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WEEKLY ROUNDUP

Weekly Roundup — Week 9 (Feb 23 – Mar 1, 2026)

1 March 2026

SUBJECTS COVERED

SCIENCE & TECH | ECONOMY | SECURITY & DEFENCE | POLITY | ENVIRONMENT | IR | HISTORY & CULTURE

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Weekly Roundup — Week 9 (Feb 23 – Mar 1, 2026)

Week 9 — February 23 – March 1, 2026 Science Tech Economy Security Defence Polity Environment International Relations History Culture

📋 WEEK OVERVIEW

A week dominated by technology milestones, energy breakthroughs, and defence indigenisation. **Kerala's renaming to Keralam** kicked off a constitutional process. The **Namo Bharat RRTS** became India's first complete rapid transit corridor. **Waaree** announced India's largest battery gigafactory. **Micron's semiconductor clean room** at Sanand — India's first — began production. **LCH Prachand** and **INS Anjadip** highlighted defence indigenisation strides. India crossed **520 GW power capacity** with the majority now from non-fossil fuels. The **Congo peatlands carbon study** raised fresh alarms on global warming. And **Sulawesi rock art** was dated to 67,800 years — the oldest in human history.

ECONOMY & DEVELOPMENT

Namo Bharat RRTS — India's First Complete Rapid Transit Corridor

PM Modi inaugurated the **complete 82 km Delhi-Meerut Regional Rapid Transit System (RRTS)** corridor — **India's first fully operational RRTS line** — connecting New Ashok Nagar, Delhi to Meerut South.

Key specifications:

- **Total length:** 82 km (17 stations)
- **Design speed:** 160 km/h; operating speed: 100–120 km/h
- **Journey time:** ~55 minutes (vs. 3–4 hours by road)
- **Train: Namo Bharat** — semi-high-speed, air-conditioned trainsets; manufactured by Alstom-BHEL (India)

Implementing body: NCRTC (National Capital Region Transport Corporation) — a Joint Venture of Government of India + UP + Delhi + Haryana + Rajasthan.

RRTS vs. Metro distinction:

- RRTS: Inter-city regional connectivity; fewer stops; higher speed (160 km/h vs. 80–90 km/h for Metro)
- Metro: Urban within-city connectivity; denser stop network; lower speed

Financing: World Bank (USD 500 million) + ADB (USD 1.03 billion) + JICA + NaBFID.

Two more RRTS corridors under construction: Delhi-Gurugram-SNB and Delhi-Panipat.

UPSC Angle — GS-3 / Economy: NCRTC structure; NaBFID (National Bank for Financing Infrastructure and Development, est. 2021); Transit-Oriented Development (TOD) policy; NCR Planning; GatiShakti integration; India's Urban Transport Mission; comparison with French RER.

Waaree Battery Gigafactory — 16 GWh Energy Storage Manufacturing

Waaree Energies (India's largest solar PV module manufacturer) announced a **Rs 8,175 crore battery energy storage gigafactory** in **Anakapalli, Andhra Pradesh** — with **16 GWh annual production capacity** for **LFP (Lithium Iron Phosphate)** battery cells.

Why LFP?

- Safer than NMC (Nickel Manganese Cobalt) — no thermal runaway risk
- Longer cycle life (3,000–5,000 cycles vs. ~1,500 for NMC)
- Lower energy density but better for **grid-scale storage** and **commercial EVs**
- No cobalt dependence (cobalt is geopolitically vulnerable: ~70% from DRC)

India's battery storage gap: India needs **200–300 GWh** of grid-scale battery storage by 2030 to manage intermittency from 500 GW renewable target. Current domestic battery manufacturing capacity: negligible.

PLI for Advanced Chemistry Cell (ACC): Rs 18,100 crore scheme — Waaree gigafactory is likely to leverage ACC PLI incentives.

UPSC Angle — GS-3 / Economy + Environment: National Mission on Transformative Mobility; NITI Aayog battery swap policy; KABIL's lithium mining (Argentina) → Waaree's manufacturing → India's battery self-sufficiency chain; FAME II subsidies; energy storage as a grid stability tool.

