# Today's Prelims Topics

## NCRB Report- 2023

### Context

The National Crime Records Bureau (NCRB) report titled Crime in India – 2023 recently released.

### What are the Key Findings of the Report?

- **Overall Crime Trends:**
  - **Indian Penal Code (IPC) cases:** 37,63,102 (**60.3% of total** and ↑**5.7%** from 2022).
  - **Special and Local Laws (SLL) cases:** 24,78,467 (**39.7% of total** and ↑**9.5%** from 2022).
  - **Total cognizable cases (IPC + SLL):** 62,41,569 cases in 2023 **(↑7.2% from 2022)**.
  - **Crime rate:** Rose from **422.2 (2022)** to **448.3 (2023)** per lakh population.
- **Types of Cases Seeing Big Rise**
  - **Obstruction on public way (Sec 283 IPC):** ↑ from 93,548 (2022) ⟶ 1,51,469 (2023).
  - **Theft cases:** ↑ from 6,52,731 ⟶ 6,89,580.
  - **Motor Vehicle Act violations (SLL):** Almost doubled, from 94,450 ⟶ 1,91,828.
- **Investigation & Charge-Sheeting:** Police handled 53.6 lakh IPC cases (including pending & reopened) disposed of 37.8 lakh, and charge-sheeted 27.5 lakh, giving a charge-sheeting rate of 72.7%.
- **Crimes Against the Human Body:**
  - **Total:** 11.85 lakh cases (31.5% of all IPC crimes).
    - Hurt: **6.36 lakh (53.7%)**.
    - Death by negligence: **1.65 lakh (14%)**.
    - Kidnapping & abduction: **1.13 lakh (9.6%)**.
  - **Murder:** ↓**2.8%** (27,721 cases).
    - Major motives: Disputes (9,209), personal vendetta (3,458), gain (1,890).
  - **Kidnapping/Abduction:** ↑5.6%; majority victims were children (70.5%).
- **Crimes Against Public Tranquillity:**
  - **Total:** 58,247 cases.
  - **Rioting:** 39,260 cases (67.4% of total).
- **Crimes Against Women:**
  - **Total:** 4.48 lakh cases (↑0.7%).
  - **Top offences:**
    - Cruelty by husband/relatives: **1.33 lakh (29.8%)**.
    - Kidnapping/abduction: **88,605 (19.8%)**.
    - Assault on modesty: **83,891 (18.7%)**.
  - **Crime rate:** Stable at 66.2 per lakh women population.
- **Crimes Against Children:**
  - **Total:** 1.77 lakh cases (↑9.2%).
    - Kidnapping/abduction: **79,884 (45%)**.

        - POCSO Act offences: **67,694 (38.2%)**.

- **Crimes Against Senior Citizens:**
    - **Total:** 27,886 cases (↓2.3%).
    - **Leading offences:** Simple hurt (27.3%), Theft (14.8%), Fraud (12.5%).
- **Cybercrime:**
    - **Cases:** 86,420 (↑31.2%).
    - **Crime rate:** 6.2 per lakh population (↑ from 4.8).
        - Fraud: 59,526 (69%).
        - Sexual exploitation: 4,199.
        - Extortion: 3,326.
- **Crimes Against Vulnerable Groups:**
    - **Scheduled Tribes (STs):**
        - Cases: 12,960 (↑28.8%).
        - Top offences: Simple hurt (21.3%), riots (13.2%), rape (9.2%).
    - **Scheduled Castes (SCs):**
        - Cases: 57,789 (almost unchanged).
        - Top offences: Simple hurt (31.9%), intimidation (7.8%), offences under SC/ST Act (7.5%).

