DAILY CURRENT AFFAIRS 07-06-2025

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Socotra Island

Syllabus: GS-1: World Geography – World Map

Context:

- UAE, WHO launch humanitarian initiative to combat malnutrition among women, children in Socotra Island.

Socotra Island: An Overview

General Information

- **Nickname**: *Galápagos of the Indian Ocean*
- **UNESCO World Heritage Site**: Since 2008
- **Biodiversity**:
  - 37% of plant species are *endemic*
  - Unique flora: *Dragon's Blood tree*, *Frankincense*

Geographical Overview

- **Location**: ~340 km southeast of Yemen, in the Indian Ocean, near Horn of Africa

- **Area**: ~3,796 sq. km
- **Landscape**:
  - Coastal plains
  - Limestone plateau
  - Rugged *Hagghier Mountains*
- **Climate**: *Semi-desert*, low rainfall, strong monsoonal winds → ecological isolation

Political Context

- **Country**: Politically part of *Yemen*
- **Current Situation**:
  - Influence of *UAE-backed forces* and *Southern Transitional Council (STC)*
  - UAE military presence (claims: *humanitarian & security reasons*) → adds to island's governance complexity

Ecological Significance

- High level of **unique species** → global ecological importance
- Historical *isolation* preserved unique ecology

Economic Activities

- **Traditional livelihoods**:
  - Fishing
  - Pearl diving
  - Livestock herding
  - Small-scale agriculture
- **Constraints**: *Geographic isolation* and economic challenges

Health Crisis and Humanitarian Efforts

- **Current Health Crisis**:
  - *Global Acute Malnutrition (GAM)* in children under 5: 10.9%
  - *Severe Acute Malnutrition (SAM)* in children under 5: 1.6% → critical emergency

- **Humanitarian Programme**:
  - Led by *UAE* and *World Health Organization (WHO)*
  - Focus: combating malnutrition, maternal & child mortality
  - Duration: *2-year programme*

Strategic Programme Components

- **Healthcare Strengthening**:
  - Improve infrastructure
  - Train medical staff
  - Supply essential medications
- **Emergency Preparedness**:
  - Better epidemic response
  - Disease surveillance systems
- **Community Engagement**:
  - Awareness campaigns
  - Sustainable health solutions

Broader Implications

- Part of larger **health system strengthening** in Yemen
- UAE-WHO partnership: *addresses urgent needs*& builds *long-term resilience*

Bar Council of India Decision to Allow Foreign Lawyers

Syllabus: GS-2: Indian Judiciary – Bar Council.

Context:

CJI B.R. Gavai praised the Bar Council of India's (BCI) amended rules allowing foreign lawyers and firms to advise on international law and arbitration.

About the Decision

- **Amendment**: BCI amended its 2022 rules.

- **Scope**:
  - Foreign law firms/lawyers can practice:
    - *Foreign law*
    - *International law*
    - *Participate in arbitration in India*
  - **Restrictions**:
    - *No appearance before Indian courts/tribunals.*
    - *Cannot practice Indian law.*

Need for the Decision

- **Enhancing Arbitration Quality**
  - India needs global expertise to improve arbitration standards.
  - *Example:* India ranked **5th globally** in arbitration case volume (ICC Report 2024).
- **Global Integration of Legal Services**
  - Enables reciprocal access for Indian lawyers to foreign markets.
  - Promotes cross-border legal practice.
- **Institutional Support Expansion**
  - Boosts credibility of Indian arbitration centres:
    - *Mumbai Centre for International Arbitration (MCIA)*
    - *Delhi International Arbitration Centre (DIAC)*
    - *India International Arbitration Centre (IIAC)*
- **Bridging Talent Gaps in Niche Areas**
  - Areas requiring global expertise:
    - *Climate litigation*
    - *Tech-law*
    - *Commercial arbitration*
  - Facilitates knowledge transfer and capacity building.