India Crosses 520 GW — Renewable Milestone

India's **total installed power capacity crossed 520 GW** — with **more than half now from non-fossil fuels** — a landmark announced at the **India Energy Transition Summit 2026** (FICCI, New Delhi).

Installed capacity breakdown (Feb 2026 estimates):

Source	Capacity
Solar	~220 GW
Wind	~85 GW
Other Renewables (hydro, biomass, SHP)	~60 GW
Nuclear	8.2 GW
Non-fossil total	**~373 GW (~72%)**
Coal + Gas + Oil	~148 GW

India's renewable targets:

- **500 GW non-fossil capacity by 2030** (NDC commitment, updated at COP26)
- **50% of electricity from non-fossil sources by 2030**

  India already ahead of schedule on installed capacity; **storage and grid integration** remain challenges

The storage gap: Solar and wind are intermittent; India needs 200–300 GWh of grid-scale storage by 2030 to balance the grid. Current grid storage: ~4 GWh (pumped hydro + batteries).

UPSC Angle — GS-3 / Environment + Economy: India's NDC; INDC vs. NDC evolution; Panchamrit (at COP26: 500 GW RE, 50% non-fossil electricity, 1B tonne carbon reduction, carbon intensity -45%, Net Zero 2070); ISTS (Inter-State Transmission System) waiver for RE; Green Energy Corridors; Renewable Purchase Obligation (RPO).

Bhavantar Bhugtan Yojana — MP's Price Deficiency Payment Model

Madhya Pradesh re-implemented the **Bhavantar Bhugtan Yojana (Price Difference Payment Scheme)** for FY 2025-26, extending coverage to **mustard and urad** — a farm income support model that **sidesteps the logistical difficulties of physical MSP procurement**.

How it works:

- If a farmer sells produce at the mandi (mandated market) price below the MSP, the **government pays the difference** (the "bhavantar" — price gap) directly to the farmer's bank account
- No government godown required; no procurement logistics; no risk of wastage

Advantages over physical MSP procurement:

- Physical procurement requires godowns, transportation, manpower, and creates government stockpile management burden

Bhavantar pays only the gap — government outlay is targeted to those who actually need support

Farmer retains flexibility to sell at market price + gets top-up

Limitations: Middlemen can manipulate mandi prices downward to increase the government's liability; requires robust mandi price monitoring.

UPSC Angle — GS-3 / Agriculture: MSP architecture (CACP recommendations); PM-AASHA (Pradhan Mantri Annadata Aay SanrakHan Abhiyan) — umbrella scheme including Price Support Scheme (PSS) + Price Deficiency Payment Scheme (PDPS); Bhavantar = state-level PDPS implementation; eNAM (electronic National Agriculture Market); Farmer Income doubling target (Swaminathan committee formula: C2+50%).

SCIENCE & TECHNOLOGY

Amaravati Quantum Valley — NQM Takes Shape

Amaravati, Andhra Pradesh was confirmed as the location of India's first **Quantum Valley** — a dedicated technology park anchored by an **IBM Quantum System Two** facility, with **TCS as a development partner**.

National Quantum Mission (NQM) — key facts:

Approved: **April 2023** by Cabinet; Rs 6,003 crore; 2023–31

Led by: **Department of Science and Technology (DST)**

Lead institutions: **IISc Bengaluru** + **TIFR Mumbai**

Targets:

Milestone	Year
50-qubit superconducting quantum computer	2028
1,000-qubit quantum computer	2031
Satellite-based QKD network	2027
Quantum cryptography deployment	2029

IBM Quantum System Two: IBM's latest quantum hardware system — superconducting qubits in a modular architecture allowing scaling to thousands of physical qubits. India's access comes through India-US iCET (Initiative on Critical and Emerging Technologies, 2023).

UPSC Angle — GS-3 / S&T: Quantum supremacy vs. quantum advantage distinction; qubit (quantum bit) — superposition + entanglement; QKD (Quantum Key Distribution) — unhackable communication using quantum physics; post-quantum cryptography; India-US iCET framework; Amaravati's significance (Andhra

Pradesh greenfield capital).

