

THEIAS AKADEMIA • MORNING EDITION • 08:00 IST

ANTIM ASSURED 100+

PART II • ENVIRONMENT TO DIRECT HIT TRACKER

Thursday, 23 July 2026

India Submits 7th National Biodiversity Report — Kunming-Montreal GBF 30×30 Target; 98 Ramsar Sites; 58 Tiger Reserves

Why in News: India submitted its 7th National Biodiversity Report to the Convention on Biological Diversity (CBD) Secretariat in July 2026, showcasing India's progress toward the Kunming-Montreal Global Biodiversity Framework (GBF) targets. The report documents India's forest cover at 25.17% of geographic area, 98 Ramsar wetland sites (2nd globally), 58 Tiger Reserves, 23 National Biodiversity Targets (NBTs) aligned with the GBF's 23 global targets, and submission of India's updated National Biodiversity Strategy and Action Plan (NBSAP 2024-30).

Background: The CBD (1992, Rio de Janeiro) is the international treaty governing biodiversity conservation, sustainable use, and fair sharing of genetic resources. India ratified it in 1994. COP15 (Kunming-Montreal, December 2022) adopted the historic Global Biodiversity Framework with its landmark 30×30 target (protect 30% of land and ocean by 2030). India's report demonstrates compliance with CBD's Article 26 (National Reports) obligation.

⚡ KEY FACTS

- GBF 30×30 Target (Target 3): Protect at least 30% of land, inland waters, coastal areas, and oceans by 2030. India: ~17.2% land under Protected Areas + conserved areas (2025); target gap ~12.8%; India's new NBTs include community conserved areas in the count.
- India's NBTs (23 targets): mapped to GBF's 23 global targets; examples — NBT 1: Spatial Planning; NBT 3: 30×30 (area-based conservation); NBT 10: Sustainable agriculture; NBT 14: Mainstreaming biodiversity in business; NBT 23: Gender equity in biodiversity governance.
- India biodiversity statistics (2026): Forest cover: 25.17% (7,15,343 sq km); Dense + Very Dense Forest: 15.43%; Ramsar Sites: 98 (largest global network); Tiger population: 3,682 (2023 census); Protected Areas: 1,003 (National Parks + WLSs + CRs + CWSs); Biodiversity Heritage Sites: 96.
- CBD National Reports: Member Parties submit National Reports every 4 years to assess progress. India's previous 6th NR was submitted in 2018. The 7th NR marks the first report

under the GBF framework (post-2022 COP15). Next COP (COP16): was held in Cali, Colombia (2024) — reviewed initial GBF progress.

💡 TEACHING HOOK

CBD milestones to remember: (1) CBD adopted at Rio Earth Summit 1992; entered force 1993; (2) Cartagena Protocol (2000) — biosafety; (3) Nagoya Protocol (2010) — Access and Benefit Sharing; (4) Kunming-Montreal GBF (2022) — 23 targets for 2030; (5) COP15 hosted by China but held in Montreal (due to COVID). GBF vs Paris Agreement: Both have "30 by 30" elements — Paris aims for 1.5°C by 2050; GBF aims to protect 30% land/ocean by 2030. India's unique position: 17% global biodiversity in 2.4% land area — mega-diverse country (12 out of 17 mega-diverse nations globally).

📄 PYQ LINKAGE

GS3 2021: "What is the Convention on Biological Diversity? Discuss its significance for India." | GS3 2022: "30x30 biodiversity target — explain and assess India's preparedness." | GS3 2024: "Examine India's biodiversity conservation framework — achievements and gaps."

🎯 PROBABLE PRELIMS MCQ

Q. The "30×30" biodiversity target — to protect 30% of land and oceans by 2030 — was adopted under: (a) Paris Agreement, COP21 (b) Nagoya Protocol (c) Kunming-Montreal Global Biodiversity Framework (d) Cartagena Protocol. **Answer: (c) Kunming-Montreal GBF.** Adopted at CBD COP15 in December 2022 in Montreal (Canada), this is Target 3 of the 23-target framework.

