusion.
- **Multi-Stakeholder Collaboration:** Unite government, industry, academia, and civil society to address complex challenges faced by informal workers.

Significance of the Report:

- The report underscores the importance of collaboration and collective action to transform the lives of India's informal workers. By harnessing the potential of AI and frontier technologies, India can unlock new opportunities for growth, productivity, and inclusivity.

About India's informal sector:

- India's informal sector is the backbone of its economy, employing over 90% of the total workforce and contributing nearly 50% of GDP, as per the Economic Survey 2022-23. Despite its critical role, this sector remains largely invisible in policy discussions and economic planning.

India's Informal Sector:

- According to the International Labour

Organization (ILO), India has one of the world's largest informal economies, with over 400 million workers engaged in low-paying, precarious jobs without social security or legal protections.

- The NITI Aayog highlights that the informal sector is a significant driver of employment, particularly in rural areas, where 80% of informal workers are concentrated.

Conclusion:

The Roadmap on AI for Inclusive Societal Development by NITI Aayog is a significant shift in thinking about AI policy in India—not merely as a tool for formal sectors or elite innovation, but as a transformative lever for hundreds of millions of informal workers left behind by traditional development trajectories. The proposed Mission Digital ShramSetu encapsulates this vision, aiming to build infrastructure, trust, skills, and enablers so that AI can help raise incomes, improve dignity of work, and play its part in the country's goal of Viksit Bharat 2047.

India-EFTA Trade and Economic Partnership Agreement (TEPA)

Context:

The India-European Free Trade Association (EFTA) Trade and Economic Partnership Agreement (TEPA) recently came into effect on October 1, 2025, marking a significant milestone in India's trade diplomacy.

About the TEPA:

- The India-EFTA Trade and Economic Partnership Agreement (TEPA) is a free trade agreement signed between India and the European Free Trade Association (EFTA) on March 10, 2024.
- EFTA o Iceland, Liechtenstein, Norway, and Switzerland. The agreement aims to boost trade and investment, create jobs, and ensure market access.

Key Features of the TEPA:

- **Tariff Liberalization & Market Access:**
 - » EFTA states will eliminate or reduce tariffs on a large share of goods exported from India.
 - » India, in return, grants concessions on about 82.7% of its tariff lines, covering 95.3% of EFTA exports.
 - » However, “sensitive sectors” such as dairy, coal, and certain agricultural items remain excluded to protect domestic interests.



- **Investment Commitment:** A standout feature is the binding investment pledge by EFTA nations of USD 100 billion over 15 years. The schedule is approximately:
 - » USD 50 billion in the first 10 years
 - » USD 50 billion in the remaining 5 years
- **Other Areas of Cooperation:** The TEPA is comprehensive in scope, covering:
 - » Trade in services
 - » Investment promotion & facilitation
 - » Intellectual property rights (IPR)
 - » Sustainable development & trade environment

- » Customs procedures, rules of origin, trade facilitation
- » Dispute settlement, government procurement, competition policy, etc. Additionally, India has established a dedicated EFTA Desk (a single-window facilitation mechanism) to aid EFTA businesses setting up or expanding operations in India.



INDIA-EUROPEAN FREE TRADE ASSOCIATION (EFTA)

TRADE & ECONOMIC PARTNERSHIP AGREEMENT (TEPA) COMES INTO FORCE

Marine product exports to grow, textiles & clothing sector will have opportunity to capture untapped EFTA markets

Sectors like leather & footwear, sports goods & toys, engineering goods, gems & jewellery, etc. will benefit

MASSIVE SECTORAL GAINS

Expected Impact & Benefits:

For Indian Economy & Industry

- » **Boost to Exports:** Indian exporters in textiles, leather, pharmaceuticals, processed foods, and machinery could gain enhanced access to high income European markets.
- » **Attract Foreign Investment:** With clear commitments and market access, India may see a surge in FDI, especially in sectors where EFTA firms bring advanced technology and know how.
- » **Employment Generation:** The projection of 1 million direct jobs can support

growth in industrial clusters and ancillary sectors.

For EFTA / European Firms

- » **Diversification:** Enhanced access to India's fast-growing market allows EFTA firms to diversify supply chains and reduce dependence on traditional trade routes.
- » **Stable Framework:** With legal protections, smoother dispute resolution, and investment guarantees embedded in TEPA, firms may find India a more secure destination.
- » **Services & Tech Linkages:** Opportunities in services (finance, tech, health) and collaboration with Indian firms (esp. in software, biotech) may expand.



INDIA-EUROPEAN FREE TRADE ASSOCIATION (EFTA)

TRADE & ECONOMIC PARTNERSHIP AGREEMENT (TEPA) COMES INTO FORCE

India's electronics sector to be big beneficiary of TEPA, will provide new avenues to MSMEs & OEMs

Opportunities for exports of medical electronics, EV components, energy-efficient electronics, etc.

BIG THRUST TO ELECTRONICS EXPORTS

Conclusion:

The India-EFTA TEPA marks a new era in trade relations between India and EFTA countries. This is India's first Europe facing trade agreement with binding commitments, signalling its deeper integration into global trade architecture. The

compact complements India's efforts to negotiate FTAs with the EU, and other blocs, enhancing its strategic leverage. It also helps India present itself as an attractive nexus between developed European economies and the rapidly growing economies of Asia and Africa.

Minimum Support Prices (MSP) for Rabi Crops

Context:

On October 1, 2025, the Cabinet Committee on Economic Affairs (CCEA), chaired by Prime Minister Narendra Modi, approved an increase in the Minimum Support Prices (MSP) for all mandated Rabi crops for the 2026-27 marketing season. This decision aims to ensure remunerative prices for farmers and encourage the cultivation of essential crops.

MSP of Key Rabi Crops:

- The approved MSPs for major Rabi crops are as follows:
 - » **Wheat:** Rs.2,585 per quintal (an increase of Rs.160 from the previous season)
 - » **Barley:** Rs.2,150 per quintal (an increase of Rs.170)
 - » **Gram (Chana):** Rs.5,875 per quintal (an increase of Rs.225)
 - » **Lentil (Masur):** Rs.7,000 per quintal (an increase of Rs.300)
 - » **Rapeseed and Mustard:** Rs.6,200 per quintal (an increase of Rs.250)
 - » **Safflower:** Rs.6,540 per quintal (an increase of Rs.600)

Rationale behind hike in MSP:

- Ensure fair and remunerative prices for farmers
- Encourage the cultivation of pulses and oilseeds
- Promote self-sufficiency in essential agricultural commodities

Implications for Farmers:

- The increased MSPs are expected to:
 - » Provide better returns to farmers,

thereby improving their income levels

- » Encourage the cultivation of pulses and oilseeds, which are vital for nutritional security
- » Reduce dependence on imports of these commodities

MSP FOR RABI CROPS

- Cabinet approves increase in MSP for all mandated Rabi Crops for Marketing Season 2026-27
- Absolute highest increase in MSP has been announced for Safflower at ₹600 per quintal followed by Lentil (Masur) at ₹300 per quintal
- MSP raised by ₹250 for Rapeseed & Mustard, ₹225 for Gram, ₹170 for Barley, and ₹160 for Wheat per quintal



S. No.	Crops	MSP RMS 2026-27	Cost of Production RMS 2026-27	Margin over cost (in percent)	MSP RMS 2025-26	Increase in MSP (Absolute)
1	Wheat	2585	1239	109	2425	160
2	Barley	2150	1361	58	1980	170
3	Gram	5875	3699	59	5650	225
4	Lentil (Masur)	7000	3705	89	6700	300
5	Rapeseed & Mustard	6200	3210	93	5950	250
6	Safflower	6540	4360	50	5940	600

Rs. per Quintal

About Minimum Support Price (MSP):

- Minimum Support Price (MSP) is the minimum price at which the government guarantees to purchase certain crops from farmers.
- It is considered a protective measure that ensures farmers receive a price that is remunerative and protects them from market fluctuations that might lead to losses.

Key Features of MSP:

- **Government Procurement:** The MSP is the price at which government agencies, such as the Food Corporation of India (FCI) and other state agencies, procure crops from farmers.
- **Recommendations by CACP:** The Commission for Agricultural Costs and Prices (CACP), which operates under the Ministry of Agriculture, is responsible for recommending MSPs. The commission

evaluates the cost of production, trends in market prices, and other factors to determine an appropriate MSP for various crops.

- » It primarily recommends MSPs for 23 crops, including 22 mandated crops and the Fair and Remunerative Price (FRP) for sugarcane.
- » The MSP is for 22 mandated crops including 14 Kharif, 6 Rabi, and 2 commercial crops. However, currently MSP is declared for 25 crops, including toria and de-husked coconut.
- **No Statutory Backing:** While MSP plays a critical role in safeguarding farmers' income, there is no statutory backing or law mandating its enforcement. The government is not legally obligated to procure crops at the MSP, even if market prices fall below the announced price. Hence, the MSP acts as a guideline rather than a legally enforceable price.

Securities Transaction Tax

Context:

The Supreme Court of India has recently decided to entertain a challenge to the constitutional validity of the Securities Transaction Tax (STT). The Court has issued a notice to the Centre, asking for a response within four weeks.

About (Securities Transaction Tax) STT:

- Securities Transaction Tax (STT) is a tax levied on the value of securities transacted through recognized stock exchanges in India.
- It was introduced in 2004 under the Finance Act, primarily to curb tax evasion in capital gains.
- For delivery-based equity trades, STT is currently charged at 0.1% on both buy and sell sides.

What are the features of STT?



The Core Legal Challenge:

- **Double Taxation:** The petitioner argues that STT results in double taxation: once in the form of STT on the transaction value, and again via capital gains tax on profits from that transaction.
 - » The contention is that taxing both the trade event and the gain from that event violates principles of tax equity.
- **Tax on Act, Not Profit:** Unlike conventional taxes that are imposed on net income or gains, STT is levied on the mere act of trading—even if the trade results in a loss.
 - » The petitioner calls it punitive or deterrent in nature, especially since it applies regardless of profit or loss.
- **Violation of Fundamental Rights:** The petition asserts STT breaches Article 14 (equality before law), Article 19(1)(g) (right to trade or practice a profession), and Article 21 (right to life, dignity).
 - » The argument is that arbitrary taxation on the act of trade, regardless of outcome, impinges on these rights.
- **Lack of Adjustment or Refund Mechanism:** A key grievance is that STT does not allow adjustment or refund against one's final tax liability, unlike TDS (Tax Deducted at Source) in other contexts, where excess deduction is adjusted or refunded.

Conclusion:

The Supreme Court's decision to examine the constitutional validity of the Securities Transaction Tax (STT) marks a significant

moment in India's fiscal and capital markets jurisprudence. This case will determine the balance between the state's power to tax and individual rights, setting a precedent for the limits of transactional taxation in India.

Nobel Prize in Economic Sciences

Context:

The Royal Swedish Academy of Sciences awarded the 2025 Nobel Prize in Economic Sciences to Joel Moky, Philippe Aghion, and Peter Howitt for their pioneering contributions to our understanding of innovation driven economic growth and how sustained growth becomes possible in the modern economy.

Core Contributions of the Laureates

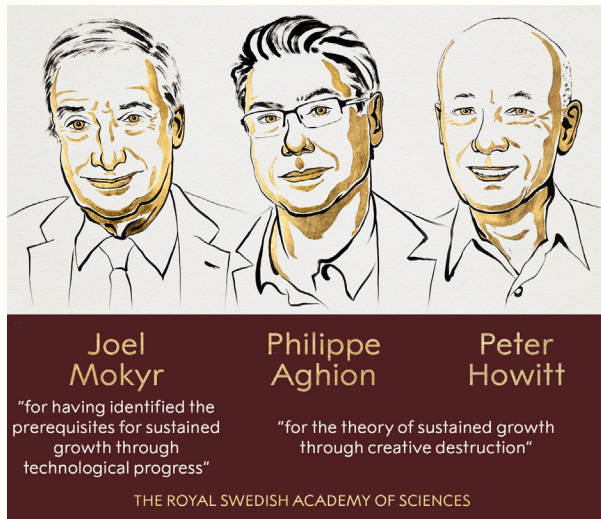
- **Joel Moky:**
 - » Moky, a professor at Northwestern University, was awarded half of the prize for identifying the prerequisites for sustained growth through technological progress. His research in economic history showed that a continual flow of "useful knowledge" is necessary for sustained growth, which includes propositional knowledge (understanding why something works) and prescriptive knowledge (practical instructions).
- **Philippe Aghion and Peter Howitt:**
 - » Aghion and Howitt shared the other half of the prize for developing the theory of sustained growth through creative destruction. Their mathematical model reveals the mechanisms of sustained growth, showing how newer, superior products continuously enter markets and displace companies selling older versions.

Significance:

- Together, the three economists explained how the world moved from a time of slow or no growth to a time where growth became

the "new normal."

- This happened because:
 - » Societies built the right institutions (like laws, schools, and research centers),
 - » They supported innovation and science,
 - » They allowed businesses to compete and grow.



Policy Implications & Challenges:

- **R&D and Innovation Policy:** Governments should support basic science and applied research, while creating incentives for private-sector innovation (grants, tax credits). However, overprotection or subsidies without competition can backfire.
- **Competition, Decentralization & Market Entry:** Policies must ensure open markets, prevent entrenched incumbents from blocking entry, and lower barriers for startups and creative firms.
- **Institutional Reform:** Growth depends on institutions that foster rule of law, property rights, openness to talent flows, education, and a culture of experimentation.
- **Balancing Disruption & Social Equity:** Creative destruction inevitably displaces workers and firms. Social safety nets, retraining policies, and transitional support are essential.
- **Global Integration & Openness:** The laureates warn against protectionism

and deglobalization. Fragmented markets reduce scale and slow innovation diffusion.

Conclusion:

The 2025 Nobel laureates reframe our understanding of modern economic growth: we live in an era where innovation, institutions, and competition coalesce to make growth the norm rather than the exception. But their work also cautions us: growth is fragile and must be actively maintained. For policymakers, the message is clear—invest in science, nurture open markets, reform institutions, manage disruption, and resist complacency.

LEAPS 2025

Context:

On October 13, 2025, Commerce & Industry Minister Piyush Goyal officially launched LEAPS 2025 — the Logistics Excellence, Advancement, and Performance Shield — during events marking the 4th anniversary of PM Gati Shakti in New Delhi.