Micron ATMP Sanand — India's First Semiconductor Clean Room

Micron Technology (US-based memory chip giant) inaugurated India's **first advanced semiconductor ATMP (Assembly, Testing, Marking and Packaging) facility** at **Sanand, Gujarat** — housing the **world's largest single semiconductor assembly clean room** and delivering its first DRAM module to **Dell Technologies**.

Why this matters:

- First time a major US semiconductor company manufactures in India
- India Semiconductor Mission 1.0 (Rs 76,000 crore) provided 50% fiscal support to Micron
- ATMP ≠ Fab (fabrication): Micron packages memory chips made in Taiwan/Japan; India handles the packaging, testing, labelling

DRAM packaging: DRAM (Dynamic Random Access Memory) is the most widely used computer memory. Micron's Sanand unit packages DRAM modules for laptops, servers, and data centres — increasingly a strategic product given China-Taiwan-US technology tensions.

Semiconductor supply chain:

- **Design** (India: Arm-based design companies, Qualcomm India R&D) → **Fab** (TSMC/Samsung/Intel) → **ATMP** (Micron Sanand, CG Power Sanand) → **Packaging** → **OEM** (Dell, HP, Apple)
- India currently in ATMP phase; Tata Electronics Dholera will be India's first **Fab** (2028+ target)

UPSC Angle — GS-3 / S&T + Economy: ISM 1.0 (Rs 76,000 crore; 50% government support); ATMP vs. Fab distinction; Semiconductor = strategic product (US CHIPS Act implications); India Design-Linked Incentive (DLI) scheme for chip design; EV + defence + telecom convergence demand for chips; India joining CHIP4 alliance discussions.

Lenacapavir — Twice-Yearly HIV Prevention Injection

Zimbabwe became one of the first countries to begin a nationwide rollout of **Lenacapavir (Yeztugo)** — the world's **first twice-yearly injectable PrEP (Pre-Exposure Prophylaxis)** for HIV prevention, developed by **Gilead Sciences**.

Clinical evidence:

- **PURPOSE 1 trial** (Sub-Saharan African young women): **~99.9% reduction in HIV acquisition** — near-complete protection
- **PURPOSE 2 trial** (broader population): ~96.4% reduction

How it works: Lenacapavir is a **capsid inhibitor** — blocks HIV's capsid protein (the shell surrounding its genetic material), preventing the virus from entering and replicating in human cells. Administered as 2 injections every 6 months.

Why twice-yearly matters: Daily oral PrEP (Tenofovir/Emtricitabine) has high efficacy but requires strict daily adherence — a major challenge in high-burden settings. Twice-yearly injection removes adherence barriers.

India's role:

- Gilead licensed generic production to **Cipla, Aurobindo, Hetero** (Indian generic manufacturers) for low/middle-income country supply
- India = world's largest HIV treatment provider under National AIDS Control Programme (NACP); Lenacapavir access will be critical

UPSC Angle — GS-2 / Social Issues + Health: TRIPS flexibilities (compulsory licensing); Doha Declaration 2001 (public health flexibilities in TRIPS); India's Section 3(d) patent law (Novartis case 2013); NACP; UNAIDS 95-95-95 targets; AIDS Healthcare Foundation India work; PM TB Free India Mission (TB-HIV co-infection).

TKDL and India-Brazil Biopiracy Deal

India's **CSIR (Council of Scientific and Industrial Research)** and Brazil's **INPI (National Institute of Industrial Property)** signed a cooperation arrangement on the **TKDL (Traditional Knowledge Digital Library)** — enabling Brazilian patent examiners to access India's database as **prior art** to prevent biopiracy.

What is TKDL?

- India's database of traditional knowledge — primarily from **Ayurveda, Unani, Siddha, Yoga** — catalogued in 5 languages (English, Spanish, French, German, Japanese) for use by global patent offices
- Contains **3.68 lakh formulations/practices** from ancient Sanskrit/Arabic texts
- Launched: 2001 by CSIR + Department of AYUSH

Biopiracy examples TKDL has countered:

- **Turmeric wound-healing patent** (US, 1995) → India challenged + revoked
- **Neem biopesticide patent** (EPO, 1995) → revoked after India's challenge
- **Basmati rice patent** (US, 1997 — RiceTec) → partially revoked

TKDL's legal basis: TKDL acts as **prior art** — if a traditional practice is documented, it proves the invention isn't "novel" (a requirement for patentability), allowing patent offices to reject biopiracy applications.

