

#### **KERALA STATE CIVIL SERVICE ACADEMY**

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# MAGAZINE

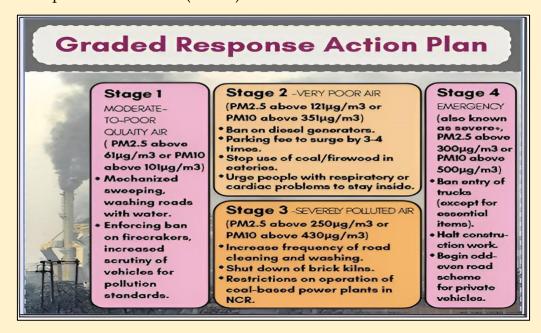






#### **GRADED RESPONSE ACTION PLAN**

Chief Minister of Delhi appealed to residents to celebrate Deepavali by bursting only certified green crackers as the Capital's air quality index (AQI) crossed 300, prompting the enforcement of stage II of the Graded Response Action Plan (GRAP).



- Nature: GRAP is a set of emergency measures that kick in to prevent further deterioration of air quality once it reaches a certain threshold in the Delhi-NCR region.
- Judgement: It was approved by the Supreme Court in 2016 after the Supreme Court's order in the matter of M. C. Mehta vs. Union of India (2016) and notified in 2017.
- Implementation: The Commission for Air Quality Management (CAQM) in NCR and adjoining areas oversees the implementation of GRAP. It collaborates with the Ministry of Environment, Forest and Climate Change (MoEFCC).
- Evolution:
  - Till 2020, the Supreme Court-appointed Environment Pollution (Prevention & Control) Authority (EPCA) used to order States to implement GRAP measures.
  - The EPCA was dissolved and replaced by the Commission for Air Quality Management (CAQM) in 2020.
  - From 2021 onwards, the GRAP is being implemented by the CAQM.
- Role of IITM and IMD: CAQM relies on air quality and meteorological forecasts by the Indian Institute of Tropical Meteorology (IITM) and the India Meteorological Department (IMD).
- Various stages of GRAP:
  - Stage I (Poor Air Quality AQI 201-300): Enforce NGT / Hon'ble SC's order on over aged diesel / petrol vehicles.
  - Stage II (Very Poor- AQI 301-400): Targeted actions to combat air pollution at identified hotspots in the region. Regulated operations of DG (Diesel Generators) have been set across all sectors in the NCR.
  - Stage III ('Severe' AQI 401-450): Impose strict restrictions on BS III petrol and BS IV diesel four-wheelers in certain areas and may suspend physical classes in schools for primary grade children up to Class 5.
  - Stage IV (Severe Plus- AQI greater than 450): When the AQI exceeds 450, four-wheelers registered outside Delhi, except for electric vehicles, CNG vehicles, and BS-VI diesel vehicles and vehicle carrying essential commodity, will not be allowed to enter the city.



#### CHILDREN DEATH DUE TO CONTAMINATED COUGH SYRUPS

The deaths of 25 children due to contaminated cough syrup highlight gaps in India's pediatric drug regulation. Despite bans on unsafe formulations, inadequate monitoring, weak pharmacovigilance, and lack of India-specific pediatric guidelines compromise the health rights of children under Article 39(f) of the Constitution.



#### **Current Challenges in Pediatric Healthcare**

- **Regulatory Gaps:** CDSCO regulates large manufacturers; state drug officers handle smaller units. Oversight is inconsistent, contributing to unsafe drug distribution.
- Lack of Pediatric-Specific Guidelines: Children are "therapeutic orphans" as most clinical trials are adult-focused; dosage often extrapolated from adult medicine, risking overdosage.
- Over-the-Counter Medication Risks: Urban use of OTC drugs for cough, cold, and fever is common; caregivers often lack awareness of correct dosage and potential side effects.
- **Inadequate Public Health Infrastructure:** Public health outlets need strict guidelines and zero tolerance for substandard or substitute medications; monitoring teenage drug misuse is also required.
- **Data Deficiency:** Policies rely on foreign or adult-centric data; Indian pediatric pharmacogenetics and environmental factors (e.g., malnutrition) are largely ignored.



#### Legal and Policy Framework

- Child Protection Laws: India has ~13 child-specific policies (e.g., National Policy for Children 1974, India Newborn Action Plan 2014) and ~10 legislations (e.g., PC-PNDT Act, Aadhaar Act) targeting labor, sexual exploitation, and welfare.
- **Limitations:** Most focus on labor and protection from abuse; pharmacovigilance in pediatric medicine lacks robust policy and legal oversight.
- Global Comparison: EU has Paediatric Use Marketing Authorisation; USA operates Best Pharmaceuticals for Children Act. Both incentivize pediatric research. India lacks a comparable legislative framework.

#### **Economic and Social Considerations**

- **Affordability:** High healthcare costs push impoverished families further into poverty; essential pediatric medicines must be affordable.
- Essential Medicines Concept: WHO's Essential Medicines List for Children (EMLc) guides priority healthcare needs; India's EMLc updates are irregular, affecting availability and accessibility.
- **Public Awareness:** Education of caregivers and pharmacists on correct dosage, labeling, and adverse effect monitoring is critical.

#### **International Lessons and Responsibilities**

- Global Incidents: Contaminated pediatric syrups have caused deaths in Gambia, Uzbekistan, Indonesia, and Cameroon; India's role as a pharmaceutical hub imposes responsibility for safe exports.
- **Holistic Policy Needs:** Adult medicines modified for children are off-label and unsafe; India requires a framework integrating safety, monitoring, and public education.