About LEAPS 2025:

- LEAPS 2025 is a national benchmarking initiative designed to recognize excellence, innovation, and leadership across India's logistics sector, enhancing its global competitiveness.
- LEAPS 2025 builds on the National Logistics Policy 2022 and the PM Gati Shakti vision, aiming to make India's logistics sector more efficient, integrated, and globally competitive.
- Implemented by DPIIT (Ministry of Commerce & Industry), it stressed sustainability (ESG), green logistics, transparency, and resilience in the logistics ecosystem.

About PM Gati Shakti:

- PM Gati Shakti, launched in October 2021, is India's National Master Plan for multi-modal connectivity, designed to streamline infrastructure development, reduce logistics costs, and accelerate economic growth

through integrated planning.

- It is a digital platform developed by BISAG-N, integrating data from 16 ministries using Geographic Information System (GIS) tools and ISRO satellite imagery, allowing cross-sectoral coordination and real-time project monitoring.

Key Objectives and Features:

- Breaking departmental silos to ensure synchronized and timely implementation of projects.
- Seamless connectivity across transport modes (Railways, Roads, Ports, Waterways, Airports, Mass Transport, and Logistics Infrastructure).
- Enhanced logistics efficiency, helping reduce costs and improving competitiveness of Indian businesses.
- Integrated development of economic zones like industrial corridors, defense corridors, and textile clusters.

Six Pillars of PM Gati Shakti:

- **Comprehensiveness:** 360° view of infrastructure projects.
- **Prioritization:** Based on inter-ministerial coordination and strategic needs.
- **Optimization:** Selection of the most cost-effective routes and methods.
- **Synchronization:** Timely execution through coordinated actions.
- **Analytical:** Spatial and data-driven decision-making tools.
- **Dynamic:** Real-time updates and adaptability to changing needs.

About National Logistics Policy 2022:

- The National Logistics Policy (NLP) 2022, launched by Prime Minister Narendra Modi on September 17, 2022, aims to create an integrated, cost-efficient, and sustainable logistics ecosystem in India.
- It addresses the challenge of high logistics costs, which historically range between 14–18% of India's GDP—significantly higher than the global average of 8%.
- **Key Objectives:**

- » Reduce logistics costs to 8% of GDP by 2030.
- » Improve India's ranking in the World Bank's Logistics Performance Index (LPI), targeting the top 25 by 2030 (improved from 44th in 2018 to 38th in 2023).
- » Enhance logistics efficiency through data-driven decision-making.
- » Boost exports by reducing logistical hurdles.
- » Support the Make in India and Atmanirbhar Bharat initiatives by accelerating goods movement.

Conclusion:

The launch of LEAPS 2025 marks a key effort by the Indian government to institutionalize logistics excellence as part of its broader growth and competitiveness agenda. By combining recognition, benchmarking, and a push for ESG and innovation, LEAPS aims to transform India's logistics landscape. Its success will depend on active participation, alignment across states, and tangible improvements in efficiency, transparency, and sustainability.

China Files WTO Complaint Against India

Context:

China has recently lodged a formal complaint with the World Trade Organization (WTO) against India, objecting to New Delhi's subsidies for electric vehicles (EVs) and battery manufacturing.

Background:

- India has, in recent years, pushed aggressively to build a domestic EV and green technology ecosystem. Central to this ambition are multiple incentive schemes:
 - » The FAME / FAME II scheme (Faster Adoption and Manufacturing of Electric Vehicles) which gives demand-side incentives.

- » The Production-Linked Incentive (PLI) scheme, which rewards higher domestic value addition and scale in manufacturing.
- » The PM E Drive programme is reported to provide subsidies for EVs and battery making tied to localization benchmarks.
- » In parallel, India is considering a National Critical Mineral Stockpile (NCMS) for rare earth and battery critical minerals to bolster domestic supply chains.



INDIA GIVES HIGHEST EV SUBSIDY AMONG LARGE COUNTRIES

	India	46%		USA	26%
	Japan	26%		Germany	20%
	Korea	16%		China	10%

China's Allegations:

- China's complaint focuses on several key legal claims:
 - » **Violation of National Treatment:** India's subsidy measures allegedly treat domestic producers more favorably than foreign ones, violating WTO's non-discrimination principle.
 - » **Import Substitution Subsidies:** China contends that some incentives are "import substitution" in nature (i.e.,

to encourage domestic sourcing over imports), which are categorically prohibited under WTO's subsidy disciplines.

- » **Prohibited / Distortive Subsidies:** Some programs, by their structure, may be claimed as prohibited (if contingent on export performance or import displacement).

India's Likely Defensive Arguments:

- **India can deploy multiple lines of defense:** Security / Public Interest Exceptions: Under Article XXI of GATT, certain subsidy measures may be defended if they are deemed necessary for national security, energy transition, or environmental goals.
- **Subsidy Classification & Design:** India may argue that its schemes are well designed to comply with WTO norms, e.g. not contingent directly on import substitution or exports, and that any advantage to domestic firms is incidental or within permissible bounds.
- **Transformation & Development Justification:** India may invoke "special and differential treatment" (SDT) or argue its measures are part of its developmental policy to foster nascent green-tech industries.

WTO Dispute Settlement Process:

- **Consultations (60 days):** China has formally requested consultations. If no agreement is reached, China may ask for a dispute settlement panel.
- **Panel Stage:** The panel will hear arguments from both India and China, examine evidence, and issue a ruling.
- **Appellate Review:** The parties may appeal to the WTO Appellate Body. (However, the Appellate Body has been nonfunctional since 2019, complicating enforcement).

Conclusion:

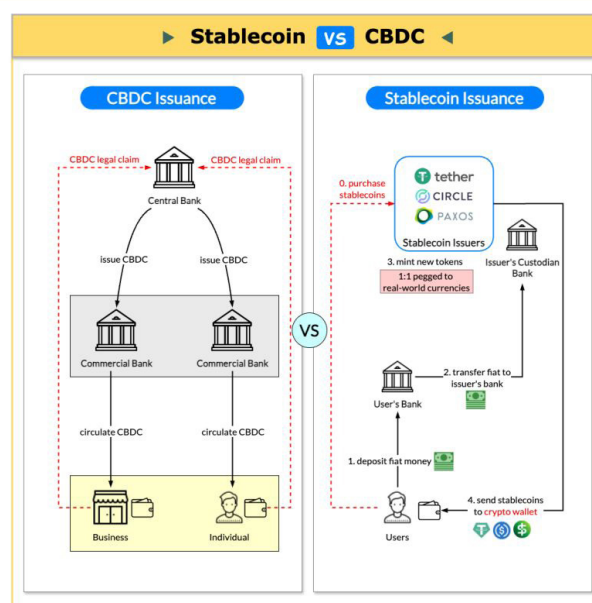
The WTO complaint filed by China against India over EV subsidies underscores the increasing competition in the global electric vehicle market. As both countries navigate this trade dispute, the outcome will be crucial in determining

the future of clean energy trade and the rules governing international commerce.

CBDCs Over Stablecoins

Context:

At the annual meeting of the World Bank Group and the International Monetary Fund (IMF) in Washington, D.C., RBI Governor Sanjay Malhotra urged to central banks worldwide: promote Central Bank Digital Currencies (CBDCs) rather than stablecoins for cross border payments.



About CBDCs vs Stablecoins:

- A Central Bank Digital Currency (CBDC) is a digital version of a nation's official currency, issued and backed by its central bank. It is legal tender and holds the same value as physical cash.
- **Example:** Digital Rupee (India), e-CNY (China), eNaira (Nigeria)
- Stablecoins are cryptocurrencies issued by private companies designed to maintain a stable value by pegging them to assets like fiat currencies (e.g., USD), commodities (e.g., gold), or using algorithmic mechanisms.

Comparison:

Feature	CBDC (e.g., India's Digital Rupee)	Stablecoin (e.g., USDT, USDC)
Issuer	Central bank of the country.	Private entities (corporations, consortia).
Backing / Liability	Full faith and credit of the government / central bank (sovereign liability)	Backed by reserve assets (fiat, commodities, short term securities) or algorithmic mechanisms.
Legal Status	Legal tender (in many designs) within the issuing jurisdiction.	Not legal tender; treated as crypto asset or digital token subject to market acceptance.
Nature & Control	Centralized (or permissioned) system, controlled by the central bank.	Can be centralized (corporate) or decentralized (algorithmic/DAO based) depending on design.

Concerns Over Stable coins:

- Stablecoins, often pegged to assets like the US dollar, are issued by private entities, raising concerns about transparency and regulatory oversight.
- Governor Malhotra warned that widespread adoption of stablecoins could lead to the dollarization of economies, undermining national monetary policies.
- He emphasized that stablecoins could pose risks related to financial stability and capital account flows.

Benefits of CBDCs Over Stablecoins

- Central Bank Digital Currencies (CBDCs) offer several advantages over stablecoins, making them an attractive option for cross-

border payments and financial transactions.

- Some of the key benefits of CBDCs over stablecoins:
 - » **Fiat Backing:** CBDCs are backed by central banks, ensuring stability and trust, whereas stablecoins are often backed by commercial entities or algorithms.
 - » **Monetary Policy Control:** CBDCs allow central banks to maintain control over monetary policy, whereas stablecoins can create risks for monetary policy and financial stability.
 - » **Financial Integrity:** CBDCs preserve the integrity of money, reducing risks associated with money laundering and terrorist financing.
 - » **Security:** CBDCs are more secure than stablecoins, as they are backed by central banks and utilize advanced cryptography.
- Regulatory Oversight:** CBDCs are subject to regulatory oversight, ensuring compliance with anti-money laundering (AML) and know-your-customer (KYC) requirements.

Conclusion:

Governor Sanjay Malhotra's call for central banks to promote CBDCs over stablecoins underscores India's commitment to ensuring financial sovereignty and stability in the evolving digital economy. As the global financial landscape continues to transform, the adoption of CBDCs may play a pivotal role in shaping the future of international payments and monetary systems.

Per Drop More Crop' Scheme

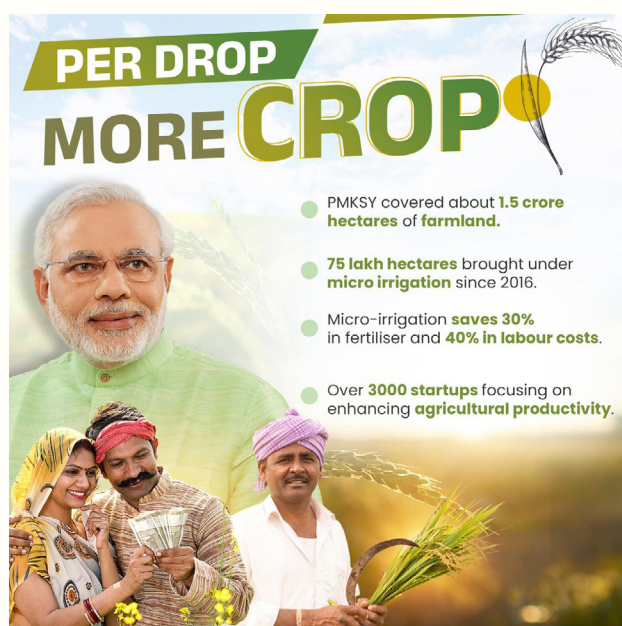
Context:

Recently, Government of India has revised the guidelines for the 'Per Drop More Crop' (PDMC) scheme. This initiative, a key component of the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY), aims to promote efficient water use in agriculture through micro-irrigation techniques

such as drip and sprinkler systems.

Key Revisions in the PDMC Scheme:

- **Enhanced Flexibility for States and Union Territories:** Previously, funds allocated for micro-level water storage and conservation projects were capped at 20% of the total allocation for each state and 40% for northeastern and Himalayan states, as well as Union Territories like Jammu & Kashmir and Ladakh. The new guidelines grant states and Union Territories the flexibility to exceed these limits based on local needs and priorities.
- **Focus on Micro-Level Water Management:** The revised guidelines encourage the construction of water harvesting systems and 'diggis' (small water storage structures) tailored to the specific requirements of individual farmers and communities.



About 'Per Drop More Crop' Scheme:

- The 'Per Drop More Crop' (PDMC) scheme, a component of the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY), is a central government program launched in 2015 to improve water use efficiency in agriculture through micro-irrigation systems like drip and sprinkler systems.

Objectives of the PDMC Scheme:

- **Promote Efficient Water Use:** By encouraging the adoption of micro-irrigation systems, the scheme aims to optimize water usage in agriculture, reducing wastage and ensuring that crops receive adequate moisture.
- **Boost Farmer Income:** Efficient water management leads to better crop yields and reduced input costs, directly contributing to increased farmer incomes.
- **Enhance Agricultural Productivity:** The scheme supports the adoption of modern irrigation techniques, leading to more consistent and higher-quality crop production.

Impact of PDMC scheme:

- The PDMC scheme has been instrumental in transforming agricultural practices across India. By providing states with the autonomy to tailor water conservation projects to their specific needs, the government ensures that interventions are more effective and sustainable.
- The emphasis on micro-irrigation not only conserves water but also empowers farmers with the tools and knowledge to enhance their agricultural practices, leading to improved livelihoods and a more resilient agricultural sector.

Conclusion:

The reforms in the PDMC scheme signify a strategic move towards sustainable agriculture in India. By focusing on efficient water use and empowering states to implement localized solutions, the government is paving the way for a more productive and water-conscious agricultural future.



Internal Security

India's Defence Transformation: From Import Dependency to Indigenous Capability

Context:

India's rapid transition towards self-reliance in the defence sector has given a new direction to national security, industrial development and technological confidence. Defense Minister Rajnath Singh's announcement at the inauguration of new aircraft production lines of first Light Combat Aircraft (LCA) Tejas Mk1A at HAL's Nashik campus that the country's defense exports have now reached ₹25,000 crore is a strong confirmation of this transformation.

While defence exports were only at Rs 1,000 crore a few years ago, today India is not only moving on the path of self-reliance but is also emerging as a reliable partner in the global defence supply chain. The target set by the Government of achieving domestic defence production of Rs 3 lakh crore and exports of Rs 50,000 crore by 2029 is a historic milestone towards realising the spirit of "Atmanirbhar Bharat".

Over the past decade, major reforms, technological innovations, and policy changes have gradually transformed India's defence landscape, marking the shift from being the world's largest arms importer to an emerging global exporter.

