DAILY CURRENT AFFAIRS 01-04-2025

GS-1

1. **Bodh Gaya temple**
2. **Impact Of Deep-Sea Mining**

GS-2

3. **Protection of Interests in Aircraft Objects Bill**

GS-3

4. **Gene Banks**
5. **World Wide Fund for Nature (WWF)**

Bodh Gaya temple

Syllabus: GS-1; Art & Culture

Context

- Buddhists want the repeal of the Bodh Gaya Temple Act, 1949 (BGTA), under which the temple is currently governed.

About

- The **Bodh Gaya Temple Act (BTA), 1949**, is a legislation enacted by the Bihar government to manage the **Mahabodhi Temple Complex** in Bodh Gaya, one of the holiest sites in Buddhism.

- The Act was introduced to resolve disputes between Hindu and Buddhist groups over the temple's administration.

- However, Buddhist monks and organizations, including the **All India Buddhist Forum (AIBF)**, have been protesting since **February 2024**, demanding its repeal, arguing that the temple should be under full Buddhist control.

Key Provisions of the Bodh Gaya Temple Act (BTA), 1949

Management Committee:

- An **8-member committee** governs the temple.
- **Equal representation** for Hindus and Buddhists (4 members each).
- The **District Magistrate (DM)** of Gaya serves as the ex-officio chairperson, historically from the Hindu community, leading to perceptions of Hindu dominance.

Controversy:

- Buddhists argue that since the temple is a sacred Buddhist site, its management should be exclusively under Buddhist authority.
- The term "Bodh Gaya Mahavihara" is used by Buddhists to emphasize its historical significance as a monastic complex.

Historical Background of the Dispute

Ancient Period:

- Built by **Emperor Ashoka** (3rd century BCE).
- Flourished as a Buddhist center under the **Pala dynasty** (8th–12th century CE).

Medieval Period:

- Decline after **Bakhtiyar Khilji's invasion** (13th century).
- 1590: A Hindu monk established the Bodh Gaya Mutt, leading to Hindu control.

Colonial Era:

- British records recognized the site as Hindu-controlled.

Post-Independence (1949):

- The Bihar Assembly passed BTA to formalize a shared management structure.

Government Interventions

2013 Amendment:

- Allowed the DM (chairperson) to be from any religion, not just Hindu.
- 1990s (Lalu Prasad Yadav's Proposal):
- Drafted the Bodh Gaya Mahavihara Bill to transfer full control to Buddhists.
- Proposed banning Hindu rituals (idol immersion, marriages) inside the temple.
- Never passed, remains pending.

About the Mahabodhi Temple Complex

Significance:

- One of Buddhism's four holiest sites (alongside Lumbini, Sarnath, Kushinagar).
- Marks the spot where Gautama Buddha attained Enlightenment.
- UNESCO World Heritage Site (2002).

Architectural Features:

- 50-meter **pyramidal shikhara** (one of India's oldest brick structures).
- Sacred Bodhi Tree (descendant of the original tree).
- **Vajrasana (Diamond Throne)** – Buddha's meditation spot.
- Golden Buddha statue in the inner shrine.

Current Protests & Demands

Buddhist monks demand:

- Repeal of BTA, 1949.
- Full Buddhist control over the temple.
- Recognition as **Bodh Gaya Mahavihara**, not just a shared Hindu-Buddhist site.

Impact Of Deep-Sea Mining

Syllabus: GS-1: Resource Geography – Offshore Mineral Resources.

Context:

- A strip of the Pacific Ocean seabed that was mined for metals more than 40 years ago has still not recovered, according to a new study.

Deep-Sea Mining: A Critical Analysis

Introduction

- Deep-sea mining refers to the extraction of mineral-rich deposits from the ocean floor at depths exceeding 200 meters.
- A recent study published in *Nature* (2024) indicates that a seabed mined in 1979 has not recovered even after 40+ years, raising concerns over its long-term environmental impact.
- Amid global discussions at the UN's International Seabed Authority (ISA), regulations for deep-sea mining are yet to be finalized.

What is Deep-Sea Mining?

Definition:

- Extraction of polymetallic nodules, sulphides, and crusts from the ocean floor.

Methods:

- **Robotic Collection:** AI-controlled vehicles plow the seabed to collect polymetallic nodules.
- **Vacuum Pumps:** Used to extract minerals from the ocean floor.
- **Processing:** Conducted on surface vessels; waste is often discharged back into the sea.

Targeted Resources:

- **Critical minerals**: Cobalt, nickel, lithium, rare earths, gold, and copper.
- **Usage**: Essential for electric vehicles (EVs), solar panels, wind turbines, and electronics.