#### Reforms Suggested / Recommendations

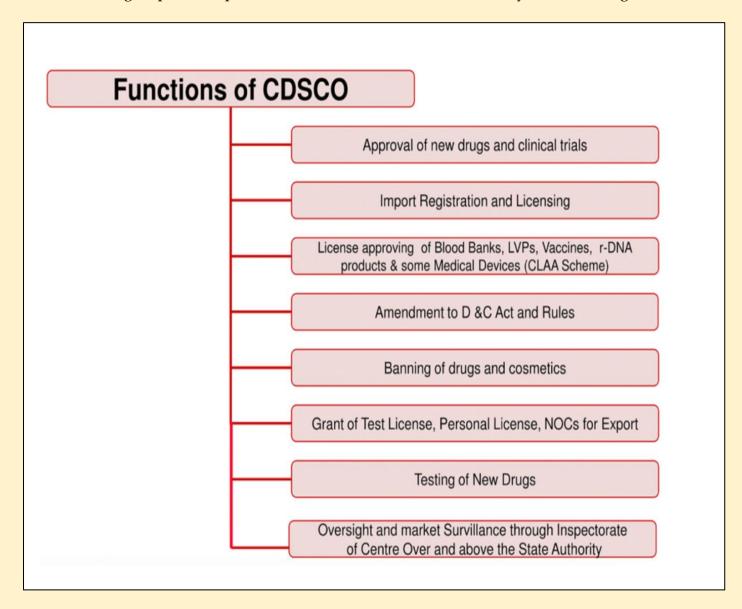
- **Robust Pharmacovigilance:** Create specialized pediatric drug monitoring infrastructure at national and state levels.
- **Legislation:** Enact pediatric-specific drug laws with clear dosage, formulation, and safety standards.
- Research & Data: Promote India-centric clinical trials and pharmacogenetic studies for children
- **Public Awareness & Training:** Mandatory training for caregivers, pharmacists, and public health workers on safe pediatric medicine practices.
- EMLc Updates: Regularly update India's pediatric essential medicines list; ensure affordability and availability in public health systems.

Children are dependent and vulnerable; safeguarding their health requires proactive policy, rigorous regulatory oversight, and public awareness. India must establish a holistic, India-specific framework to prevent medical tragedies, ensure safe pediatric medicines, and uphold constitutional health rights.



#### CENTRAL DRUGS STANDARD CONTROL ORGANISATION (CDSCO)

- It functions as India's national regulatory body overseeing cosmetics, pharmaceuticals, and medical devices.
- The CDSCO is organized with the Drug Controller General of India (DCGI) overseeing pharmaceuticals and medical devices.
- It is assigned duties under **Drugs and Cosmetics Act**, **1940**.
- The DCGI is situated within the Ministry of Health and Family Welfare and receives guidance from the Drug Technical Advisory Board (DTAB) and the Drug Consultative Committee (DCC).
- The CDSCO operates through zonal offices that conduct inspections prior to licensing, post-licensing inspections, post-market surveillance, and, if necessary, initiates drug recalls.

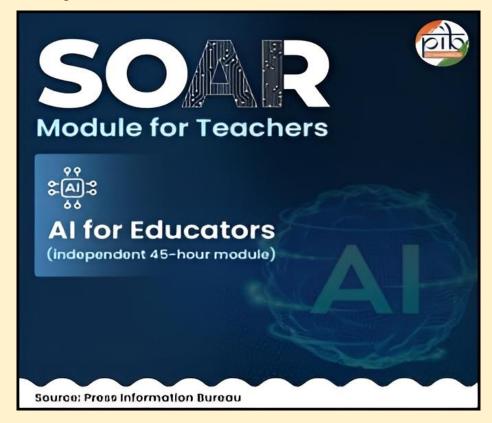


Thus CDSCO plays a pivotal role in ensuring the safety, efficacy, and quality of drugs and medical devices in India, safeguarding public health through robust regulatory oversight.



#### **SOAR PROGRAM**

The Skilling for AI Readiness (SOAR) program has been launched by government of India, and it coincides with the 10-year milestone of the Skill India Mission, which has empowered people through various skilling schemes since 2015.



- Launch: It was launched by the Ministry of Skill Development and Entrepreneurship (MSDE) in July 2025.
- Objective: It aims to integrate artificial intelligence learning into India's school education and training ecosystem, preparing both students and teachers for a rapidly evolving digital world.
- Long-tern vision: SOAR's long-term vision is to position India as a global leader in AI by preparing its youth for AI-driven careers and entrepreneurial ventures.
- In sync with NEP 2020: The National Education Policy (NEP) 2020 emphasises the inclusion of contemporary subjects like Artificial Intelligence (AI) in school curricula, at appropriate stages, to foster innovation and digital literacy among students.
- Focus: It focuses on school students from classes six to twelve and educators across India. It is offering three targeted 15-hour modules for students and a 45-hour module for teachers. These courses introduce foundational AI and machine learning concepts, along with data literacy and the ethical use of technology.
- Centre of Excellence in AI: In support of this vision, the Union Budget 2025–26 has earmarked ₹500 crore to establish a Centre of Excellence in Artificial Intelligence for Education. The centre will focus on developing AI-based learning tools, promoting multilingual AI resources for Indian languages, and fostering innovative classroom practices.
- Linkage with IITs: It will also strengthen AI curriculum development across technical institutions and complement existing efforts by IITs and AICTE-approved colleges that already offer advanced courses in machine learning, deep learning, and data analytics.



#### SYNTHETIC MEDIA AND DEEPFAKE REGULATIONS

The proliferation of AI-generated deepfakes and synthetic media has raised significant concerns regarding misinformation, electoral integrity, and personal rights. In response, the Indian government has proposed amendments to the IT Rules, 2021, mandating the labelling of AI-generated content to enhance transparency and accountability in the digital ecosystem.