India-Brazil significance: Brazil is a megadiverse nation (Amazon) — TKDL-INPI cooperation strengthens South-South knowledge protection. Both nations champion the **Nagoya Protocol (2010)** on Access and Benefit Sharing under the CBD (Convention on Biological Diversity).

UPSC Angle — GS-3 / S&T + IR: TRIPS Agreement (WTO); CBD (Convention on Biological Diversity, 1992 Rio Earth Summit); Nagoya Protocol (2010, entered force 2014); India's Biological Diversity Act 2002; India's National Biodiversity Authority (NBA); ABS (Access and Benefit Sharing) mechanism.

DEFENCE & SECURITY

Prahaar — India's First Counter-Terrorism Policy Framework

The **Ministry of Home Affairs (MHA)** released **"Prahaar"** — India's first comprehensive counter-terrorism policy framework — addressing threats across land, air, maritime, cyber, and CBRN domains.

Key pillars of Prahaar:

Prevention: Intelligence fusion (NIA + IB + RAW + state police); financial intelligence (FIU-IND); social media monitoring

Response: National Security Guard (NSG) deployment doctrine; NDRF-police coordination; hostage situations

Drone threats: Counter-drone (C-UAS) systems at critical infrastructure; anti-drone R&D fund

Cyber terrorism: Critical infrastructure protection (power grids, banking, defence); CERT-In escalation protocols

CBRN preparedness: Chemical, Biological, Radiological, Nuclear threat response doctrine

Digital financing: Hawala, cryptocurrency, shell companies used to finance terror — FIU-IND mandate enhanced

UPSC Angle — GS-3 / Security: NIA (National Investigation Agency, est. 2008 post-26/11); UAPA (Unlawful Activities Prevention Act 1967); MHA's internal security mandate; NSG's counter-terrorism role (Black Cat Commandos); India's global commitment (FATF member — combating terror financing); UN Security Council 1267 Sanctions Committee.

LCH Prachand — World's Only High-Altitude Attack Helicopter

The **LCH (Light Combat Helicopter) Prachand** — HAL-developed, inducted into the Indian Air Force and Army in 2023 — came into focus as India expanded procurement following its superior performance in Ladakh operations.

LCH Prachand specifications:

Developer: **HAL (Hindustan Aeronautics Limited), Bengaluru**

Role: Attack helicopter for high-altitude operations

Operating altitude: up to **4,000–5,000 metres** — the only attack helicopter in the world designed for sustained combat at these altitudes

Armament: 20mm turret gun, air-to-air missiles (Mistral 2), anti-tank guided missiles (Helina/Dhruvastra), rockets

Weight advantage: Twin-engine design optimised for high-altitude thin air (reduced lift efficiency)

Strategic significance: The **2020 Galwan Valley standoff** with China revealed India's gap in high-altitude attack capability — Chinese Z-10 helicopters operate in Tibet. LCH Prachand directly fills this gap.

Comparison: US AH-64 Apache cannot sustain operations above ~3,000 m effectively. LCH Prachand's design is unique globally for high-altitude performance.

UPSC Angle — GS-3 / Security: HAL's helicopter portfolio (Dhruv ALH → LCH Prachand → IMRH → multi-role); Helina (Helicopter-launched NAG) anti-tank missile; Aatmanirbhar Bharat in defence; India-China LAC standoff locations (Galwan, Depsang, Demchok); High-altitude warfare doctrine.

INS Anjadip — 4th Indigenous ASW Shallow Water Craft

INS Anjadip, the **4th vessel of India's ASW-SWC (Anti-Submarine Warfare Shallow Water Craft) programme**, was commissioned at **Chennai Port** by CNS **Admiral Dinesh K. Tripathi**.