Historical Background:

❖ At the time of Independence, India inherited a modest but structured defence industrial base with 16 ordnance factories and a skilled technical workforce. However, most of these units focused on maintenance and assembly, not on innovation or research. In 1958, the Defence Research and

Development Organisation (DRDO) was established to promote indigenous research, but it suffered from limited funding and weak coordination with the armed forces.

❖ Following the 1962 war with China, India turned heavily towards arms imports—mainly from the Soviet Union—to modernise its military. This import-driven approach persisted for decades, making India one of the world's top arms importers and exposing vulnerabilities in technology dependence.

Building a Self-Reliant Defence Ecosystem:

❖ Over the past decade, India's defence policy has undergone a major transformation aimed at reducing foreign dependence and boosting local manufacturing. The focus has shifted towards indigenous design, research, and production, supported by institutional reforms, new procurement procedures, and greater private sector participation.

❖ Key milestones include the creation of the Chief of Defence Staff (CDS) and the Department of Military Affairs (DMA) to promote jointness among the Army, Navy, and Air Force. The success of recent joint operations, such as Operation Sindoor, has demonstrated how these reforms have improved coordination and operational efficiency.

❖ **Structural Reforms:** India's security architecture has been restructured to address modern threats and streamline decision-making. Three tri-service agencies were created between 2018 and 2019:

» **Defence Cyber Agency:** handles military

cyber operations and cyber warfare.

- » **Defence Space Agency (DSA):** focuses on the military use of space for communication, navigation and surveillance.
- » **Armed Forces Special Operations Division (AFSOD)** – provides a rapid-response capability for strategic missions across domains.
- ❖ All three function under the Integrated Defence Staff and report to the CDS. Another major reform underway is the creation of Integrated Theatre Commands, which will further enhance joint operations.
- ❖ **Defence Procurement Reforms:** The Defence Acquisition Procedure (DAP) 2020 replaced the earlier version of 2016 with the goal of promoting self-reliance and transparency in acquisitions. Key features include:
 - » Increased indigenous content requirement to 50% or more in several procurement categories.
 - » Introduction of “negative import lists”, banning the import of over 500 defence items to encourage domestic sourcing.
 - » Requirement for foreign vendors to set up local manufacturing or joint ventures in India.
- ❖ As a result, India’s defence production has reached Rs.1.27 lakh crore (2023–24) — the highest ever — with a growing share coming from the private sector.

Major Policy Reforms and Defence Corridors:

- ❖ The corporatisation of the Ordnance Factory Board (OFB) in 2021 was a landmark reform. The 41 ordnance factories were reorganised into seven new Defence Public Sector Undertakings (DPSUs) for better efficiency and accountability.
- ❖ Further, the government established two Defence Industrial Corridors (DICs) — in Uttar Pradesh and Tamil Nadu — to attract investment, promote innovation, and strengthen the defence manufacturing ecosystem. Investments of over Rs. 8,600 crore have already been made, with plans

to attract more than Rs.50,000 crore in the coming years.

- ❖ **Rise in Defence Exports:** India’s defence exports have grown nearly 15 times in the past decade — from around Rs.1,500 crore in 2016–17 to Rs. 23,622 crore in 2024–25. Exports include radar systems, missiles, artillery guns, and patrol vessels supplied to friendly nations such as Vietnam, the Philippines, and several African countries.
 - » This transformation aligns with India’s vision of becoming a net defence exporter and a reliable strategic partner, especially in the Global South. The government now targets Rs. 50,000 crore in defence exports by 2028–29.
- ❖ **Private Sector Participation and Start-Up Ecosystem:** The once state-dominated defence sector now welcomes private companies and start-ups. Firms like Tata, L&T, Mahindra Defence, Adani Defence, and Bharat Forge have entered areas such as aerospace, drones, armoured vehicles, and defence electronics.
 - » The iDEX (Innovations for Defence Excellence) initiative has supported over 400 start-ups working on cutting-edge technologies like artificial intelligence (AI), robotics, smart weapons, and cybersecurity.
 - » Its sub-scheme, ADITI (Acing Development of Innovative Technology with iDEX), focuses on developing critical and strategic technologies.

Technological Advancements Driving India’s Defence Growth:

- ❖ **Artificial Intelligence (AI):** AI applications are being used in predictive maintenance, decision-making, and target identification. The Ministry of Defence launched 75 AI-based products in 2022, and about USD 12.6 million annually has been earmarked for AI projects.
- ❖ **Autonomous Systems and Robotics:** India is advancing in unmanned systems, with innovations such as the ‘NETRA’ UAV and DRDO’s ‘Daksh’ robot, used for surveillance

and bomb disposal.

- ❖ **Cybersecurity and Electronic Warfare:** The Defence Cyber Agency, NTRO, and DIA are developing cyber defence capabilities. DRDO's 'Shakti' electronic warfare system has enhanced India's ability to disrupt enemy communications and radar networks.
- ❖ **3D Printing and Advanced Manufacturing:** Additive manufacturing is revolutionising production. Partnerships between HAL and Wipro3D have enabled the 3D printing of metal components for aero engines, reducing production time and cost.
- ❖ **Quantum Technologies:** The newly established Quantum Technologies Research Centre (QTRC) under DRDO focuses on ultra-secure communication. In collaboration with IIT Delhi, it has successfully tested quantum secure communication over 1 km.
- ❖ **Indigenous Defence Platforms:** India's indigenous platforms like INS Vikrant, Project 17A frigates, Tejas LCA Mk-1A, and ATAGS artillery guns highlight growing domestic capabilities in complex defence systems.

Persistent Challenges:

- ❖ Around 36% of India's defence procurement still depends on imports.
- ❖ Critical technologies like jet engines, radars, missile seekers, and stealth systems remain foreign-sourced.
- ❖ Cybersecurity gaps and shortage of skilled professionals (nearly 8 lakh experts needed) weaken digital defence.
- ❖ Private sector integration with procurement processes remains slow due to bureaucracy and regulatory hurdles.
- ❖ Defence corridors have yet to reach their full potential due to fluctuating military requirements and inconsistent policy implementation.
- ❖ India's share in global arms exports remains modest despite rapid growth, hindered by concerns over execution timelines and after-sales support.

The Road Ahead:

- ❖ **Encourage Public-Private Collaboration:**

Joint ventures between DPSUs and private firms can accelerate innovation and production efficiency.

- ❖ **Focus on Technology Transfer and R&D:** Increased investment in indigenous research, particularly in high-end technologies like engines and sensors, is essential.
- ❖ **Enhance Defence Exports:** India must build a credible reputation for timely delivery and quality assurance to expand its export markets in Southeast Asia, Africa, and Latin America.
- ❖ **Defence Skill Development:** Setting up specialised training institutes and a Defence Talent Academy can create a skilled workforce in defence engineering, AI, and cybersecurity.
- ❖ **Integrated Theatre Commands:** Fast-tracking their implementation will improve coordination and resource sharing among services.

Conclusion:

India's defence sector is undergoing a historic transformation — from being an arms importer to becoming an emerging global defence hub. The Aatmanirbhar Bharat initiative has redefined national security by merging self-reliance with strategic autonomy. While challenges remain in achieving complete technological independence, India's growing innovation ecosystem, private sector participation, and export success have positioned it as a confident, capable, and self-reliant power in the global defence landscape. If sustained with consistent investment, skill development, and policy support, India's vision of becoming a builder's nation rather than a buyer's market will soon be a reality.

Short Issues

‘SAKSHAM’ Unmanned Aerial System Grid

Context:

The Indian Army has begun procuring SAKSHAM — a domestically developed Counter Unmanned Aerial System (UAS) Grid — to strengthen its defences against evolving drone threats. Developed by Bharat Electronics Limited (BEL), SAKSHAM is designed to detect, track, identify, and neutralise hostile unmanned aerial systems in real time.

Background:

- The need for a robust counter drone framework became particularly evident in Operation Sindoor, when drone swarms crossed borders and exposed gaps in detection, response speed, and airspace control.
- Traditional notions of the battlefield (limited to land plus low altitude air) are being rethought.
- The Army has shifted from the concept of Tactical Battle Area (TBA) to a broader Tactical Battlefield Space (TBS), which includes the Air Littoral — airspace up to 3,000 metres (≈10,000 feet) above the ground. SAKSHAM is intended to secure this domain.

Key Features of SAKSHAM:

Feature	Description
Full Situational Awareness	SAKSHAM will unify inputs from various sensors (radar, radio frequency, electro optical/infrared etc.), mapping friendly, neutral, and hostile aerial entities.
Soft and Hard Kill Options	The system supports both non kinetic disruption (jamming/spoofing) and kinetic neutralisation (destruction) of enemy drones depending on threat type and proximity.

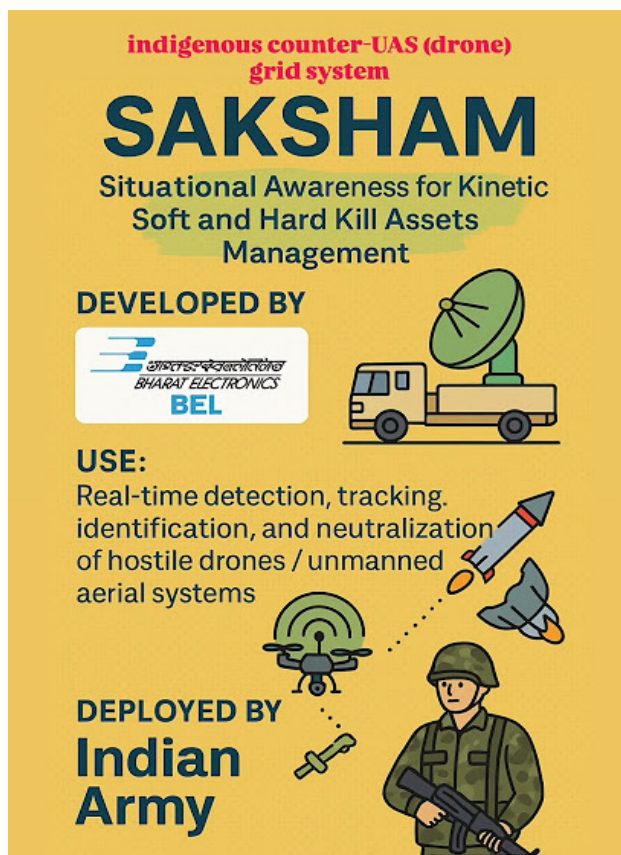
Command & Control Networked Grid	It's a grid system: integrating multiple detection, tracking, and neutralisation nodes across areas of deployment. It runs over the secure Army Data Network (ADN) so that different formations and arms can share the air picture in real time.
AI / Automated Decision Support	Uses AI/ML tools to assist operators: classifying threats, prioritising response, and helping speed up decision making. Also designed to be upgradable/scalable as threats evolve.
GIS based Common Operating Picture	Uses geospatial information systems to visualise battlefield air space, including aerial threats and friendly assets.
Integration with Existing Systems	Will interface with Akashteer, India's automated Air Defence Control & Reporting System, to map all airspace users and coordinate responses.

Strategic Implications of SAKSHAM:

- **Enhanced Airspace Control (up to 3,000 m):**
 - » Provides ground forces greater control over low to medium altitude airspace.
 - » Crucial for countering UAVs and drone swarms in modern warfare.
- **Faster Reaction, Lower Vulnerability:**
 - » Integrates detection, tracking, decision-making, and neutralisation.
 - » Minimises response time and reduces the threat posed by hostile drones.
- **Boost to Indigenous R&D and Manufacturing:**
 - » Fully developed by Bharat Electronics Limited (BEL).
 - » Supports Aatmanirbhar Bharat and the Army's Decade of Transformation (2023–2032).

▪ **Strengthened Deterrence and Border Security:**

- » Enhances India's ability to deter and disrupt drone incursions, especially along the Pakistan border.
- » Makes hostile UAV operations riskier and less effective.



indigenous counter-UAS (drone) grid system

SAKSHAM

Situational Awareness for Kinetic Soft and Hard Kill Assets Management

DEVELOPED BY

BHARAT ELECTRONICS BEL

USE:
Real-time detection, tracking, identification, and neutralization of hostile drones / unmanned aerial systems

DEPLOYED BY
Indian Army

Conclusion:

SAKSHAM marks a major step in modernising India's air defence, offering real-time sensor fusion, AI support, and soft/hard kill options for drone threats up to 3,000m. If effectively deployed and maintained, it can protect frontline assets, deter hostile UAVs, and enhance India's defence tech edge.

ICGS Akshar

Context:

ICGS Akshar, the second vessel in the Adamya class series, was recently commissioned at

Karaikal, Puducherry, under the Eastern Seaboard region of the Coast Guard. "Akshar" means "imperishable," symbolising ICG's enduring commitment to secure seas.

Background:

- As part of its push for indigenous defence production, the Government of India awarded a contract in March 2022 to Goa Shipyard Limited (GSL) to build eight Fast Patrol Vessels (FPVs) for the Indian Coast Guard. Total contract value: Rs 473 crore.
- These vessels are called the Adamya class FPVs. They are being designed and built in house by GSL, to meet the operational requirements of ICG, with over 60% indigenous content.

Key Features & Capabilities:

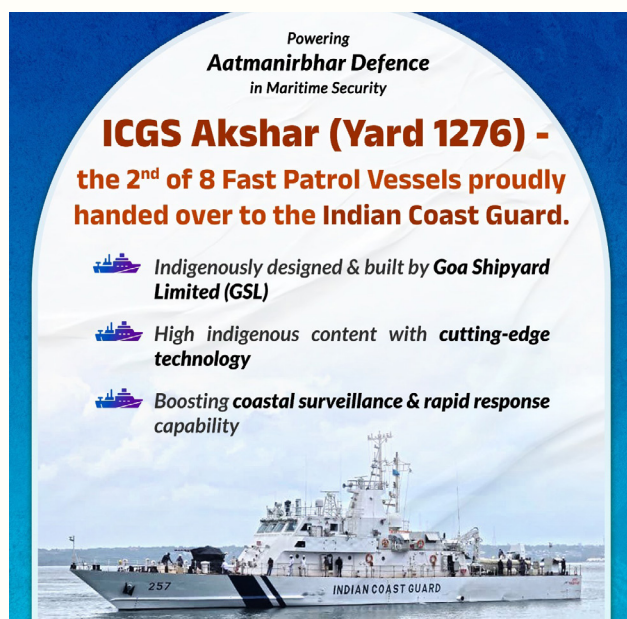
- **Indigenous Percentage:** Over 60% of components are from Indian industry, contributing to Atmanirbhar Bharat / Make in India goals.
- **Dimensions & Performance:** Displacement about 320 330 tons, length ~51 52 m, beam ~8 m, draught ~2.5 m. Powered by twin marine diesel engines, driving CPPs. Max speed ~27 knots. Endurance ~1,500 nautical miles at economical speed.
- **Weaponry & Systems:** Armed with a 30 mm CRN-91 gun, two 12.7 mm stabilised remote controlled machine guns, supported by fire control systems. Also equipped with advanced onboard systems: Integrated Bridge System (IBS), Integrated Platform Management System (IPMS), Automated Power Management System (APMS).