#### **Key Arguments:**

- Widespread Proliferation: Advancements in generative AI have made it easier to create
  photorealistic images and videos, leading to the widespread dissemination of AI-generated
  content across social media platforms. For instance, Meta has initiated the labelling of AIgenerated content on Facebook, Instagram, and Threads to inform users about the nature of
  the content they encounter.
- **Democratic Risks:** The rapid spread of AI-generated misinformation poses a threat to democratic processes. During India's general election, over 75% of voters were exposed to political deepfakes, with nearly one in four believing the AI-generated content was real.
- **Personal Rights Violations:** Public figures have reported instances of their likenesses being misused in AI-generated media. For example, a deepfake video of Punjab Chief Minister Bhagwant Mann was created and circulated with the intent to defame him.
- **Industry Initiatives:** The Coalition for Content Provenance and Authenticity (C2PA) has developed an open technical standard, known as Content Credentials, to enable the verification of digital content's origin and edits. This initiative aims to establish trust in media content by providing transparent information about its creation and modifications.
- **Regulatory Challenges:** The current IT Rules, 2021, may not adequately address the complexities associated with AI-generated content. The proposed amendments seek to fill this regulatory gap by introducing clear guidelines for labelling AI-generated content, thereby enhancing user awareness and trust.

#### **Criticisms / Drawbacks:**

- **Enforcement Complexity:** Ensuring consistent identification and labelling of AI-generated content across diverse platforms and formats presents significant enforcement challenges.
- **Legal Ambiguities:** The introduction of subordinate legislation without thorough parliamentary scrutiny may raise concerns regarding democratic legitimacy and accountability.
- **Limited Impact Evidence:** Mandatory labelling, as observed in previous interventions, may have limited effectiveness in reducing misinformation without complementary measures such as user education and platform accountability.
- Global Coordination: Divergent approaches to AI content regulation across countries complicate efforts to establish standardized practices and may hinder international cooperation.



#### Reforms / Recommendations:

- **Dynamic Regulation:** Regularly update regulations to keep pace with advancements in AI technology and address emerging challenges effectively.
- **Public Awareness Campaigns:** Implement educational initiatives to enhance users' ability to critically assess AI-generated content and identify potential misinformation.
- **Industry Collaboration:** Encourage collaboration among tech companies, policymakers, and civil society to develop and adopt standardized labelling practices and verification tools.
- Parliamentary Oversight: Ensure that amendments to regulations undergo thorough scrutiny and debate in Parliament to uphold democratic principles.
- **Integration with Digital Literacy:** Incorporate AI content labelling into broader digital literacy programs to empower users to navigate the digital landscape responsibly.

#### Latest amendments

The IT Rules, 2021 were originally notified on **25th February**, **2021** and subsequently amended on **28th October**, **2022** and **6th April**, **2023**. They prescribe due diligence obligations on intermediaries, including social media intermediaries, with the objective of ensuring online safety, security and accountability.

Under Rule 3(1)(d), intermediaries are required to remove unlawful information upon receiving actual knowledge either through a court order or notification from the Appropriate Government.

The review undertaken by MeitY highlighted the need for additional safeguards to ensure senior-level accountability, precise specification of unlawful content, and periodic review of government directions at higher level.

#### **Key Features of the Amendments**

#### 1. Senior-level Authorisation:

- Any intimation to intermediaries for removal of unlawful information can now only be issued by a senior officer not below the rank of Joint Secretary, or equivalent, or, where such rank is not appointed, a Director or an officer equivalent in rank—and, where so authorised, acting through a single corresponding officer in its authorised agency, where such agency is so appointed.
- In case of police authorities, only an officer **not below the rank of Deputy Inspector General of Police (DIG)**, specially authorised, can issue such intimation.

#### 2. Reasoned Intimation with Specific Details:

- The intimation must clearly specify the legal basis and statutory provision, the nature of the unlawful act, and the specific URL/identifier or other electronic location of the information, data or communication link ("content") to be removed.
- This replaces the earlier broad reference to 'notifications' with 'reasoned intimation' to align the Rules with the requirement of 'actual knowledge' as mandated under section 79(3)(b) of the IT Act, bringing clarity and precision.

#### 3. Periodic Review Mechanism:

- All intimations issued under Rule 3(1)(d) will be subject to a **monthly review** by an officer not below the rank of Secretary of the Appropriate Government.
- This ensures that such actions remain **necessary**, **proportionate**, **and consistent** with law.

#### 4. Balance of Rights and Responsibilities:

 The amendments strike a balance between the constitutional rights of citizens and the legitimate regulatory powers of the State, ensuring that enforcement actions are transparent and do not lead to arbitrary restrictions.



#### **Expected Impact**

- **Transparency & Accountability**: Clear guidelines on who can issue directions and how, with periodic review, ensures checks and balances.
- **Clarity for Intermediaries**: By mandating detailed and reasoned intimations, intermediaries will have better guidance to act in compliance with law.
- **Safeguards and Proportionality**: The reforms ensure proportionality and uphold the principles of natural justice while reinforcing lawful restrictions under the IT Act, 2000.

The proposed mandatory labelling of AI-generated content represents a proactive step towards enhancing transparency and accountability in the digital realm. By implementing dynamic regulations, fostering public awareness, and promoting industry collaboration, India can mitigate the risks associated with AI-generated misinformation and uphold democratic values.

#### EC FLAGS DEEPFAKES AS A THREAT TO ELECTORAL INTEGRITY

With growing concerns over the manipulation of digital media, the Election Commission of India (EC) has issued new guidelines mandating all political parties and candidates to declare any artificial intelligence (AI)-generated or synthetic content used in their campaigns.

The move comes ahead of the upcoming Bihar elections and aims to curb misinformation that can distort the democratic process.

The EC described the misuse of AI-generated or hyper-realistic synthetic media as a "deep threat and challenge" to free and fair elections.

It observed that fabricated videos and audio clips of political leaders often circulate as genuine, potentially influencing public opinion and misleading voters. The poll body noted that such practices undermine the credibility of the electoral process and could lead to false narratives.

#### **New Labelling Rules for AI-Generated Content**

Under the new directive, any campaign material created or altered using AI must carry a visible and prominent label such as "AI-Generated", "Digitally Enhanced", or "Synthetic Content".

The EC has specified that the label should cover at least 10 per cent of the visible area in visuals and appear during the first 10 per cent of audio duration. For video content, the label must be placed on the top band of the screen.

#### **Record-Keeping and Removal Obligations**

Political parties and candidates are now required to maintain detailed records of all AI-generated content used during campaigns, including creator details, timestamps, and metadata for verification purposes.