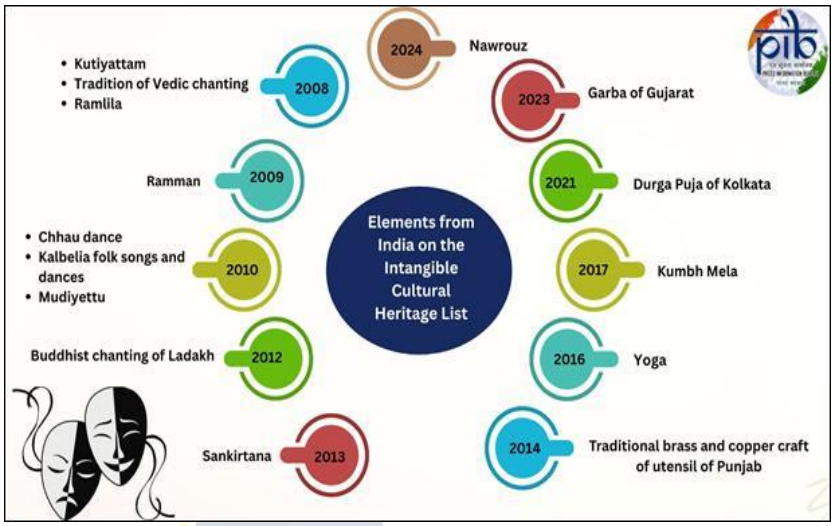
**Source:** Indian Express

# Traditional Ritual Theatres of India

## Context

4 Ritual theatre in India (Kutiyattam, Mudiyettu, Ramman, and Ramlila) was recognized by UNESCO as Intangible Cultural Heritage (ICH).

## What is a Ritual theatre?




- A performance form combining **sacred rituals with dramatic expression**.
- Typically staged in **temples, courtyards, and festival grounds**.
- Involves **acting, singing, dance, music, narration, puppetry, and ritual symbolism**.
- Functions as:
    - **Devotion** (invoking gods & myths),
    - **Social identity** (community participation),
    - **Cultural transmission** (values & traditions across generations).

## UNESCO's Intangible Cultural Heritage

- The **UNESCO Intangible Cultural Heritage List** is a global recognition given to **living traditions and practices** that communities pass down through generations.
- These are not physical monuments or sites (like the World Heritage List), but **intangible practices** such as **festivals, rituals, dances, songs, craftsmanship, oral traditions, and theatre forms**.
- According to the **2003 Convention for the Safeguarding of Intangible Cultural Heritage**, ICH includes:
    - **Oral traditions and expressions** (including language).
    - **Performing arts** (dance, music, theatre).
    - **Social practices, rituals, festive events.**
    - **Knowledge & practices about nature and the universe.**
    - **Traditional craftsmanship.**

| Ritual Theatre | Region | Key Features |
|---|---|---|
| **Kutiyattam** | Kerala | • Oldest surviving Sanskrit theatre (2000+ years).<br>• Performed in temple halls (*kuttampalams*).<br>• Uses **abhinaya** (eye, hand, facial expressions). |

| | | |
|---|---|---|
|  | | |
| **Mudiyettu**<br>  | Kerala | • Ritual dance-drama of **Goddess Kali vs demon Darika**.<br>• Performed annually after harvest in Bhagavati temples.<br>• Begins with purification & **kalamezhuthu** (ritual drawings).<br>• Whole village participates: priests, dancers, mask-makers. |
| **Ramman**<br>  | Uttarakhand (Garhwal Himalayas) | • Annual April festival in **Saloor-Dungra villages**.<br>• Dedicated to local deity **Bhumiyal Devta**.<br>• Features masked dances, Ramayana recitations & folk narratives.<br>• Each caste/household has a ritual role. |
| **Ramlila**<br>  | North India (esp. UP, Bihar, MP) | • Dramatic re-enactment of the **Ramayana** during Dussehra.<br>• Based on **Tulsidas's Ramcharitmanas**.<br>• Staged in temple grounds, courtyards, public squares. |

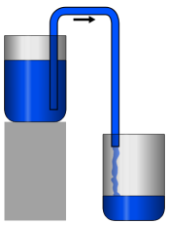
**Source:** PIB

# Siphon-Powered Desalination Breakthrough

## Context

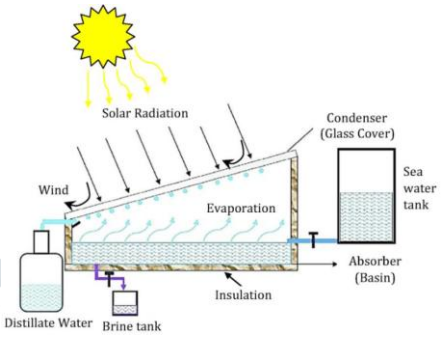
IISc scientists develop siphon-powered desalination breakthrough to turn seawater into drinking water

## What is the meaning of Siphon?



- A siphon is a simple device that allows a liquid to flow from a higher level to a lower level through a tube, even if the tube goes up and over an obstacle in between.
- The flow happens due to gravity and pressure difference, without requiring a pump.

