1. **SWAYATT initiative:** Recently, the Government e-Marketplace (GeM) has commemorated six years of the SWAYATT initiative.
   - **About SWAYATT Initiative:** Launched in 2019, with objective to invigorate participation of startups, women entrepreneurs, Micro & Small Enterprises (MSEs), Self Help Groups (SHGs), and youth, especially those from backward sections, in public procurement.
     - **Key Features:** Facilitates training and on boarding of last-mile sellers → Develops women entrepreneurship → Encourages participation of small-scale businesses in government procurement.
     - **Recent Developments:** GeM signed a Memorandum of Understanding (MoU) with the Federation of Indian Chambers of Commerce & Industry Ladies Organisation (FICCI-FLO), representing over 9,500 women entrepreneurs.
     - **Impact:** Women entrepreneurs constitute 8% of the total seller base on GeM.
   - **About Government e-Marketplace (GeM):** An online market platform established in 2016 for government procurement of goods and services.
     - **Objective:** Serves as the **National Procurement Portal of India** for ministries, departments, and PSUs.
     - **Development:** Created by the Directorate General of Supplies and Disposals (Ministry of Commerce & Industry) with technical support from the National e-Governance Division (MeitY).
2. **PRAKRITI 2025:** The International Conference on Carbon Markets, Prakriti 2025, recently concluded successfully.
   - **About Prakriti 2025:** Organized by the Bureau of Energy Efficiency under the Ministry of Power and the Ministry of Environment, Forest and Climate Change.
   - **Objective:** Served as a platform for in-depth discussions on global carbon market trends, challenges, and future pathways.
   - **About Carbon Market:** A system for buying and selling the right to emit **carbon dioxide (CO_2)** into the atmosphere.
   - **Carbon Credits:** Governments issue carbon credits, where 1 credit = 1,000 kg of CO_2 emissions.
   - **Purpose:** Limits total carbon emissions by **restricting the number of credits issued**.

- **Trading Mechanism:**
  - **Excess Emission:** Firms exceeding their quota must buy additional credits.
  - **Low Emission:** Firms emitting less can sell unused credits.
  - **Incentive:** Creates a financial push for emission reduction.
- **Origin:** Concept first emerged in the 1990s (U.S.) to regulate sulphur dioxide emissions using a cap-and-trade model.
- **Expansion:** Now includes carbon offsets, where businesses fund environmental projects (e.g., tree planting) to compensate for emissions.

3. **Cali Fund:** The 'Cali Fund' was launched recently to resume 16th Conference of Parties (COP16) to the United Nations Convention on Biological Diversity (CBD) in Rome.
   - **About Cali Fund:** It is a new international fund, created to help protect biodiversity.
     - **Purpose:** Aims to collect contributions from businesses utilizing genetic resources, ensuring fair benefit-sharing with indigenous communities and local populations.
     - **Beneficiaries:** At least half of the funds are designated for indigenous peoples and local communities.
     - **Corporate Participation:** Encourages companies to allocate a portion of their profits or revenues to the fund; discussions with firms from various countries, including the United States, are underway.
   - **About Convention on Biological Diversity (CBD):** It is an international agreement that aims to conserve biodiversity, sustainably use its components, and fairly share the benefits from genetic resources.
   - **About COP16:** The 16th Conference of the Parties (COP16) to the United Nations Convention to Combat Desertification (UNCCD) was held in Riyadh, Saudi Arabia from December, 2024.
   - **Theme:** "Our Land. Our Future".
   - **Key Objectives:**
     - Developing a global financing mechanism to mobilize $200 billion annually for biodiversity protection.
     - Establishing a framework for monitoring and evaluating progress towards the Kunming-Montreal Global Biodiversity Framework targets.

