CURRENT AFFAIRS

UPSC CSE 2026

DAILY CURRENT AFFAIRS NOTES

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Doctor, two held in Gujarat over a 'terror conspiracy'

- The **Gujarat Anti-Terrorism Squad (ATS)** arrested a **Hyderabad-based doctor and two of his accomplices** near Gandhinagar. The arrests were over an **alleged plot involving chemical weapons** and **connections with a global terror network**.
- The accused were allegedly **developing ricin**, an **extremely lethal toxin derived from castor beans**, for use in **planned terror strikes**.

Greater openness

- A **Supreme Court-constituted Special Investigation Team (SIT)** reported that **Reliance Foundation's Vantara project in Jamnagar** had been **above board** in acquiring wild animals from abroad.
- The SIT said Vantara had the **right permits** and the **facilities for the upkeep of over 30,000 animals**, and criticism of its activities was **"wholly unjustified"**.
- The full report becomes relevant as a **global body** has made concerning observations and **recommended** that India's wildlife authorities **pause the issue of permits** allowing endangered animals to be imported by zoos.
- This came after the **CITES committee** visited Jamnagar; CITES is the **most influential agreement on cross-border wildlife movement**.
- The **CITES committee commended Vantara's infrastructure** and the **expertise available** for animal care.
- The committee's reservations came from permit codes that **did not always accurately reflect the arrangement** between exporting countries and India.
- **Indian laws do not allow zoos** to commercially procure animals.
- The **primary objective of CITES** is to **curb animal trafficking** and expects countries to incorporate checks in wildlife laws. CITES does **not discourage cross-border commercial transactions** but insists they be **properly recorded** with **proper traceability** of animals being moved.

Does India need nutritional transformation?

- Society's relationship with **food and nutrition** is evolving, with the next transformation involving **functional foods** and **smart proteins**.

Functional Foods and Smart Proteins

- **Functional foods**: Enriched foods that promote health or prevent disease, such as **vitamin-enriched rice** or **omega-3-fortified milk**. Technologies involved: **nutrigenomics**, **bio-fortification**, **3D food printing**, **bioprocessing**.
- **Smart proteins**: Proteins sourced using biotechnology to reduce reliance on conventional production.
  - **Plant-based proteins** (restructured extracts from legumes, cereals, oilseeds)
  - **Fermentation-derived proteins** (produced by **microbial systems**)
  - **Cultivated meat** (animal cells grown in **bioreactors** without slaughter)

Why does India need them?

- India's nutritional landscape remains **highly uneven**; over **one-third of children are stunted**.
- **Urban-rural divide** persists in adult protein intake.
- Societal expectations shifting from food being **filling** to **genuinely nourishing**.
- Need to shift from **food security** to **nutritional security** (proteins, antioxidants, vitamins).
- Must achieve nutritional transformation while ensuring **sustainability**, avoiding **environmental degradation** and **climate change impacts**.

Where does India stand today?

- Recognised under **BioE3 policy** (Biotechnology for Economy, Environment, and Employment).
- **DBT** and **BIRAC** have initiated funding programmes.
- **Functional foods**: **Zinc-enriched rice** (IIRR, Hyderabad), **Iron-rich pearl millet** (ICRISAT), Private players: **Tata Consumer Products, ITC, Marico**.
- **Smart proteins**: **377 products** (meat, eggs, dairy alternatives) in 2023 by **70+ smart protein brands**.

- **Key gap**: Lack of **regulatory clarity**; **FSSAI** yet to issue guidance on **novel foods** (cultivated meat, precision-fermented proteins).
- **Lagging innovation** or influx of **mislabelled products,** Need for **workforce upskilling**; possibility of **market power concentration,** Public scepticism of **lab-made food.**

How are other countries faring?

- **Japan**: First to conceptualise functional foods and create regulatory framework (1980s).
- **Singapore**: First to approve commercial **cultivated chicken** (2020).
- **China**: Prioritising **alternative proteins** for food security and innovation.
- **European Union**: Strong investments through **Farm to Fork** strategy.

Way forward

- Functional foods and smart proteins will be vital for **nutritional security**.
- **Economic opportunity**: Global plant-based foods market at **$85–240 billion by 2030**.
- India could emerge as a **major supplier**, generating **thousands of jobs** across agriculture, manufacturing, logistics.
- **Other required actions**:
  - **National regulatory framework** under FSSAI on definitions, safety evaluation, labelling
  - **Inter-ministerial coordination** for coherent policy
  - **Public-private partnerships** for scaling biomanufacturing and indigenising technologies like **precision fermentation**
  - **Public education** and **farmer inclusion** to ensure equitable distribution of benefits.