## About Solar Stills



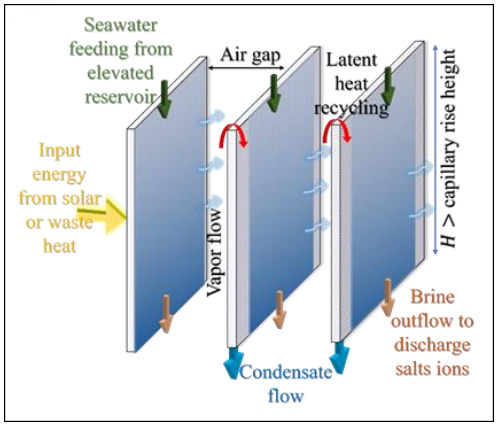

- A **solar still** is a device that uses the **heat of the sun** to purify water by mimicking nature's water cycle (evaporation ⟶ condensation ⟶ collection).
- It is mainly used to convert **salty, dirty, or contaminated water into drinkable fresh water**.

### What were the Issues Associated (Identified by IISC)

- Salt buildup, where crusts form on evaporator surfaces, blocking water flow.
- Scaling limits, as wicking materials can only lift water about 10–15 cm, restricting system size and output.

A wick is a strip of fabric or fibrous material (like cotton, cloth, or special synthetic fibers) that draws liquid upward through capillary action

## About the Siphon-Powered Desalinisation




- **Water Supply:** A wick(fabric) draws salty water from a tank.
  - Water flows smoothly over a **grooved metal plate** because of gravity.
- **Salt Handling:** In old systems, salt sticks to the surface and blocks water.
  - Here, the **flow keeps washing salt away**, so no blockage happens.
- **Evaporation;** Sun heats the thin film of water on the metal plate.
  - Water turns into vapor (salt is left behind).
- **Condensation:** Just **2 millimeters away**, a cooler surface collects the vapor as **fresh water droplets**.
- **Heat Recycling:** The system is made of **layers (like a stack)**.
  - Heat from one layer is reused in the next, so efficiency goes up.

**Source:** PIB

# RBI Deputy Governor

## Context

The Indian government appointed Satish Chandra Murmu as the new RBI deputy governor.

## About Deputy Governor of RBI

- The Central Bank has 4 Deputy Governors **appointed by the Central Government**.
- **Qualifications:**
  - A person must have at least 25 years of work experience in Public Administration including experience at the level of Secretary or equivalent in the Government of India;
  - or At least 25 years of work experience in an Indian or International Public Financial Institution.
- **Tenure:** 3 years (Eligible for reappointment).
- **Participation in a meeting of the Central Board**: A Deputy Governor, if nominated, may attend any meeting of the Central Board of RBI and take part in its deliberations but is **not entitled to vote.**
- **Salaries and allowances** are determined by the Central Board, with approval of the Central Government.
- **Removal:** By the Central Government.

### Financial Sector Regulatory Appointments Search Committee (FSRASC)

- FSRASC is the final authority to recommend nomination of Governor and Deputy Governor of RBI.
- It is headed by the **Cabinet Secretary.** The other members of the committee include the Secretary Department of Financial Services, RBI Governor and **3** outside experts.

**Source:** Indian Express

# Gravitational Waves and the Moon-Based Detector

## Context

Researchers are planning to build a gravitational wave detector on the Moon — called LILA (Laser Interferometer Lunar Antenna)

## What are Gravitational Waves?

- They are **ripples in spacetime** created when extremely massive objects (like black holes or neutron stars) move violently, such as during collisions or mergers.
- They were predicted by **Einstein's General Theory of Relativity (1916)**.
- They travel at the **speed of light** and stretch and squeeze spacetime as they pass.
- On Earth, the effect is incredibly tiny — changing distances by less than the width of an atom — so **very sensitive instruments** are needed to detect them.
- First detected in **2015 by Laser Interferometer Gravitational-Wave Observatory (LIGO)** from two colliding black holes.
- **Limitation in Detection:** Current **earth-based detectors (like LIGO, Virgo, KAGRA)** can only detect gravitational waves in a limited frequency range and up to certain cosmic distances.