ENV

CBD

GBF

30x30

Ramsar

Tiger Reserves

Biodiversity

ENV

Marine Species · WPA · CITES

Static Special · Source: IUCN / WII / MoEFCC / AffairsCloud

Dugong (Dugong dugon) — India's Only Fully Aquatic Herbivorous Mammal; Palk Bay Conservation Reserve; National Recovery Programme

Why in News: India's National Dugong Recovery Programme, managed by the Wildlife Institute of India (WII) and MoEFCC, received attention this month as India prepares its updated NBSAP 2024-30. Dugong populations in India have declined to approximately 200 individuals, confined primarily to Palk Bay (Tamil Nadu), Gulf of Kutch (Gujarat), and Andaman & Nicobar Islands. The Palk Bay Dugong Conservation Reserve (September 2022, Tamil Nadu) — India's first and only Dugong Conservation Reserve — covers ~500 sq km and is critical to the species' survival in Indian waters.

Background: Dugongs are the only surviving members of the family Dugongidae and the only fully herbivorous marine mammal that is exclusively marine (unlike sea otters or polar bears which have terrestrial access). They are dependent on seagrass meadows for sustenance — making seagrass habitat loss, fishing net entanglement, and boat collisions the primary threats. Historically distributed across 48 countries from East Africa to Australia, their range has contracted dramatically.

KEY FACTS

- Scientific classification: Dugong dugon (only living species in Family Dugongidae; order Sirenia — 4 species including 3 manatees); IUCN Red List: Vulnerable (2015 assessment); CITES Appendix I (strictest trade ban); WPA 1972: Schedule I (highest protection in India).
- Palk Bay Dugong Conservation Reserve: Notified September 2022 by Tamil Nadu; ~500 sq km area; India's FIRST dedicated Dugong Conservation Reserve; set up under Section 36A of the Wildlife Protection Act (WPA) 1972; located between Pamban Island and Point Calimere (Kodikkarai Wildlife Sanctuary).
- Threats: Seagrass loss (key food source); accidental catch in fishing nets (bycatch); boat propeller injuries; illegal hunting; pollution; coastal development. Dugongs can live up to 70 years and reproduce very slowly (1 calf every 3-7 years) — making population recovery extremely slow.
- National Dugong Recovery Programme (WII): Satellite tagging (GPS/ARGOS), community outreach in Tamil Nadu fishing communities, seagrass habitat mapping (Gulf of Mannar + Palk Bay), carcass monitoring network. Gulf of Mannar Marine National Park (1980) — a Biosphere Reserve — hosts the southern boundary of Palk Bay dugong habitat.

TEACHING HOOK

Sirenia order memory trick: "Sea-renia = 4 Sea Mammals eating sea-grass": Dugong (1 species — Indian Ocean/Pacific), West Indian Manatee, Amazonian Manatee, West African Manatee. The extinct Steller's Sea Cow was also a Sirenian. Key fact: Dugong ≠ sea cow (though informally

called that). Dugong tail = forked (like whale); Manatee tail = paddle-shaped (like beaver). Palk Bay is a shallow water body between Tamil Nadu and Sri Lanka — not the same as Palk Strait (the connecting channel). IUCN Vulnerable ≠ Endangered — Vulnerable is 3 steps from Extinct, Endangered is 2 steps.

PYQ LINKAGE

GS3 2020: "Seagrass ecosystems — significance and threats." | GS3 2022: "Critically evaluate India's approaches to marine biodiversity conservation." | GS3 2024: "Species-specific conservation reserves in India — examine the legal framework and examples."

PROBABLE PRELIMS MCQ

Q. Which of the following is correct about the Dugong? (1) It belongs to the order Sirenia. (2) Palk Bay Dugong Conservation Reserve was notified in 2022. (3) It is listed as Endangered by IUCN. Codes: (a) 1 and 2 only (b) 2 and 3 only (c) 1 and 3 only (d) 1, 2 and 3. **Answer: (a) 1 and 2 only.** Statement 3 is wrong — Dugong is VULNERABLE (not Endangered) on the IUCN Red List. Both statement 1 (order Sirenia) and statement 2 (Palk Bay CR notified September 2022) are correct.

