

## UPSC Daily Current Affairs| One Liners 25-04-2025

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#### History, Art and Culture

##### Mehrgarh Farming Settlement

*Recently, radiocarbon dating using Accelerator Mass Spectrometry (AMS) has adjusted the timeline of the farming settlement in Mehrgarh from 8000 BCE to 5200 BCE.*

- **Location** - Mehrgarh, a Neolithic site, is situated at the entrance of the Bolan Pass in Balochistan, Pakistan.
- **Early agricultural practices** - The site reveals the presence of an early farming village with evidence of domesticated wheat, barley, and cattle.
- It is the earliest known location where cotton was utilized in the Old World.
- **Excavations** - Preserved mud brick structures, burial sites, and distinctive pottery known as Togau ware.
- **Implications** - The revised dating to 5200 BCE provides a more accurate chronological framework for understanding the development of early agriculture and settlement patterns in the region preceding the Harappan civilization.

#### Geography

##### Eruption at Poás Volcano

*Recently, highly active Poás volcano, a significant tourist draw, has recently experienced an eruption.*

- **Location** - Situated within the Poás Volcano National Park, Costa Rica.
- It is classified as a composite stratovolcano and reaches an elevation of 2,708 meters above sea level.
- Its irregular and complex structure covers a substantial basal area of approximately 400 square kilometers.
- **Characteristics** - It is characterized by its formation from several adjacent eruptive centers featuring large collapse craters.
- The volcano's principal crater is measuring about 1.5 kilometers in width and reaching a depth of 300 meters, ranking it among the largest active craters globally.
- **Recent activity** - Throughout 2024 and continuing into 2025, the crater lake has been drying up.
- **Impacts** - This process has triggered ash-producing eruptions and elevated gas levels, accompanied by small rock-ejecting explosions, indicating ongoing volcanic activity.

#### Internal Security

### **Pahalgam Terror Attack**

*Recently, horrific terrorist attack struck in Pahalgam, on April 22, 2025, resulting in the tragic deaths of more than 25 individuals, predominantly tourists.*

- **Located in** - Baisaran Valley of Anantnag district, a well-known hill station in the Jammu and Kashmir Valley, approximately 90 km from Srinagar.
- Its remote, high-altitude location, accessible only by foot or horseback.
- **Tourist site** - The attack occurred in the scenic Baisaran Valley, a popular tourist destination renowned for its resemblance to European landscapes and often called "Mini Switzerland."
- **Other tourist sites** - Its attractions include the Amarnath Cave Temple, Aru Wildlife Sanctuary, Betaab Valley, and Tulian Lake, drawing numerous tourists annually.

### **Polity & Governance**

#### **Rights of Persons with Disabilities Act, 2016 (RPwD Act)**

*Recently, the Delhi High Court asked Swiggy and Zepto, to respond to a plea claiming their apps were not accessible to people with visual impairment.*

- It was enacted to fulfill India's obligations under the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD), which India ratified in 2007.
- **Aim** - To ensure the rights and dignity of people with disabilities.
- **Replacement of** - Persons with Disabilities Act, 1995.
- **Feature** - It mandates for adoption of accessibility features by the platforms such as e-commerce.
- **Barriers to visually impaired persons** - The platforms violated the dignity of persons with impairment by denying them equal access to essential services such as food delivery, grocery shopping, and restaurant reservations.
- The absence of accessible search features and interactive elements for the visually impaired created severe barriers.

#### **Price Support Scheme (PSS)**

*Recently, the Government has approved the procurement of Tur, Urad and Masur under PSS equivalent to 100% of production for the procurement year 2024-25.*

- **Umbrella scheme** - [Pradhan Mantri Annadata Aay Sanrakshan Abhiyan \(PM-AASHA\)](#).
- **Objectives** - To provide financial assistance to farmers when market prices for their crops fall below the Minimum Support Price (MSP).
- To protect farmers from losses due to price volatility and ensure they receive a fair return for their produce.
- **Crops covered** - Bajra, Jowar, Maize, Paddy, Cotton, Tur, Moong, Urad, Groundnut, Sesamum Wheat, Gram, Mustard, and Sugarcane etc.
- The procurement of oil seeds, pulses and cotton, through National Agricultural Cooperative Marketing Federation of India Ltd (NAFED), which is the Central nodal agency for the MSP.

