DAILY CURRENT AFFAIRS 15-03-2025

GS-1

1. **North Sea**

GS-3

2. **Recession**
3. **Flareless Coronal Mass Ejection**
4. **National Board for Wildlife (NBWL)**
5. **Great Nicobar Infrastructure Project**

North Sea

Syllabus: GS-1; Geography- Mapping

Context

- North Sea collision ship captain appears in court

About

- The **North Sea** is a marginal sea of the Atlantic Ocean, located between **Great Britain, Scandinavia, Germany, the Netherlands, Belgium, and France**.

Geographical Features

1. **Location**:
   - Bounded by the **United Kingdom (west)**, **Norway and Denmark (east)**, **Germany, the Netherlands, Belgium, and France (south)**.
   - Connected to the Atlantic Ocean via the **English Channel (southwest)** and to the Baltic Sea via the **Skagerrak and Kattegat (northeast)**.
2. **Important Water Bodies**:

- **Dogger Bank** (shallow sandbank, important for fishing)
- **Norwegian Trench** (deepest part)
- **Wadden Sea** (UNESCO-listed tidal wetlands along the coast of Germany, the Netherlands, and Denmark)

Economic Importance

1. **Oil & Gas Reserves**:
   - One of the **richest offshore petroleum fields** (found in the UK and Norwegian sectors).
   - Key oil fields: **Brent, Forties, Ekofisk, and Statfjord**.
   - Countries involved: **Norway, the UK, the Netherlands, Denmark, and Germany**.
2. **Fishing Industry**:
   - One of the **most productive fisheries** in the world.
   - Major fish species: **Cod, Haddock, Herring, Mackerel**.
   - Overfishing is a significant concern.
3. **Trade & Shipping**:
   - The **English Channel** (part of the North Sea) is **one of the busiest shipping lanes** in the world.
   - Major ports: **Rotterdam (Netherlands), Hamburg (Germany), Antwerp (Belgium), London (UK), and Esbjerg (Denmark)**.
4. **Renewable Energy (Wind Farms)**:
   - The **North Sea has one of the world's largest offshore wind farms**.
   - Countries investing: **Germany, the UK, Denmark, and the Netherlands**.
   - Example: **Hornsea Wind Farm (UK), Gemini Wind Farm (Netherlands)**.

Environmental Concerns

1. **Overfishing & Marine Depletion**
   - Strict fishing quotas imposed by the **European Union (EU) and regional bodies**.
2. **Oil Spills & Pollution**
   - Heavy offshore oil drilling poses risks of **oil spills**.
   - The **Brent Spar incident (1995)** highlighted oil industry-related environmental concerns.
3. **Climate Change & Rising Sea Levels**
   - Low-lying countries like **the Netherlands and Belgium** are vulnerable to **storm surges and flooding**.
   - Coastal management measures include the **Delta Works (Netherlands)**.

Geopolitical Significance

1. **Brexit & Fisheries Dispute**
   - UK and the **EU had major disputes over fishing rights** post-Brexit.
   - The UK gained more control over its **Exclusive Economic Zone (EEZ)**.
2. **Norway's Role**
   - Not an EU member but controls significant **oil and gas reserves**.
   - Important for **Europe's energy security**.
3. **Strategic Importance**
   - During **World War I & II**, the North Sea was a crucial naval battlefield.
   - NATO conducts **military exercises** here due to its proximity to **Russia and the Arctic route**.