Expected Outcomes:

- **Strengthening Maritime Security:** With its speed, endurance, and capability to patrol India's Exclusive Economic Zone (EEZ), offshore assets, island territories, Akshar will enhance surveillance, coastal security, anti smuggling, anti piracy, and search and rescue operations.
- **Boost to Indigenisation:** The high indigenous content means more domestic

manufacturing, supply chain strengthening (including MSMEs), reduced dependency on imports, and more control over maintenance and future upgrades.

- **Operational Edge:** Systems like CPP for propulsion, IPMS, APMS etc. give manoeuvrability, efficiency, automation, lower response times. These are important for modern threats like fast incursions, illegal fishing, pollution, etc.
- **Maritime Domain Awareness (MDA):** More vessels means better coverage along the vast coastline and islands, which is critical given strategic challenges in the Indian Ocean Region — presence of non traditional threats, importance of maritime trade, etc.



Challenges:

- Maintenance of advanced systems and ensuring sustained operational readiness (crew training, spare parts etc.)
- Integration with other surveillance and information systems to avoid gaps in maritime domain awareness.
- Ensuring that indigenous content isn't just on paper but also in quality, reliability, and performance.

Conclusion:

ICGS Akshar's commissioning is a significant milestone in India's maritime security journey. It showcases India's growing ship building capability, commitment to "Make in India", and strategic intent to monitor and secure its maritime zones more effectively.

INS Androth

Context:

The Indian Navy recently commissioned INS Androth, its second Anti-Submarine Warfare Shallow Water Craft (ASW-SWC), at the Naval Dockyard in Visakhapatnam.

About INS Androth:

- INS Androth is the second ship of the Arnala-class Anti-Submarine Warfare Shallow Water Craft (ASW-SWC), built by Garden Reach Shipbuilders and Engineers (GRSE).
- INS Androth is designed specifically to detect, track, and neutralize underwater threats in coastal and shallow waters. It plays a crucial role in anti-submarine operations, maritime surveillance, search and rescue missions, and coastal defense.

Key Features Include:

- **Class & Purpose:** Part of the modern Arnala-class, replacing older Abhay-class corvettes to boost India's coastal ASW capabilities.
- **Dimensions:** Length of 77.6 meters and displacement of 900 tonnes, enabling agility and maneuverability.
- **Speed & Propulsion:** Powered by a water-jet propulsion system linked to three marine diesel engines, it can reach speeds up to 25 knots—ideal for quick response in shallow waters.
- **Indigenous Content:** Reflecting India's "Aatmanirbhar Bharat" vision, the ship is built with over 80% indigenous components.
- **Armament:** Equipped with indigenous lightweight torpedoes, anti-submarine rockets, naval mines, a 30mm surface gun, and remote-controlled 12.7mm guns.

- **Sensors:** Features the Abhay hull-mounted sonar, developed by DRDO and BEL, along with a low-frequency variable-depth sonar, enhancing underwater detection capabilities.

Strategic Significance of INS Androth:

- **Augmenting Littoral ASW Capability:** Submarines represent a potent asymmetric threat in the Indian Ocean Region (IOR), particularly in shallow coastal zones. INS Androth strengthens India's ability to detect, track, and neutralise these threats close to its shores, filling operational gaps left by older ships.
- **Coastal Defense & Maritime Domain Awareness:** With evolving maritime challenges, unauthorised incursions, threats to offshore assets, sea lane security, vessels like Androth help maintain persistent presence in coastal waters. Their agility and sensor systems allow better surveillance, early warning, and patrol tasks which are critical for coastal security.
- **Indigenous Defence Manufacturing & Self Reliance:** The high indigenous content in Androth's construction is a sign of growing maturity in India's shipbuilding and defence systems. This reduces dependency on foreign suppliers, shortens supply chains, boosts local industrial capability, and strengthens strategic autonomy in defence procurement and technology.

Conclusion:

The induction of INS Androth into the Indian Navy's fleet exemplifies India's growing self-reliance in defense manufacturing and its commitment to safeguarding national maritime interests. As part of the broader ASW-SWC series, INS Androth enhances the Navy's ability to counter underwater threats in littoral waters, contributing to regional maritime security.

India Overtakes China in World Air Force Ranking

Context:

Indian Air Force (IAF) has reportedly surpassed China's People's Liberation Army Air Force (PLAAF) to secure the third position globally, according to the 2025 rankings published in the World Directory of Modern Military Aircraft (WDMMA).

About World Directory of Modern Military Aircraft (WDMMA):

- The WDMMA rankings evaluate air forces across 103 countries, including 129 air services (army, naval, marine aviation components) and assess a total of 48,082 aircraft globally.
- The principal metric is the TruVal Rating (TVR), which captures a blend of quantitative and qualitative factors (fleet size, modernization level, operational readiness, logistics, mission flexibility, etc.).
- In 2025, the TVR scores for the top-ranked air forces are:
 - » United States: 242.9
 - » Russia: 114.2
 - » India: 69.4
 - » China: 63.8

India Soars to Become the World's 3rd Most Powerful Air Force!



India overtakes China to claim the **3rd spot globally** in Air Power rankings

IAF's fleet accounts for **1,716 aircraft**, including fighters, helicopters & trainers

IAF now holds a **TruVal Rating of 69.4**, reflecting capability & modernization

commanding power in the skies!

Reasons behind India's ranking rise:

The WDMMA report highlights a few structural and qualitative strengths that have helped India

overtake China in this ranking:

- **Balanced Fleet Composition**
 - » In India's case, 31.6 % of its aircraft are fighters, 29 % are helicopters, and 21.8 % are trainers—signaling a diversified, multi role capability rather than being overly concentrated in one type.
 - » By contrast, China's fleet is heavily skewed: 52.9 % fighters and 28.4 % trainers, which though powerful in combat may lack flexibility in broader mission mixes.
- **Modernization & Multi-Generation Platforms**
 - » The IAF currently operates a mix of 4.5 generation fighters such as Su 30MKI, Dassault Rafale, Tejas Mk1, along with upgraded older platforms like MiG 29 and Mirage 2000.
 - » Future induction plans include Tejas Mk1A, Tejas Mk2, MRFA (Multi-Role Fighter Aircraft), and AMCA (Advanced Medium Combat Aircraft) to bring fifth-generation capability.
- **Operational Readiness & Training**
 - » A robust pilot training pipeline, maintenance regimes, logistical support, and ability to deploy across different mission types (air defence, ground support, transport, surveillance) factor into WDMMA's evaluation.

Strategic Implications

- **India's Strategic Leverage:** Occupying third place gives India a stronger regional deterrent posture and boosts its influence in the Indo-Pacific strategic theater.
- **Perception & Diplomacy:** Such a ranking will be leveraged in defence diplomacy, signaling to allies and adversaries alike that India's air power is credible at a global level.
- **Pressure to Sustain Momentum:** Surpassing China is a significant symbolic victory, but maintaining or improving that ranking demands consistent modernization, investment in R&D, pilot training, fleet

renewal, and logistics infrastructure.

Conclusion:

India's rise to become the world's third most powerful air force is a significant development in global military dynamics. The country's emphasis on operational readiness, training, and modernization has paid off, and it is now well-positioned to play a major role in regional and global security. As the global defence landscape continues to evolve, India's air force is likely to remain a key player

Historic Mass Surrender of 210 Maoist Cadres

Context:

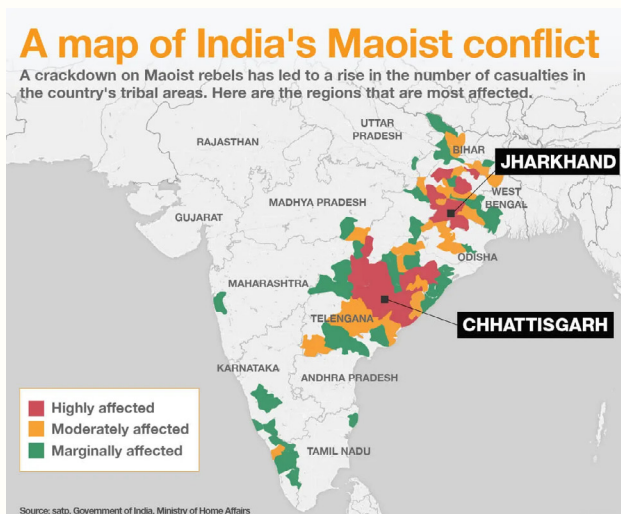
Chhattisgarh recently witnessed one of the largest single-day surrenders of Maoist cadres in its history. A total of 210 Maoists, including 110 women, laid down their arms at the Reserve Police Lines in Jagdalpur, Bastar district.

Puna Margem' Ceremony:

- The surrender ceremony, termed 'Puna Margem' (Path to Rehabilitation), was a symbolic gesture of the Maoists rejoining the mainstream society. Each returning cadre was presented with a copy of the Indian Constitution and a rose, signifying their commitment to peace and democratic values.

Motivations Behind the Surrender:

- The decision to lay down arms was influenced by several factors:
 - » **Internal Fractures:** Dissatisfaction with the Maoist leadership and internal divisions within the organization.
 - » **Security Concerns:** Heavy losses suffered by the Maoist forces in recent encounters.
 - » **Desire for Peace:** A collective yearning for a dignified and harmonious life through peaceful means.



the "Red Corridor," and is characterized by violence against security forces, infrastructure, and civilians.

- The government has countered LWE with a multi-pronged strategy combining security operations, development initiatives, and welfare schemes.

Conclusion:

The mass surrender of 210 Maoist cadres in Jagdalpur represents a significant milestone in Chhattisgarh's efforts to combat Left-Wing Extremism. It underscores the effectiveness of sustained peace initiatives, dialogue, and rehabilitation programs in addressing complex insurgency issues.

Implications of the Mass Surrender:

- **Strategic Shift in Counter-Insurgency Operations:** The mass surrender signifies a strategic shift in Chhattisgarh's counter-insurgency operations. The state's emphasis on rehabilitation over punitive measures has led to a significant reduction in Maoist activities, particularly in the Abujmad and North Bastar regions. This approach aligns with Union Home Minister Amit Shah's directive to eliminate Naxalism by March 2026, contingent upon the Maoists' renunciation of violence.
- **Enhanced Community Engagement and Trust:** The 'Puna Margem' initiative has fostered greater community engagement and trust between the government and local populations. By integrating former insurgents into mainstream society, the government has demonstrated a commitment to peace and development, encouraging other Maoist cadres to reconsider their stance.

About Left-Wing Extremism (LWE):

- Left-Wing Extremism (LWE) is a form of politically motivated violence in India rooted in Maoist ideology, aiming to overthrow the state through armed insurgency.
- It primarily affects underdeveloped, tribal-dominated regions, historically known as

BrahMos Missiles

Context:

Defence Minister Rajnath Singh and Uttar Pradesh Chief Minister Yogi Adityanath, recently flagged-off the first batch of BrahMos missiles manufactured at the BrahMos Integration and Testing Facility Centre in Lucknow. The state-of-the-art facility, a key component of UP Defence Industrial Corridor, was virtually inaugurated by Raksha Mantri on May 11, 2025.

About BrahMos Missile:

- The BrahMos missile is a state-of-the-art supersonic cruise missile developed through a joint venture between India's Defence Research and Development Organisation (DRDO) and Russia's NPO Mashinostroyeniya.
- Its name is derived from the rivers Brahmaputra (India) and Moskva (Russia), symbolising the collaborative effort between the two nations.

Technical Specifications:

- **Type:** Supersonic cruise missile
- **Speed:** Mach 2.8 (approximately 3,400 km/h)
- **Range:** Originally 290 km; extended to 450 km; future variants aim for 800 km

- **Weight:** 2,200–3,000 kg
- **Length:** Approximately 9 meters
- **Propulsion:** Two-stage system—solid propellant booster followed by a liquid ramjet engine
- **Launch Platforms:** Land, sea, air, and submarine
- **Guidance:** Advanced inertial navigation system coupled with GPS
- **Stealth Features:** Low radar cross-section design
- **Operational Principle:** "Fire and forget"

Variants and Deployment:

- The BrahMos missile has been developed in multiple variants to enhance its versatility:
 - » **Land-Based System:** Deployed along India's borders, capable of striking targets with precision.
 - » **Sea-Based System:** Integrated into Indian Navy warships, providing maritime strike capabilities.
 - » **Air-Launched Version:** Mounted on aircraft like the Sukhoi-30 MKI, enabling aerial strikes.
 - » **Submarine-Launched Version:** Launched from submerged platforms, enhancing strategic deterrence.
- Each variant is designed to operate effectively across diverse terrains and combat scenarios, ensuring India's strategic dominance.

Strategic Significance:

- **Deterrence:** The BrahMos missile serves as a potent deterrent against adversaries, enhancing India's defense posture.
- **Precision Strikes:** Its high speed and accuracy allow for precise strikes on critical targets, minimizing collateral damage.
- **Versatility:** The ability to launch from multiple platforms provides flexibility in various combat situations.
- **Indigenous Development:** The missile showcases India's growing capabilities in defense technology and self-reliance.

Conclusion:

The successful flagging-off of the first batch of BrahMos missiles from Lucknow marks a historic milestone in India's journey towards self-reliance in defence manufacturing. It reflects the nation's determination to achieve technological independence, enhance operational readiness, and secure its strategic interests.

Tejas Mk1A and HTT-40: Self-Reliance in defence production

Context:

Defence Minister Shri Rajnath Singh recently inaugurated the third production line of the Light Combat Aircraft (LCA) Tejas Mk1A and the second production line of the Hindustan Turbo Trainer-40 (HTT-40) at Hindustan Aeronautics Limited (HAL) Nashik on October 17, 2025.