If any misleading synthetic content is found on official social media accounts, it must be removed within three hours of detection or report. The EC warned that circulating manipulated media without consent or factual accuracy could attract action under the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021.

#### **Emphasis on Accountability and Transparency**

The EC reiterated its commitment to safeguarding democratic values by promoting transparency in digital campaigning. It emphasised that political entities must act responsibly while adopting emerging technologies and comply with due diligence obligations to prevent misinformation. The advisory marks a decisive step in addressing the growing challenge of deepfake content in Indian elections.



#### NINGOL CHAKOUBA FESTIVAL

Manipur government holds fish fair ahead of the Ningol Chakouba festival and targets to sell 1.5 lakh kg of various fish varieties.



- Annual festival of Manipur: The festival is held every year in Manipur on the second day of the lunar month of Hiyangei of the Meitei calendar.
- Primarily celebrated by Meiteis: The festival is mainly celebrated by the Meiteis but nowadays many other communities also have started to celebrate it.
- Objective: It emphasises the importance of happiness and reunion of a family in bringing peace and harmony in a society.
- Nomenclature: Ningol means 'married woman' and Chakouba means 'invitation for feast'; so the festival is the one where the married women are invited to their parents' home for a feast.
- Uniqueness: The main component of the festival is the visit of married sisters to their maternal homes for grand feast and joyous reunion followed by giving away the gifts.

#### **UDAN (UDE DESH KA AAM NAGRIK)**

Ministry of Civil Aviation is celebrating the 9th anniversary of the Regional Connectivity Scheme – UDAN (Ude Desh Ka Aam Nagrik). It was held in New Delhi, chaired by Secretary (Civil Aviation) and other senior officers of the Ministry.





- Launch: The scheme was designed under the National Civil Aviation Policy (NCAP) 2016, with a focus on connecting Tier-2 and Tier-3 cities through a market-driven yet financially supported model.
- Objective: UDAN aims to democratize aviation and enhance regional connectivity, ensuring that even remote regions of the country are accessible by air.
- Nodal Ministry: It works under the Ministry of Civil Aviation.
- Implementing authority: The Airports Authority of India (AAI) serves as the nodal agency responsible for its implementation.
- Provision of subsidies: Under the UDAN Scheme, the government works in partnership with airlines to provide subsidies and incentives to operate flights on underserved and unserved routes.
- Works on VGF model: The government provides financial support to airlines through a
  Viability Gap Funding (VGF) model, which covers the difference between the cost of
  operations and the expected revenue on the identified routes.
- Use of bidding: Aviation companies bid for air routes. The company that asks for the lowest subsidy is awarded the contract. Under this fare for each flight, the airline has to book half, or a minimum of 9, or a maximum of 40 seats.
- Capping of price: Under the scheme, the airfare for a one-hour journey by a 'fixed wing aircraft' or half an hour's journey by a helicopter for about 500 km has been fixed at Rs.2500.

#### PRIME MINISTER'S SCHOOLS FOR RAISING INDIA (PM SHRI)

The ruling Left Democratic Front (LDF) appears divided over the Kerala government's move to sign a MoU with the Union government to access the Prime Minister's Schools for Raising India (PM SHRI) government school modernisation funds.

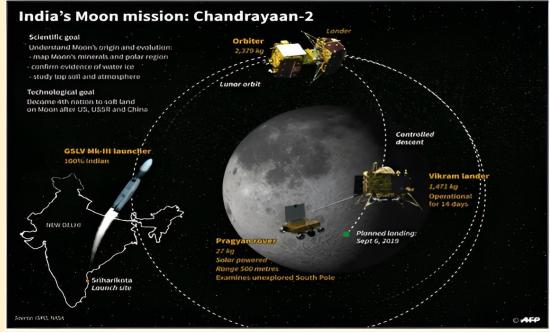




- Launch: It is a centrally sponsored initiative, launched in 2022, by the Government of India aimed at establishing over 14,500 PM SHRI Schools by enhancing existing schools to showcase the implementation of the National Education Policy (NEP) 2020.
- Objective: The primary objective is to create an inclusive and nurturing environment that promotes the well-being and safety of every student, offering diverse learning experiences and access to quality infrastructure and resources.
- Funding: The funding pattern is 60:40 between Centre and State Governments and UTs with legislature (except J&K). The sharing pattern is 90:10 for North Eastern and Himalayan States and UT of J&K and 100% central funding for the Union Territories without legislature.
- Need of MoU: States must confirm their participation by signing a Memorandum of Understanding (MoU) with the Education Ministry.
- Duration: The duration of the scheme is from 2022-23 to 2026-27, after which it shall be the responsibility of the states/UTs to continue to maintain the benchmarks achieved by these schools.
- Eligibility:
  - Schools managed by Central/State/UT Governments and local bodies.
  - All Kendriya Vidyalayas and Navodaya Vidyalayas which are non-project and run from permanent buildings.
- Main features of these schools:
  - These schools will focus on holistic student development of students including the skills of communication, collaboration and critical thinking.
  - Schools will have modern labs, libraries, art rooms, and promote "green" initiatives like water conservation and waste recycling.
  - Learning outcomes will be prioritized, with competency-based assessments that apply knowledge to real-life situations.

#### **CHANDRAYAAN-2**

• The lunar orbiter of India's second moon mission, Chandrayaan-2, has made the first-ever observation of the effects of the sun's coronal mass ejection (CME) on the moon.





