

UPSC Daily Current Affairs| One Liners 02-01-2026

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Geography

Southern Ocean Carbon Anomaly

- **Definition** - The term refers to the unexpected behaviour of the Southern Ocean functioning as a carbon sink in recent decades.
- **Prediction model** - Climate models projected a decline in the Southern Ocean's carbon sink capacity, anticipating reduced CO₂ absorption or even a potential net release.
- **Observational data** - Measurements since the early 2000s indicate that the Southern Ocean has absorbed more CO₂ than previously expected.

Polity & Governance

National Frequency Allocation Plan 2025 (NFAP-2025)

- **Released by** - Department of Telecommunications (DoT), Ministry of Communications.
- **Key Enhancements in NFAP-2025**
 - Identification of the 6425-7125 MHz band for International Mobile Telecommunications (IMT), significantly enhancing mid-band spectrum availability for *5G, 5G Advanced, and future 6G networks*.
 - Allocation of *Ka, Q, and V bands for satellite-based services*, crucial for high-throughput Geo-Stationary Orbit (GSO) satellites and large non-GSO satellite constellations.
 - Additional spectrum for *In-Flight and Maritime Connectivity (IFMC)* to ensure seamless broadband access in the air and at sea.
 - Support for emerging technologies such as *Vehicle-to-Everything (V2X) communication, LEO/MEO satellite services, and expanded broadband connectivity solutions*.

Prime Minister's Scheme for Mentoring Young Authors (PM-YUVA 3.0)

- **Implemented by** - National Book Trust, India, under the Ministry of Education.
- **Aligned with** - National Education Policy (NEP) 2020.
- **Book proposals by** - 43 young authors below the age of 30 years were selected through an All-India contest in 22 official Indian languages and English.
- Selected book proposals will be developed into books under the six-month mentorship of eminent scholars.
- **Scholarship of** - Rs 50,000 per month and a lifetime royalty of 10% on their published book.
- **Themes** -
 - Contribution of Indian Diaspora in Nation Building,
 - Indian Knowledge System, and
 - Makers of Modern India (1950-2025).
- **Aim** - To encourage young writers to contribute to nation building through their writing and ideas.

Economy

India - 4th Largest Economy

- India has overtaken Japan to become the *world's fourth-largest economy*, with a gross domestic product (GDP) of \$4.18 trillion.
- **Real GDP growth** - It reached 8.2% in the second quarter of 2025-26, compared to 7.8% in the first quarter and 7.4% in the fourth quarter of the previous fiscal year.
- **Projections** - It indicate that India is likely to surpass Germany to become the third-largest economy within the next 2.5 to 3 years, with an estimated GDP of \$7.3 trillion by 2030.

Environment

Madhya Pradesh Tiger Deaths

- **55 tiger deaths in 2025** - It represents the highest annual mortality since the initiation of Project Tiger in 1973.
- **Mortality Surge** - In the preceding 3 years, tiger deaths numbered 46, 43, and 34, respectively, indicating an escalating trend.
- **Census 2022** - Madhya Pradesh had a tiger population of 785, resulting in an *annual mortality rate of approximately 7%*.
- **Causes** - Electrocution (11 out of 55 tiger deaths), road accidents, railway collisions and natural/territorial conflicts.

Environmental Projects in Developing Countries

- **Approved by** - Global Environment Facility (GEF) Council, meet in December.
- **Projects focus on** - The conservation of biodiversity, protection against climate change, recovery of lands, and ecosystem management.
- **Significance** - These efforts contribute to achieving the 2030 biodiversity targets established by the *Kunming Montreal Global Biodiversity Framework*, which was adopted in 2022.

Security

INS Vaghsheer

- INS Vaghsheer is the 6th and final vessel in the Kalvari-class (Scorpene-class) submarine series.
- **Launched in** - 2022, currently undergoing sea trials.
- **Name** - The submarine is named after the sand fish, a deep-sea predator native to the Indian Ocean.

Kalvari-class Submarines

- **Type** - Diesel-electric attack submarines.
- **Origin** - Designed by the French naval defence and energy company DCNS, now known as Naval Group.
- **Built by** - Mazagon Dock Shipbuilders Limited (MDL) in Mumbai under a technology transfer agreement.
- **Developed as** - A part of Project 75 of the Indian Navy.
- **Features** - The class includes stealth capabilities, precision-guided weapons such as torpedoes and anti-ship missiles, and advanced sonar and combat management systems.

Science

Lab Grown Diamond

• Laboratory-created diamonds are produced by replicating the natural diamond growth process.

• Manufacturing Methods

- **High-Pressure/High-Temperature (HPHT)** - This method simulates the natural conditions found deep within the Earth.

- **Chemical Vapor Deposition (CVD)** - This process involves introducing a gas mixture into a vacuum chamber to facilitate diamond growth.

TYPES OF LAB GROWN DIAMONDS

Detail Guide about Different Type of
Lab Grown Diamonds



Simulant Diamonds

Diamond Simulants are objects or materials which resemble some features of natural diamonds.

Types of Simulant Diamonds

■ Diamond Nexus Simulants

With better durability than Cubic Zirconia simulants, and a triple life expectancy due to their sturdy nature.

■ Cubic Zirconia Simulants

These are the cheapest diamond simulants that are generated from reacting zirconium dioxide.

■ Moissanite Lab Grown Gemstones

These gemstones simulants are synthesized from silicon carbide.



Cultured Diamonds

All the ingredients of Cultured diamonds are created from scratch and are created in an environment same as in the diamond mines.

Types of Cultured Diamonds

■ HPHT Diamonds

HPHT Synthetic Diamonds are those diamonds that have been created under 'High Pressure and High Temperature'.

■ CVD Diamonds

CVD diamonds are referred to the diamonds which have been created by Chemical Vapour Decomposition.

Reserve Bank of India (RBI) report

According to an RBI report, the number of bank fraud cases is decreasing, yet the total amount involved is increasing.

- The number of reported fraud cases declined from 36,052 in 2023-24 to 23,879 in 2024-25.
- Conversely, the total amount involved in frauds increased significantly, rising from ₹11,261 crore in 2023-24 to ₹34,771 crore in 2024-25.
- This increase is mainly attributed to the re-examination and re-reporting of 122 large fraud cases, amounting to ₹18,336 crore, following a Supreme Court judgment.
- **Card and internet fraud** - Accounted for 66.8% of the total number of cases.
- **Advance-related frauds** - It represented 33.1% of the total amount involved by value.
- **Private sector banks (PVBs)** - Accounted for 59.3% of the total cases, with the majority involving card or internet fraud.
- **Public sector banks (PSBs)** - These were responsible for 70.7% of the total amount involved, predominantly due to advance-related frauds.