About Tejas Mk1A:

- The Tejas Mk1A is an upgraded version of India's indigenous light combat aircraft, developed and manufactured by Hindustan Aeronautics Limited (HAL).
- **Key Features & Upgrades:**
 - » The Mk1A variant incorporates major enhancements over the original Tejas Mk1, including a new avionics suite, Active Electronically Scanned Array (AESA) radar, improved electronic warfare (EW) suite, and air-to-air refuelling capability.
 - » It is powered by the GE F404-IN20 engine, providing higher thrust and enabling the fighter to reach speeds of up to around Mach 1.8 and cover a ferry range of approximately 1,700 km in some estimates.
 - » The aircraft is capable of multirole operations: air superiority, ground attack, reconnaissance, and maritime missions. It supports a variety of weapons including beyond-visual-range (BVR) missiles and precision-guided munitions.



About HTT-40:

- The HTT-40 is a tandem-seat turboprop basic trainer aircraft designed and developed indigenously by Hindustan Aeronautics Limited (HAL) via its Aircraft Research & Design Centre (ARDC).
- It is intended to serve as the ab-initio (first stage) trainer for the Indian Air Force (IAF) and other Indian armed services, and reduce dependence on imported trainer aircraft.
- **Key Features & Specifications:**
 - » **Engine:** Powered by a Honeywell TPE331-12B turboprop engine (or equivalent) providing around ~1,100 hp (derated to ~950 hp in some configurations) for training use.
 - » **Performance:** Maximum speed around 450 km/h, service ceiling around 6,000 m (6 km) in training role.
 - » **Indigenous content:** Initially about 56 % indigenous content, with plans to increase to over 60 % by further indigenizing components and subsystems.

Strategic Significance:

- **Enhanced Production Capacity:** With the third Tejas line and the second HTT-40 line operational, HAL's Nashik division amplifies India's capability to meet the IAF's fighter and trainer aircraft demand.
- **Manufacturing Ecosystem Strengthening:** The new lines reflect investments in infrastructure, assembly jigs, modules and digital manufacturing within the defence-aerospace domain.
- **Employment & Industry Partnerships:** HAL has created around 1,000 jobs through the Nashik expansion and developed over 40 industry partners in the region.
- **Symbol of Indigenous Progress:** The Tejas Mk1A and HTT-40 are emblematic of India's efforts to design, develop and produce advanced aerospace platforms domestically — moving away from import dependency.

Conclusion:

The inauguration of the third production line of LCA Mk1A and the second production line of HTT-40 at HAL Nashik marks a significant milestone in India's journey towards self-reliance in defence production. With this development, India is poised to strengthen its defence manufacturing capabilities, reduce dependence on foreign imports, and emerge as a major player in the global defence industry.

Anti-Submarine Warfare Shallow Water Craft of Mahe Class

Context:

Cochin Shipyard Ltd (CSL) has officially delivered the first of eight Anti-Submarine Warfare Shallow Water Craft (ASW SWC) of the Mahe-class to the Indian Navy.

About Mahe:

- The contract for eight vessels (the Mahe-class) between the Ministry of Defence and CSL was signed on 30 April 2019.
- The intended delivery schedule for all eight is between August 2025 and June 2028 (per

publicly reported timeframe).

Design, Role & Features:

- The Mahe-class is designed to replace the older Abhay class ASW corvettes of the Indian Navy, particularly for shallow/littoral water anti-submarine warfare, mine-laying, surveillance, search & rescue (SAR) and low-intensity maritime operations (LIMO).
 - » **Specifications:** length ~78 m, displacement ~900 to ~1,100 tons (depending on source) for the CSL variant. Speed up to ~25 knots. Endurance cited at ~1,800 nautical miles in CSL press materials.
 - » **Propulsion:** Noteworthy is the use of a diesel engine–waterjet combination, enhancing shallow water manoeuvrability.
 - » **Indigenous content:** High – over 80 % indigenous content is repeatedly mentioned for the Mahe-class.

About Anti-Submarine Warfare Shallow Water Craft:

- The ASW-SWC class (“Anti-Submarine Warfare Shallow Water Craft”) is a new class of shallow-water corvettes being built for the Indian Navy, by two shipyards: Cochin Shipyard Ltd. (CSL) and Garden Reach Shipbuilders & Engineers (GRSE).
 - » The target number is 16 vessels in total (8 built by GRSE, 8 by CSL).
 - » Length is about 77–78 m, width around 10.5m for the GRSE version (“Arnala-class”). For the CSL version (“Mahe-class”) similar dimensions are cited.
 - » **Propulsion:** Diesel engines combined with water-jets, giving good shallow-water performance and maneuverability.
 - » **Speed:** Approximately 25 knots in shallow/littoral waters.

Strategic Significance:

- Enhances Indian Navy’s littoral/near-shore ASW capability, crucial in the Indian Ocean Region where submarine activity (including from adversaries) is increasing.

- » Replaces older platform (Abhay-class) with more modern, agile, indigenous ships.
- » High domestic content aligns with India’s self-reliance goal in defence manufacturing.
- » **Adds flexibility:** these vessels can undertake not only ASW but mine-laying, surface/air defence and SAR in coastal zones.

Conclusion:

The successful delivery of Mahe paves the way for the induction of seven more ASW SWCs, each equipped with advanced features to counter emerging maritime challenges. As India continues to strengthen its naval capabilities, the Mahe and its sister ships will be at the forefront of the nation's maritime defense strategy.



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Power Packed News

Indian women's Cricket Team won its first ICC Women's ODI World Cup

- India won its first ICC Women's ODI World Cup title on November 2, 2025, in Navi Mumbai. India defeated South Africa by 52 runs in the final.
- India's Shafali Verma delivered a brilliant all-round performance, scoring 87 runs and taking crucial wickets, earning her the title of "Player of the Match." All-rounder Deepti Sharma took 5 wickets for 39 runs in the final and was named "Player of the Tournament."
- With this victory, India became the fourth nation after Australia, England, and New Zealand to win the Women's World Cup. Previously, India had reached the finals in 2005 and 2017.
- The 13th edition of the tournament was co-hosted by India and Sri Lanka, featuring a total of eight teams. Under the guidance of coach Amol Muzumdar and captain Harmanpreet Kaur, the Indian team achieved this historic triumph. India received a record prize of ₹37.3 crore for the victory.

President Javier Milley Wins Major Midterm Elections in Argentina

- Argentine President Javier Milley has won a landslide victory in the midterm elections. His party, La Libertad Avanza, won nearly 41% of the national vote and significantly increased its influence in Congress. The party won 13 of the 24 seats in the Senate and 64 of the 127 seats in the lower house, a significant increase from the previous 7 and 37 seats, respectively.
- President Milley attributed this success to his economic reforms and efforts to cut government spending. He takes office on December 10, 2023, replacing Alberto Fernández.
- Milley's victory reflects growing public acceptance of his libertarian agenda, which includes reducing the size of the state, controlling inflation, and reforms towards dollarization. This result is being seen as a decisive change in Argentina's political direction.

Smriti Mandhana becomes world No. 1 in women's ODI batting

- Indian cricketer Smriti Mandhana has topped the ICC Women's ODI batting rankings. She achieved a rating of 828 points, placing her nearly 100 points ahead of Australia's Ashleigh Gardner. Mandhana's impressive performances - 109 against New Zealand and an unbeaten 34 against Bangladesh - earned her this position.
- She was also named the ICC Women's Player of the Month for September 2025. Her opening partner, Pratika Rawal, had reached 27th place with 564 points before her injury.
- England's Sophie Ecclestone tops the bowling rankings with 747 points, while Australia's Alana King and Ashleigh Gardner are second and third, respectively. Mandhana's achievement is a historic moment for Indian women's cricket, reflecting Team India's continued progress on the global stage.

Second Phase of Voter List Revision

- The Election Commission of India has announced the commencement of the second phase of

the Special Intensive Revision (SIR) of voter lists.

- This phase will be conducted in 12 states and union territories—Gujarat, Madhya Pradesh, Tamil Nadu, Kerala, Rajasthan, Uttar Pradesh, West Bengal, Goa, Chhattisgarh, Puducherry, Andaman and Nicobar Islands, and Lakshadweep.
- The objective of this revision is to ensure the accuracy, transparency, and integrity of voter lists. Approximately 510 million voters will participate in this process.
- Counting activities will begin on November 4th and continue for a month, verifying and updating voter details. The draft voter list will be published on December 9th, while the final list will be released on February 7th, 2026. The Commission stated that no appeals were filed in the first phase, strengthening public confidence in transparency.

Rs. 5,532 crore approved for 7 projects under ECMS

- The Government of India has approved seven projects under the Electronics Component Manufacturing Scheme (ECMS), with a total investment of ₹5,532 crore. These projects are expected to produce electronic components worth ₹36,559 crore and generate over 5,100 direct jobs.
- The aim is to achieve self-sufficiency in components such as high-density interconnect (HDI) PCBs, multi-layer PCBs, camera modules, copper clad laminate (CCL), and polypropylene film.
- The newly approved units will be set up in Tamil Nadu (5), Andhra Pradesh (1), and Madhya Pradesh (1). These projects will enable India to meet 20% of its domestic PCB demand and 15% of its camera module requirements.
- This initiative complements India's Semiconductor Mission and Production Linked Incentive (PLI) program, strengthening self-reliance and export potential in the electronics sector.

Timor-Leste becomes ASEAN's 11th member

- Timor-Leste has been made the 11th member of the Association of Southeast Asian Nations (ASEAN). This decision was taken unanimously during the 47th ASEAN Summit held in Kuala Lumpur, Malaysia. Timor-Leste's Prime Minister, Xanana Gusmao, attended the meeting on this historic occasion. This is ASEAN's first expansion since Cambodia joined in 1999.
- ASEAN, formed through the Bangkok Declaration in 1967, was formed with Indonesia, Malaysia, the Philippines, Singapore, and Thailand as its founding members. Later, Brunei (1984), Vietnam (1995), Laos and Myanmar (1997), and Cambodia (1999) joined.
- Malaysia, which will chair ASEAN in 2025, hosted the 47th Summit with the theme "Inclusiveness and Sustainability."
- Timor-Leste's membership not only symbolizes regional integration but is also seen as a bridge to new opportunities for economic cooperation and strategic partnership, especially in the context of India and the Indo-Pacific region.

Announcement of National Science Awards 2025

- On October 25, the Government of India announced the National Science Awards (RVP) 2025 to recognise outstanding contributions in the field of science and technology. These awards are known as the "Padma Awards of the scientific world."
- A total of 25 awards will be presented this year, 24 individual and one team award. The

late physicist Professor Jayant Vishnu Narlikar was posthumously honored with the "Vigyan Ratna" award for lifetime contributions.

- Eight scientists will receive the "Vigyan Shri," while fourteen researchers under the age of 45 will receive the "Vigyan Yuva Puraskar." Additionally, the CSIR Aroma Mission received the "Science Team Award" for its collective contribution to scientific progress.
- This initiative aims to promote scientific innovation and encourage youth to pursue research, strengthening India's vision of "science-led development."

India's Foreign Exchange Reserves Cross \$702 Billion

- According to data released by the Reserve Bank of India (RBI) on October 24, India's foreign exchange reserves increased by \$4.5 billion to \$702.3 billion in the week ended October 17, the second-highest level ever.
- This increase was primarily driven by an increase in gold reserves, which exceeded \$108.5 billion for the first time. Global gold prices rose by nearly 65% in 2025 and the RBI's continued buying policy contributed to this.
- Although foreign exchange assets declined by \$1.7 billion to \$570.4 billion, the proportion of gold in total reserves reached 15%—the highest level since 1996–97.
- According to a Morgan Stanley report, the RBI has added approximately 75 tonnes of gold since 2024, bringing the total reserves to 880 tonnes. This increase reflects India's financial stability and the success of its reserves diversification policy amid global uncertainties.

Indigenous Anti-Submarine Warfare Ship 'Mahe' inducted into the Indian Navy

- On October 23, 2025, the indigenously built anti-submarine warfare shallow watercraft (ASW-SWC) 'Mahe' was commissioned into the Indian Navy. Built by Cochin Shipyard Limited, Kochi, it is the first of eight ASW-SWC ships in the series.
- 'Mahe' was designed and built under India's self-reliance initiative (Aatmanirbhar Bharat). Named after the historic port city of Mahe in Puducherry, the ship symbolizes India's rich maritime tradition. This approximately 78-metre-long and 1,100-tonne vessel is equipped with torpedoes, anti-submarine rockets, advanced sonar, and radar systems. More than 80% of its components are indigenous.
- 'Mahe' is capable of coastal defense, submarine surveillance, search and rescue, and low-intensity maritime operations. Its induction significantly strengthens the Navy's coastal security and anti-submarine capabilities.

Indian Coast Guard Commissions 'Ajeet' and 'Aparajit'

- On October 24, the Indian Coast Guard (ICG) commissioned two indigenously built advanced Fast Patrol Vessels (FPVs)—ICGS Ajit and ICGS Aparajit—at Goa Shipyard Limited. These vessels are designed to strengthen maritime security and coastal surveillance.
- Both 52-meter-long vessels weigh 320 tons and are equipped with a Controllable Pitch Propeller (CPP) system, the first in their class to be incorporated into an Indian vessel. This significantly improves manoeuvrability and fuel efficiency.

- These vessels will be deployed in fisheries protection, anti-smuggling, anti-piracy, and search and rescue operations. These are the seventh and eighth vessels in the eight-member FPV series, built entirely in Indian shipyards.
- The commissioning of 'Ajeet' and 'Aparajit' marks another significant step towards self-reliance in India's coastal security infrastructure.

Advertising legend Piyush Pandey passes away

- Advertising legend and Padma Shri recipient Piyush Pandey has passed away at the age of 70. He was the Executive Chairman and Worldwide Chief Creative Officer of Ogilvy India. He pioneered a new creative language in the Indian advertising industry, connecting mass communication with the common people.
- Pandey created memorable advertisements such as "Har Ghar Kuch Kehta Hai" (Asian Paints), "Kuch Khaas Hai Zindagi Mein" (Cadbury Dairy Milk), and "ZooZoo" (Vodafone).
- He also played a role in creating the political slogan "Ab Ki Baar, Modi Sarkar." In 2004, he became the first Asian to serve as jury president at the Cannes Lions Festival. He received the Padma Shri in 2016 and the "Lion of St. Mark" lifetime achievement award in 2018, along with his brother Prasoon Pandey.
- He also contributed significantly to public service campaigns, such as the "Do Boond Zindagi Ke" polio eradication campaign with Amitabh Bachchan. He combined creativity with Indian sensibilities in Indian advertising, which will forever inspire him.