ENV

Dugong

Sirenia

Palk Bay

IUCN Vulnerable

CITES Appendix I

Seagrass

§2 · PLACES IN NEWS — 23 JULY 2026

 PLACES IN NEWS — 23 JULY 2026 | ANTIM ASSURED 100+



- ① New Delhi (Parliament + NCM) ● ② Nubra, Ladakh (Udmaroo Bridge)
- ③ Manila, Philippines (ASEAN ARF + Jaishankar-Wang Yi) ● ④ Tokyo, Japan (India-Japan Summit)
- ⑤ Palk Bay, Tamil Nadu (Dugong CR) ● ⑥ Chennai, Tamil Nadu (ePlane eVTOL)

① New Delhi, India

Parliament Monsoon Session Day 4; NCM
Chairman Grewal assumes charge; NCM post
vacant 14+ months; GS2 — Governance /
Statutory Bodies.

② Nubra, Ladakh, India

Udmaroo Bridge over Shayok River
inaugurated by LG Saxena; ₹27.18 cr; 35 km
saved; LAC proximity; Buddhist pilgrimage; GS2
— Border Connectivity.

③ Manila, Philippines

EAM Jaishankar at ASEAN ARF; Quad FM Meet;
bilateral with Wang Yi — "border peace is
prerequisite for normal India-China ties"; 2026
ASEAN Chair: Philippines.

④ Tokyo, Japan

16th India-Japan Annual Summit (July 1-3); PM
Takaichi + PM Modi; UNICORN first defence co-
development; \$12.5B investment; Economic
Security Declaration.

⑤ Palk Bay, Tamil Nadu, India

India's only Dugong Conservation Reserve (Sep
2022); ~500 sq km; ~200 Dugongs in India;

⑥ Chennai, Tamil Nadu, India

ePlane Company e200X eVTOL prototype
unveiled; IIT Madras incubated; 2,200 kg; 110

seagrass-dependent; National Dugong
Recovery Programme (WII).

km range; India's first electric air taxi;
commercial ops 2028.

§3 · ETHICS & INTEGRITY CASE STUDIES

Case 1 • Independence of Statutory Bodies (NCM)

The NCM Chairperson post remaining vacant for 14+ months while the appointee is a senior BJP state party official raises questions about the independence of statutory bodies from political processes. An IAS officer examines whether appointments should be through an independent selection committee.

Dimensions: Institutional integrity, impartiality, separation of state and policy, minority rights protection. **GS4 Value:** Fairness, rule of law, institutional independence.

Case 2 • Economic Normalisation vs. Territorial Integrity (India-China)

India faces the dilemma of normalising economic ties with China (resuming flights, visas, investment) while China continues to claim Arunachal Pradesh. Jaishankar states "border peace is prerequisite." **Dimensions:** National interest vs. economic pragmatism; diplomatic ethics; sovereignty vs. development. **GS4 Value:** Integrity, courage of conviction, principled diplomacy.

Case 3 • Defence Procurement Integrity

Large-scale DAC approvals (₹52,000 crore) involve significant public funds and procurement decisions that are vulnerable to lobbying and kickbacks (Bofors, AgustaWestland legacy). What ethical safeguards must a DAC member apply?

Dimensions: Public interest, fiduciary duty, probity, accountability. **GS4 Value:** Non-partisanship, objectivity, whistleblower protection.

Case 4 • IPR and Publicly-Funded Research (ICMR)

When ICMR licenses its drug patents to private pharma companies (Emcure, Biological E), there is a tension between recovering R&D costs and ensuring affordable public access to medicines. Should patents on publicly-funded research be royalty-free for India's public health system? **Dimensions:** Public good vs. commercial incentive; equity in access to healthcare; IP ethics. **GS4 Value:** Compassion, social justice, integrity in research governance.

