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## National Marine Fisheries Census 2025 Launched

### Why in News?

The Union Minister of State for Fisheries, Animal Husbandry and Dairying, **Shri George Kurian**, launched the **National Marine Fisheries Census (MFC) 2025** at ICAR-Central Marine Fisheries Research Institute (CMFRI), Kochi.

This marks India's **first fully digitised fisheries census**, representing a major stride towards **data-driven and technology-enabled marine governance**.

### Key Points

#### About:

- ❖ The **National Marine Fisheries Census 2025** is a **45-day nationwide exercise** designed to collect comprehensive data on India's marine fishing sector.
- ❖ It will cover **1.2 million fisher households** across **4,000 marine fishing villages** in **nine coastal States and four Union Territories**.
- ❖ The enumeration will be conducted from **3rd November to 18th December, 2025**.
- ❖ The initiative is coordinated by the **Department of Fisheries (DoF)** under the **Ministry of Fisheries, Animal Husbandry and Dairying**, with **CMFRI** as the nodal agency and the **Fishery Survey of India (FSI)** as the operational partner.

#### Purpose and Objectives:

- ❖ To create a **comprehensive digital database** of marine fishing communities, infrastructure, and socio-economic indicators.
- ❖ To **modernise fisheries management** and improve welfare delivery through verified digital data.
- ❖ To link all fishers with the **National Fisheries Digital Platform (NFDP)** for streamlined access to government schemes.
- ❖ To facilitate better implementation of **Pradhan Mantri Matsya Kisan Samridhi Sah-Yojana (PM-MKSSY)** and **Pradhan Mantri Matsya Sampada Yojana (PMMSY)**.

Digitised and Real-Time Data Collection: For the first time, the Census adopts a fully digital mode, using two dedicated mobile applications developed by CMFRI to ensure accuracy, transparency, and efficiency.

Mobile Application	Core Function	Impact on the Census
VyAS Bharat	Data Capture and Geo-referencing	Used by field staff to collect socio-economic data from 1.2 million fisher households and key statistics. Links each data entry to a specific location through geo-referencing.
VyAS Sutra	Verification and Monitoring	Enables instant validation of field data and provides a centralised platform for live monitoring of the enumeration process across the country.

## LVM3-M5 Launch: ISRO Shoots Off India's Heaviest Communication Satellite 'GSAT-7R'

### Why in News?

India's space capabilities received a major upgrade on **November 2, 2025**, when the **Indian Space Research Organisation (ISRO)** successfully deployed **GSAT-7R**, a next-generation communication satellite for the **Indian Navy**, using its **LVM3-M5** heavy-lift rocket popularly known as '**Bahubali**' from **Sriharikota**.

### Key Points

#### About GSAT-7R

- Digitised and Real-Time Data Collection: For the first time, the Census adopts a fully digital mode, using two dedicated mobile applications developed by CMFRI to ensure accuracy, transparency, and efficiency.
- Fully indigenous, equipped with **multi-band transponders** to support **voice, video, and data relay** across surface, sub-surface, and aerial naval assets.

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- Provides uninterrupted, encrypted connectivity across the entire Indian Ocean Region (IOR).
- Enhances real-time situational awareness, enabling joint coordination between ships, submarines, aircraft, and command centres.
- Acts as a force multiplier in India's maritime domain awareness grid, ensuring secure and resilient communication during operations.

#### About the Launch Vehicle – LVM3-M5 ('Bahubali')

- India's heaviest operational rocket, earlier known as **GSLV Mk-III**.
- Payload Capacity:**
  - Up to 4,000 kg to **Geosynchronous Transfer Orbit (GTO)**.
  - Up to 8,000 kg to **Low Earth Orbit (LEO)**.
- Configuration:** A three-stage launch system comprising:
  - S200 solid strap-on boosters for liftoff thrust.
  - L110 liquid core stage powered by twin **Vikas engines**.
  - C25 cryogenic upper stage — developed entirely in India.
- Serves as the **baseline launcher for the Gaganyaan Human Spaceflight Mission**, where its modified version is called **Human-Rated LVM3 (HRLV)**.
- Nickname 'Bahubali' reflects its immense lifting strength and consistent reliability across missions.

#### Development Background

- The M5 mission is the **fifth successful flight** in the LVM3 series, continuing ISRO's flawless streak with this vehicle.
- Follows earlier satellites like **GSAT-7 (Rukmini)** for the Navy and **GSAT-7A** for the Air Force, extending India's defence communication capabilities.

## Tri-Services Exercise 'Trishul 2025'

#### Why in News

The Tri-Services Exercise 'Trishul 2025' will commence on **November 3, 2025**, led by the **Indian Navy**, integrating

Army, Air Force, and maritime elements across the **Sir Creek** and desert sectors of Gujarat and Rajasthan, extending into the **northern Arabian Sea**.