- Nature: It is the second lunar exploration mission developed by ISRO after Chandrayaan-1. It is the 1st Indian expedition to attempt a soft landing on moon with indigenous technology.
- Objectives:
  - to study lunar topography, mineralogy, elemental abundance, the lunar exosphere, and signatures of hydroxyl and water ice;
  - to study the water ice in the south polar region and thickness of the lunar regolith on the surface; and
  - o to map the lunar surface and help to prepare 3D maps of it.
- Launch vehicle: It was launched using India's most powerful launcher GSLV MK-III from Satish Dhawan Space Centre in Andhra Pradesh.
- Components:
  - There are three components of the mission, a lunar orbiter, the Vikram lunar lander, and the Pragyan rover. The mission's lander is named Vikram after Dr Vikram A Sarabhai, the Father of the Indian Space Programme.
  - The lander, rover and orbiter will perform mineralogical and elemental studies of the lunar surface. The orbiter is deployed at an altitude of 100 kilometers above the surface of the Moon.
- Major payloads:
  - Chandrayaan-2 Large Area Soft X-ray Spectrometer (CLASS)
  - Solar X-ray Monitor (XSM)
  - CHandra's Atmospheric Compositional Explorer 2 (CHACE 2)
  - Dual Frequency Synthetic Aperture Radar (DFSAR)
  - Imaging Infra-Red Spectrometer (IIRS)
  - Terrain Mapping Camera (TMC 2)
  - Orbiter High Resolution Camera (OHRC)
  - o Dual Frequency Radio Science (DFRS) Experiment
- Step towards PLANEX: The mission is an important step in India's plans for planetary exploration, a program known as Planetary Science and Exploration (PLANEX).

#### **BRAHMOS MISSILES**

 Defence Minister Rajnath Singh said that the BrahMos missiles were a symbol of India's growing indigenous strength in defence manufacturing and every inch of Pakistan was within their reach.

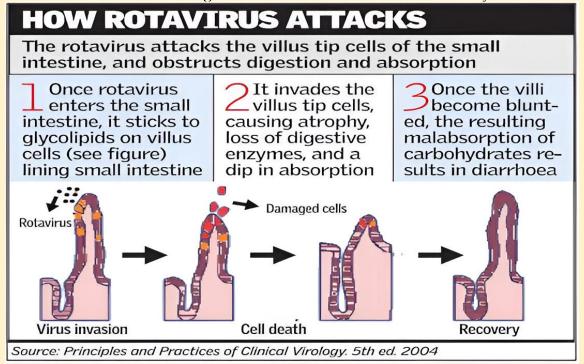




- Nomenclature: It is named after the Brahmaputra River of India and the Moskva River of Russia
- Range: An Indo-Russian joint venture, the standard BrahMos missile has a range of 290 km and but extended-range versions can reach up to 500 km. Future variants like the BrahMos-II are planned to have a much longer range of up to 1,500 km.
- Fastest cruise missile: It is the world's fastest cruise missile with a top speed of Mach 2.8 (about three times the speed of sound).
- Two-stage missile; It is a two-stage (solid propellant engine in the first stage and liquid ramjet in the second) missile. The solid propellant booster engine propels it to supersonic speed before separating, and during the cruise phase, the liquid ramjet or second stage, propels the missile closer to 3 Mach.
- Launch platforms: It is a multiplatform missile which can be launched with great accuracy from land, air and sea having multi-capability capabilities and can operate during day and night despite bad weather.
- Uniqueness: It operates on the "fire and forget" principle i.e. it does not require guidance after launch. It also carries a conventional warhead weighing 200 to 300 kg.
- Propulsion and Flight: Jet engines are the primary mode of propulsion for cruise missiles. Most cruise missiles are subsonic and use Turbofan and Turbojet engines. While less common, supersonic and hypersonic cruise missiles utilize Ramjet and Scramjet engines.

#### **ROTAVIRUS**

• A recent study on the impact of the indigenous rotavirus vaccine in India found marked reductions in rotavirus-based gastroenteritis in sites across the country.



#### **About Rotavirus:**

- Family: Rotavirus is a double-stranded RNA virus genus in the Reoviridae family.
- Contagious: Rotavirus is a contagious disease that spreads easily from child to child.
- Mortality: Rotavirus is a leading cause of severe diarrhoea and death among children less than five years of age. It is responsible for around 10% of total child mortality every year.



- Mode of spread: Rotavirus spreads easily through the fecal-oral route )when a person comes in contact with the feces of someone who has rotavirus and then touches their own mouth).
- For example, rotavirus can spread when a child with rotavirus doesn't wash their hands properly after going to the bathroom and then touches food or other objects.
- Symptoms
  - Severe diarrhea
  - Throwing up
  - Dehydration
  - Fever
  - Stomach pain
- Dosage: World Health Organisation (WHO) recommends that the first dose of rotavirus vaccine be administered as soon as possible after 6 weeks of age, along with DTP vaccination (diptheria, tetanus and pertussis).
- Inclusion in National Schedules: WHO has recommended the inclusion of rotavirus vaccine in the National Schedules of the countries where under five mortality due to diarrhoeal diseases is more than 10%.
- Vaccines available: Currently, two vaccines are available against rotavirus:
  - Rotarix (GlaxoSmithKline): is a monovalent vaccine recommended to be orally administered in two doses at 6-12 weeks.
  - Rota Teq (Merck) is a pentavalent vaccine recommended to be orally administered in three doses starting at 6-12 weeks of age.

#### GLOBAL FOREST RESOURCES ASSESSMENT (GFRA) 2025

India has recorded major progress in forest conservation and climate action, advancing to the 9th position worldwide in total forest area and maintaining its 3rd rank in annual net forest area gain, according to the Global Forest Resources Assessment (GFRA) 2025 released by the Food and Agriculture Organization (FAO).

The report also places India 5th among the world's top carbon sink nations, with its forests removing 150 million tonnes of carbon dioxide (CO<sub>2</sub>) annually during 2021–2025.





#### India's Rise in Global Forest Rankings

The FAO report highlights India's achievement in expanding forest and tree cover through systematic afforestation and conservation initiatives. India's total forest area stands at approximately 72.7 million hectares, accounting for about 2% of the global total of 4.14 billion hectares, which covers 32% of the Earth's land area.

Europe holds the largest forest share globally, while South America has the highest proportion of land under forest cover. Notably, more than half of the world's forest area is concentrated in just five countries — Russia, Brazil, Canada, the United States, and China.