How should law schools change attendance norms?

- The Delhi High Court's judgment in **In Re: Suicide Committed by Sushant Rohilla, 2025** examines how universities should exercise **disciplinary authority** within the **constitutional framework of fairness and reason**.

What was the core issue before HC?

- The case was **not concerned with attendance per se** but with its **enforcement**. Many universities **debarred students** once attendance fell below the limit **without warning, counselling or discussion**.
- Such **mechanical application** violated **procedural fairness** and **constitutional standards**.
- Judgment draws from **Article 14's doctrine of non-arbitrariness** and **procedural fairness**.
- Universities exercising disciplinary powers are **public authorities** subject to **constitutional accountability**; decisions must be **reasoned, proportionate and just**.
- Fairness is a **constitutional value** linked to **Article 21's protection of dignity and mental well-being**, safeguarding **due process** and **students' welfare**.

Did HC invalidate attendance rules?

- The Court **upheld attendance norms** but objected to **rigid enforcement**. Affirmed **BCI's authority** under **Rule 12 of Legal Education Rules 2008** requiring **70% attendance**, relaxable to **65% in exceptional cases**.
- Called the framework **"extremely strict"** and urged reconsideration in light of **NEP 2020** and **UGC Regulations 2003**, which stress **flexibility** and **learner-centred education**.

What must universities now follow?

- Weekly **attendance updates** through portals or notice boards.
- **Monthly shortage notices** to students and guardians for early intervention.
- **Counselling** and opportunities to address shortfalls through **extra classes**, **home assignments**, or **recognised academic activities** such as **legal-aid work**.
- Recording **medical**, **mental-health issues**, or **hardship**.
- **Notice and opportunity for representation** before any final decision.
- If, despite remedial efforts, a student still fails to meet required attendance, **they may be debarred**.

What are the implications?

- Implications are **institutional, cultural and pedagogical**. Universities must foster **supportive environments**, integrate **counselling**, and establish **Grievance Redressal Committees** with student representation.

- Debarment can no longer be **informal or automatic**; decisions must be **reasoned** and open to **representation**.
- **Experiential learning** (moots, internships, research, legal-aid work) must count toward **engagement**.
- Attendance should promote **participation**, not **policing**.
- **BCI must revisit Rule 12** in light of **NEP 2020**.
- No law school may impose **stricter norms** than those prescribed.

Aditya-L1 gets a close look at eruptions from the sun

- Using the **Visible Emission Line Coronagraph (VELC)** aboard **Aditya-L1**, scientists at the **Indian Institute of Astrophysics (IIA)** and **NASA** collaborated to **estimate crucial parameters of a coronal mass ejection (CME)** very close to its lift-off from the sun.
- Scientists said these are the **very first spectroscopic observations of a CME in the visible wavelength range**.
- The **unique spectroscopic observations** with the VELC allowed them to **study CMEs very close to the sun's visible surface** for the first time. VELC provides a **sustained view of the sun for 24 hours every day** due to its position at the **sun-earth Lagrangian L1 location**.
- The corresponding number for the **non-CME corona** near the sun is **10-100 million electrons per cubic centimetre**.
- With the sun nearing the **maximum activity phase of sunspot cycle 25** and with VELC stabilised in operations, **more energetic eruptions** are expected to be observed.

Climate change, imbalance in fertilizer use impact soil's organic carbon: ICAR study

- A detailed study by **eight ICAR scientists** found that **unscientific use of fertilizers** and **climate change** are contributing to **degradation of organic carbon** in arable areas of the country.
- The study found that when **organic carbon is low**, the **deficiency of micronutrients** in the soil is high, and when **organic carbon is high**, the deficiency is low.
- The team used an earlier study showing **rainfall and temperature determine organic carbon** and correlated this across the country.
- They found **organic carbon is highly correlated with elevation** — higher elevation means **higher organic carbon**, and moving from hills to low land results in **lower organic carbon**.
- **Organic soil carbon is negatively correlated with temperature** — regions like **Rajasthan and Telangana** with high temperatures have **low organic carbon content**.
- The study noted that **temperature, rainfall and elevation** are the three important factors determining **organic carbon concentration** in the soil.
- The scientists developed an **'agri-ecological base' map** to assess the impact of cropping systems and fertilizer use on organic carbon. The map can help in **policy decisions**, particularly for **carbon credit** and **assessing land degradation**.
- The study found that **imbalanced fertilizer application** caused a decline in organic carbon.
- **Haryana, Punjab and parts of western Uttar Pradesh** have intensified fertilizer application skewed towards **urea and phosphorus**, which has **negatively impacted organic carbon** in the soil.
- The study noted that **climate change impacts organic carbon** — rising temperatures could cause **further decline** in soil organic carbon. This decline will affect **soil health**, **carbon credit**, and **heat emission from soil**.