Challenges to Implementation

- **Protectionism & Legal Monopoly Concerns**
  - Fears of job loss among Indian lawyers.
  - Potential market capture by elite foreign firms in arbitration/consultancy.
- **Regulatory Oversight & Reciprocity Issues**
  - Difficulty in ensuring reciprocal entry abroad for Indian firms.
- **Risk of Unequal Competition**
  - Foreign firms often have:
    - Higher capital
    - Global clientele
    - Advanced resources
  - May outcompete domestic firms.
- **Monitoring Compliance**
  - Need robust mechanisms to ensure foreign firms do not breach non-litigious limits.

Significance

- **Boosts India's Arbitration Ecosystem**
  - CJI Gavai: *Supports India's ambition to be a global arbitration hub.*
  - Benefits sectors like infrastructure and trade.
- **Strengthens Indo-UK Legal Ties**
  - Announced at *Indo-UK Arbitration Conference*.
  - Enhances bilateral legal cooperation.
- **Enables Legal Sector Modernization**
  - Access to:
    - Global best practices
    - Legal technology
    - International advisory standards

- Drives professional excellence.

- **Preserves Indian Legal Sovereignty**
  - Foreign lawyers are barred from practicing Indian law.
  - Upholds the *Advocates Act, 1961*.
- **Opens Global Opportunities for Indian Lawyers**
  - Indian advocates can register to practice foreign law abroad (reciprocity provisions).
  - No need to surrender Indian practice rights.

Conclusion

- Marks a **progressive shift** balancing:
  - Globalization
  - Domestic legal protection.
- With **robust regulation**, it can uplift India's:
  - Arbitration ecosystem
  - Consultancy sector.
- Success depends on:
  - Mutual trust
  - Clear rules
  - Strong regulatory vigilance.

SEBI's Operational Framework for ESG Debt Securities

Syllabus: GS-3: Indian Economy – Capital Market.

Context:

- SEBI (Securities and Exchange Board of India) has notified a **detailed operational framework** for the issuance of Environmental, Social, and Governance (ESG) debt securities.

- These include:
  - Social Bonds
  - Sustainability Bonds
  - Sustainability-Linked Bonds

About ESG Debt Securities

What are ESG Debt Securities?

- Financial instruments used to **raise funds exclusively** for projects with **environmental, social, or governance benefits**.
- Categories:
  - **Social Bonds** → Fund social impact projects.
  - **Sustainability Bonds** → Fund combined environmental and social goals.
  - **Sustainability-Linked Bonds** → Performance-linked to predefined ESG targets.

Key Features

- Funds must be utilized only for **eligible sustainable or social projects**.
- Bonds must be **accurately labelled** based on the primary project objective.
- Must comply with **recognized international ESG standards**.
- Require **third-party verification** or certification.
- Applicable to both:
  - Public issues
  - Private placements

SEBI's Operational Framework

Classification Criteria

- Issuers must classify bonds as **Green, Social, or Sustainability Bonds**.
- Classification is based on the **primary objective** of the funded projects.
- Ensures **clear demarcation** of the expected impact.

Disclosure Requirements

Initial Disclosures

- To be included in the **offer document**:
  - Project eligibility.
  - Project selection process.
  - Indicative distribution of funds (between **financing** and **refinancing**).

Continuous Disclosures

- To be made **annually**:
  - Detailed report on **impact metrics**.
  - Updates on **fund utilization**.

Independent Review Mechanism

- Issuers must appoint **independent third-party reviewers** or certifiers.
- Objective: Validate the **alignment** of projects with ESG principles.
- Outcome: **Enhances transparency** and **builds investor trust**.

Monitoring and Impact Tracking

- Issuers are responsible for **continuous impact assessment**.
- Goal: Ensure that funded projects are **effectively reducing** environmental or social harm.

Applicability and Implementation

- The framework is applicable to **all ESG debt issuances** starting **June 5, 2025**.
- Designed to align with **global ESG benchmarks**.
- Aims to attract **responsible capital** to Indian markets.

Significance

- Strengthens **credibility** of ESG-labelled debt in India.
- Enhances **investor confidence** through rigorous disclosures and verification.
- Promotes **sustainable financing** in alignment with global best practices.