## What is the Moon-Based Detector (LILA)?

- **Purpose:** To detect **low-frequency gravitational waves (sub-hertz, decihertz range)** that Earth-based detectors cannot pick up.
- **Why on the Moon?**
    - Very low **seismic noise** (Moon is much quieter).
    - **Natural vacuum** above surface ⟶ less infrastructure needed.
    - Can access frequencies that are blocked by Earth's atmosphere and environment.
- **Phases:**
    - **LILA Pioneer** ⟶ small-scale mission using lunar landers (by US companies or India's Chandrayaan).
    - **LILA Horizon** ⟶ larger setup requiring astronauts to deploy equipment.
- **Significance:** Will add the "missing notes" of the **cosmic symphony**, letting scientists study black holes, neutron stars, and even the early universe in greater detail.

**Source:** The Hindu

# Sahyog Portal

## Context

The Karnataka High Court has dismissed X Corp's petition against the Union government's Sahyog portal, said foreign platforms cannot claim Article 19 rights.

## What is the Sahyog Portal?

- **Launched:** October 2024 by the **Union Ministry of Home Affairs (MHA)**.
- **Operated by:** Indian Cybercrime Coordination Centre (I4C).
- **Purpose:** A **centralised platform** to send **takedown notices** to internet intermediaries (social media companies, ISPs, telecom operators, web-hosting services).
    - Enforces **Section 79 of the IT Act, 2000** ⟶ gives intermediaries **"safe harbour" protection** (they are not liable for user content unless they ignore unlawful content notices).
- **How it works:** If government agencies flag unlawful content, intermediaries **must remove/disable access quickly**.
    - Failure = loss of **safe harbour immunity**.
- **Special features:** Automates and speeds up takedown orders.
    - Aimed at **real-time coordination** between law enforcement and platforms, especially in **time-sensitive cases** like missing persons or harmful viral content.

## X Corp's Censorship Challenge

- **"Parallel censorship regime":** Claimed government was using **Section 79(3)(b)** (safe harbour removal) to bypass **Section 69A** (blocking of content with stricter checks).
- **Section 69A safeguards:** Requires written orders, committee review, limited to Article 19(2) grounds (sovereignty, public order, etc.).
    - Provides scope for **judicial review**.
- **Shreya Singhal Case (2015):** Supreme Court had held that takedowns under Section 79 need a **court order or formal government notification**.
    - Without safeguards, Sahyog allows **thousands of officials** to issue takedown notices ⟶ risk of arbitrary censorship.
- **Impact on free press:** Supported by **DigiPub (92 digital news outlets)** ⟶ argued Sahyog notices often target critical reporting on ministers/government.
- **"Censorship portal":** X argued Sahyog bypassed due process and gave the government unchecked power to silence political criticism.

**Source:** The Hindu

# Gaza peace plan

## Context

US President Donald Trump introduced a 20 point peace plan to end war in Gaza.

## About Gaza Peace Plan

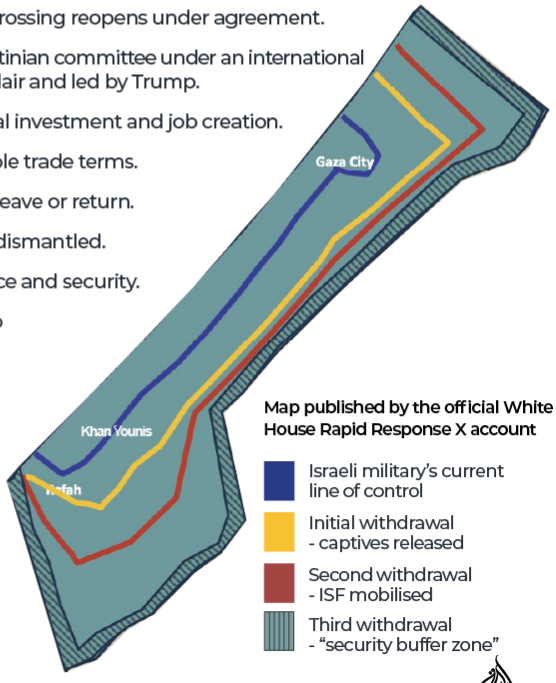
ISRAEL'S WAR ON GAZA

### Trump's 20-point Gaza plan

United States President Donald Trump has proposed a 20-point peace plan to end the war in Gaza after holding talks with Israeli Prime Minister Benjamin Netanyahu.