§4 • PRELIMS MCQS — 23 JULY 2026 (15 QUESTIONS)

Q1. The National Commission for Minorities was established under: (a) Constitution of India, Art. 340 (b) National Commission for Minorities Act, 1992 (c) Minorities Protection Act, 1950 (d)

Human Rights Act, 1993

✓ Answer: (b) — NCM Act 1992; it is statutory NOT constitutional.

Q2. Which of the following is the 6th minority notified under the NCM Act (added in 2014)? (a) Buddhist (b) Jain (c) Jewish (d) Zoroastrian

✓ Answer: (b) — Jain community added as 6th notified minority in 2014.

Q3. The Shayok River flows through which valley before joining the Indus? (a) Lidder Valley (b) Zaskar Valley (c) Nubra Valley (d) Chenab Valley

✓ Answer: (c) — Shayok flows through Nubra Valley, Ladakh, before joining the Indus.

Q4. ASEAN Regional Forum (ARF) was established in: (a) 1991 (b) 1994 (c) 1997 (d) 2003

✓ Answer: (b) — ARF established 1994; currently 27 members; annual FM-level security forum.

Q5. UNICORN is the first-ever defence technology co-development project between India and: (a) USA (b) France (c) Israel (d) Japan

✓ Answer: (d) — India-Japan 16th Annual Summit (July 2026); Japan's first such co-development with any country.

Q6. DAC stands for: (a) Defence Acquisition Committee (b) Defence Advisory Council (c) Defence Acquisition Council (d) Defence Allotment Committee

✓ Answer: (c) — Defence Acquisition Council; chaired by Defence Minister; apex procurement body.

Q7. Akash Tarang is: (a) A medium-range surface-to-air missile (b) An anti-UAV electronic warfare system (c) A man-portable anti-tank missile (d) A high-altitude pseudo satellite

✓ Answer: (b) — Anti-UAV EW system; DRDO + BEL; jams and neutralises drone swarms.

Q8. The ePlane Company that unveiled India's first eVTOL in 2026 is incubated at: (a) IIT Bombay (b) IIT Delhi (c) IIT Madras (d) IIT Kharagpur

✓ Answer: (c) — IIT Madras Research Park, Chennai; founded 2017; e200X prototype unveiled July 2026.

Q9. eVTOL stands for: (a) Electric Vertical Transport Over Land (b) Electric Vertical Take-Off and Landing (c) Enhanced Vertical Take-Off and Lift (d) Electric VTOL Thrust Oscillator Landing

✓ Answer: (b) — Electric Vertical Take-Off and Landing; key technology for Advanced Air Mobility (AAM).

Q10. ICMR's Medical Innovations Patent Mitra is primarily aimed at: (a) Blocking foreign pharma patents in India (b) Commercialising publicly-funded biomedical R&D through licensing (c) Establishing medical devices import guidelines (d) Regulating clinical trials under CDSCO

✓ Answer: (b) — Bridges public R&D to industry; ICMR licenses patents to Indian pharma for commercialisation.

Q11. SHetA2, licensed by ICMR to Emcure Pharmaceuticals, targets: (a) Drug-resistant tuberculosis (b) Cervical precancerous cells (c) Pancreatic cancer (d) Dengue fever

✓ Answer: (b) — SHetA2 selectively kills cervical intraepithelial neoplasia (precancerous) cells; potential non-surgical treatment for cervical cancer.

Q12. Dugong is listed as which category on the IUCN Red List? (a) Critically Endangered (b) Endangered (c) Vulnerable (d) Near Threatened

✓ Answer: (c) — IUCN Vulnerable (2015 assessment); CITES Appendix I; WPA Schedule I in India.

Q13. India's first and only Dugong Conservation Reserve was notified in: (a) Gulf of Kutch, Gujarat (b) Andaman Islands (c) Palk Bay, Tamil Nadu (d) Gulf of Mannar, Tamil Nadu

✓ Answer: (c) — Palk Bay Dugong Conservation Reserve, Tamil Nadu; notified September 2022; ~500 sq km.