Distribution of Deposits:

- **Clarion-Clipperton Zone (Pacific Ocean):** Holds the richest deposits.
- **Hydrothermal Vents & Seamounts:** Also contain significant mineral reserves.

Technological Status:

- Still in the **experimental phase**, with most operations limited to exploration.

Current Status of Deep-Sea Mining

- **Commercial mining has not yet begun**; only small-scale tests have been conducted.
- **Regulations pending:** ISA aims to finalize deep-sea mining rules by **2025**.
- **UNCLOS Oversight:** The United Nations Convention on the Law of the Sea (UNCLOS) classifies deep-sea mineral wealth as the **"common heritage of mankind."**

Benefits of Deep-Sea Mining

1. Critical Mineral Supply:

- Can help meet rising global demand for **EVs and renewable energy technologies**.
- E.g., **Cobalt demand is expected to rise by 400-600% by 2040**.

2. Alternative to Land-Based Mining:

- Reduces environmental issues like **deforestation, land degradation, and freshwater contamination**.

3. Controlled Labor Conditions:

- Offshore mining may reduce human rights violations seen in land-based mining operations.

4. Strategic Resource Security:

- Reduces dependence on **geopolitically sensitive reserves**, such as those controlled by China and Congo.

5. High Resource Concentration:

- Polymetallic nodules contain a **higher density of critical minerals** than terrestrial sources.

Impacts of Deep-Sea Mining

1. Ecological Damage:

- **Physical disruption:** Mining disturbs the fragile deep-sea ecosystem.
- **Case study:** A recent study found **no biological recovery even after 44 years** in an 8-meter-wide mining site in the Pacific.

2. Species Extinction Risk:

- Many deep-sea species are **rare, slow-reproducing, and nodule-dependent**.
- Mining could lead to their **irreversible loss**.

3. Disruption of Marine Food Chain:

- Mining **waste plumes** can spread toxic materials, affecting fish species vital for fisheries, particularly in **Pacific Island nations**.

4. Threat to the Ocean's Carbon Cycle:

- Disturbing seabed ecosystems may **reduce the ocean's ability to absorb carbon**, exacerbating climate change.

5. Socio-Economic Inequality:

- **Developed nations & private corporations** may monopolize deep-sea resources, **excluding coastal nations from benefits**.

Way Forward

1. Scientific Pause & Research:

- A **moratorium on deep-sea mining** until sufficient ecological data is available.

2. Robust & Inclusive Regulations:

- ISA must **establish transparent, enforceable laws** ensuring equitable benefit-sharing.

3. Circular Economy Approach:

- Promote **battery recycling** and extraction of minerals from **e-waste and mine tailings**.

4. Alternative Technologies:

- Support **sodium-ion and LFP (Lithium Iron Phosphate) batteries** to reduce dependency on cobalt and nickel.

5. Global Collaboration:

- Stakeholder engagement among **scientists, policymakers, and coastal nations** for sustainable ocean governance.

Conclusion

- Deep-sea mining presents a paradox—**essential for green energy but posing significant ecological risks**.
- A **science-led, precautionary, and equitable approach** is essential to balance economic growth with **ocean conservation**.

Protection of Interests in Aircraft Objects Bill

Syllabus: GS-2: Laws and Acts giving effect to International Conventions.

Context:

The Bill gives legal force to the Cape Town Convention that India signed in 2008 after a Cabinet approval.

Cape Town Convention

What is it?

- An international treaty adopted in **2001** to facilitate asset-based financing and leasing of aircraft, helicopters, and engines.
- Establishes **uniform legal rules** for international aviation leasing and financing.

Objective:

- Protect **lessors and creditors** by ensuring legal remedies in case of default.
- Reduce **cross-border legal complexities** in international aviation leasing.

Key Features:

1. **Standardized Legal Framework**
    - Covers **leasing, security interests, and conditional sales** of aircraft equipment.
2. **Creditor Protection**
    - Grants **creditors the right to repossess and deregister aircraft** swiftly in case of lessee default.
3. **Global Registry System**
    - Establishes a **centralized international registry** for ownership and financial interests.
4. **Enforceability Across Jurisdictions**
    - Ensures **legal predictability and uniformity** in aircraft leasing across different countries.

Protection of Interests in Aircraft Objects Bill, 2025

What is it?

- A bill passed by the Indian Parliament to **implement the Cape Town Convention** and its Aircraft Protocol into domestic law.
- Strengthens India's **aircraft leasing and financing framework**.

Objective:

- Provide **legal clarity** to aircraft leasing transactions.
- Reduce **aircraft leasing costs** by aligning with international norms.
- Position **India as a global hub** for aviation leasing and financing.

Key Provisions:

- **Legal Enforceability**
    - Grants **full legal force** to the Cape Town Convention and Aircraft Protocol in India.