#### Carbon Sink Performance and Global Context

India's forests have sequestered an estimated 150 million tonnes of CO<sub>2</sub> per year between 2021 and 2025, ranking fifth among global carbon sinks. During this period, global forests acted as a net sink, removing about 3.6 billion tonnes of CO<sub>2</sub> annually from the atmosphere.

Asia, led by India and China, saw its forest carbon removals reach 0.9 billion tonnes of CO<sub>2</sub> annually, with a marked decline in deforestation-related emissions. The world's total forest loss rate has also reduced significantly — from 10.7 million hectares per year in the 1990s to just over 4 million hectares between 2015 and 2025.

#### **Expansion in Planted and Agroforestry Areas**

India's efforts in expanding planted forests have been particularly notable. The country accounts for 11.8 million hectares of bamboo forests — nearly 40% of the global bamboo area — and ranks fifth in the world for rubber plantations with 831,000 hectares.

Agroforestry has also grown steadily; India and Indonesia together contribute nearly 70% of the global agroforestry area, amounting to about 55.4 million hectares. These expansions have supported rural livelihoods, improved biodiversity, and strengthened carbon sequestration potential.

#### CONVENTION FOR THE SUPPRESSION OF THE FINANCING OF TERRORISM

Iran has ratified the International Convention for the Suppression of the Financing of Terrorism (CFT Treaty) in a move seen as a bid to ease international isolation and gain access to the global banking system.

The decision comes as President Masoud Pezeshkian's administration seeks to align with the Financial Action Task Force (FATF) requirements and improve relations with the West.





#### **Effort to Ease Economic Isolation**

Iran's economy has long struggled under the weight of international sanctions, particularly from the United States. Its placement on the FATF blacklist in 2020 — alongside countries such as North Korea and Myanmar — further restricted its access to international finance.

President Pezeshkian, elected on a reformist platform, is seeking to rebuild Iran's global credibility by adhering to anti-terror financing standards and promoting greater economic transparency.

#### **CFT Treaty**

The CFT Treaty, or International Convention for the Suppression of the Financing of Terrorism, is a 1999 United Nations treaty that requires signatory nations to criminalize the financing of terrorism and cooperate with each other to prevent and punish it.

It establishes a legal framework for international cooperation, including sharing evidence and extraditing suspects, and mandates that parties outlaw financing terrorist acts and freeze terrorist funds.

#### Key aspects of the CFT Treaty

- Criminalization: Parties to the treaty are required to define and criminalize the financing of terrorism in a way that aligns with the convention.
- International Cooperation: The treaty commits states to provide each other with the greatest measure of assistance in criminal investigations and proceedings related to terrorism financing.
- Mutual Legal Assistance: It mandates that countries can't refuse a request for mutual legal assistance on the grounds of bank secrecy.
- Evidence Sharing: Parties are required to assist each other in obtaining evidence and can share information to establish criminal, civil, or administrative liability.
- Entry into force: The treaty was adopted in 1999 and entered into force in 2002.

#### **Domestic Debate and Political Divide**

The ratification has triggered strong opposition from Iran's ultra-conservative factions. Critics argue that joining the convention could expose sensitive economic and military information to foreign powers, potentially undermining Iran's regional alliances with groups such as Hamas, Hezbollah, and the Houthis.

Reformists, however, see it as essential for restoring trade links with allies including Russia and China, and for mitigating the impact of sanctions on the economy.

Reports suggest an Iranian representative attended an FATF meeting in Paris for the first time in six years, hinting at renewed diplomatic engagement. Nonetheless, Iran's removal from the FATF blacklist remains uncertain, as broader international sanctions — recently reinforced by the United Nations in September — continue to restrict its financial and trade activities.

#### **CARBIDE GUNS**

A dangerous new Diwali trend in Madhya Pradesh has left more than 300 children injured, with several losing their eyesight, after playing with devices known as "carbide guns."

These makeshift "toys," resembling harmless firecrackers, are in fact hazardous chemical explosives now banned across the state.



#### The Rise of a Deadly Diwali Trend

Hospitals across Bhopal, Gwalior, Indore, and Vidisha reported a surge in cases of severe eye injuries among children during Diwali celebrations. Investigations revealed that the cause was the use of "carbide guns" — cheap, locally made devices marketed as "desi firecracker guns."



Despite their toy-like appearance, they are capable of producing violent explosions, leading to corneal burns, ruptured pupils, and permanent vision loss. By the time authorities intervened, over 300 injuries had been recorded, with at least 10 children blinded.

#### **How Carbide Guns Work**

A carbide gun is typically constructed from a PVC or metal pipe fitted with a small chamber for calcium carbide. When water is added, it reacts to release acetylene gas, which, upon ignition, explodes with significant force.

The resulting blast mimics the sound of a firecracker but also propels shrapnel-like fragments of plastic or metal that can cause devastating injuries to nearby users. Despite their crude design, these devices are extremely dangerous due to the uncontrolled chemical reaction they create.

#### Social Media and the Spread of the 'Firecracker Gun Challenge'

Authorities have traced the spread of the carbide gun craze to social media platforms such as Instagram and YouTube, where short videos promoting the "Firecracker Gun Challenge" encouraged young users to recreate and ignite these devices.

The trend's viral nature contributed to its widespread availability in local markets during Diwali, with units selling for as little as ₹150 to ₹200. In many cases, the users were children aged six to fifteen.

- Acetylene is highly flammable and can explode under certain pressure/temperature conditions. It is stored dissolved in acetone inside specially designed cylinders with porous packing. Never compress pure acetylene.
- Calcium carbide reacts vigorously with water to give acetylene; control water contact and vent gas outdoors or into proper collectors.
- Food/agricultural use warning: using CaC<sub>2</sub> to ripen fruit is unsafe and often illegal impurities in technical carbide (arsenic, phosphorus compounds) can contaminate food and cause health hazards.