**Summary of the 20 points:**

1. Gaza will become a "deradicalised terror-free zone".
2. Gaza will be redeveloped to improve life for its people.
3. War ends immediately once both sides agree, with Israeli withdrawal to an agreed-upon line and ceasefire.
4. All captives, alive and deceased, returned within 72 hours of Israel's acceptance.
5. Israel frees 250 Palestinian life-sentence prisoners, 1,700 detainees, and exchanges remains proportionally.
6. Hamas members who decommission their weapons get amnesty or safe passage abroad.
7. Full humanitarian aid enters immediately to rebuild essential infrastructure.
8. Aid flows freely via UN and Red Crescent, Rafah crossing reopens under agreement.
9. Gaza governed temporarily by a technocratic Palestinian committee under an international board including former UK Prime Minister Tony Blair and led by Trump.
10. Trump economic plan to rebuild Gaza with global investment and job creation.
11. Special economic zone established with favourable trade terms.
12. No forced displacement. People are free to stay, leave or return.
13. Hamas excluded from governance, all weapons dismantled.
14. Regional partners guarantee Hamas's compliance and security.
15. International Stabilization Force (ISF) deployed to secure Gaza and train police.
16. Israel won't occupy Gaza, withdraws as stability and demilitarisation progress.
17. If Hamas rejects the plan, areas handed over from the Israeli military to the ISF will proceed.
18. Interfaith dialogue launched to promote "values of tolerance and peaceful co-existence."
19. Reforms pave the way for "Palestinian self-determination and statehood".
20. The US leads talks for a peaceful political future between Israel and Palestinians.




Map published by the official White House Rapid Response X account

- Israeli military's current line of control
- Initial withdrawal - captives released
- Second withdrawal - ISF mobilised
- Third withdrawal - "security buffer zone"

Source: Rapid Response 47 | September 30, 2025

@AJLabs ALJAZEERA

**Source:** AL Jazeera

# Lachipora WLS

## Context

District Magistrate Baramulla ordered the immediate closure of 14 gypsum mining units operating within the prohibited 1-km radius of Lachipora Wildlife Sanctuary.

## About Lachipora Wildlife Sanctuary

- **Location:** Situated in **Baramulla district, Jammu & Kashmir**, near the village of Lachipora, on the **northern banks of the Jhelum River**.
- **Establishment:** Declared a wildlife sanctuary in **1987** with the primary objective of conserving the **endangered Markhor** (wild goat with distinctive twisted horns).
- **Flora:**
    - **Coniferous forests:** Deodar, Himalayan white pine, blue pine.
    - **Broadleaf forests:** Birch, horse chestnut, West Himalayan fir, Persian walnut.
- **Fauna:**
    - **Markhor (endangered)** – primary focus of sanctuary creation.
    - **Hangul (Kashmir Stag, endangered)** – sanctuary is an important habitat.
    - **Other mammals:** Himalayan black bear, snow leopard, musk deer, and several others.
    - **Avifauna:** Recognised as an **Important Bird Area (IBA)**.
        - Key species found Himalayan Griffon, Western Tragopan.

**Source:** Greater Kashmir

# Central Pollution Control Board (CPCB) Report on Ozone Pollution Levels

## Context

The CPCB found that the **Delhi–National Capital Region (NCR)** recorded the **highest levels of ground-level ozone (GLO) pollution** in the country, followed by the **Mumbai Metropolitan Region (MMR)**.

## What is Ground Level Ozone (GLO)?

- Ozone ($O_3$) is a gas made of three oxygen atoms.
- At ground level (troposphere, up to ~10 km), it acts as an **air pollutant**, unlike in the stratosphere where it protects us from UV radiation.
- GLO is a **secondary pollutant** ⟶ it is **not emitted directly**, but formed through chemical reactions.
    - Formed when **sunlight** triggers reactions between:
        - **Oxides of Nitrogen (NOx)** – mainly from vehicle exhaust, power plants, industry.
        - **Volatile Organic Compounds (VOCs)** – from fuels, solvents, paints, biomass burning, etc.
        - NOx + VOCs + Sunlight ⟶ $O_3$ (Ground-Level Ozone).
- **Impacts of Ground-Level Ozone:**
    - **Human Health:** Worsens **bronchitis**.
        - Triggers **asthma attacks**.
        - Irritates lungs and reduces breathing capacity.
    - **Climate:** Absorbs radiation ⟶ behaves as a **potent greenhouse gas**, contributing to warming.
        - A major component of **smog**.
    - **Agriculture & Ecosystems:** Disrupts **photosynthesis** in plants.
        - Reduces crop productivity.
        - Stunts growth of sensitive species, affecting biodiversity.