4. **Thames River:** A recent study indicates that climate change is set to increase algal blooms in Thames River, despite a significant reduction in phosphorus levels over the past decades.
   - **About Thames River:** Total Length is 346 km, making it the **longest river in England** and the **second longest in the UK** (after River Severn).
   - **Flows Through:** Southern England, passing major cities like London, Reading, Windsor, and Oxford (where it is also called the Isis River).
   - **Course:**
     - **Origin:** Thames Head, Cotswold Hills, Gloucestershire.
     - **Mouth:** North Sea, via the Thames Estuary.
     - **Nore Sandbank:** Marks the meeting point of the Thames and North Sea.
     - **Basin Area:** Covers approximately 16,130 sq. km.
   - **Major Tributaries:** Lea, Leach, Churn, Coln, Windrush, Kennet, Evenlode, Ock, and Loddon.
   - **About Algal Blooms:** Rapid increase in algae population in aquatic systems, often visible as green scum on water surfaces.
   - **Role of Phosphorus:**
     - **Primary Nutrient:** Phosphorus is a key nutrient that promotes algal growth.
     - **Sources:** Commonly enters water bodies through agricultural runoff containing fertilizers and effluent discharge.
   - **Impact of Elevated Phosphorus Levels:**
     - **Eutrophication:** Excess phosphorus leads to nutrient-rich conditions, causing dense algal blooms.
     - **Oxygen Depletion:** Decomposition of abundant algae consumes dissolved oxygen, potentially resulting in fish kills and biodiversity loss.
   - **Case Studies**: Bengaluru Lakes & Ukkadam Lake
5. **Kundi:** Traditional rainwater harvesting structures called **kundis** have been instrumental in providing potable water in the arid regions of Rajasthan, India. These structures are now being revived to combat water scarcity in desert areas.
   - **About Kundi:** It is a traditional rainwater harvesting structure prevalent in the Thar Desert of Rajasthan. It consists of a circular underground well surrounded by a saucer-shaped catchment

- area designed to collect and store rainwater.
- **Structure and Function:**
  - **Catchment Area:** The area around the kundi is paved to channel rainwater into the well.
  - **Inlet:** Rainwater is directed through an inlet into the underground storage.
  - **Storage:** The underground well stores the collected rainwater, protecting it from evaporation and contamination.
- **Historical Significance:** Kundis have been used for centuries in Rajasthan as a reliable source of drinking water, especially during dry seasons. They exemplify the indigenous knowledge and ingenuity in water conservation in arid landscapes.
- **Modern Relevance:** With increasing water scarcity, there is a renewed interest in reviving and maintaining kundis. Efforts are being made to restore these structures to ensure sustainable water supply for local communities.

6. **Exercise DHARMA GUARDIAN:** The Indian Army contingent has departed for the 6th edition of the India-Japan Joint Military Exercise, **DHARMA GUARDIAN**, scheduled from 24th February to 9th March 2025 in Japan.
   - **About Exercise Dharma Guardian:** It is joint exercise conducted annually between **India and Japan**, alternating between the two nations.
   - **Objective:** Enhances interoperability for joint urban warfare and counter-terrorism operations under a UN mandate.
   - **Focus Areas:**
     - validation exercise for counterterrorism drills in desert and semi-desert terrain. High physical fitness, joint planning, and tactical drills.
     - Advanced Special Forces skills and modern tactics, techniques, and procedures aligned with current operational needs.
     - 48-hour-long
   - **Cultural Exchange:** Strengthens cultural and professional ties, fostering mutual respect through social interactions and understanding of each other's traditions and values.
   - **Significance:** Facilitates knowledge-sharing on tactical operations, and enhances cooperation and coordination between the two forces.

7. **Olive Ridley Turtles:** Nearly 700,000 Olive Ridley turtles have laid eggs at Odisha's Rushikulya rookery during an eight-day mass nesting period.
   - **About Olive Ridley Turtles (Lepidochelys olivacea)** It's named after the olive-green colour of its heart-shaped shell.
   - **Size & Habitat:** Among the smallest sea turtles, found in the Pacific, Indian, and Atlantic Oceans, primarily in tropical regions.
   - **Diet:** Carnivorous, feeding on jellyfish, shrimp, snails, crabs, mollusks, fish, and their eggs.
   - **Major Nesting Sites in India**: Odisha's Gahirmatha, Devi River mouth, and Rushikulya beaches host over 100,000 nests annually.
   - **Arribada:** Mass nesting phenomenon where thousands of females gather to lay eggs on the same beach.
   - **Nesting Behaviour:** Females return to the same beach where they hatched to lay eggs.
   - Eggs hatch in 45-65 days, and hatchlings move toward the ocean.
   - **Global Nesting Sites:** Odisha is the largest mass nesting site, followed by Mexico and Costa Rica.
   - **Population Decline:** 30-50% global population reduction (IUCN estimates).
   - **Poaching & Exploitation:** Despite a **CITES Appendix I ban**, turtles are still poached for **meat, shell, leather, and eggs**.
   - **Conservation Measures:**
     - **Turtle Excluder Devices (TEDs):** Odisha government mandates TEDs in **trawl nets** to reduce accidental turtle deaths.
     - **Operation Olivia:** Launched in the 1980s by the Indian Coast Guard.
   - **Metal Tagging:** Started in 2021 by the Zoological Survey of India (ZSI) and Odisha's Forest Department.
     - Non-corrosive metal tags help track movements and identify key habitats.
   - **Legal Protection:**
     - **IUCN Status: Vulnerable**
     - **Wildlife (Protection) Act, 1972:** Schedule I
     - **CITES:** Appendix I