### **Emissions Trading Scheme (ETS)**

*Recently, Surat's ETS specifically designed to curb particulate air pollution, marking a significant step in environmental regulation.*

- **Launched in** - 2019, it is the 1<sup>st</sup> unique scheme to focus on trading particulate pollution globally.
- **Target** - It initially targeted 342 high-emitting industries in Surat, predominantly within the textile sector, which commonly used solid fuels like coal and lignite, and liquid fuels such as diesel.
- **Functions** - A regulatory mechanism that uses economic incentives to lower air pollution.
- Establishes a limit (cap) on total allowable emissions, distributing tradable emission permits to industries.
- Enable companies to buy and sell pollution rights and industries with lower emissions can profit by selling surplus permits to those exceeding their limits.
- It also known as Cap-and-Trade System.

### **Economy**

#### **India's Manufacturing Push**

*Recently, Finance Minister outlined India's ambitious plan to elevate the manufacturing sector's contribution to GDP from 12% to 23% within the next 2 decades.*

- **Sunrise Industries** - They are emerging sectors experiencing rapid expansion, characterized by high growth rates, numerous startups, and substantial investment.
- **Characteristics** - These industries are not static and mature over time.
- It potentially transitioning into maturity and eventually the sunset phase, as exemplified by the compact disc industry.
- These industries often exhibit significant innovation and their swift growth can pose a threat to established, declining "sunset" industries.
- **Role** - The targeted growth in India's manufacturing sector is expected to be significantly propelled by the dynamism and potential of these burgeoning sunrise industries.
- **Examples** - Alternative energy, social media, cloud computing, blockchain technology, information technology, and clean energy.

### **Environment**

#### **National Environmental Engineering Research Institute (NEERI)**

*The Supreme Court has recently directed the NEERI, to conduct a detailed assessment of the glass industries operating near the Taj Mahal in Agra, Uttar Pradesh, to evaluate their potential impact on the monument.*

- **Established in** - 1958 in Nagpur, under the Ministry of Science and Technology.
- It is a pioneering research institute in environmental science and engineering, funded by the Government of India and a constituent laboratory of Council of Scientific & Industrial Research (CSIR).
- The Central Public Health Engineering Research Institute (CPHERI), was renamed as National Environmental Engineering Research Institute (NEERI) in 1974.
- **Mission** - To undertake research and development in environmental management, pollution control, and sustainable development.
- **Focus on** - Water supply, sewage disposal, communicable diseases, and industrial pollution.
- **Areas of Expertise** - In climate/environment, health, lab and field testing, monitoring and evaluation, policy development, research, standards, technology, and fuel R&D.

### **Science**

### Quantum Gravity Gradiometers (QGGs)

Recently, NASA scientists are exploring the use of advanced cold atom-based QGGs deployed on satellites to precisely measure shifts in Earth's mass distribution, particularly those caused by climate change.

- It is a highly sensitive instrument that measures spatial variations in gravitational acceleration.
- **Functions** – To cool atoms near absolute zero in a vacuum, inducing wave-like behavior.
- Lasers manipulate these atoms, causing a phase shift directly proportional to the local gravitational force.
- **Application** – It is used in resource exploration to locate less dense hydrocarbon deposits, this technology is now being adapted for climate change monitoring.
- **Measurement capability** – This sophisticated setup allows for the detection of minuscule differences in acceleration, as small as  $10-15\text{m/s}^2$  over a one-meter distance, enabling highly sensitive gravity measurements.
- **Monitoring Earth's mass distribution** – From low Earth orbit, QGGs can estimate the mass of significant geological formations like the Himalayas and monitor the movement of water, ice, and geological materials with unprecedented accuracy.
- The gravitational force across Earth's surface is not uniform; it varies based on the underlying mass distribution.
- Denser regions, such as mountain ranges, exhibit a stronger gravitational pull compared to less dense areas.

### Miscellaneous

#### Special Category National Panchayat Awards, 2025

Recently, the Special Category [National Panchayat Awards](#) are conferred at the event of National Panchayati Raj Day (NPRD) on 24<sup>th</sup> April, 2025.

- It is the 1<sup>st</sup> time, that the Ministry of Panchayati Raj has institutionalised dedicated Special Category Awards.
- **Objective** – To incentivize and acknowledge exemplary efforts of Gram Panchayats in the key national priorities of Climate Action and Atmanirbharta (Self-Reliance) through augmentation of Own Sources Revenue (OSR).
- **Climate Action Special Panchayat Award (CASPA)** – To encourage Panchayats to act as climate-responsive local governments.
- **Atma Nirbhar Panchayat Special Award (ANPSA)** – To promote Atmanirbharta through augmentation of Own Source Revenue (OSR) by Panchayats.
- **Panchayat Kshamta Nirman Sarvottam Sansthan Puraskar (PKNSSP)** – To recognize excellence in capacity building and training of Panchayati Raj representatives and functionaries.
- This award was instituted in 2023 and 1<sup>st</sup> awards were conferred in 2024.



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