**Sources:** TOI

# Sound Detection & Ranging System (SODAR)

## Context

CSIR–Advanced Materials and Processes Research Institute (AMPRI) designed & developed the SODAR system facility inaugurated at India Meteorological Department, (IMD), Delhi.

## What is the SODAR System?

- It is an **acoustic remote sensing system** that uses **sound waves** to study the **atmosphere**.
- Works on the principle of **radar**, but instead of radio waves, it uses **acoustic (sound) signals**.
- **Working:**
    - The system emits **acoustic pulses (sound signals)** vertically into the atmosphere.
    - These pulses are **scattered back** by small-scale **temperature and wind turbulence** in the air.
    - By analyzing the **time delay and frequency shift** of the returned sound signals, SODAR can measure:
        - Wind speed
        - Wind direction
        - Turbulence characteristics of the lower atmosphere.

**Source:** PIB

# Radar Mounted Drones

## Context

The Border Security Force (BSF) with the help of the Indian Space Research Organisation (ISRO) is developing drone mounted radar systems.

## What are Radar-Mounted Drones?

- Drones equipped with **miniaturized radar systems**.
- Provide **real-time aerial surveillance** without crossing borders.
- Can detect **movement of intruders, vehicles, or smugglers** in all terrains and weather conditions.
- **Key Advantages:**
    - **Enhance daily vigilance:** Continuous coverage of wide areas – especially difficult terrain and remote sections
    - **Surveillance in night and during bad weather:** Radar can track even when visual sensors are not working
    - **Fast-track alerts/triggers:** Helps deploy forces quickly as it gives real-time alerts
    - **Integrated sensor fusion:** Combining radar, infrared, high-resolution cameras and ground sensors can provide better detection
    - **Mobility and Scalability:** Deployment in small areas – In times of crisis, deploying more drones to provide increased coverage

**Source:** New INdian Express

# Personality in News

## Rani Rashmoni

### Context

PM Narendra Modi paid tribute to Rani Rashmoni on her birth anniversary.

### About Her (1793–1861)

- **Birth:** Born in **Kona village**, present-day **North 24 Parganas, West Bengal**.
- **Contributions:**
  - Founded the **Dakshineswar Kali Temple** in Bengal.
  - Extended patronage to **Sri Ramakrishna Paramahansa**.
  - Spoke out against **social evils** such as **polygamy, child marriage, and sati**.
  - Drafted and submitted a **bill against polygamy** to the East India Company. Offered support to **social reformers** like **Ishwar Chandra Vidyasagar**.

**Source:** PIB

# Mains Topics

## India's Deep Ocean Mineral Exploration

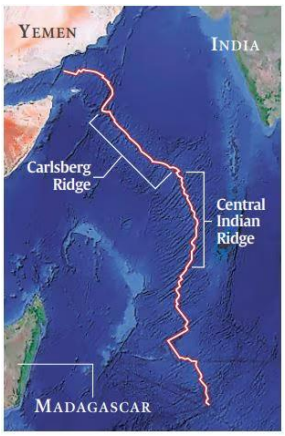
### Context

In September 2025, India signed a second contract with the International Seabed Authority (ISA) for exclusive rights to explore **Polymetallic Sulphides (PMS) in the Carlsberg Ridge** of the Indian Ocean. With this, India has become the **first country in the world** to hold two contracts for PMS exploration,

### Ocean Mineral Exploration

- The deep ocean floor is a treasure house of minerals critical for high-tech, defence, and renewable energy industries.
- Mineral deposits are usually found around hydrothermal vents, mid-ocean ridges, and abyssal plains.
- **Key mineral resources include:**
    - **Polymetallic Nodules (PMNs):** Potato-sized lumps on seabed rich in manganese, nickel, cobalt, and copper. India holds a 75,000 sq. km exploration site in the Central Indian Ocean Basin since 1987.
    - **Polymetallic Sulphides (PMS):** Deposits around hydrothermal vents, rich in copper, zinc, lead, silver, gold, and trace rare earth elements.
    - **Cobalt-rich Ferromanganese Crusts:** Found on seamounts, containing cobalt, nickel, and rare earth elements.