ASW-SWC programme:

8 vessels planned; built by **L&T Shipbuilding, Kattupalli, Chennai**

Designed for **anti-submarine warfare in shallow coastal waters** — hunting enemy submarines in India's EEZ and near-shore zones

Sensors: Bow-mounted sonar + towed array sonar; equipped with torpedoes and depth charges

Strategic context: China's submarine fleet (70+ submarines) increasingly patrols the Indian Ocean — including the Bay of Bengal and Arabian Sea. Shallow-water ASW capability is critical for defending India's 7,517 km coastline and offshore infrastructure.

UPSC Angle — GS-3 / Security + Economy: India's shipbuilding indigenisation; P75 submarines (Scorpene class); P75I (AIP submarines); Make in India defence; L&T's role in naval shipbuilding; Indian Ocean submarine threat environment; India's maritime doctrine.

ENVIRONMENT & ECOLOGY

Congo Peatlands — Ancient Carbon Release

Research published in ***Nature Geoscience*** (ETH Zurich) found that lakes in the **Democratic Republic of Congo — Lake Mai-Ndombe** and **Lake Tumba** — are releasing carbon trapped for over **3,000 years** from surrounding tropical peatlands — raising alarm about the Congo Basin as a potential **carbon bomb** under climate stress.

What are peatlands?

- Waterlogged terrestrial ecosystems where dead organic material (sphagnum moss, grasses, trees) accumulates faster than it decomposes
- Result: ancient carbon stored as dense, compressed organic matter (peat)
- The **Congo Basin** holds the **world's largest tropical peatland** (~145,000 sq km) — storing ~30 billion tonnes of carbon (equivalent to ~3 years of global CO_2 emissions)

Why the lakes are releasing carbon:

- Climate warming + reduced rainfall → peatlands drying
- Drying peatlands oxidise → CO_2 and methane released
- Carbon stored for millennia is entering the atmosphere rapidly

Global implications:

- Tropical peatlands are not adequately represented in global climate models
- Congo peatland release could accelerate warming by an additional 0.5–1°C if not addressed
- REDD+ (Reducing Emissions from Deforestation and Forest Degradation) mechanism should prioritise Congo peatland conservation

UPSC Angle — GS-3 / Environment: REDD+; Paris Agreement 1.5°C target; methane as greenhouse gas (GWP 25× CO_2 over 100 years); carbon sink vs. carbon source dynamics; Congo Basin as the "second lung of the Earth" (Amazon = first); COP27 Glasgow-Sharm el-Sheikh Action Plan.

INTERNATIONAL RELATIONS

CM-302 Anti-Ship Missile — China-Iran Deal and Gulf Security

Iran was finalising procurement of China's **CM-302 supersonic anti-ship cruise missile** — raising alarms about the naval balance of power in the Persian Gulf, directly relevant to India's energy security given India's reliance on Gulf crude oil.

CM-302 specifications:

- Range: ~290 km; speed: **Mach 3** (supersonic); terminal manoeuvre for evasion
- Sea-skimming flight profile: flies at wave-top level to avoid radar detection
- Primary threat to: US carrier battle groups, Saudi/UAE frigates, commercial tankers

India's exposure:

- ~35–40% of India's crude oil from GCC (Saudi Arabia, UAE, Iraq); 40–45% more from Iran + Russia combined
- Any escalation shutting the **Strait of Hormuz** (at Iran's doorstep) would cut ~20% of global oil trade
- 9 million Indians in Gulf; USD 40 billion annual remittances at risk

UPSC Angle — GS-2 / IR + GS-3 / Economy: Iran-China 25-year Comprehensive Strategic Partnership (2021); China arms Iran as strategic counter to US; India-Iran Chabahar Port (India's answer to Gwadar); Hormuz Strait (width ~56 km, navigable ~5 km each way); India's Strategic Petroleum Reserve (SPR) at ~9.5 days of consumption.

HISTORY, ART & CULTURE

Sulawesi Rock Art — World's Oldest at 67,800 Years

A **hand stencil** in a limestone cave on **Muna Island, Sulawesi, Indonesia** was dated to at least **67,800 years ago** — making it the **world's oldest confirmed rock art**, surpassing the previous record by over 16,000 years.