Nomination Provisions Come into Effect

- From November 1, 2025, the nomination provisions of the Banking Laws (Amendment) Act, 2025 came into effect. According to the Ministry of Finance, these changes will provide greater flexibility and transparency to depositors. Customers will now be able to nominate up to four nominees for their bank deposit accounts.
- The amendment aims to simplify and streamline the claim settlement process. This will benefit not only depositors but also their nominees. Furthermore, this reform is an important step towards strengthening governance and accountability in banks.
- The Act also empowers the Reserve Bank of India to harmonize reporting standards, thereby enhancing transparency and oversight. The government aims to strengthen depositor protection, audit quality in public sector banks, and confidence in the banking system.

Neeraj Chopra Awarded Honorary Lieutenant Colonel in the Territorial Army

- India's star athlete Neeraj Chopra has been awarded the honorary "Lieutenant Colonel" rank in the Territorial Army. Defense Minister Rajnath Singh and Army Chief General Upendra Dwivedi presented him with the rank insignia.
- Neeraj Chopra joined the Indian Army in 2016 as a Naib Subedar. His outstanding sporting achievements include a gold medal at the 2020 Tokyo Olympics, the 2018 Arjuna Award, the Khel Ratna, and the 2022 Param Vishisht Seva Medal—the Indian Army's highest peacetime honor.

- He was promoted to the rank of Subedar Major in 2022. Chopra has also been awarded the Padma Shri. His appointment is being seen not only by the Indian sports world but also as a symbol of pride and discipline within the Army. This honor will inspire the youth of the country to strive for excellence, patriotism, and service.

India develops first indigenous antibiotic, 'Naphithromycin'

- India has achieved a historic milestone in medical science by developing its first indigenous antibiotic, 'Naphithromycin.' It is effective against drug-resistant respiratory infections and is particularly beneficial for cancer and diabetes patients.
- Naphithromycin is the first molecule designed, developed, and clinically tested entirely in India. It was jointly developed by the Department of Biotechnology (DBT) and Wockhardt Pharma. Union Minister Dr. Jitendra Singh described it as an excellent example of India's "industry-academia partnership."
- During the event, he also announced the success of India's first indigenous gene therapy trial for hemophilia, which showed a 60–70% improvement.
- India has already sequenced 10,000 human genomes and plans to expand this to 1 million—a milestone in positioning India as a leader in biopharmaceutical innovation.

'Cotton Revolution Mission'

- The central government has launched the 'Cotton Revolution Mission' with a budget of ₹600 crore to boost cotton production. The mission aims to promote the cultivation of high-yielding, long-staple cotton through technological innovation and research.
- The high-density plantation (HDP) technology adopted in Maharashtra's Akola district has shown remarkable success, and will now be replicated in Telangana. Telangana farmers will be sent to Akola for a post-harvest demonstration tour and provided with appropriate seeds and training.
- The state has 2.4 million farmers engaged in cotton cultivation, making it India's top cotton producer. The government will soon launch 122 procurement centers and the "Cotton Farmer App," allowing farmers to book slots online and receive fair prices while avoiding middlemen.
- This mission is a significant step not only towards increasing production but also towards transparent marketing and increasing farmers' incomes.

Sanae Takaichi becomes Japan's first female Prime Minister

- Sanae Takaichi took office as Japan's first female Prime Minister on October 21, 2025. She is a senior leader of the Liberal Democratic Party (LDP) and succeeded former Prime Minister Fumio Kishida.
- Takaichi is considered a representative of Japan's conservative politics and has emphasized national security, defense capability strengthening, and technological self-reliance.
- She has previously held several key ministries, including the Ministry of Internal Affairs and Communications. Under her leadership, Japan is expected to further strengthen its role in regional security, especially in the Indo-Pacific region.
- Takaichi's election as Prime Minister is also seen as a symbol of Japan's gender equality and the increasing role of women in political participation.

Sixth Global Fintech Fest

- The sixth Global Fintech Fest (GFF 2025) was held in Mumbai from October 7-9, 2025. The event took place at the Jio World Convention Centre and the Nita Mukesh Ambani Cultural Centre (NMACC). The theme of the fest was "Empowering Finance for a Better World Powered by AI: Augmented Intelligence, Innovation, Inclusion."
- It was jointly organized by the Payments Council of India (PCI), the National Payments Corporation of India (NPCI), and the Fintech Convergence Council (FCC).
- It attracted over 100,000 participants and 7,500 companies from over 75 countries, making it one of the largest fintech conferences in the world and helping to establish India as a global fintech hub.

Military Coup in Madagascar

- Following widespread popular uprisings and political instability in the African island nation of Madagascar, the military has seized power. Colonel Michel Randrianirina has been appointed the country's new president, formally approved by the High Constitutional Court.
- This marks the end of a weeks-long crisis, while former President André Rajoelina has been exiled from the country.
- Rajoelina was impeached on charges of dereliction of duty, following which the military intervened. In recent weeks, protests over electricity and water shortages have turned violent, leaving 22 people dead and over 100 injured, according to the United Nations.
- The United Nations has condemned the military intervention as "unconstitutional." The African Union has also suspended Madagascar's membership following the coup.
- This development deepens the trend of increasing military rule and the crisis undermining democratic institutions in Africa.

Renowned singer Rao Balasaraswati Devi passes away

- Raavu Balasaraswati Devi, a legendary singer and actress of Telugu cinema, has passed away at the age of 97. She is considered a pioneer of playback singing in the South Indian film industry. She made her playback singing debut with the 1943 film Bhagya Lakshmi, laying the foundation for the tradition of playback singing in Telugu films.
- Balasaraswati Devi was also the first artist to perform light music on All India Radio. She acted in Tamil classics such as Bhakta Kuchela (1936), Balayogini (1937), and Thiruneelakantar (1939), and played the lead role in the 1940 Telugu film Ilalu.
- Her contributions date back to a period in Indian cinema when the combination of singing and acting was the soul of film culture. Her art left an indelible mark not only on Telugu but also on the Indian musical tradition, and she will continue to inspire generations to come.

Actor Pankaj Dheer passes away

- Pankaj Dheer, a renowned television and film actor, has passed away from cancer at the age of 68. He gained nationwide recognition for his role as Karna in B.R. Chopra's epic series Mahabharata (1988). He later became popular as King Shivdutt in the TV show Chandrakanta.
- Born in Punjab, Pankaj Dheer began his film career in the 1980s with small roles and appeared

in films such as Sadak, Sanam Bewafa, Aashiq Awara, Baadshah, and Zameen. He left a deep impression in both villainous and character roles.

- Dhir's acting played a key role in bridging the boundaries between Indian television and cinema. His deep dialogue delivery and dignified personality made him one of the most memorable actors. His son, Nikitin Dheer, is also active in the film industry.

Sonali Ghosh becomes the first Indian to win the Kenton R. Miller Award

- Kaziranga National Park Director Sonali Ghosh has made history by winning the prestigious Kenton R. Miller Award, becoming the first Indian to receive this honor. The award is given by the World Commission on Protected Areas (WCPA), part of the International Union for Conservation of Nature (IUCN).
- The award recognises innovation in the management of national parks and protected areas. Ghosh was honoured for her conservation model that combines traditional local knowledge and modern scientific methods.
- The ceremony, held in Abu Dhabi on October 10, also honored Roque Simón Sevilla Larrea of Ecuador for his contributions to sustainable development.
- Established in 2006, the award is given every two years to individuals or teams who develop effective conservation models that combine environmental governance, community engagement, and science. Ghosh's achievement further strengthens global recognition of India's conservation efforts.

NSG's seventh hub to be established in Ayodhya

- Union Home Minister Amit Shah announced the establishment of the National Security Guard's (NSG) seventh hub in Ayodhya on October 14. This decision was taken on the NSG's 41st foundation day and is considered a significant step towards expanding the country's counter-terrorism capabilities.
- The new hub will be added to existing hubs in Mumbai, Chennai, Kolkata, Hyderabad, Ahmedabad, and Jammu. It aims to ensure rapid response in the event of terrorist attacks in North India. The Home Minister stated that this hub will strengthen the training of the NSG and state police units and enhance operational capabilities.
- On the same occasion, the Special Operations Training Centre (SOTC) in Manesar, Haryana, built at a cost of Rs.141 crore, was also inaugurated.
- The NSG has surveyed over 770 critical locations so far. These new initiatives are a milestone towards further strengthening India's internal security structure.

Defence Minister Releases Book 'Ready, Relevant & Resurgent II'

- On October 14, 2025, Defence Minister Rajnath Singh released the book "Ready, Relevant and Resurgent II: Shaping a Future Ready Force" in New Delhi. The book, written by Chief of Defence Staff (CDS) General Anil Chauhan, presents a holistic approach to adapting India's armed forces to future challenges.
- The book analyzes the changing nature of modern warfare, such as cyber, space, and cognitive

warfare, and explains how technology, leadership, and institutional strength are crucial to military preparedness.

- The author also underlines that integrating traditional military doctrines with emerging technologies will shape the future of India's defense strategy. This publication outlines the Indian Armed Forces' "future-ready" vision and is being viewed as a guiding document for policymakers.

India elected unopposed to the United Nations Human Rights Council for the term 2026–28

- On October 14, 2025, India was elected unopposed to the United Nations Human Rights Council (UNHRC) for the term 2026–28. This will be India's seventh term, which will begin on January 1, 2026.
- India's Permanent Representative, Parvathaneni Harish, thanked all countries and said that this election is a testament to India's strong commitment to human rights and fundamental freedoms. The UNHRC has a total of 47 member states, elected for three-year terms based on geographical balance. India's success reflects the continuation of its long-standing human rights diplomatic efforts.
- Since the Council's inception in 2006, India has completed six terms, and its unopposed victory for the seventh term underscores its global credibility and trusted partnerships. It further strengthens India's spirit of "Vasudhaiva Kutumbakam" on the international stage.

Patrick Herminy becomes New President of Seychelles

- Opposition leader Patrick Herminy won the presidential election in Seychelles on October 12, 2025, following a runoff election. He received 52.7% of the vote, while incumbent President Wavel Ramkalawan received 47.3%.
- Herminy is the leader of the United Seychelles Party, which ruled the country for four decades before losing power in 2020. This election result marks a shift in power in Seychelles politics and reflects the maturation of democratic competition in the island nation.
- Both candidates' campaigns focused on social issues such as environmental protection, climate change, and drug addiction.
- Herminy's victory is expected to strengthen Seychelles' tourism-based economy through regional and international partnerships and advance the Sustainable Development Goals (SDGs).

Five Maharashtra beaches receive 'Blue Flag' certification

- Five beaches in Maharashtra—Shrivardhan and Nagaon in Raigad district, Parnaka in Palghar, and Guhagar and Ladghar in Ratnagiri district—have received the prestigious 'Blue Flag' certification.
- This certification is awarded by the Denmark-based Foundation for Environmental Education (FEE), which evaluates beaches based on 33 international parameters.
- These parameters include aspects such as water quality, cleanliness, environmental education, safety, and sustainable management.

- This achievement has established Maharashtra's coastal region as a symbol of environmental excellence and sustainable tourism internationally.
- According to the state government, this certification is an important step towards local community participation, green management policies, and environmental sensitivity, advancing India's sustainable coastal development agenda.

Oscar-winning actress Diane Keaton passes away

- Famous Hollywood actress Diane Keaton has passed away at the age of 79. She gained global recognition in the 1970s with her role as Kay Adams-Corleone in "The Godfather" series.
- In 1978, she received an Oscar, a Golden Globe, and a BAFTA award for the film "Annie Hall"—which is considered the crowning achievement of her career.
- Keaton appeared in numerous acclaimed films, including "Father of the Bride," "The First Wives Club," and "Something's Gotta Give," and was nominated for an Academy Award four times. She also directed the 1995 film "Unstrung Heroes," which screened in the "Un Certain Regard" section at the Cannes Film Festival.
- Her final film project was the 2024 comedy "Summer Camp." Diane Keaton's legacy will forever be remembered in Hollywood as a symbol of her original acting style, subtle humor, and female empowerment.

Sherry Singh becomes India's first Mrs. Universe

- India made history on the international stage when Sherry Singh won the Mrs. Universe 2025 crown. This achievement marks India's first global victory in the married women's category.
- The 48th edition of the pageant was held in Okada, Manila, the capital of the Philippines, where contestants from 120 countries participated. Sherry Singh represented India and previously won the Mrs. India 2025 title by UMB Pageants.
- Her grace, confidence, and commitment to women's empowerment and mental health impressed the judges. The Mrs. Universe pageant is not just a platform for beauty but also a celebration of intelligence, compassion, and social responsibility.
- Sherry Singh's victory is being considered a symbol of the global recognition and leadership potential of Indian women.

Deepika Padukone becomes India's first Mental Health Ambassador

- On October 10, 2025, World Mental Health Day, actress Deepika Padukone was appointed India's first Mental Health Ambassador.
- This initiative, launched by the Union Ministry of Health and Family Welfare, aims to promote national awareness and dialogue about mental health. Deepika will work with the Ministry on equitable access to mental health services and a comprehensive wellness policy.
- Her appointment coincides with the tenth anniversary of her non-profit organization, The Live Love Laugh Foundation, which she founded in 2015 after her personal struggle with depression.
- The Foundation has played a significant role in de-stigmatising mental health and promoting

counselling services in India.

- This initiative marks a new chapter in strengthening India's National Mental Health Program (NMHP) and equity-based health policy through public participation.

Third International Purple Festival inaugurated in Goa

- On October 9, 2025, Dr. Ramdas Athawale, Union Minister of State for Social Justice and Empowerment, inaugurated the third International Purple Festival in Panaji, the capital of Goa. The festival is organised with the aim of promoting empowerment, inclusiveness, and equal opportunities for persons with disabilities.
- Dr. Athawale stated that the government has prioritised the development of all sections of society, especially persons with disabilities, senior citizens, Scheduled Castes, and Scheduled Tribes over the past decade.
- Chief Guest Dr. Virendra Kumar (Union Minister of Social Justice) commended the Goa government's efforts and emphasised the need for full social participation of persons with disabilities.
- The festival showcased cultural programs, innovative exhibitions, and accessible technological solutions that embody the vision of "Accessible India, Inclusive India."
- The event reinforces the values of inclusive development and social equality in India.