### Significance of the Two Contracts Awarded to India




- **First Country with Dual PMS Contracts:** India now commands the largest PMS exploration area globally, enhancing scientific prestige.
- **Strategic Location:** The Carlsberg Ridge is closer to India (2°N latitude), unlike the distant Central & Southwest Indian Ridges (~26°S). This improves logistics and lowers operational costs.
- **Energy & Resource Security:** Secures access to metals crucial for batteries, electronics, renewable technologies, and defence industries.
- **Strengthened Deep-Ocean Capacity:** Builds on India's earlier PMS exploration expertise (2016 contract), supported by advanced vessels, Autonomous Underwater Vehicles (AUVs), and the **Samudrayaan submersible (Matsya)**.
- **Leadership in Blue Economy:** Positions India as a front-runner among developing nations in ocean resource exploration under UNCLOS.

## Why India Needs Underwater Minerals

- **Critical Mineral Shortage:** India has limited terrestrial reserves of copper, cobalt, nickel, lithium, and rare earths, essential for EVs, renewable energy, and electronics.
- **Green Transition:** PMS minerals are key to solar panels, wind turbines, and batteries - vital for achieving India's net-zero 2070 goals.
- **Strategic Autonomy:** Reduces dependence on global supply chains dominated by China and African sources.
- **Defence Applications:** Critical for missile systems, radar, satellites, and advanced alloys.
- **Economic Opportunity:** Tapping ocean resources strengthens India's **Blue Economy**, unlocking growth beyond land-based extraction.

## Challenges in PMS Exploration and Excavation

- **Technical Barriers:** PMS deposits are found at depths of 2,000–5,000 metres in rocky, uneven terrain, demanding highly specialised vessels and ROVs.
- **High Costs:** Deep-sea exploration requires expensive technologies, ultra-pure water, uninterrupted power, and imported heavy equipment.
- **Environmental Concerns:** Mining hydrothermal vents risks disturbing fragile deep-sea ecosystems, with unknown biodiversity impacts.
- **Geopolitical Competition:** Growing Chinese and US interest in deep-ocean exploration may lead to competition over ISA contracts.
- **Skill & Infrastructure Gaps:** India still lacks world-class foundries, submersible fleets, and large-scale deep-sea mining systems.

### Government Initiatives

- **Deep Ocean Mission (2021):**
  - ₹4,077 crore initiative to explore deep-sea resources.
  - Includes development of **Matsya submersible** (Samudrayaan) for human exploration up to 6,000m.
  - Strengthens technology for mining PMNs, PMS, and cobalt crusts.
- **India Semiconductor Mission (parallel linkage):** Ensures demand for critical minerals in electronics.
- **Blue Economy Policy (Draft):** Focuses on sustainable use of ocean resources for growth, jobs, and security.
- **National Centre for Polar and Ocean Research (NCPOR):** Nodal agency for PMS exploration.
- **ISA Engagement:** India has been part of ISA since 1994 and actively seeks additional contracts (e.g., cobalt-rich ferromanganese crusts at Afanasy-Nikitin Seamount).

## Way Forward

- **Technology Development:** Accelerate indigenous capacity in AUVs, ROVs, and deep-sea mining technologies.
- **Environmental Safeguards:** Establish baseline ecological studies; adopt precautionary principle for deep-sea mining.
- **International Partnerships:** Collaborate with technologically advanced nations like Japan, South Korea, and EU on sustainable deep-sea mining.

- **Skill Development:** Strengthen academic-industry linkages in oceanography, marine geology, and robotics.
- **Strategic Diplomacy:** Push for greater voice of Global South in ISA and link PMS exploration with energy transition goals.
- **Balanced Exploitation:** Ensure economic benefits without compromising marine ecosystems, aligning with Blue Economy sustainability principles.

**Source:** **Indian Express**

# Wassenaar Arrangement: Need for Reform in the Cloud & AI Era

## Context

Recently protests erupted against Microsoft over claims that its Azure cloud services support Israeli military actions affecting Palestinians, highlighting gaps in the Wassenaar Arrangement. As cloud and AI technologies outpace traditional rules, the regime faces urgent calls for reform to curb misuse of dual-use tech.