Dating method: Uranium-series (U-series) disequilibrium dating — measures the decay of uranium-234 into thorium-230 in calcium carbonate (flowstone) deposits overlying the artwork; provides minimum age of the art underneath.

What this means for human evolution:

- Previously, symbolic/abstract art was considered a marker of **cognitive modernity** (~40,000–50,000 years ago — Europe's Chauvet Cave)
- Sulawesi's 67,800-year-old art predates modern humans' arrival in Europe
- Suggests symbolic thinking and artistic capability were present in humans who left Africa **before** the European migration — rewriting the "cognitive revolution" timeline

Indonesia's Sulawesi cave art: The island has multiple cave sites with ancient figurative art — **Sus celebensis (Sulawesi warty pig)** paintings at ~45,500 years previously held the record for oldest figurative art. This hand stencil is even older and simpler.

India connection: Similar "cave art tradition" at **Bhimbetka Rock Shelters (Madhya Pradesh)** — UNESCO World Heritage Site with rock paintings from 30,000+ years ago; potentially older layers under study.

UPSC Angle — GS-1 / History + Art & Culture: Bhimbetka Rock Shelters (MP; UNESCO 2003; Mesolithic + later periods); Mesolithic vs. Palaeolithic rock art in India; Out of Africa migration theory; Homo sapiens migration timeline (2 waves: 60,000–70,000 years ago through Southeast Asia; 45,000 years ago to Europe); prehistoric art as evidence of symbolic cognition.

📌 FACTS CORNER — WEEK 9 KNOWLEDGEPEDIA (FEB 23 – MAR 1, 2026)

NAMO BHARAT RRTS:

82 km; 17 stations; Sahibabad, Delhi ↔ Meerut South; India's first complete RRTS line

Design speed: 160 km/h; journey time: ~55 min; NCRTC (GoI + UP + Delhi + Haryana + Rajasthan JV)

Finance: World Bank USD 500M + ADB USD 1.03B + JICA; RRTS vs. Metro: inter-city vs. intra-city

2 more RRTS: Delhi-Gurugram-SNB + Delhi-Panipat (under construction)

INDIA 520 GW POWER:

Solar: ~220 GW; Wind: ~85 GW; Hydro+biomass: ~60 GW; Nuclear: 8.2 GW; Non-fossil: ~373 GW (~72%)

NDC target: 500 GW non-fossil by 2030 (on track); 50% electricity from non-fossil by 2030

Storage gap: ~4 GWh current (pumped hydro + batteries) vs. 200–300 GWh needed by 2030

Panchamrit (COP26): 500 GW RE; 50% non-fossil electricity; 1B tonne carbon reduction; -45% carbon intensity; Net Zero 2070

WAAREE BATTERY GIGAFACTORY:

Rs 8,175 crore; 16 GWh; Anakapalli, AP; LFP (Lithium Iron Phosphate) cells

LFP: safer (no thermal runaway), longer cycles (3,000–5,000), no cobalt; preferred for grid storage + commercial EVs

PLI for ACC (Advanced Chemistry Cell): Rs 18,100 crore scheme

KERALA → KERALAM:

Union Cabinet approved renaming; constitutional route: Parliament amends First Schedule via simple majority (Art. 3)

Article 3: Parliament may by law form a new state, alter boundaries, or rename; state legislature's view must be obtained (but not binding on Parliament)

Kerala Assembly 2023 resolution; "Keralam" = traditional Malayalam name

PRAHAAR COUNTER-TERRORISM FRAMEWORK:

India's first comprehensive CT policy framework; released by MHA

6 pillars: prevention, response, drones, cyber terrorism, CBRN, digital financing

NIA: est. 2008 (post 26/11); headquartered New Delhi; handles terror cases across India

FATF: India member since 2010; assessed as "Compliant/Largely Compliant" (2024 evaluation)

AMARAVATI QUANTUM VALLEY:

IBM Quantum System Two + TCS; Amaravati, Andhra Pradesh

NQM: April 2023; Rs 6,003 crore; DST lead; IISc + TIFR

50-qubit (2028); 1,000-qubit (2031); satellite QKD (2027); QKD = unhackable quantum communication