- Use proper industrial controls, gas detectors, ventilation, certified cylinders and trained personnel.
- Welding & cutting (oxy-acetylene torch) high flame temperature (~3300°C) useful for metal cutting, brazing and welding.
- Chemical synthesis precursor to many chemicals: vinyl compounds, chlorinated/vinyl derivatives, acetaldehyde (via hydration), synthetic rubbers and certain plastics (historically important). Industrial routes have shifted to ethylene-derived processes, but acetylene still important in specialty chemistry.
- Organic synthesis (laboratory) building block for many organic reactions (alkynylation, coupling reactions).
- Lighting (historical) miners' lamps, carbide lamps; largely obsolete now.
- Polymer and specialty monomers niche production of some polymers and cross-linkers.

#### **INS MAHE**

India's defence manufacturing sector achieved a major milestone as Cochin Shipyard Limited (CSL) handed over Mahe, the first of eight indigenously built Anti-Submarine Warfare Shallow Water Crafts (ASW SWC), to the Indian Navy.

The delivery underscores India's commitment to enhancing naval strength through indigenous design, innovation, and technology under the Aatma Nirbhar Bharat initiative.



#### Formal Handover Ceremony in Kochi

The vessel was officially delivered during a ceremony where Dr S. Harikrishnan, Director (Operations) at CSL, signed the acceptance documents with Commander Amit Chandra Choubey, the Commanding Officer-Designate of "Mahe".

The event was graced by Rear Admiral R. Adhisrinivasan, Chief Staff Officer (Technical), Western Naval Command, along with Commodore Anup Menon and other senior naval and shipyard officials, reflecting the importance of this addition to the Navy's fleet.

#### **Indigenous Design and Technical Excellence**

Designed and built entirely by Cochin Shipyard, "Mahe" adheres to the classification standards of Det Norske Veritas (DNV). The 78-metre-long vessel is the largest Indian naval ship to operate with a diesel engine-waterjet propulsion system, enhancing speed, manoeuvrability, and performance in shallow waters.

The ship's multi-mission role includes underwater surveillance, anti-submarine operations, search and rescue missions, and mine-laying tasks.



#### **Boost to Aatma Nirbhar Bharat Vision**

Officials highlighted that "Mahe" incorporates more than 90 per cent indigenous content, with most of its materials, machinery, sensors, and systems sourced domestically. This achievement represents a key stride in India's self-reliance in defence manufacturing and reflects the growing capability of the national defence industrial base to deliver complex naval platforms.

#### Strengthening India's Coastal Defence Fleet

The delivery of "Mahe" marks a significant step in augmenting the Indian Navy's shallow-water combat capabilities. Equipped with advanced sensors, sonar systems, and communication suites, the vessel will play a crucial role in coastal security and anti-submarine warfare operations.

The remaining seven vessels in the ASW SWC series are currently under construction at Cochin Shipyard and are scheduled for phased delivery in the coming years, further fortifying India's maritime defence posture.

#### **EXERCISE OCEAN SKY 2025**

The Indian Air Force (IAF) has made history by becoming the first non-NATO nation to participate in Exercise Ocean Sky 2025, a high-intensity multinational air combat drill hosted by the Spanish Air Force at Gando Air Base, Spain, from October 20 to 31, 2025.

The exercise underscores India's growing global military footprint and reinforces its role as an emerging aerospace power.



#### IAF's Historic Participation in Ocean Sky 2025

Exercise Ocean Sky 2025 brings together air forces from NATO member nations for advanced air combat training. India's inclusion marks a landmark moment, highlighting its growing defence ties with Spain and its rising stature in international military cooperation.

The IAF's presence demonstrates its readiness to collaborate with global partners on complex joint air operations and interoperability missions.

#### Strategic Importance for India

The participation of the IAF reflects India's commitment to strengthening operational readiness and defence diplomacy. Engaging in such multinational drills provides Indian pilots exposure to diverse combat environments and mission planning frameworks. These exercises significantly enhance tactical proficiency and interoperability, boosting the IAF's preparedness for modern aerial warfare and coalition missions.



#### Boost from the Airbus C-295 Induction

Exercise Ocean Sky 2025 follows a key milestone in the IAF's modernisation drive—the induction of 16 ""Airbus C-295 tactical transport aircraft"". The final aircraft was delivered two months ahead of schedule at Airbus's Seville facility on August 3, 2025, and was received by Indian Ambassador to Spain Dinesh K Patnaik and senior IAF officials.

This delivery marks a leap in India's airlift and operational versatility, enhancing its ability to undertake varied missions under challenging conditions.

#### **India-Spain Defence Cooperation Deepens**

India's procurement of 56 C-295 aircraft from Airbus Spain marks the first-ever 'Make in India' initiative in the defence aviation sector. The first aircraft was formally handed over on September 13, 2023, in Seville, in the presence of Air Chief Marshal VR Chaudhari.

The growing bilateral partnership extends beyond procurement, with the 5th Joint Working Group on Defence Cooperation held earlier this year in New Delhi to expand joint projects. From advanced joint exercises to indigenous production, India and Spain are strengthening a strategic defence relationship that underscores India's ascent as a credible aerospace power.

#### **HYUNMOO 5 BALLISTIC MISSILE**

South Korea is set to deploy its powerful Hyunmoo 5 ballistic missile by the end of this year, marking a crucial upgrade in its conventional deterrence capabilities against North Korea. Defence Minister Ahn Gyu-back announced that the country plans to possess a "considerable amount" of the missile to establish a "balance of terror" on the Korean peninsula.



#### Hyunmoo 5: The 'Monster Missile'

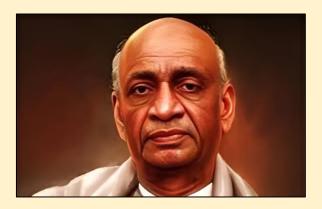
Dubbed the "monster missile" due to its massive size and destructive power, the Hyunmoo 5 is a high-powered, ground-to-ground ballistic missile weighing approximately 36 tonnes.

It is capable of carrying an eight-tonne warhead designed to penetrate heavily fortified underground bunkers. With a length of around 16 metres, the missile's range varies between 600 km and 5,000 km, making it one of South Korea's most formidable non-nuclear weapons.