### Wassenaar Arrangement – Key Facts

- It was established in 1996 as the successor to the Cold War–era Coordinating Committee for Multilateral Export Controls (COCOM).
- **Headquarters:** Located in Vienna, Austria.
- **Membership:** Comprises 42 countries. India became a member in 2017. Includes most NATO and EU states, along with all UNSC P5 members *except China*.
- **Objective:** To enhance transparency, responsibility, and oversight in the transfer of conventional arms and dual-use goods and technologies.
- **Working Mechanism:** Operates through voluntary coordination—members share information, notify export license denials, and report controlled transfers.
- **Control Lists:**
  - **Munitions List:** Encompasses conventional weapons such as tanks, combat aircraft, UAVs, helicopters, missiles, and small arms.
  - **Dual-Use List:** Covers sensitive technologies and equipment with both civilian and military applications.
- **Technology Expansion:** In 2013, it expanded to cover **"intrusion software"** - showing adaptability to emerging threats.
- **Strategic Significance for India:** Membership gives India access to high-tech goods & Boosts India's image as a responsible technology power.

## Gaps in the Current Regime

- **Outdated Structure:** Originally designed for physical exports (hardware, chips, devices). Digital services like **cloud computing and SaaS** were never envisaged.
- **Cloud Services in Grey Area:** Remote access and API calls not clearly defined as "exports". It allows exploitation by regimes misusing global cloud providers for surveillance and repression.
- **Voluntary Nature:** Any member can block reforms. Implementation left to domestic laws ⟶ patchy and inconsistent across states.
- **Limited End-use Oversight:** Controls are framed around military/WMD proliferation, not mass human rights violations enabled by AI and surveillance.
- **Loopholes**
  - Exemptions for "defensive research" and intra-country transfers.
  - Services can slip through due to lack of consensus definitions.

## Reform Proposals

- **Expand Control Lists**

  - Include infrastructure/services enabling large-scale surveillance, profiling, and cross-border data policing.
  - Define thresholds for capacity and carve out strictly licensed defensive uses.
- **Redefine "Export"**
  - Treat remote enablement, authorisation, and granting admin rights as **equivalent to exports**.
  - Apply controls to SaaS and cloud transactions.
- **Embed End-use & Human Rights Controls**
  - Licensing to factor in: Identity of user, Jurisdiction & oversight regime& Potential for abuse
  - Align with UN Guiding Principles on Business and Human Rights.
- **Binding Framework**
  - Move from voluntary coordination to mandatory minimum standards.
  - Require denial of exports in atrocity-prone regions.
- **Institutional Agility**
  - Establish a **technical committee/secretariat** to fast-track controls on emerging tech (AI, cyber weapons, surveillance).
  - Introduce **sunset clauses** to review items periodically.
- **Enhanced Coordination**
  - Create **shared watchlists**, real-time red alerts, and interoperability standards among licensing authorities.

## Challenges in Reform

- **Political Resistance:** Some states may resist reforms, citing sovereignty, innovation, or commercial interests in exporting surveillance tools.
- **Consensus Requirement:** The arrangement works on unanimity, allowing even a few holdouts to block reforms.
- **Technical Complexity:** Defining exports in the **cloud era**, mapping software functions to control categories, and distinguishing benign from malign uses is intricate.
- **Industry Pushback:** Private tech companies may resist additional compliance burdens. Fear of stifling innovation in fast-moving domains like AI.
- **Differing National Priorities:** States vary in their ambition: the EU has stronger human rights controls, while others prioritise commercial and security interests.

## Way Forward

- **Broaden the Scope of Wassenaar:** Include digital technologies, AI, and cloud services in its ambit with clear definitions.
- **Shift to Binding Commitments:** Move from voluntary sharing to enforceable minimum global standards.
- **Integrate Human Rights into Export Controls:** Explicitly address misuse of technology for mass surveillance, repression, and discrimination.
- **Create Domain-Specific Control Regimes:** E.g., a specialised regime for **AI, cyber weapons, and digital surveillance**, aligned with Wassenaar but more agile.
- **India's Role**

- As a relatively new member, India should push reforms reflecting **Global South concerns**.
- Advocate for balanced rules that prevent misuse but also ensure technology access for development.

**Source:** The Hindu