2025 Nobel Prize in Literature

- On October 9, 2025, renowned Hungarian writer László Krasznahorkai was awarded the Nobel Prize in Literature. The Swedish Academy awarded him this prize for "works that affirm the power of art in the midst of apocalyptic reality."
- Krasznahorkai is known for his profound, philosophical, and epic writing, inspired by the Central European literary tradition—Kafka, Bernhard, and Kundera.
- He became the second Hungarian writer to receive this award, after Imre Kertész in 2002.
- He will receive a prize of approximately US\$1.2 million.
- This literary honour is given globally to writers who offer new language and vision to the complex aspects of human existence.
- Krasznahorkai's honour is being seen as a re-establishment of philosophical realism and artistic depth in global literature.

Group Captain Shubhanshu Shukla appointed brand ambassador of 'Vikasit Bharat Buildathon'

- Indian Air Force officer and test pilot Group Captain Shubhanshu Shukla has been appointed brand ambassador of the government's innovation initiative, the 'Vikasit Bharat Buildathon'.
- He is the first Indian astronaut to visit the International Space Station (ISS), having participated in the Axiom-4 mission. The 'Vikasit Bharat Buildathon' is a nationwide student innovation competition organized by the Ministry of Education and the Atal Innovation Mission.
- It aims to promote creativity, technological thinking, and problem-solving skills among students from grades 6 to 12.
- Approximately 10 million students and 1.5 lakh schools are participating in this, making it the

largest school hackathon ever.

Goa's 'Mahaje Ghar Yojana'

- The Goa government has launched the 'Mahaje Ghar Yojana' initiative to regularize houses built on government and community land. It was inaugurated on October 4, 2025, by Union Home Minister Amit Shah.
- The scheme aims to provide legal ownership rights to long-settled families. As per eligibility, only houses built on government land before 1972 or on community land before February 28, 2014 will be eligible. The scheme aims to regularise over 50,000 houses, protecting thousands of families from eviction. The application and approval process has been simplified to ensure speedy issuance of certificates.
- The scheme is expected to benefit nearly half the state's population. This initiative is not only a step towards social justice but also an attempt to resolve the problem of land disputes and illegal constructions in Goa.

Rajasthan's first 'Namo Biodiversity Park' inaugurated

- Rajasthan's first 'Namo Biodiversity Park' was inaugurated on October 5, 2025, by Union Environment Minister Bhupendra Yadav in the Pratap Bandh area of Alwar. Also known as 'Namo Van', this park will serve as a green lung for the Alwar region.
- A symbolic tree planting ceremony was held to mark the inauguration. The park aims to increase greenery, improve air quality, and spread environmental awareness among people.
- Bhupendra Yadav stated that the park will not only promote a clean environment but also inspire visitors to adopt an environmentally friendly lifestyle. It is designed as both an ecological project and a community awareness platform.
- This initiative advances biodiversity conservation and the 'Green India' vision in the state. In the future, similar parks will be developed in other districts of Rajasthan based on this model.

Mirabai Chanu Wins Silver Medal at World Weightlifting Championships

- India's star weightlifter Mirabai Chanu won the silver medal in the women's 48 kg category at the 2025 World Weightlifting Championships held in Førde, Norway. She lifted a total of 199 kg (84 kg snatch + 115 kg clean and jerk).
- This achievement marks Chanu's first World Championship medal since 2022. This marks her comeback after finishing fourth at the Paris 2024 Olympics. South Korea's Ri Song-gum won the gold medal in this category, lifting a total of 213 kg.
- Chanu's achievement continues the tradition of consistent excellence in Indian weightlifting. She said this medal is the result of her hard work and the support of her team. This victory has become a symbol of perseverance and determination for women athletes in India.

Air Force Chief Releases Book "Wings of Valor"

- Indian Air Force Chief Air Chief Marshal A.P. Singh released the book "Wings of Valor" in New

Delhi. The book is written by Swapnil Pandey and published by HarperCollins India.

- The book details the IAF's most daring operations, including a special chapter on Operation Sindoor. Speaking at the launch ceremony, A.P. Singh said that the contributions of personnel working behind the scenes are equally important, along with those involved in combat.
- He said that these heroes often do not receive due recognition, so such books honor their valor and dedication. "Wings of Valor" is an inspiring document of the IAF's traditional valor, technical prowess, and commitment to national security.

Khaled al-Anani Named UNESCO's Next Director-General

- UNESCO's Executive Board has nominated Egyptian scholar and former minister Khaled al-Anani as the organization's next Director-General. If the UNESCO General Assembly, to be held in Uzbekistan in December 2025, confirms his appointment, he will become the first Director-General from the Arab world.
- Al-Anani, 54, is a renowned Egyptologist and professor at Cairo University. He served as Egypt's Minister of Antiquities and later as Minister of Tourism and Antiquities, leading the National Museum of Egyptian Civilization and several important archaeological projects.
- He defeated economist Firmin Edouard Matoko of the Republic of Congo in the vote. This nomination comes after Audrey Azoulay served two terms. Egyptian President Abdel Fattah al-Sisi hailed the country's "historic achievement." The appointment comes at a time when UNESCO is grappling with a financial crisis due to the US withdrawal.

World Bank raises India's growth forecast to 6.5%

- The World Bank has raised India's growth forecast for the fiscal year 2026 from 6.3% to 6.5%. According to the report, this growth is driven by strong domestic consumption, improvements in rural areas, and the positive effects of GST reforms. India will remain the world's fastest-growing major economy.
- However, the forecast for fiscal year 2027 has been lowered to 6.3%, reflecting the potential negative impact of the 50% tariff imposed by the US. South Asia is projected to grow by 6.6% in 2025 and 5.8% in 2026—down from the April forecast.
- The report warns that global economic uncertainty, political instability, and labor market disruptions caused by artificial intelligence could impact the region's growth momentum.

India Wins Record 22 Medals at the 2025 World Para Athletics Championships

- India achieved its best-ever performance at the 2025 World Para Athletics Championships in New Delhi, winning a total of 22 medals, including 6 gold, 9 silver, and 7 bronze.
- With this achievement, India ranked 10th. Over 2000 athletes from 104 countries participated in the competition. India fielded a 73-member contingent, comprising 54 men and 19 women.
- Shailesh Kumar won the first gold medal in the men's high jump (T63 category) by setting an Asian record, while Sumit Antil won his third World Championship gold medal—the most by an Indian para-athlete.
- India set three World Championship records and seven Asian records during the event. India's

total medal tally now stands at 67 (19 gold, 24 silver, 24 bronze), reflecting India's growing global standing in para-sports.

Second Global Conference on Sustainable Livestock Transitions

- The Food and Agriculture Organization (FAO) organized the "Second Global Conference on Sustainable Livestock Transitions" in Rome between September 29–October 1, 2025. India was represented by Rajiv Ranjan Singh, Union Minister of Fisheries, Animal Husbandry and Dairying. The conference aimed to share best practices and innovations for sustainable, inclusive, and climate-resilient development in the livestock sector.
- During the conference, the FAO-LEAP partnership released two guidelines—(1) Valuation of Ecoservices in Livestock Agro-Ecosystems, and (2) The Role of Livestock in the Circular Bioeconomy.
- India is the world's largest milk producer, contributing approximately 24.76% of global production. The sector contributes 5.5% to national GDP and 31% to agricultural GVA. The conference reinforced the global commitment to aligning the livestock sector with the Sustainable Development Goals (SDGs).

New Agricultural Commodities Added to the e-NAM

- The Government of India recently added 9 new agricultural commodities to the National Agriculture Market (e-NAM) platform, increasing the total number of commodities to 247.
- Launched on April 14, 2016, e-NAM is an online integrated agricultural trading portal that connects APMC mandis, private agricultural markets, and buyers across the country. Its aim is to make agricultural marketing uniform, transparent, and digital.
- The newly added commodities include green tea, dried ashwagandha roots, mustard oil, lavender oil, mentha oil, virgin olive oil, and broken rice.
- This move will provide farmers with access to a comprehensive national market, quality-based pricing, and transparent trade free from intermediaries. Producers of value-added and medicinal products will particularly benefit. The expansion of e-NAM marks another significant step towards digitizing agricultural marketing and increasing farmers' incomes.

Renowned Indian Actor Asrani Passes Away

- Veteran Indian actor and director Govardhan Asrani passed away in Mumbai at the age of 84 after a prolonged illness. He acted in over 350 Hindi films during a career spanning more than five decades. He was primarily known for his comedic and supporting roles.
- He began his acting career in 1967 with the film 'Hare Kanch Ki Chooriyan'. He was a favorite of directors like Hrishikesh Mukherjee and Gulzar and played memorable roles in many hit films such as 'Chupke Chupke', 'Bawarchi', 'Namak Haraam', 'Guddi', 'Abhimaan', 'Bhool Bhulaiyaa', and 'Dhamaal'.
- Besides Hindi films, he also acted in Gujarati, Rajasthani, and one Punjabi film. He also served as the director of the Film and Television Institute of India (FTII), Pune, from 1988 to 1993.
- He acted in the film 'Dream Girl 2', which was released in 2023. Two of his films, 'Bhoot Bangla' and 'Haiwaan', are yet to be released posthumously.

MCQs Based on Current Affairs

1. Which of the following activities require prior approval of the National Biodiversity Authority under the Biological Diversity Act, 2002?

1. Any person (foreign / non Indian) accessing biological resources from India.
2. Transfer of research results (derived from biological resources) to non Indian entities.
3. Applying for an Intellectual Property Right (IPR) outside India based on biological resources obtained from India.
4. Domestic citizens using biological resources for traditional agricultural farming.

Select the correct options:

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

2. Which of the following bodies are statutory under the Biological Diversity Act, 2002?

1. National Biodiversity Authority (NBA)
2. State Biodiversity Boards (SBBs)
3. Biodiversity Management Committees

Options:

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

3. Which of the following statements about the Payments Regulatory Board (PRB) constituted by the RBI are correct?

1. It replaced the earlier Board for Regulation and Supervision of Payment and Settlement Systems (BPSS).
2. It has six members, including ex officio and government nominated members.
3. It includes nominees from State Governments.
4. It meets at least twice a year.

Select the correct option:

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

4. Consider the following with respect to the voting mechanism in the Payments Regulatory Board (PRB):

1. Every member of PRB has one vote.
2. Decisions are made by majority vote among members present.
3. In case of a tie in votes, the Chairperson has a casting vote.

Which of the above statements are correct?

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

5. Which of the following statements about the India EFTA TEPA (Trade & Economic Partnership Agreement) are correct?

1. The TEPA enters into force on 1 October 2025.
2. Under TEPA, EFTA has committed to investing USD 100 billion in India over 15 years.
3. India will offer duty concessions on over 95% of EFTA's tariff lines.
4. Sensitive agricultural products, dairy, and coal are entirely excluded from duty concessions under TEPA.

Select the correct option:

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

6. Consider the following statements about the MSP regime in India:

1. India first adopted MSP (for wheat) in 1966 to address food shortages during the Green Revolution period.
2. The Swaminathan Commission (2006) recommended that MSP be 50% more than the cost of production.
3. The MSP scheme is statutory and binding on private sector buyers.
4. The "cost of production" for MSP purposes can include various cost concepts like A2,

A2+FL, C2).

Which of the above are correct?

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

7. Which of the following statements about India's re election to the ICAO Council in September 2025 are correct?

- 1. India was re elected under Part II category of ICAO Council.
- 2. The election took place during the 42nd ICAO Assembly Session held in Montreal.
- 3. India secured the same number of votes as in the 2022 elections.

Select the correct option:

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

8. Consider the following statements about India's Pulse Mission:

- 1. It is a six year mission.
- 2. It aims to achieve self sufficiency in pulses by 2030 31.
- 3. It provides assured procurement for all pulses at MSP by the government for four years.

Which of these statements are correct?

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

9. Typhoon Bualoi, which recently hit Vietnam and the Philippines, is locally known in the Philippines by which name?

- A: Opong
- B: Ragasa
- C: Mitag
- D: Kajiki

10. Consider the following statements about PM SETU:

- 1. It is a centrally sponsored scheme with total

outlay of Rs. 60,000 crore.

- 2. It aims to modernise 1,000 government ITIs through a hub and spoke model (200 hub + 800 spoke).
- 3. Hub ITIs will host innovation centres, production units, training of trainers, and placement services.
- 4. Spoke ITIs will be converted into private institutions under full privatization.

Which of the above statements are not correct?

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

11. Consider the following statements about ICGS Akshar:

- 1. It is the second vessel in the Adanya class fast patrol vessels (FPVs) being built for the Indian Coast Guard.
- 2. It was built by Garden Reach Shipbuilders & Engineers (GRSE).
- 3. The ship has a top speed of about 27 knots.
- 4. The endurance of the ship is approximately 1,500 nautical miles.

How many of the above statements are correct?

- A: Only one
- B: Only two
- C: Only three
- D: All four

12. Consider the following statements about Aspirational Agriculture Districts as identified under PM Dhan Dhaanya Krishi Yojana (PMDDKY):

- 1. A total of 100 districts have been identified across India under this scheme.
- 2. The identification of these districts is based on three criteria: low productivity, low crop intensity, and below average access to credit.
- 3. Each district will have a separate budgetary allocation exclusively for PMDDKY from the Centre.
- 4. The scheme will converge 36 central schemes across 11 ministries.

How many of the above statements are correct?

- A: Only one
 B: Only two
 C: Only three
 D: All four

13. Consider the following statements regarding the 2025 Nobel Prize in Physiology or Medicine:

1. The prize was awarded to Mary E. Brunkow, Fred Ramsdell, and Shimon Sakaguchi for their discoveries concerning peripheral immune tolerance.
2. Their research identified the FOXP3 gene as essential for the development and function of regulatory T cells (Tregs).
3. The laureates discovered a novel cytokine that suppresses T-cell activation.

Which of the above statements are correct?

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

14. With reference to INS Androth, consider the following statements:

1. It is a type of Anti Submarine Warfare ship, part of the "Arnala class".
2. It is made by GRSE with more than 80% of the parts made in India.
3. It moves using water-jet systems powered by diesel engines.
4. The ship is named after an island in Andaman & Nicobar

Which of the statements given above is/are correct?