#### Key Details

- The large-scale exercise is **led by the Indian Navy**, coordinated by the **Western Naval Command**, with active participation from the **Army's Southern Command**, the **Navy's Western Command**, and the **IAF's South Western Command**.
- Aim of the Exercise:**
  - Validate joint operational procedures.
  - Enhance interoperability among the three services.
  - Strengthen networked command integration for multi-domain operations.

#### Sir Creek

- Location:** Marshy estuarine area between **Kutch (Gujarat, India)** and **Sindh (Pakistan)**, where the **Rann of Kutch** meets the **Arabian Sea**.
- Length:** Approximately **96 km** long tidal creek.
- Dispute:** India–Pakistan boundary dispute — India considers the **mid-channel** as the border, while Pakistan claims the **eastern bank**.
- Strategic Importance:**
  - Serves as a **sensitive coastal security zone** and **strategic maritime boundary**.
  - Crucial for **naval and coastal surveillance**, especially under **Western Naval Command**.
  - Rich in **marine resources**; potential **Exclusive Economic Zone (EEZ)** implications.
  - Environmentally significant — part of the **Indus Delta ecosystem**.

## International Day to End Impunity for Crimes Against Journalists (IDEI) 2025

#### Why in News?

On **2 November 2025**, the annual **International Day to End Impunity for Crimes Against Journalists** is being observed under the auspices of the UNESCO with a special

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focus on “AI-facilitated Gender-Based Violence against Women Journalists.” The campaign this year draws attention to how artificial intelligence enables new forms of harassment and silencing of women in media.

### Key Points

- 💡 The Day was established by the **United Nations General Assembly** in **2013** in response to the **killing of French journalists Ghislaine Dupont and Claude Verlon in Mali**.
- 💡 **UNESCO's Campaign:** The organisation is rolling out its “CTRL + ALT + MUTE” awareness initiative to highlight vulnerabilities faced by women journalists and to mobilise action against impunity and digital violence.
- 💡 **2025 Theme:** The focus on **AI-enabled gender violence** realises the fact that online abuse — including deepfakes, doxxing, and orchestrated trolling has become a significant threat to women journalists' safety and freedom.
- 💡 **Global Data:** Between 2006 and 2024, more than **1,700 journalists** were killed globally; roughly **nine out of ten** such killings have not resulted in justice.

### United Nations Educational, Scientific and Cultural Organization (UNESCO)

- 💡 **Founded:** 1945 (Constitution came into force in 1946)
- 💡 **Headquarters:** Paris, France
- 💡 **Mandate:** To promote international cooperation in education, the sciences, culture, and communication in order to foster peace, sustainable development, and human rights worldwide.
- 💡 **Key Functions**
  - ❖ Sets global norms and standards in its fields of expertise.
  - ❖ Develops tools and programmes for international cooperation.
  - ❖ Produces knowledge and supports evidence-based policymaking for member states.
  - ❖ Maintains networks of sites and institutions, such as World Heritage Sites, Biosphere Reserves, and Creative Cities.

## India Women Win 2025 World Cup

### Why in News?

India's women's cricket team created history by clinching their **first-ever ICC Women's ODI World Cup** title after **defeating South Africa** in the final.

### Key Details

#### 💡 India's Journey:

- ❖ India had previously reached the **finals in 2005 and 2017**, losing to Australia and England, respectively.
- ❖ India thus became the **fourth team** to win the Women's World Cup (under the captaincy of **Harmanpreet Kaur**), after **Australia, England, and New Zealand**.

#### 💡 About the Tournament:

- ❖ The 2025 tournament was the **13<sup>th</sup> edition** of the Women's Cricket World Cup. It is held after a gap of 4 years.
- ❖ India and Sri Lanka hosted a total of 8 teams.

#### ❖ Winners of last 4 editions:

- ⌚ **2013:** Australia
- ⌚ **2017:** England
- ⌚ **2022:** Australia
- ⌚ **2025:** India

#### 💡 Key Highlights of the 2025 Final:

- ❖ **Coach (India):** Amol Muzumdar
- ❖ **Captain (South Africa):** Laura Wolvaardt
- ❖ **Player of the Match:** Shafali Verma
- ❖ **Player of the Tournament:** Deepti Sharma

#### 💡 Awards:

- ❖ ICC declared a prize-money kitty of **USD 4.48 million** (≈ ₹ 39 crore) for the champions.
- ❖ **The Board of Control for Cricket in India (BCCI)** announced a cash reward of **₹ 51 crore** for the Indian women's team after their win.

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## 137 Indian Institutions in QS Rankings Asia 2026

### Why in News?

Prime Minister Narendra Modi highlighted the record increase in Indian universities in the [QS rankings](#), reiterating the government's commitment to quality education, research, and innovation.