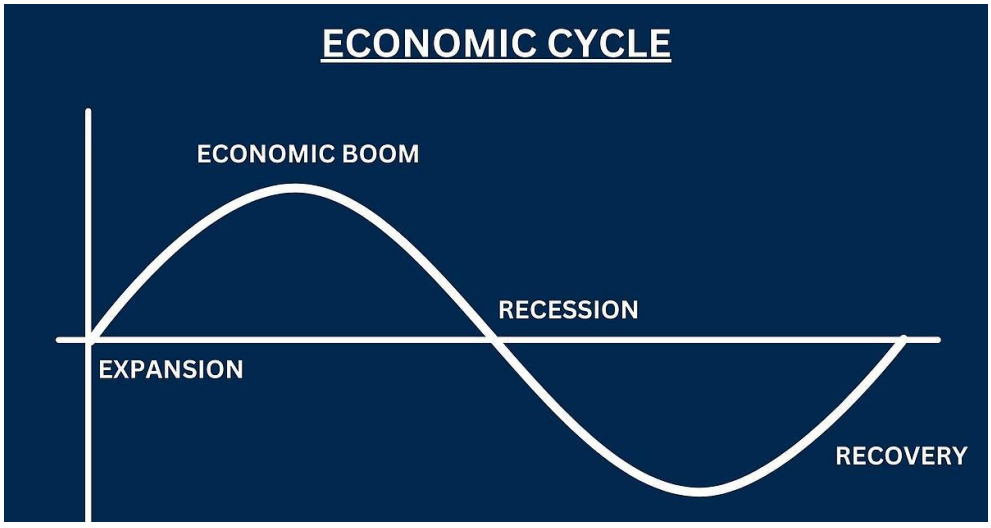
Recession

Syllabus: GS-3; Economy

Context

- US recession fears, tariff tantrums may dim IT growth.

1. Definition of Recession

- A recession is a significant decline in economic activity spread across the economy, lasting more than a few months. It is typically recognized when GDP contracts for two consecutive quarters.
- 

2. Causes of Recession

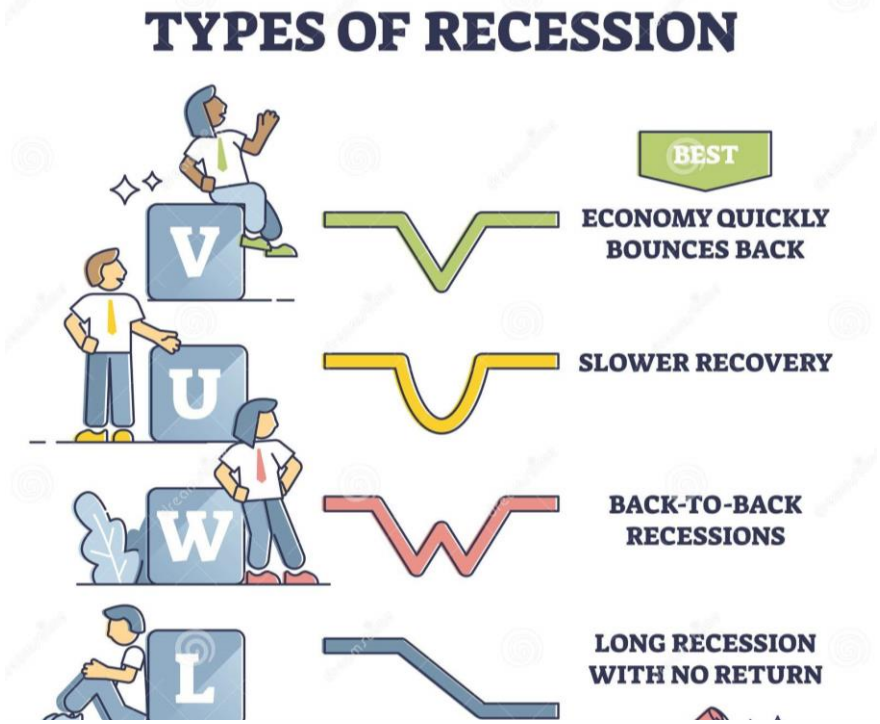
- **Demand Shock:** Sudden decline in consumer demand (e.g., pandemic lockdowns).
- **Supply Shock:** Disruptions in the supply chain (e.g., oil crisis, war).
- **Monetary Policy Tightening:** High interest rates reducing borrowing and investment.
- **Financial Crisis:** Banking failures, stock market crashes (e.g., 2008 Global Financial Crisis).
- **Global Events:** Wars, pandemics, or trade conflicts affecting economic stability.