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

15. Which of the following statements about NITI Aayog is/are correct?

1. It is a constitutional body established by an act of Parliament.
2. The Prime Minister is the ex officio Chairperson of NITI Aayog.
3. It has the power to allocate funds to states for centrally sponsored schemes.

4. It fosters cooperative federalism by involving state governments in policy deliberations.

Options:

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

16. Which of the following statements about the NAKSHA (National Geospatial Knowledge based Land Survey of Urban Habitations) scheme is/are correct?

1. It is launched under the Digital India Land Records Modernization Programme (DILRMP).
2. The pilot covers over 150 Urban Local Bodies (ULBs) across several states and union territories.
3. It is fully funded by the states, with matching central assistance.
4. It uses aerial survey, GIS, and ground verification to produce geospatial land parcel records.

Options:

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

17. Consider the following statements regarding the ILO report "The State of Social Justice: A Work in Progress":

1. The report highlights that over 50% of the global population is now covered by some form of social protection.
 2. Child labour among children aged 5–14 has increased in recent years due to digital inequality.
 3. The gender wage gap is projected to close within the next two decades if current trends continue.
 4. The report links demographic shifts and environmental transitions as emerging global challenges to labour markets.
- Which of the statements given above is/are correct?

- A: 1 and 4 only

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

18. Which of the following statements about the 2025 Nobel Prize in Physics is/are correct?

1. The Prize was awarded to John Clarke, Michel H. Devoret, and John M. Martinis.
2. It was awarded “for the discovery of macroscopic quantum mechanical tunnelling and energy quantisation in an electric circuit.”
3. Their experiments involved semiconductors operating at room temperature to demonstrate quantum effects.

Select the correct answer using the code:

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

19. Regarding the Sloth Bear (*Melursus ursinus*), consider the following statements:

1. Sloth bears are found only in India.
2. They are listed as Vulnerable on the IUCN Red List.
3. They are protected under Schedule I of the Wildlife (Protection) Act, 1972 and included in CITES Appendix I.

Which of the above statements are correct?

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

20. Which of the following statements about the Gharial (*Gavialis gangeticus*) is/are correct?

1. Gharials are endemic to rivers of the Indian subcontinent such as the Ganges and Chambal.
2. They are classified as Vulnerable on the IUCN Red List.
3. Gharials are listed under Schedule I of the Wildlife (Protection) Act and in CITES Appendix I.

Select the correct answer using the codes given below:

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

21. The Nobel Prize in Chemistry 2025 was jointly awarded to scientists from Japan, Australia, and the USA for their work on Metal-Organic Frameworks (MOFs). Who among the following is NOT one of the laureates?

- A: Susumu Kitagawa
 B: Omar M. Yaghi
 C: Richard Robson
 D: Akira Yoshino

22. Consider the following statements about the regulatory framework governing drug manufacturing in India:

1. The primary legislation regulating drugs and cosmetics in India is the Drugs and Cosmetics Act, 1940.
2. The Central Drugs Standard Control Organisation (CDSCO) grant licensing of all drug manufacturers in India.
3. Good Manufacturing Practices (GMP) are mandatory standards laid down in Schedule M of the Drugs and Cosmetics Rules, 1945.
4. The Indian Pharmacopoeia (IP) defines the quality standards for drugs in India.

Which of the above statements are correct?

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

23. Consider the following statements about e-NAM:

1. e-NAM was launched in 2016 to unify agricultural markets across India.
2. The platform allows only government-run mandis to participate in trading.
3. e-NAM integrates quality testing, online payment, and logistics features.

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

24. Consider the following statements regarding SAKSHAM:

1. SAKSHAM is developed by Bharat Electronics Limited (BEL).
2. SAKSHAM is an indigenous Counter Unmanned Aerial System (UAS).
3. The system operates using the Army Data Network (ADN).

Which of the above statements is/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 María Corina Machado:

1. She is the first Venezuelan to receive the Nobel Peace Prize.
2. She co-founded Súmate organization that focuses on election transparency in Venezuela.
3. She was elected president of Venezuela in 2024.

Which of the above statements is/are correct?

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

26. With reference to the National Red List Assessment (NRLA) recently launched by the Government of India, consider the following statements:

1. It aims to assess the extinction risk of only faunal species in India.
 2. The assessment will align with internationally accepted IUCN guidelines.
 3. It is linked to India's obligations under the Convention on Biological Diversity (CBD).
- 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

27. Which of the following is/are objectives of the Convention on Biological Diversity (CBD)?

1. Conservation of biological diversity
2. Ensuring food security for all member nations
3. Sustainable use of biodiversity components
4. Fair and equitable sharing of benefits from genetic resources

Select the correct answer using the code below:

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

28. Consider the following pairs of Economic Nobel laureates and their contributions (2025):

Laureate	Contribution
1. Joel Mokyr	Historical analysis of economic growth and innovation
2. Philippe Aghion	Theoretical model of creative destruction in growth
3. Peter Howitt	Political economy of globalization

Which of the above pairs are correctly matched?

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

29. Consider the following statements regarding Maitri II:

1. It will be India's third permanent research station in Antarctica.
 2. It is designed to operate solely on fossil fuels to withstand the harsh Antarctic climate.
 3. The station will feature remote data transmission capabilities even when unmanned.
- Which of the statements given above is/are correct?

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

30. With reference to the governance of Antarctica, consider the following statements:

1. The Antarctic Treaty ban military presence for defensive purposes.
2. The Madrid Protocol requires Environmental Impact Assessments (EIA) for new constructions.
3. India is not a consultative party to the Antarctic Treaty.

Which of the statements is/are correct?

- A: 1 and 2 only
 B: 2 only
 C: 1, 2 and 3
 D: None

31. Consider the following statements regarding LEAPS 2025:

1. LEAPS 2025 is implemented by the Ministry of Road Transport and Highways.
2. It aims to benchmark performance, innovation, and leadership in the logistics sector.
3. LEAPS 2025 focuses on sustainability and green logistics.

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 about PM Gati Shakti:

1. It was launched in October 2022 to mark the National Logistics Day.
2. It is powered by GIS and ISRO satellite tools for real-time project monitoring.
3. It integrates data from over 20 ministries and departments.

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

33. With reference to Rare Earth Elements (REEs),

consider the following statements:

1. Rare Earth Elements are a group of 17 chemically similar elements, including the 15 lanthanides, along with scandium and yttrium.
2. India has no significant reserves of rare earth elements and depends entirely on imports.
3. Rare earth elements are critical for the manufacturing of renewable energy technologies, such as wind turbines and electric vehicles.
4. China is the world's largest producer and exporter of rare earth elements.

Which of the statements given above is/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

34. Consider the following statements regarding the All India Elephant Estimation (SAIEE) 2021–25:

1. It is the first elephant population estimation in India to use DNA-based methods.
2. The total estimated wild Asian elephant population in India is over 25,000.
3. It shows a decline in population compared to the 2017 estimation.

Which of the above statements is/are correct?

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

35. Consider the following statements about the Asian elephant in India:

1. The Asian elephant is listed as Endangered on the IUCN Red List.
 2. It is protected under Schedule I of the Wildlife Protection Act, 1972.
 3. It is included in Appendix II of CITES.
- Which of the statements given above is/are correct?

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

D: None

36. Consider the following statements regarding the recent Supreme Court decision on direct recruitment of District Judges under Article 233 of the Constitution:

1. A judicial officer who previously practised as an advocate can be eligible under the direct recruitment quota, provided the combined experience (as advocate + as judge) is at least 7 years.
2. The Court held that eligibility under Article 233 must be determined at the time of appointment, not at the time of application.
3. The Court fixed a minimum age of 35 years for all direct recruitment candidates (whether from Bar or service).

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. Consider the following statements about recent defence transformation initiatives in India:

1. The year 2025 has been officially declared by the Ministry of Defence as the "Year of Reforms", with priorities including integrated theatre commands.
2. India's policy of Positive Indigenisation Lists means that some defence equipment must now be manufactured within India.
3. Under recent reforms, 30% of defence capital procurement budget in 2024-25 has been reserved for Indian companies to encourage technology transfer.

Which of the statements given above are correct?

- A: 1 and 2 only
 B: 2 only
 C: 1, 2 and 3 only
 D: None

38. Consider the following statements regarding India's 2025 WDMMA Air Force rankings:

1. India ranks third globally, ahead of China, in terms of air power capability.
2. Over 50% of India's aircraft are fighter jets.

3. WDMMA evaluates air forces using a metric known as the TruVal Rating (TVR).

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

39. Consider the following statements regarding the Global Pension Index 2025 released by the Mercer CFA Institute:

1. India received a D grade with an overall score of 43.8.
2. The Index evaluates pension systems based on Adequacy, Sustainability, and Equity.
3. Singapore entered the A grade tier for the first time in 2025, becoming the only Asian country to do so.

Which of the above statements is/are correct?

- A: 1 and 2 only
 B: 1 and 3 only
 C: 1, 2 and 3 only
 D: None

40. Consider the following statements about Tejas Mk1A:

1. Tejas Mk1A replaces India's aging MiG-21/23/27 fleet.
2. It has over 64% indigenous content.
3. Mk1A can operate from aircraft carriers.

Which of the statements are correct?

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

41. Consider the following statements about the BrahMos missile:

1. It is a supersonic cruise missile developed jointly by India and Russia.
2. Its current operational range is up to 450 km, with future variants aiming for 800 km.
3. It can be launched from land, sea, air, and submarine platforms.
4. It uses a single-stage solid propellant engine.

Which of the statements are correct?

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

42. Consider the following statements about the Rotavac vaccine:

1. It is an oral vaccine developed indigenously in India.
2. The effectiveness of Rotavac in the field is around 54%.
3. Rotavac is administered to children in a two-dose schedule.
4. The vaccine helps prevent rotavirus-induced gastroenteritis.

Which of the statements 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

43. Consider the following statements about global forest extent as reported in Global Forest Resources Assessment 2025 (GFRA 2025):

1. Global forests cover approximately 4.14 billion hectares.
2. Forests cover about 32 % of the Earth's land area.
3. Nearly half of the world's forests are in tropical regions.
4. The global average forest area per person is about 1 hectare.

Which of the above statements are correct?

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

44. Consider the following statements regarding regional and national findings of GFRA 2025:

1. In the global ranking of total forest area, India is ranked 9th.
2. The top five countries (in order) holding the largest forest area are: Russia, Brazil, Canada, USA, China.
3. The report indicates that Asia was the only continent to report a net forest gain.

4. The GFRA assessment is published every five years.

Which of the above are correct?

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

45. Consider the following statements about Kafala system:

1. Under the system, a migrant worker's legal status (residency & employment) was tied to a local employer ("kafeel").
 2. Workers often needed employer consent to leave the country or change jobs.
 3. The system was originally designed in the 1950s to regulate foreign labour flows into oil-rich Gulf economies.
 4. The system granted full freedom and mobility to migrant workers from the outset.
- Which of these statements are correct?

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

46. Consider the following statements regarding the State of Global Air (SoGA) 2025 report:

1. It is jointly released by the World Health Organization (WHO) and the United Nations Environment Programme (UNEP).
2. The report states that air pollution was responsible for about 7.9 million deaths globally in 2023.
3. More than 85% of these deaths were linked to non-communicable diseases (NCDs).

Which of the statements given above are correct?

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

47. Consider the following statements regarding the Mahe-class ships of the Indian Navy:

1. The Mahe-class is being constructed by Cochin Shipyard Limited (CSL).
2. These ships are designed primarily for deep-

sea anti-submarine warfare operations.

3. The Mahe-class will replace the older Abhay-class corvettes in the Indian Navy.

Which of the statements given above are correct?

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

48. Consider the following statements about the 47th ASEAN Summit:

1. It was held in Kuala Lumpur, Malaysia from 26-28 October 2025.
2. It marked the formal accession of Timor Leste as the 11th member of ASEAN.
3. PM of India attended the summit in person as India's representative.

Which of the above statements is/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 about the LVM3 rocket used in the CMS-03 mission:

1. It is a three-stage heavy-lift launch vehicle.
2. Its cryogenic stage uses the indigenous CE-

20 engine.

3. It can launch payloads of up to 8,000 kg to Geostationary Transfer Orbit (GTO).

Which of the above statements is/are correct?

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

50. Consider the following statements regarding Cyclone Montha and tropical cyclones in India:

1. Cyclone Montha was classified as a Severe Cyclonic Storm.
 2. In the Northern Hemisphere, cyclones rotate clockwise, whereas in the Southern Hemisphere, they rotate counter-clockwise.
 3. Cyclones derive their energy primarily from the release of latent heat due to condensation of moist air over warm ocean waters.
 4. Cyclone Montha name was given by Thailand.
- Which of the statements given above is/are correct?

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

ANSWER

1	C
2	D
3	C
4	D
5	C
6	C
7	A
8	A
9	A
10	B

11	C
12	C
13	A
14	C
15	C
16	B
17	A
18	A
19	C
20	B

21	D
22	B
23	B
24	D
25	C
26	C
27	B
28	A
29	D
30	A

31	C
32	B
33	B
34	B
35	A
36	B
37	A
38	B
39	B
40	A

41	C
42	C
43	C
44	A
45	C
46	C
47	B
48	A
49	C
50	B



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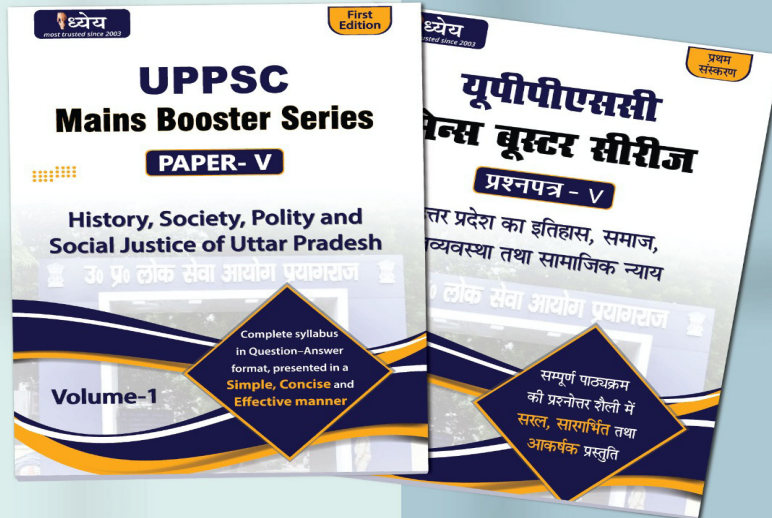
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