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 1st 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 10−15m/s2 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 24th April, 2025.

• It is the 1st 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 1st awards were conferred in 2024.

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