3. Indicators of Recession

- **Decline in GDP Growth**
- **High Unemployment Rate**
- **Falling Industrial Production**
- **Decline in Consumer Spending**
- **Stock Market Decline**

4. Types of Recession

- **V-shaped:** Quick decline followed by a rapid recovery.
- **U-shaped:** A prolonged slump before recovery.
- **W-shaped (Double-Dip):** A brief recovery followed by another recession.
- **L-shaped:** A long period of stagnation after decline.



5. Impact of Recession

- **Economic Impact:** Lower production, decline in investments.
- **Social Impact:** Higher unemployment, poverty, and inequality.
- **Political Impact:** Policy instability, changes in government policies.
- **Global Impact:** Disruptions in global trade and financial markets.

6. Measures to Counter Recession

- **Monetary Policy:** Lowering interest rates, quantitative easing.
- **Fiscal Policy:** Increased government spending, tax cuts, stimulus packages.
- **Structural Reforms:** Improving infrastructure, boosting employment policies.

7. Important Recessions in History

- **Great Depression (1929-39):** Severe economic downturn in the U.S. and global impact.
- **Oil Crisis Recession (1973-75):** OPEC's oil embargo led to stagflation.
- **Global Financial Crisis (2008-09):** Housing market collapse in the U.S. led to a worldwide recession.
- **COVID-19 Recession (2020):** Pandemic-induced global economic slowdown.

8. Recession and India

- **1991 Economic Crisis:** Led to LPG (Liberalization, Privatization, Globalization) reforms.
- **2008 Global Recession:** India's impact was limited due to strong domestic demand.
- **COVID-19 Recession:** GDP contraction of -7.3% in 2020-21, followed by a strong recovery.

Flareless Coronal Mass Ejection

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

Context:

- Scientists from the **Indian Institute of Astrophysics (IIA)** reported the observation of a **flareless coronal mass ejection (CME)** using the **Visible Emission Line Coronagraph (VELC)** instrument onboard the **Aditya-L1 mission**.

- **Aditya-L1** is **India's first dedicated mission to study the Sun**.
- The **VELC payload** was developed by the Bengaluru-based IIA.

Significance of VELC Observations

- VELC enables the study of the **solar corona** closer to its base in the solar atmosphere.
- It provides data at **shorter time intervals** compared to other coronagraphs in orbit.
- The CME observed on **July 5, 2024**, had **no association with any flare**.

Magnetic Instability and Scientific Impact

- The observations provide **crucial insights into magnetic instabilities** that cause flares and CMEs.
- Findings will soon be published in the **Astrophysical Journal**.
- This contributes to the **understanding of the origin and behavior of CMEs**.

Future Prospects and Importance

- With the Sun approaching the **maximum phase of Solar Cycle 25**, CMEs are expected to occur more frequently.
- **Continuous monitoring** using VELC will provide **valuable data** to the Indian and international scientific community.
- VELC's unique design helps:
    - Observe CMEs **close to the solar limb**.
    - Determine their **onset time**.
    - Investigate the **relationship between CMEs and flares**.

Understanding Flares and CMEs

- Both are **explosive solar events** caused by **magnetic reconnection** (rearrangement of magnetic field lines).
- **Solar Flares**:
    - Release energy **as electromagnetic radiation** from heated plasma.
- **Coronal Mass Ejections (CMEs)**:
    - Massive eruptions of **plasma and magnetic fields**.
    - Weigh about **a trillion kilograms**.
    - Travel at speeds up to **3,000 km/s** through interplanetary space.

- **Ambiguous Association**:
    - The exact relationship between **flares and CMEs** remains unclear.

Conclusion

- The **VELC observations of a flareless CME** mark a **significant advancement in solar physics**.
- These findings will enhance our understanding of **solar activity and space weather predictions**.
- The **Aditya-L1 mission** is expected to contribute significantly to global solar research.