MICRON ATMP SANAND:

Sanand, Gujarat; ISM 1.0 (50% government support); world's largest single semiconductor assembly clean room

ATMP (Assembly, Testing, Marking, Packaging) ≠ Fab; Micron DRAM (memory chips) packaged for Dell/others

Also at Sanand: CG Power ATMP (Renesas/STARS JV); Tata Electronics (Dholera) = India's first fab (2028+)

LCH PRACHAND:

Developer: HAL Bengaluru; inducted: 2023 (IAF + Army); only attack helicopter designed for 4,000–5,000 m ops

Armament: 20mm gun, Mistral-2 (AAM), Helina/Dhruvastra (ATGM), rockets

Context: fills gap revealed in 2020 LAC standoff; Chinese Z-10 operates in Tibet

INS ANJADIP:

4th of 8 ASW-SWC vessels; L&T Kattupalli, Chennai; commissioned by CNS Adm. Dinesh K. Tripathi

ASW = Anti-Submarine Warfare; shallow coastal water operations; bow sonar + towed array sonar + torpedoes

LENACAPAVIR:

Gilead Sciences (US); brand: Yeztugo; twice-yearly injectable PrEP (6-month interval)

~99.9% effectiveness (PURPOSE 1); ~96.4% (PURPOSE 2); capsid inhibitor (blocks HIV replication)

Gilead licensed to India's Cipla, Aurobindo, Hetero for LMICs; Zimbabwe first nationwide rollout

Daily oral PrEP: Tenofovir+Emtricitabine (Truvada); adherence challenge solved by injectable

TKDL:

CSIR + DPIIT + Department of AYUSH; launched 2001; 3.68 lakh traditional formulations/practices

5 languages: English, Spanish, French, German, Japanese; used as prior art in patent offices

Biopiracy wins: Turmeric (US, 1995), Neem (EPO, 1995), Basmati (US, 1997 — partial)

India-Brazil: CSIR + INPI (Brazil's patent office) cooperation; Nagoya Protocol + CBD framework

BHAVANTAR BHUGTAN YOJANA:

MP scheme (revived FY26); Price Difference Payment for mustard + urad

Government pays MSP-market price gap directly to farmer's bank; no physical procurement

Under PM-AASHA umbrella: PSS (physical procurement) + PDPS (price deficiency) + PSF (Price Stabilisation Fund)

CONGO PEATLANDS:

Lake Mai-Ndombe + Lake Tumba, DRC; carbon from peatlands 3,000+ years old now releasing

Congo Basin = world's largest tropical peatland: ~145,000 sq km; ~30 billion tonnes stored carbon

Method: lake sediment core + radiocarbon dating; study: ETH Zurich in Nature Geoscience

REDD+ = mechanism to reduce deforestation + forest degradation emissions (under UNFCCC)

SULAWESI ROCK ART:

Muna Island, Sulawesi, Indonesia; hand stencil; ≥67,800 years old (uranium-series dating)

Oldest confirmed rock art globally; oldest figurative art: Sus celebensis pig, Sulawesi ~45,500 years

India analogue: Bhimbetka Rock Shelters, MP (UNESCO 2003; 30,000+ years; Mesolithic + Palaeolithic)

CM-302 MISSILE:

China-Iran deal; CM-302: Mach 3, ~290 km range, sea-skimming; anti-ship

Hormuz Strait: ~56 km wide; ~5 km navigable; ~20% global oil trade; India crude import exposure ~85%

India SPR: ~5.33 MMT (~9.5 days); locations: Vishakhapatnam, Mangaluru, Padur

OTHER RELEVANT FACTS:

Seva Teertha (completed context from Week 8): replaces South Block built 1930; PM RAHAT = road accident victim compensation scheme

NCRTC RRTS corridors: Delhi-Meerut (82 km, complete); Delhi-Gurugram-SNB (under construction); Delhi-Panipat (under construction)

> PM-AASHA (Pradhan Mantri Annadata Aay SanrakHan Abhiyan): umbrella for PSS + PDPS + PSF; Bhavantar = state implementation of PDPS model

Sources: PIB, The Hindu, Indian Express, DD News

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