COP30: beginner's guide on what to expect from the climate summit

- It is both **symbolic and strategic** that **COP30** is being hosted in **Belém**, a point of entry to the **Amazon rainforest**.
- The **Amazon** is one of the world's **largest carbon sinks (150–200 billion tonnes)** and biodiversity reserves, but is **threatened by deforestation and land conversion**, tipping towards **irreversible decline**.
- COP30 is being called the **'Implementation COP'** as it is expected to translate commitments into **concrete action**.
- Guided by the **Global Stocktake (GST)** — a mandatory five-year review of climate progress — COP30 is expected to advance **mitigation, adaptation, and means of implementation**.

- **Its programme will focus on six key areas**: energy, industry and transport transitions; stewardship of forests, oceans and biodiversity; food systems transformation; resilience in cities, infrastructure and water; and human and social development.
- **Climate adaptation** is imperative for millions in **Global South**, but adaptation is **context-specific**, making negotiations on **Global Goal on Adaptation** difficult. **GGA** aims to set **quantifiable goals**, organise **matching funding**, and create a system to **account for adaptation outcomes**, and is expected to be established at COP30.
- The **Loss and Damage Fund**, set up in COP28, is **grossly underfunded**, receiving **less than a billion dollars** against annual needs of **hundreds of billions**.
- For developing countries, this finance enables **preparedness for extreme events**, **climate-resilient agriculture**, and **renewable energy adoption**.
- Access to **affordable technology and capacity building** is vital but is hindered by **high costs** and **intellectual property issues**.
- COP30 should lead to **North–South collaborations** for training, innovation and technology sharing; otherwise climate transition risks becoming an area of **inequality**.
- In countries like **India**, a "**just transition**" must include investments in **low-carbon manufacturing**, **renewable energy**, **ecosystem restoration**, **green skills**, **small businesses**, and **alternative livelihoods**.
- Countries were expected to update their **Nationally Determined Contributions (NDCs)** through 2035 and submit them by **February 2025**, but submissions so far account for **only 19% of global emissions**.
- A key spotlight of Belém is the **integration of climate and biodiversity agendas**.
- Brazil is pushing the **'Tropical Forest Forever Facility'**, a financing model to **compensate 70+ developing countries with tropical forests** for conservation efforts.
- At Belém, **India** will champion **climate justice** and **common but differentiated responsibilities**, urging developed nations to lead in **emission cuts** and **financial support**.
- At the climate talks in **Bonn**, India played a key role in coordinating the **G77+China bloc** to advocate for a **fair and predictable finance goal** under the **NCQG framework**.

What's the latest in climate science?

- With the pace of **climate change** speeding up, **extreme weather** and related impacts are increasingly affecting global populations and environments.

Warmer, faster

- Global temperatures are **climbing faster than before**, with new records in **2023**, **2024**, and points in **2025**.
- Study in June updated baseline data for **UN IPCC** science reports.
- Average global temperature rising at **0.27°C per decade**, almost **50% faster** than the **0.2°C per decade** rate of the 1990s and 2000s.
- **Sea levels rising faster**: **4.5 mm/year** in the last decade. **1.85 mm/year** average since 1900.
- World on track to cross **1.5°C warming threshold around 2030**.
- World has already warmed by **1.3–1.4°C** since pre-industrial era (WMO).

Tipping points

- **Warm-water corals** in an almost irreversible **die-off** due to successive marine heatwaves → possibly the **first climate tipping point**.
- Researchers warned of potential **Amazon rainforest "die back"**, transforming into **savannah**, if **deforestation** and warming above **1.5°C** continue.
- **Greenland meltwater** could trigger earlier collapse of **Atlantic Meridional Overturning Circulation (AMOC)**, which keeps European winters mild.
- In **Antarctica**, scientists concerned about **declining sea ice**. Ice loss exposes **dark water** that absorbs more solar radiation → amplifies warming. Threatens **phytoplankton** growth, which consumes large amounts of global **CO_2**.

Wildfires

- Heatwaves and drought continue to make **wildfires frequent and severe**.
- **State of Wildfires** report recorded **3.7 million sq. km burned** (2024–2025) area roughly equal to **India + Norway**.

- Slightly less than last two decades' average, **but CO_2 emissions were higher**.

Deadly heat

- UN agencies estimate **half the world's population** is already struggling with extreme heat.
- Worker productivity drops **2–3% for every degree above 20°C**. Study in **The Lancet** estimated **over $1 trillion** in global productivity losses last year due to heat.