Aditya-L1 Mission

Overview:

- **Launch Date:** September 2, 2023
- **Developed By:** ISRO, with contributions from Indian academic institutions
- **Mission Type:** India's first dedicated solar observation mission
- **Positioning:** Lagrange Point 1 (L1) – located **1.5 million km from Earth** (1% of the Earth-Sun distance)

Objectives:

- Study the **Sun's corona, chromosphere, and solar emissions**
- Monitor **solar wind, magnetic storms, and space weather impacts on Earth**

Key Features:

- **Continuous Solar Observation:** Uninterrupted view of the Sun from L1
- **Indigenous Payloads:** 7 payloads for **spectroscopy, coronagraphy, and particle analysis**
- **Fuel Efficiency:** L1's **gravitational equilibrium** minimizes fuel usage for orbital corrections
- **Early Warning System:** Detects **solar radiation and storms** before they impact Earth

National Board for Wildlife (NBWL)

Syllabus: GS-3: Wildlife Conservation.

Context:

- The **National Board for Wildlife (NBWL)** has **denied** the Uttarakhand government's proposal for **soapstone mining** near **Kedarnath Wildlife Sanctuary**.
- Kedarnath Wildlife Sanctuary is a habitat for **endangered species**, making the proposal environmentally sensitive.

About National Board for Wildlife (NBWL)

- Constituted by the **Central Government** under **Section 5A** of the **Wildlife (Protection) Act, 1972 (WLPA)**.
- Established through an **amendment to WLPA in 2022**.
- Replaced the **Indian Board for Wildlife (1952)**.
- **Top-level advisory body** to the government on **wildlife conservation**, particularly within **Protected Areas (PAs)**.
- Guides government decisions and **issues approvals for projects** in **PAs**.
- As per **WLPA**, the following require NBWL's approval/recommendation:
    - **Construction of tourist lodges** in PAs.
    - **Alteration of PA boundaries**.
    - **Destruction or diversion of wildlife habitat**.
    - **De-notification of Tiger Reserves**.

Organizational Structure

- **Total Members**: **47-member committee**.
- **Chairperson**: **Prime Minister**.
- **Vice-Chairperson**: **Minister of Environment, Forest, and Climate Change (MoEFCC)**.
- Other members include:
    - Officials from **wildlife conservation and protection institutions**.
    - **Chief of Army Staff, Defence Secretary, and Expenditure Secretary**.
    - **10 nominated members** (eminent conservationists, ecologists, and environmentalists).

- **Additional Director General of Forests (WL) & Director, Wildlife Preservation** (Member-Secretary).

Standing Committee of NBWL

- **Independent body** under NBWL.
- Consists of **up to 10 members** of NBWL.
- **Chaired by** the **Minister of Environment, Forest, and Climate Change**.
- **Functions**:
  - **Project clearance body** (approves specific projects impacting wildlife).
  - NBWL, in contrast, is a **policy-making body**, advising the **Central Government** on wildlife protection.

Great Nicobar Infrastructure Project

Syllabus: GS-3: Biodiversity Conservation.

Context:

- The proposed **₹80,000 crore** mega infrastructure project on **Great Nicobar Island (GNI)** has raised **serious environmental concerns**.
- The project, spearheaded by **NITI Aayog**, includes:
  - **Transshipment terminal** in **Galathea Bay**
  - **Greenfield airport**
  - **Greenfield township**
  - **Tourism project** with a **gas-powered plant**

What is Great Nicobar Island?

- The **southernmost island** of the **Andaman & Nicobar Islands**, strategically located in the **Indian Ocean**.
- Covers an area of **910 sq. km**, with a population of **about 8,000 people**, including **Shompen and Nicobarese tribes**.
- Rich in **biodiversity**, home to **leatherback turtles**, **coral reefs**, and **primary tropical rainforests**.

