

1. **Biosolids:** It holds untapped potential for Indian agriculture, offering a cost-effective alternative to chemical fertilizers.
 - **About:** Biosolids are solid products derived from wastewater treatment sludge and used for beneficial purposes.
 - **Formation Process:** Wastewater treatment separates solids from liquids. The solids undergo physical and chemical treatment, forming semi-solid, nutrient-rich biosolids.
 - **Nutrient Content & Benefits:** Contain **nitrogen, phosphorus, and potassium (NPK)**, vital for crop production.
 - Enhance soil fertility, improve crop productivity, and reduce dependence on chemical fertilizers.
 - Aid in replenishing macronutrients and micronutrients in degraded soils.
 - Reusing biosolids can convert waste into a valuable resource, supporting sustainable development and environmental conservation.
 - **Key Government Initiatives Supporting Biosolids Use:**
 - **Swachh Bharat Mission 2.0 & AMRUT 2.0** – Focus on sustainability, hygiene, and waste management.
 - **Waste to Wealth Mission** – Promotes resource conversion from waste, including compost, biogas, and energy.
 - **National Mission for Clean Ganga** – Reduces pollution from untreated sewage and promotes biosolid resource recovery.
2. **National Mission on Monuments and Antiquities (NMMA):** It was established in 2007 by the Government of India to prepare two national registers on monuments and antiquities.
 - **About NMMA:** Launched by the Ministry of Culture of the Government of India.
 - **Objective:** A pan-India mission to prepare a National Register and establish state-level databases on built heritage, sites, and antiquities.
 - **Key Goals:**
 - **Documentation & Database Creation:** Develop a database for planners, researchers, and heritage management.
 - **Uniform Documentation Format:** Record Registered & Catalogued Antiquities from Central & State Governments, private museums, universities, and collections.

- **Public Awareness & Sensitization:** Promote awareness about preserving cultural and historical heritage.
 - **Training & Capacity Building:** Extend training to State Departments, Local Bodies, NGOs, Universities, Museums, and local communities.
 - **Institutional Synergy:** Facilitate collaboration between ASI, State Departments, institutions, and NGOs.
 - **Publication & Research:** Encourage research and publication on heritage conservation.
 - **Significance:** Enhances public engagement and awareness for India's cultural heritage protection.
- 3. Quick commerce (Q-commerce):** It gained prominence during the COVID-19 pandemic, initially serving lockdown customers. Despite the pandemic ending, Q-commerce continues to reshape shopping habits, especially in urban India.
- **About Q-commerce:** A subclass of e-commerce facilitating rapid deliveries (10–20 minutes) to customers.
 - Operates through dark stores (warehouses solely for online order fulfillment) and distribution centers.
 - Close proximity to consumers ensures faster deliveries.
 - **Advantages over Traditional Retail:** Mobile app-based platforms use customer data for a customized shopping experience.
 - Enables better inventory planning based on demand patterns (e.g., seasonal or demographic influences).
 - **Benefits for Brands & Retailers:** A study by IIM Ahmedabad's Centre for Transportation and Logistics highlights Q-commerce's role in brand awareness.
 - EY-Parthenon attributes growth to low-cost manpower availability and abundant choice for consumers.
 - **Supply-side advantages:** Large platforms can distribute frozen/chilled products without expensive freezers in Kirana stores.
- 4. Bills of Lading Bill, 2024:** Recently, Lok Sabha passed the Bills of Lading Bill, 2024, to update and simplify the legal framework for shipping documents.

- **About Bills of Lading Bill, 2024:** Replaces the Indian Bills of Lading Act, 1856, which provided a legal framework for issuing bills of lading.
 - A bill of lading is a document issued by a freight carrier to a shipper, containing details about the type, quantity, condition, and destination of goods.
 - The 1856 Act recognized the bill of lading as conclusive evidence of goods on board.
 - It granted all rights of suit and liabilities regarding goods to: receiver as per the bill of lading and any third party to whom the receiver transfers ownership.
 - The Bill retains all provisions of the 1856 Act while modernizing the legal framework.
 - It empowers the Central Government to issue directions for implementation and includes a repeal and saving clause to eliminate colonial legacy.

5. Short-selling: The Securities and Exchange Board of India (SEBI) is considering a **major revamp of short-selling regulations**, potentially allowing it for all stocks except those in the trade-to-trade (T2T) segment.