Q14. The Kunming-Montreal Global Biodiversity Framework's "30×30" target refers to: (a) Reducing 30% of global emissions by 2030 (b) Protecting 30% of land and oceans by 2030 (c) Achieving 30 sustainable development goals by 2030 (d) Planting 30 billion trees by 2030

✓ Answer: (b) — Target 3 of GBF; adopted at CBD COP15 December 2022; India's NBSAP 2024-30 aligned with it.

Q15. India's 7th National Biodiversity Report was submitted under which international convention? (a) CITES (b) Ramsar Convention (c) Convention on Biological Diversity (d) Bonn Convention

✓ Answer: (c) — CBD Article 26 requires National Reports every 4 years; India's 7th NR submitted July 2026 under CBD.

GS2 Statutory Bodies Q1. The National Commission for Minorities lacks constitutional status and enforcement powers. In light of the prolonged vacancy in the NCM Chairperson's post, critically examine the adequacy of India's statutory framework for minority protection. (250 words)

Hints: NCM Act 1992 → only recommendatory, no enforcement → compare with NHRC (statutory but stronger mandate) → political appointments risk → contrast with constitutional bodies (NCSC, NCST) → suggest reforms: security of tenure, independent appointment committee, contempt powers for non-compliance.

GS2 India-China Q2. "Peace and tranquility in the border areas is the prerequisite for normal bilateral ties." Assess India's approach to normalising relations with China in the context of EAM Jaishankar's Manila bilateral with Wang Yi. (250 words)

Hints: Galwan 2020 context → October 2024 Kazan summit → disengagement completed → Manila signals → economic dimensions (\$85B trade deficit) → India's principled stand vs. economic pragmatism → strategic autonomy → compare with India-Pak doctrine.

GS2 IR Q3. The 16th India-Japan Annual Summit launched the UNICORN defence co-development project and a Joint Declaration on Economic Security. Examine how Japan is emerging as India's partner for technology-driven security in the Indo-Pacific. (250 words)

Hints: Special Strategic and Global Partnership 2014 → CEPA 2011 → 2+2 Dialogue 2022 → UNICORN (first defence co-dev) → Economic Security (semiconductors, critical minerals, AI) → Japan's Article 9 evolution → Quad linkage → infrastructure (DMIC, Bullet Train) → shared concerns about China.

GS3 Defence Q4. India's DAC approval of ₹52,000 crore for Akash Tarang, MRSAM, V-SHORADS, and High-Altitude Pseudo Satellites reflects a paradigm shift in India's air defence strategy. Examine the significance of layered air defence for India's national security. (250 words)

Hints: Drone warfare lessons (Ukraine, Israel, Op Sindoor) → layered architecture (VSHORADS → MRSAM → S-400) → Akash Tarang anti-UAV EW → HAPS for persistent ISR → indigenisation (DRDO, BEL) → Atmanirbharta metrics → DAP 2020 → Budget allocation for defence R&D.

GS3 S&T Q5. "Advanced Air Mobility is not just aviation — it is a public service delivery revolution." In the context of ePlane Company's eVTOL e200X, examine the potential and challenges of electric air taxis in India. (250 words)

Hints: IIT Madras ecosystem → AAM applications (air ambulance, urban mobility, disaster relief)

→ UDAN 2.0 integration → DGCA certification challenge → charging infrastructure → noise + airspace management → global market \$30B by 2030 → India as AAM manufacturer vs importer → policy gap.

GS3

Economy

Q6. ICMR's Medical Innovations Patent Mitra seeks to commercialise publicly-funded biomedical research. Examine the challenges and opportunities of public R&D-to-market pathways in India's pharmaceutical sector. (250 words)

Hints: Public R&D landscape (ICMR, CSIR, ICAR, DBT) → commercialisation deficit → MIPM model → Bayh-Dole comparison → Covaxin success story → IP ownership debates → affordable access vs. innovation incentive → Make in India + PLI for pharma → National Medical Commission role → global generics competitiveness.