Concerns Associated with the Project

1. Environmental Concerns

(a) Massive Deforestation

- Project will **destroy 130 sq. km** of primary **tropical rainforest**, causing **biodiversity loss**.
- Initial estimates of **tree felling (8.65–9.64 lakh)** underestimated; actual loss could exceed **10 million trees**.

(b) Impact on Wildlife

- Threatens species like the **leatherback sea turtle** in **Galathea Bay Wildlife Sanctuary (WLS)**.
- **Galathea Bay WLS**, designated for **marine turtle conservation (1997)**, was **denotified in 2021** for port development, contradicting **India's Marine Turtle Action Plan (2021)**.

(c) Compensatory Afforestation Issues

- Pristine **Nicobar forests** being **compensated** by afforestation in **Haryana and Madhya Pradesh**, failing to replicate the **biodiversity lost**.

(d) Coral Reef Destruction

- Coastline under **Coastal Regulation Zone (CRZ 1A)**, making ship-repair and industrial activities a **threat to marine ecosystems**.

2. Legal Concerns

(a) Violation of Supreme Court Orders

- **Shekhar Singh Commission (2002)** recommended a **total ban** on tree felling in **tribal reserves and national parks**.
- Project does not follow **mandatory afforestation before felling** rules.

(b) Lack of Tribal Consultation

- Ignores rights of **indigenous Shompen and Nicobarese tribes**, whose **survival is tied to the forests**.

(c) Lack of Transparency

- Government **withheld environmental clearance details**, citing **national security**, though only the **airport** has a **defense link**.

3. Government Stand

(a) Contradictory Stance

- **Ministry of Home Affairs** cites **security concerns**, while **Ministry of Shipping** promotes **high-end tourism**, leading to **strategic contradictions**.

- Project additions like **cruise terminals, shipbuilding, and EXIM ports** increase **environmental risks**.

(b) Cost Escalation

- **Transshipment terminal cost** increased by **20% from 2021 to 2024**.
- Additional features (e.g., **ship-repair, cruise terminal**) will **further escalate costs**.

Significance of the Project for India

1. Strategic Importance

- Nicobar is located near **Malacca, Sunda, and Lombok Straits**, **key global trade routes**.
- Supports **India's Act East Policy (2014)** and **QUAD's Indo-Pacific strategy**.
- **Greenfield airport** enhances **defense deployment** and **naval monitoring**, particularly against **Chinese naval presence**.

2. Economic Significance

- **International Container Transshipment Terminal (ICTT)** reduces **reliance on foreign ports** (e.g., **Singapore, Colombo**).
- Boosts **India's global trade competitiveness**, aligning with **Maritime India Vision 2030** and **Amrit Kaal Vision 2047**.

3. Sustainable Development Potential

- Can develop **high-end tourism** like **Singapore and the Maldives**.
- Aims for **eco-friendly urbanization** with **renewable energy & sustainable housing**.

Way Forward

1. Minimizing Ecological Damage

- Conduct **biodiversity assessment** to **identify critical habitats**.
- Explore **alternative locations** for infrastructure development.
- Ensure **strict compliance** with environmental laws.
- Prioritize **restoration of degraded forests** within **Andaman & Nicobar Islands**.

2. Protection of Tribal Rights

- Minimize **displacement** of **Shompen & Nicobarese**.
- Ensure **fair compensation, livelihood support, and skill development**.
- Establish a **community council** for **inclusive decision-making**.

3. Strengthening Institutional Oversight

- Form **independent monitoring body** with **environmentalists, local representatives, and government officials**.

4. Resource Management

- Develop **sustainable water, food, and energy** management.
- Strengthen **climate-resilient infrastructure & disaster preparedness**.

Conclusion

- While the **Great Nicobar Island Project** has **strategic and economic advantages**, it raises **significant environmental and tribal rights concerns**.
- A **balanced approach** ensuring **sustainability, ecological preservation, and indigenous welfare** is **essential** for **long-term national interest**.