- 💡 **Quacquarelli Symonds (QS)** is a London-based global higher education analyst best known for its widely recognised [QS World University Rankings](#).

### Key Points

- 💡 **About:** The QS World University Rankings: Asia 2026 reveals that **no Indian university is in the top 50**, but **India added 137 universities**, marking a 1,125% increase in representation since 2016.
- ✖ **India now has 294 universities in the QS Asia Rankings**, making it the **second highest after China**, which added 261 universities, bringing its total to 395.
- ✖ Indian institutions continue to perform strongly in **academic reputation, research productivity, and employer reputation**, but lag behind in **internationalisation and research visibility**.

#### Top Performers in Asia:

- ✖ **University of Hong Kong**: Ranked 1<sup>st</sup>.
- ✖ **Peking University**: Ranked 2<sup>nd</sup>.
- ✖ **National University of Singapore (NUS)** and **Nanyang Technological University (NTU)**: Ranked 3<sup>rd</sup> (tied).

#### Top Indian Institutions:

- ✖ **IIT Delhi**: 59<sup>th</sup> (down from 44<sup>th</sup> in 2025).
- ✖ **IIT Bombay**: 71<sup>st</sup> (down from 48<sup>th</sup> in 2025).
- ✖ **IISc Bengaluru**: 64<sup>th</sup> (down from 62<sup>nd</sup> in 2025).
- ✖ **IIT Madras**: 70<sup>th</sup> (down from 56<sup>th</sup> in 2025).
- ✖ **IIT Kanpur**: 77<sup>th</sup> (down from 67<sup>th</sup> in 2025).
- ✖ **Delhi University**: 95<sup>th</sup> (down from 81<sup>st</sup> in 2025).

#### Private Institutions' Growth:

- ✖ **Chandigarh University** improved to 109<sup>th</sup> (from 120<sup>th</sup> in 2025).

- ✖ BITS Pilani, Shoolini University, and O.P. Jindal Global University also achieved their highest-ever rankings.

## Amul Ranked 1<sup>st</sup> Among World's Top Cooperatives

### Why in News?

Union Home Minister and Minister of Cooperation, Amit Shah, congratulated **Amul** and **Indian Farmers Fertiliser Cooperative Limited (IFFCO)** for securing the 1<sup>st</sup> and 2<sup>nd</sup> ranks among the top ten cooperatives globally, according to the **ICA World Cooperative Monitor 2025 report**.

- 💡 This milestone was recognized during the **ICA CM50 Conference** held in Doha, Qatar.



### Key Points

- 💡 The **International Cooperative Alliance (ICA)**, in collaboration with the **European Research Institute on Cooperative and Social Enterprises (EURICSE)**, released the **2025 edition of the World Cooperative Monitor (WCM)**, marking the [UN International Year of Cooperatives](#).
- 💡 The **13<sup>th</sup> edition of the WCM** provides a comprehensive overview of the global **cooperative sector**, showcasing cooperatives' contributions to sustainable, inclusive, and resilient economies worldwide.

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💡 The **2025 report** features the **Top 300 cooperatives**, highlighting their **economic impact** across sectors like **agriculture, finance, health, energy, and education**, with a combined turnover of **USD 2.79 trillion** in 2023.

- ❖ **By turnover relative to GDP per capita**, India's **Amul** and **IFFCO** top the global list, highlighting the strength of cooperatives in **emerging economies**.
- ❖ This ranking underscores the **strength and potential** of India's **cooperative sector** in driving economic empowerment and growth.

#### About Amul (Gujarat Cooperative Milk Marketing Federation Ltd)

- 💡 Amul was established in **1946** as the **Kaira District Co-operative Milk Producers' Union Limited** in **Anand, Gujarat**, founded by **Tribhuvandas Patel** with support from **Morarji Desai** and **Sardar Vallabhbhai Patel**.
- 💡 In **1950**, the cooperative launched the **Amul brand**, and it has since grown to become India's largest **food product marketing organisation** with an annual turnover of **USD 7.3 billion** (2023-24).

#### About IFFCO (Indian Farmers Fertiliser Cooperative)

- 💡 IFFCO was founded in **1967** and is headquartered in **New Delhi**. It manufactures and markets **fertilisers** to Indian farmers.
- 💡 As one of the world's largest cooperatives, IFFCO operates with **35,000 member cooperatives**, reaching over **50 million farmers** across India.

## Birth Anniversary of Guru Nanak Dev Ji

### Why in News?

President Droupadi Murmu extended her greetings on the occasion of **Guru Nanak Jayanti**, urging all citizens to embrace Guru Nanak Dev Ji's teachings of **truth, justice, compassion**, and human equality to build a better society.