Nanoplastics and Their Impact on Pathogen Virulence

Syllabus: GS-3: Science and Technology – Nanotechnology.

Context:

- Nanoplastics are increasingly recognized as a **global environmental pollutant** with significant implications for **ecosystem** and **human health**.
- Recent research highlights their role in **enhancing bacterial virulence** and contributing to **antibiotic resistance**, raising **public health alarms**.

What are Nanoplastics?

- **Definition**: Plastic particles < 100 nanometres in size.
- **Sources**:
  - Breakdown of larger plastic debris.
  - Direct manufacturing for specific applications.
- **Properties**:
  - Extremely small size allows easy entry into **biological systems**.
  - Surface charge influences interactions with **cells** and **microorganisms**.

Ubiquity of Nanoplastics

- Found in **remote environments**: high mountains, deep ocean trenches.
- Detected in **human blood and tissues**, including in **newborns**.

Key Research Findings

Focus of Study

- Interaction between **nanoplastics** and **pathogenic bacteria** (*Escherichia coli*).
- Aim: To understand how nanoplastics influence **bacterial virulence**.

Major Discovery

- **Positively charged nanoplastics** increase production of **Shiga-like toxins** in *E. coli*.
- Raises the risk of **exacerbated foodborne illnesses**.

Mechanism of Action

- *E. coli* has a **negatively charged outer membrane**.
- **Attracts positively charged nanoplastics** → interaction induces **cellular stress**.
- Cellular stress → triggers enhanced **toxin production**.
- Altered **bacterial behavior and pathogenicity** observed.

Experimental Methodology

- Cultured **rifampicin-resistant pathogenic strain** of *E. coli*.
- Exposed bacteria to **polystyrene-based nanoplastics** with:
  - Positive charge
  - Negative charge
  - Neutral charge
- Studied both:
  - **Free-floating bacteria**
  - **Biofilms**
- Used **Environmental Scanning Electron Microscopy** to visualize interactions.

Results and Implications

Observations

- Initial bacterial growth **inhibited** by charged nanoplastics.
- **Adaptive response** observed → bacteria began to thrive over time.
- Bacterial **RNA changes** indicated:
  - Enhanced **gene transfer**.
  - Increased **pathogenicity** and **survivability**.

Role of Nanoplastics

- Both **positively** and **negatively charged nanoplastics** promoted:
  - Increased **virulence**.
  - Potential for **antibiotic resistance**.

Public Health Implications

- Nanoplastics can:

- **Alter microbial communities**.
- Induce formation of **biofilms**.
- Promote spread of **virulence factors** and **resistance genes**.

- Pose risks of:
  - **Severe infections**.
  - **Antibiotic resistance escalation**.

Conclusion

- Nanoplastics represent a **dual environmental and health hazard**:
  - Persistent in ecosystems.
  - Capable of **modifying bacterial behavior** in ways that may amplify **human disease risks**.
- Urgent need for:
  - **Further research**.
  - **Policy interventions** to limit nanoplastic pollution.
  - **Public health awareness** regarding their impacts.

EnviStats India 2025

Syllabus: GS-3: Environment and Ecology.

Context:

- The 8th edition of EnviStats India 2025 was released by MoSPI on 5 June 2025, offering a structured statistical profile of India's environment.

EnviStats India 2025: Environment Statistics

- **Released by:** Ministry of Statistics and Programme Implementation (MoSPI)
- **Date:** 5 June 2025
- **Edition:** 8th Edition

Key Highlights

Energy Trends

- **Thermal Power Generation:** Increased significantly from 7.92 lakh GWh in 2013–14 to 13.26 lakh GWh in 2023–24, reflecting India's continued reliance on thermal power for base-load electricity.
- **Renewable Energy Generation:** Showed remarkable growth from 65,520 GWh to 2.25 lakh GWh in the same period, demonstrating India's progress towards clean energy transition and its climate commitments under the Paris Agreement.