- **About Short-selling:** It allows investors to sell a stock without owning it, betting on a fall in stock prices.
- **Current rules:** Naked short-selling is banned; SEBI mandates delivery of securities at the time of settlement. Only stocks in the F&O (Futures and Options) segment are allowed for short selling.
- **SEBI's Observations:** Non-institutional investors engage in short selling of non-F&O stocks by selling and squaring off positions within the same trading day.
 - The direct payout of securities may impact short-term strategies like buy-today-sell-tomorrow (BTST).
 - Stocks purchased in earlier settlements but not yet delivered will not be considered short sales.
- **About:** SEBI is the **regulatory authority** for India's **securities market**.
 - Established in **1988**, it gained **statutory powers** through the **SEBI Act, 1992**.
 - Key reforms include paperless trading, electronic settlements, and the **T+1 settlement cycle**.
- SEBI has **civil court-like powers** under the **Code of Civil Procedure, 1908**, allowing it to: Investigate and take action to protect investor interests → summon individuals, inspect books and registers of market participants → suspend trading of any security → restrict individuals/entities from buying, selling, or dealing in securities → impound proceeds or securities related to investigations.

6. **Nilgai (Blue Bulls):** 4,279 'nilgais' culled in Bihar in 2024-25 (till Feb) due to widespread crop damage, as informed by State Environment Minister in the Assembly.

- **About Nilgai (Blue Bulls):** The term "Nilgai" (Hindustani) means "blue cow", referring to the blue-grey color of adult bulls.
- **Features:** Long neck, short upright mane, bony narrow head, barrel-like chest, strong legs, high withers sloping to the croup.
- **Largest Asian Antelope:** Belongs to the family Bovidae.
- **Habitat:** Found in lightly wooded forests, wooded grasslands, scrub areas, agricultural lands, and near human settlements.
- **Distribution:** Found in **Nepal, India, and Pakistan.**
- **Conservation Status:**
 - **IUCN Red List:** Least Concern.
 - **Legal Protection:** Listed under **Schedule-III** of the **Wildlife (Protection) Act, 1972.**
- **Legal provision:** The **Centre can declare an animal "vermin"** under wildlife laws, permitting culling for **crop protection.**
 - Nilgai declared **vermin** in Bihar in Dec 2015.
- **Culling process:** Certain state officials are empowered to grant culling permissions.
 - Officials prepare a strategy before launching culling operations.
 - Role of mukhiya (village head) is crucial in the entire process.



7. **Smart Proteins:** The Department of Biotechnology is funding research to develop smart proteins under the BioE3 initiative.

- **About:** Smart Proteins are designed to taste and have the texture of real proteins and are derived from microorganisms, plants, and lab-grown animal proteins.
 - The initiative aims to make food sources climate resilient and address protein deficiencies.
 - Smart proteins require less land, water, and energy, reducing environmental impact.
- **Government Initiative:** The **Department of Biotechnology** is inviting **research grant applications** to develop and **scale up** smart protein production.
- **Types of Smart Proteins:**
 - **Fermentation-Derived Proteins:** Sourced from microbes like algae, bacteria, and fungi.

- **Plant-Based Proteins:** Mimic the **taste and texture of meat.**
- **Cell-Culture-Based Proteins:** Animal cells grown in labs to produce edible proteins.
- **About BioE3 (Biotechnology for Economy, Environment, and Employment) Policy:** Steered by the Department of Biotechnology, the policy aims to foster high-performance biomanufacturing.
 - High-performance biomanufacturing involves producing medicines, materials, bio-based products, and addressing farming and food challenges using advanced biotechnological processes.

8. Exercise KHANJAR-XII: Joint Military Exercise Khanjar-XII between India and Kyrgyzstan began at Tokmok, Kyrgyzstan.

- **About Exercise KHANJAR-XII:**

- **Participants:**

- **India:** Troops from the **Parachute Regiment (Special Forces).**
- **Kyrgyzstan:** Troops from the **Kyrgyz Scorpion Brigade.**

- **Aim:** To enhance military cooperation and interoperability between the Special Forces of both countries.

- To exchange experiences and best practices in Counter-Terrorism and Special Forces Operations in urban and mountainous high-altitude terrain.

- **Focus Areas:** Urban warfare scenarios and counter-terrorism tactics under the UN mandate.

- Precision sniping, complex building intervention, and mountain craft.

- **Historical Background:** The exercise started in 2011 and has evolved into an annual training event.

- The **venues alternate** between India and Kyrgyzstan.
- The **last edition** was conducted in India in January 2024.

- **Significance:** Strengthens **defence ties** and addresses **international terrorism and extremism.**

- Features **cultural exchanges**, including the celebration of the Kyrgyz festival Nowruz.
- Reaffirms the commitment of **India and Kyrgyzstan** to **peace, stability, and security** in the region.