- **Creditor Remedies in Defaults**
  - Allows **creditors/lessors to repossess aircraft within 2 months** of default or as per agreed terms.
- **DGCA as Domestic Registry**
  - **Directorate General of Civil Aviation (DGCA)** responsible for maintaining a **registry of aircraft interests and dues**.
- **Mandatory Reporting**
  - Airlines and lessors must **periodically update DGCA** on dues and leasing activities to ensure transparency.
- **Boost to Leasing Sector**
  - May **reduce leasing costs by 8–10%**, attracting global investors.
  - Expected to **make airfares more affordable** by lowering operational costs.

Significance of the Bill for India

Economic & Financial Impact

- **Reduces dependence** on foreign lessors by creating a robust domestic leasing ecosystem.
- **Improves investor confidence** by ensuring legal protection for creditors.
- **Enhances India's aviation sector competitiveness** in the global market.

Strategic & Policy Benefits

- Aligns India with **international best practices** in aviation financing.
- Strengthens India's ambition to become an **aviation hub** in the Asia-Pacific region.
- Encourages **Make in India and self-reliance** in aviation leasing and financing.

Challenges & Concerns

- **Implementation issues**: Requires efficient coordination between **DGCA, airlines, and global lessors**.
- **Potential legal disputes** over aircraft repossession and financial obligations.
- **Impact on domestic airlines**: Stricter repossession rules could pressure financially weak airlines.

Conclusion

- The **Protection of Interests in Aircraft Objects Bill, 2025** is a crucial step toward strengthening India's aviation leasing sector.
- By adopting the **Cape Town Convention**, India aims to **reduce leasing costs, attract global investments, and enhance its position in international aviation financing**.
- Effective **implementation and regulatory oversight** will be key to realizing the full benefits of the bill.

Gene Banks

Syllabus: GS-3; Science & Tech

Context

- The Indian government will establish a **Second National Gene Bank** to conserve **10 lakh crop germplasms**, ensuring future food and nutritional security.
- Part of the **Union Budget 2025-26's "Investing in Innovations"** theme.

Purpose of Gene Banks:

- Preserve seeds, pollen, and plant tissues to prevent extinction.
- Support crop breeding, research, and biodiversity conservation.
- Maintain genetic diversity for **climate resilience** and **food security**.

India's First Gene Bank:

- **Established**: 1996 by **ICAR-NBPGR** (New Delhi).
- **Status**:
  - **Second-largest globally** (after Norway's Svalbard Seed Vault).
  - Houses **4.71 lakh accessions** (2,157 species).
  - Supplies genetic resources for crop improvement.

National Bureau of Plant Genetic Resources (NBPGR):

- **Role**: Conservation, evaluation, and utilization of plant genetic resources.
- **Headquarters**: New Delhi (under **ICAR**).

National Gene Fund:

- Established under the **Protection of Plant Varieties and Farmers' Rights Act, 2001** (Section 45).
- **Objectives**:
  - Fair benefit-sharing from genetic resources.
  - Funds conservation efforts and sustainable farming.
  - Provides incentives to farmers/institutions for biodiversity conservation.

Why It Matters

- Strengthens India's **food security** and **agricultural resilience**.
- Addresses challenges like **climate change** and **genetic erosion**.
- Aligns with global biodiversity goals (e.g., **UN SDGs**).

World Wide Fund for Nature (WWF)

Syllabus: GS-3: Wildlife Conservation – Organisations.

Context:

- Uttarakhand Forest Department has partnered with **World Wide Fund for Nature (WWF)** to install **trap cameras** in interior forest roads.
- These **trap cameras** will provide **real-time alerts** to drivers about wild animal movements, reducing **human-wildlife conflict** and **road accidents** in forest areas.

About WWF (World Wide Fund for Nature)

What is WWF?

- An **international NGO** focused on **environmental conservation** and reducing **human impact** on nature.
- Established: **1961**
- Founders: **Sir Peter Scott, Max Nicholson, and others**
- Origin: Initiated to support **IUCN** and **global conservation efforts** through fundraising and activism.
- Headquarters: **Gland, Switzerland**

Objective of WWF

- To **halt environmental degradation** and promote a sustainable future where humans live in **harmony with nature**.

Major Functions of WWF

- Supports **3,000+ conservation projects** across **100+ countries**.
- Publishes **Living Planet Report** and maintains the **Living Planet Index**.
- Conducts global campaigns like **Earth Hour** and **Debt-for-Nature Swap**.
- Works in six major domains:
    1. Wildlife
    2. Forests
    3. Oceans
    4. Freshwater
    5. Food
    6. Climate
- Uses **AI tools and sensor-based technologies** for wildlife monitoring.

Funding Sources

- Individuals – 65%
- Governments – 17%
- Corporate donors – 8%