Fisheries

- **Inland Fish Production:** Rose from 61.36 lakh tonnes to 139.07 lakh tonnes, indicating the growing importance of inland aquaculture in India's food security and rural livelihoods.
- **Marine Fish Production:** Increased to 44.95 lakh tonnes over the period 2013–2024, reflecting sustainable utilisation of marine resources.

Temperature Trends

- **Annual Mean Temperature:** Increased from 25.05°C (2001) to 25.74°C (2024), consistent with global climate change patterns.
- Both minimum and maximum temperatures have shown a similar upward trend, indicating an overall warming climate across the country.

Rainfall Patterns

- Year-to-year rainfall continues to exhibit high variability.
- There is no clear long-term rising or falling trend in rainfall, reflecting the erratic nature of the Indian monsoon and highlighting challenges for agricultural planning and water resource management.

Biodiversity

- India hosts 1,04,561 recorded faunal species, underlining its status as one of the world's most biodiverse nations.
    - Soil species: 22,404
    - Freshwater species: 9,436
    - Mangrove species: 5,023
- This rich biodiversity plays a critical role in maintaining ecosystem services and resilience.

Environmental Sector Expenditure (2021–22)

- **Highest allocation:** The Environment Sustainability Sector received ₹2,433 crore, showing government prioritisation of broader sustainability goals.
- **Lowest allocation:** Agroforestry, despite its potential for climate mitigation and rural livelihoods, received the least funding, indicating an area needing more attention.

New Indicators Added

- The 2025 edition included new indicators for:
  - Ramsar sites (wetlands of international importance)
  - Sanitation
  - Transport
  - Electricity access
- These additions reflect a more integrated and holistic approach to environment statistics.

Methodology

- The report adopts the **Framework for the Development of Environment Statistics (FDES) 2013**.
- This ensures structured categorisation and global comparability of data, aligning India's statistical efforts with international best practices.

Analysis

Positives

- **Data-Driven Policymaking:** The structured and comprehensive dataset enhances evidence-based decision-making for climate action, biodiversity conservation, and sustainable development.
- **Expanded Scope:** By including socio-environmental indicators (such as sanitation and Ramsar sites), the report adopts a more holistic view of sustainability.
- **Biodiversity Documentation:** The detailed biodiversity data highlights India's significant contribution to global environmental health and positions it as a leader in biodiversity conservation.
- **Energy Transition Monitoring:** The clear documentation of renewable energy growth supports strategic planning for a resilient and low-carbon energy future.

Negatives

- **Rainfall Analysis Gaps:** The report lacks state-wise or zonal rainfall trends, limiting its utility for region-specific disaster preparedness and water management.
- **Lack of Impact Assessment:** While it provides statistical data, it does not assess the causes or impacts of trends in key sectors such as pollution or land use.
- **Data Timeliness:** Some datasets are retrospective, reducing their relevance for dynamic and rapidly evolving sectors like air quality or urban expansion.
- **Inadequate Climate Vulnerability Mapping:** Despite noting rising temperatures, the report does not sufficiently analyse climate vulnerability or readiness for adaptation, which are critical for building resilience.

Way Forward

- **Integrate Real-Time Data:** Leveraging ISRO's geospatial tools and Internet of Things (IoT)-enabled systems can improve the timeliness and accuracy of environmental monitoring.
- **Regional Data Disaggregation:** Providing state- and district-level indicators would support decentralised planning and enable targeted interventions at local levels.
- **Link Data with SDG Progress:** Mapping the data directly to Sustainable Development Goals (SDGs) such as Goal 6 (Clean Water), Goal 7 (Affordable and Clean Energy), Goal 13 (Climate Action), Goal 14 (Life Below Water), and Goal 15 (Life on Land) would enhance its strategic relevance.
- **Improve Public Accessibility and Visualisation:** Presenting the data through interactive dashboards and engaging visual formats would promote wider use by civil society, researchers, and educational institutions.

Conclusion

EnviStats India 2025 marks a significant step forward in strengthening India's environmental data ecosystem by aligning with global standards and tracking key trends in energy, biodiversity, and climate.