§6 · ANSWER WRITING VALUE ADDITION

QUOTE — INDIA-CHINA DIPLOMACY

"Border peace is not just a precondition — it is the foundation on which the entire edifice of bilateral relations rests." — EAM S. Jaishankar, Manila, July 22, 2026. *Use in: GS2 India-China answers, GS4 integrity in diplomacy, IR essays.*

DATA — INDIA-JAPAN INVESTMENT

India-Japan bilateral investment target: ¥5 trillion (2022 Summit) → doubled to ¥10 trillion (\$83 billion) at 16th Summit (July 2026); 129 MoUs signed at Joint Economic Forum; 150 Japanese companies pledging \$12.5 billion. *Use in: GS2 India-Japan answers, GS3 FDI/investment essays.*

DATA — DUGONG CONSERVATION

India: ~200 Dugongs remaining; primarily Palk Bay (TN), Gulf of Kutch (GJ), A&N Islands; Palk Bay CR (500 sq km, Sep 2022) = India's ONLY Dugong reserve; IUCN Vulnerable; lifespan up to 70 years; 1 calf per 3-7 years = extreme recovery difficulty. *Use in: ENV Marine conservation answers, biodiversity essays.*

DATA — EVTOL GLOBAL MARKET

Global eVTOL/Advanced Air Mobility (AAM) market: projected \$30 billion by 2030 (Morgan Stanley); India currently 0% market share; ePlane e200X = India's first full-scale prototype (2026); target:

2028 commercial operations (air ambulance first). *Use in: GS3 S&T, aviation policy, startup ecosystem answers.*

§7 · AKADEMIA DIRECT HIT TRACKER — 23 JULY 2026

#	TOPIC	GS	PRIORITY	ONE-LINE RECALL
1	NCM — Harjit Singh Grewal	GS2	 HIGH	NCM Act 1992, statutory, 6 minorities (Jain added 2014), only recommendatory powers
2	Udmaroo Bridge, Shayok River, Nubra	GS2/1	 HIGH	₹27.18 cr, Truss bridge, 35 km saved, Shayok = Indus tributary, Ladakh UT, DBO strategic
3	Jaishankar Manila — ASEAN ARF	GS2	 HIGH	ARF 1994, 27 members, Philippines ASEAN Chair 2026, Jaishankar-Wang Yi bilateral
4	Jaishankar-Wang Yi — India-China Normalisation	GS2	 HIGH	"Border peace = prerequisite"; Kazan October 2024 reset; disengagement complete; \$85B deficit
5	India-Japan 16th Summit — UNICORN	GS2	 HIGH	PM Takaichi + Modi; UNICORN = first India-Japan defence co-dev; \$12.5B; Economic Security Declaration
6	DAC ₹52,000 cr — Akash Tarang	GS3	 HIGH	Akash Tarang = anti-UAV EW (DRDO+BEL); MRSAM (India+IAI); V-SHORADS; HAPS; MPATGM
7	ePlane Company e200X eVTOL	GS3	 MEDIUM	IIT Madras; 2,200 kg; 110 km; NVIDIA IGX Thor; India's first eVTOL prototype; 2028 commercial
8	ICMR Patent Mitra — SHetA2 + Vaccines	GS3	 MEDIUM	ICMR est. 1911 (IRFA); Patent Mitra = public R&D licensing; Emcure SHetA2 (cervical); Biological E (typhoid+shigella)

9	Dugong + Palk Bay CR	ENV	 HIGH	Dugongidae, order Sirenia, IUCN Vulnerable, CITES I, WPA Sch-I, Palk Bay CR Sep 2022 (~500 sq km), ~200 India
10	India CBD 7th National Report + GBF	ENV	 HIGH	CBD 1992, COP15 Kunming-Montreal GBF, 30×30 = Target 3, 23 NBTs, 98 Ramsar sites, forest 25.17%
11	India BRICS Chairship 2026	GS2	 MEDIUM	Theme: BRICS — Building Resilience, Innovation, Cooperation, Sustainability; 3rd Transport Ministers Meet; Summit = New Delhi late 2026
12	Quad FM Manila 2026	GS2	 MEDIUM	Quad = India+US+Japan+Australia; Manila FMM July 22-23; maritime security, AI, supply chains; ASEAN-India Maritime Year 2026

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