UPSC Daily Current Affairs| One Liners 17-02-2026

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History, Art and Culture

Herath (Shivaratri in Kashmir)

- **Festival –** Herath, celebrated by Kashmiri Pandits (displaced and those still in Kashmir).
- **Tradition –** Unique to Kashmir—Pandits prepare mutton and fish dishes.
- **Past Brotherhood –** Hindus gave walnuts to Muslim neighbours; Muslims reciprocated with lotus stems (nadru) on Nowruz, symbolizing shared culture.
- **Current Situation –** Walnut-sharing rare now due to 1990s migration.
- **Celebrations –** Pandits thronged Srinagar temples (Hanuman, Sharika Devi, Sankaracharya).
- **Sentiment –** Nostalgic recollections of harmony shared by elders and on social media.

Geography

Annual Streamflow

- **Period –** *1980–2021.*
- **Methodology –**
  - Used a *high-resolution, physics-based hydrological model.*
  - Factors included – *Rainfall, groundwater, river flow, irrigation pumping.*
- **Indus Basin Trends**
  - **Overall streamflow –** Modest increase (~8% over four decades).
  - **Main drivers –** Rising precipitation (Western Disturbances, variable monsoon.)
  - **Strongest increases –** Indus, Jhelum, Chenab rivers.
  - **Declines –** Ravi and Sutlej (eastern tributaries).
- **Ganga Basin Trends**
  - **Streamflow –** Sharp and sustained decline (~17% reduction)
  - **Rainfall –** Decreased by ~10%
  - **Temperatures & atmospheric water demand –** Increased
  - **Dominant factor –** Intensive groundwater pumping for irrigation.

Social Issues

Urban Challenge Fund (UCF)

- Implemented by – Ministry of Home and Urban Affairs.
- **Central Assistance**
  - Allocation – Rs.1 lakh crore
- **Funding Model**
  - Centrally sponsored scheme.
  - Operates in competitive “challenge mode”.
- **Project Cost Coverage**
  - Central assistance covers *25% of project costs.*
- **Market Funding**
  - Cities must raise at least 50% from the market
  - Sources - Municipal bonds, bank loans, PPPs
- **Expected Investment**
  - Total projected investment – Rs.4 lakh crore in the urban sector over 5 years.
- **Eligibility**
  - Cities with population ≥ 10 lakh (2025 estimates).
  - All State/UT capitals.
  - Major industrial cities with population ≥ 1 lakh.
  - All ULBs in hilly/NE States and smaller ULBs (<1 lakh population) under Credit Repayment Guarantee Scheme.
- **Operational Period**
  - FY 2025-26 to 2030-31.
  - Extendable up to 2033-34.

Polity & Governance

Delhi's Bhu-Aadhaar Scheme

- **Initiative under –** Ministry of Home and Urban Affairs.
- **Implementation –** Revenue Department's IT division with support from Survey of India.
- **Objective –** To create a digital land map of the city.
- **Technology –** Drone surveys and high-resolution imaging.
- **Identification –** Each land parcel gets a 14-digit ULPIN; owners receive a Bhu-Aadhaar card.
- **Benefits –** Safeguards property rights, curbs corruption, prevents disputes, simplifies ownership verification, enables departmental data coordination, and reduces fraudulent transactions.
- **Background –** Part of the Digital India Land Records Modernization Programme (DILRMP), introduced in 2016; pilot completed in Tilangpur Kotla village

Economy

2G bioethanol plant

- It is the *World's 1st commercial-scale 2G bioethanol plant* using bamboo as feedstock.
- **Location –** Numaligarh, Assam.
- **Company –** Assam Bio Ethanol Private Limited (ABEPL), a joint venture of Numaligarh Refinery Limited (NRL), Chempolis Oy (Finland), and Fortum.
- **Investment** – Rs.4,930 crore.
- **Feedstock –** Requires 5 lakh metric tonnes of bamboo annually.
- **Output**
  - Produces 49,000 metric tonnes of ethanol annually.
  - **By-products –** Furfural, acetic acid, liquid CO_2, bio-coal.
- **Significance**
  - Made from non-food farm waste/residue.
  - More sustainable with a lower carbon footprint.
  - Ensures food security (unlike 1G ethanol from food crops).

Environment

Bio-based Chemicals

- **Definition –** Bio-based chemicals derived from biological feedstocks such as sugarcane, corn, starch, and biomass residues.
- **Processes –** Typically produced through *fermentation or enzymatic methods.*
  - **Bio-based enzymes –** Naturally sourced enzymes (from microbes/plants) applied in biofuels, food processing, textiles; e.g., amylases in brewing, cellulases in biofuel production.
- **Examples –** It includes organic acids (e.g., lactic acid), bio-alcohols, solvents, surfactants, and intermediates used in plastics, cosmetics, and pharmaceuticals.
- **Significance –** Both reduce environmental impact, support sustainable industrial processes, and provide alternatives to fossil fuel–based chemicals.

India's Position in Bio-Based Chemicals and Enzymes

- **Strengths –** Large agricultural base, strong fermentation expertise (pharma, vaccines), expanding manufacturing sector.
- **Policy –** Prioritized under the Department of Biotechnology's BioE3 policy.
- **Key Players (Chemicals) –** Praj Industries, Godrej Industries, Godavari Biorefineries, Jubilant Ingrevia, StringBio.
- **Key Players (Enzymes) –** Novozymes India, DuPont, DSM, Advance Enzyme Technologies.
- **Market –** Enzymes sector is consolidated, with top players holding *over 75% market share.*

‘Anupam’ Decentralized Waste Management Model

- **Anupam means –** “incomparable”.
- **Implemented by –** New Delhi Municipal Council (NDMC).
- **Objective –** To decentralize waste management and promote sustainable urban living.
- **Key Features**
  - **Source segregation -**Wet, dry, and sanitary waste separated.
  - **On-site composting -** Wet & horticultural waste composted in parks/green belts.
  - **Dry waste -** Sorted and sent to recyclers.
  - **E-waste -** Sent to CPCB-authorised recyclers.
  - **Reduced transport -** Wet waste no longer sent to NDMC plants.
  - **Community involvement -** Awareness drives, RWA meetings, penalties for mixed waste.
  - **Dedicated staff -** Sanitation inspectors and NDMC staff for composting & mechanised cleaning.
- **Pilot Project**
  - Successfully implemented in 6 residential colonies, including Chanakyapuri.

Science

Inhaled Nitric Oxide for Drug-Resistant Pneumonia

- **Problem**
  - Drug-resistant pneumonia is a major ICU complication.
  - Particularly severe with Pseudomonas aeruginosa.
- **Research Conducted by –** Massachusetts General Hospital and Harvard Medical School.
- **Discovery –** High-dose inhaled nitric oxide (NO) reduced drug-resistant *P. aeruginosa* in a large-animal ICU model.
- **Nitric Oxide Use**
  - Naturally produced in the human body.
  - Traditionally used at low doses (20–80 ppm) in neonatal care to widen blood vessels.
  - Study tested much higher doses (300 ppm) for antimicrobial activity.
- **Animal Study (Pigs) –** 16 ventilated pigs with *multidrug-resistant P. aeruginosa pneumonia.*
- **Treated animals showed –**
  - 99% lower bacterial counts in lungs.
  - Improved oxygenation and lung function.
  - Evidence that NO helps restore chemical signalling in infected lungs.

Epibatidine

Five European states concluded Alexei Navalny was killed using epibatidine, a rare poison dart frog toxin, directly implicating the Russian state.



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