

## 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  $\geq$  10 lakh (2025 estimates).

- All State/UT capitals.

- Major industrial cities with population  $\geq$  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**

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

## **Economy**

### **2G bioethanol plant**

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- It is the *World's 1<sup>st</sup> commercial-scale 2G bioethanol plant* using bamboo as feedstock.
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- Location** - Numaligarh, Assam.
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- Company** - Assam Bio Ethanol Private Limited (ABEPL), a joint venture of Numaligarh Refinery Limited (NRL), Chempolis Oy (Finland), and Fortum.
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- Investment** - Rs.4,930 crore.
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- Feedstock** - Requires 5 lakh metric tonnes of bamboo annually.
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### **Output**

Makes 49,000 metric tonnes of ethanol annually.

**By-products** - Furfural, acetic acid, liquid CO<sub>2</sub>, bio-coal.

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### **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**

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- Problem**
  - Drug-resistant pneumonia is a major ICU complication.
  - Particularly severe with *Pseudomonas aeruginosa*.
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- Research Conducted by** - Massachusetts General Hospital and Harvard Medical School.
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- Discovery** - High-dose inhaled nitric oxide (NO) reduced drug-resistant *P. aeruginosa* in a large-animal ICU model.
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- 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.
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- Animal Study (Pigs)** - 16 ventilated pigs with *multidrug-resistant P. aeruginosa pneumonia*.
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- 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.

# Lethal dose

- It causes paralysis, breathing difficulties and death.
- The toxin is not found naturally in Russia. It is found in **Ecuadorian dart frogs** in South America. Indigenous tribes use the toxin in blow darts or blowguns when they hunt.
- Poison dart frogs are native to tropical Central and South America. The frogs are brightly coloured as a warning signal to predators that they contain powerful toxins in their skin.

**EPIBATIDINE**  
one of earth's deadliest poisons and 200 times stronger than morphine — found in Navalny's biological samples.



**It is not clear how the toxin was administered to Navalny.**



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