#### RASHTRIYA EKTA DIWAS

Prime Minister Narendra Modi will lead the Rashtriya Ekta Diwas parade near Kevadia in Gujarat on October 31 to commemorate the 150th birth anniversary of Sardar Vallabhbhai Patel.



#### About Sardar Vallabhbhai Patel:

- Birth: He was born on 31st October 1875, in Nadiad, Gujarat.
- Career: He completed law studies in England, earning a prize in Roman Law, and returned to India as a barrister in 1913.
- Legacy: He is popularly known as the "Iron Man of India" for his determination and firm approach. He is revered as a symbol of national unity and resilience.
- Statue of Unity: In 2018, the Statue of Unity, the world's tallest statue at 182 meters (600 feet), was inaugurated at Kevadia, Gujarat, honouring Sardar Vallabhbhai Patel. His birth anniversary is observed as National Unity Day (31st October).
- Contributions in the Indian National Movement:
  - He played a pivotal role in Kheda Satyagraha (1918) demanding tax exemptions for farmers affected by crop failure due to drought.
  - He led the resistance during the Bardoli Satyagraha (1928) against an unjust tax increase, earning him the title "Sardar" for his leadership.
  - He played crucial role during Non-Cooperation and Civil Disobedience. He embraced Gandhi's vision, leading actions like the Salt Satyagraha in 1930 and facing multiple imprisonments for his involvement.
  - He chaired the 46th session of the Congress in 1931, navigating through the Gandhi-Irwin Pact discussions.
  - He was arrested and imprisoned during Quit India Movement (1942).
- Role after independence of India:
  - He was India's first Deputy Prime Minister and Home Minister.
  - He spearheaded the integration of 562 princely states into the Indian Union, securing stability and democracy for millions. The Indian Independence Act of 1947 allowed princely states to declare independence.
  - He was instrumental in establishing the modern All India Services, strengthening the administrative framework of the country.
  - He is remembered as the "patron saint of India's civil servants" for his contribution to reinforcing the bureaucratic system.
  - National Civil Services Day (21st April) honours Sardar Patel's 1947 speech, calling civil servants "the steel frame of India" and reinforcing their dedication to public service.
  - He led the Advisory Committee on Fundamental Rights, Minorities, and Tribal and Excluded Areas in the Constituent Assembly.



#### **ASIAN PALM CIVET**

• A recent scientific study has revealed that civet coffee (popularly known as Kopi Luwak), which is primarily produced from the excreta of the Asian palm civet, shows distinct when compared to naturally harvested robusta beans.



#### **About Asian Palm Civet:**

- Common names: The Asian Palm Civet, is also known as the Toddy Cat or Common Palm Civet.
- Distribution: It is a small, nocturnal mammal that is found throughout South and Southeast Asia, including India, Sri Lanka, Indonesia, and the Philippines.
- Scientific Name: It is a member of the Viverridae family, which also includes other civet and mongoose species. Its scientific name is Paradoxurus hermaphroditus.
- Physical features: It has a long, slender body, short legs, and a pointed snout. It weighs between 2 to 5 kg (4.4 to 11 lbs) and measures around 53 to 71 cm (21 to 28 inches) in length, including the tail.
- Behaviour: It is thought to lead a solitary lifestyle, except for brief periods during mating.
- Uniqueness: Its fur is brownish-grey with black spots, and it has a white mask-like marking around its eyes. Its anal scent glands emit a nauseating secretion as a chemical defence when threatened or upset.
- Nocturnal: It is a nocturnal animal and feeds on a variety of prey, including insects, small mammals, and fruits.
- Relevance in coffee industry: One of the most distinctive features of Asian palm civets is their ability to digest coffee beans, which makes them an important part of the coffee production process in some countries.
- Conservation Status: It is classified as 'Least Concern' under the IUCN Red List.

#### **UNCTAD16 CONFERENCE**

At the 16th session of the United Nations Conference on Trade and Development (UNCTAD16) in Geneva, India called on developing and least developed nations to present a united front against global trade challenges.

Commerce and Industry Minister Piyush Goyal emphasised the need for the Global South to act collectively in addressing systemic inequalities and barriers that hinder fair trade and development.

#### **UNCTAD16: A Platform for Economic Transformation**

The UNCTAD16 conference, held from 20 to 23 October 2025 at the Palais des Nations in Geneva, focuses on the theme "Shaping the Future: Driving Economic Transformation for Equitable, Inclusive and Sustainable Development".

Hosted by Switzerland and UNCTAD, the quadrennial gathering brings together ministers, experts, and representatives from 195 member states to set the organisation's priorities for the next four years and discuss the challenges shaping the global economy.



#### **UNCTAD**



#### Objectives of UNCTAD

- The UNCTAD is supposed to fulfill the following objectives that have been evolved gradually of the various conferences.
- Trade in Manufactured Goods (GSP)
- 2. Trade in Primary Commodities
- 3. Development Finance
- 4. Economic Cooperation among LDCs

**UNCTAD** annual trade and development report

The Geneva-based UN body has been releasing this report since 1981 to provide analysis the major current economic trends and policy issues of global concern.

#### **Need of this report:**

 It provides recommendations to boost the global economy so that lives of people are improved and the future of the planet is secure.

#### India's Call for Collective Action

Addressing delegates, Piyush Goyal urged the Global South to "speak with one voice" to defend shared interests in the face of rising trade restrictions.

He highlighted that the international trading environment has become volatile and uncertain, eroding trust in multilateral institutions and the rules-based system.

Goyal noted that developing nations continue to face tariff and non-tariff barriers, overconcentrated supply chains, and diminishing special treatment under the World Trade Organization framework.

#### **Concerns Over Unilateral Policies and Emerging Divisions**

The Indian minister criticised unilateral environmental measures such as carbon taxes and the growing technological divide that disproportionately affect developing economies.

He warned that such policies risk marginalising nations that are still pursuing development goals, poverty reduction, and industrial growth.

Goyal further stressed that restrictive services-sector policies and non-market practices are deepening global inequality and undermining fair competition.

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