### Key Points

- 💡 **About:** Guru Nanak (1469-1539) was born in **1469** in **Talwandi** village, near Lahore in Pakistan.
  - ❖ He was the **first of the 10 Sikh gurus**.
  - ❖ He worked as a **clerk** in Sultanpur in the **Lodi administration**.
- 💡 **Spiritual Revelation:** Around the **age of 30**, Guru Nanak had a profound **spiritual experience** and a direct encounter with **God** near a river **Kali Bein**, leading him to declare, "**There is neither Hindu nor Muslim.**"
- 💡 **Philosophy:** He was a proponent of the **Nirguna School** of the **Bhakti movement** and was influenced by **Kabir Das**. He emphasised spiritual practices like "**Nam Japna**" i.e., the repetition of God's name to experience God's presence.
- 💡 **Teachings and Travels:** He travelled extensively across **India and the Middle East**, spreading his message with his Muslim companion, **Mardana**.
  - ❖ The **hymns** composed by him were incorporated in the **Adi Granth** by the **fifth Sikh Guru Arjan** in **1604**.
- 💡 **Community and Legacy:** He settled in **Kartarpur** and established the **first Sikh community** where disciples lived and worshipped together.
  - ❖ He appointed **Guru Angad (Bhai Lehna)** as his **successor** to lead the community.

#### Sikh Gurus and Their Major Contributions

Guru	Period	Key Contributions
Guru Nanak Dev	1469-1539	Founder of Sikhism; started <b>GURU KA LANGAR</b> ; contemporary of <b>Babur</b> ; <b>550<sup>th</sup></b> birth anniversary commemorated with <b>Kartarpur corridor</b> .
Guru Angad	1504-1552	Invented <b>Guru-Mukhi script</b> ; popularised <b>GURU KA LANGAR</b> .
Guru Amar Das	1479-1574	Introduced <b>Anand Karaj Marriage</b> ; abolished <b>Sati</b> and <b>Purdah</b> ; contemporary of <b>Akbar</b> .

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Guru Ram Das	1534-1581	Founded Amritsar in 1577; initiated construction of <b>Golden Temple</b> .
Guru Arjun Dev	1563-1606	Composed <b>Adi Granth</b> in 1604; completed <b>Golden Temple</b> ; executed by <b>Jahangir</b> .
Guru Hargobind	1594-1644	Transformed Sikhs into a <b>military community</b> ; established <b>Akal Takht</b> ; waged wars against <b>Jahangir and Shah Jahan</b> .
Guru Har Rai	1630-1661	Promoted peace with <b>Aurangzeb</b> ; focused on missionary work.
Guru Har Krishan	1656-1664	Youngest guru; summoned by Aurangzeb for anti-Islamic blasphemy.
Guru Teg Bahadur	1621-1675	Founded <b>Anandpur Sahib</b> , Beheaded on the orders of Mughal Emperor <b>Aurangzeb in 1675</b> .
Guru Gobind Singh	1666-1708	Founded Khalsa in 1699; introduced <b>Pahul</b> (Baptism ceremony); <b>last guru</b> to pass Guruship to <b>Guru Granth Sahib</b> .

## Maldives Enforces World's First Generational Smoking Ban

### Why in News?

The **Maldives** has officially become the **first country in the world** to enforce a **generational ban on smoking**, prohibiting anyone **born on or after 1st January 2009** from ever purchasing, possessing, or using tobacco products.

### Key Points

#### 💡 The generational Ban:

- ❖ Applies to **all tobacco forms**, including cigarettes, cigars, and smokeless tobacco.
- ❖ **Retailers must verify age** before sale to prevent violations.

- ❖ Aims to **phase out tobacco use within one generation**.
- ❖ The Maldives already has a **complete ban on vaping and e-cigarettes**, regardless of age.
- 💡 **New Zealand** was the first to enact such law (born after 1<sup>st</sup> January, 2009), but they **repealed it** in 2023 before it took effect.
- 💡 **Health Perspective:**
  - ❖ Tobacco kills nearly **7 million people annually** (WHO).
  - ❖ The move aligns with the **WHO Framework Convention on Tobacco Control (FCTC)** to curb youth initiation and protect future generations.

### WHO Framework Convention on Tobacco Control (FCTC)

- 💡 It is the **world's first global public health treaty**. Over **180 parties** (including **India**) have ratified the convention. It was adopted in 2003 and enforced in 2005.
- 💡 **Objective:** To protect present and future generations from the devastating health, social, environmental, and economic consequences of tobacco consumption and exposure to tobacco smoke.
- 💡 **Key Provisions:**
  - ❖ Ban on **tobacco advertising, promotion, and sponsorship**.
  - ❖ **Health warnings** covering at least 30–50% of packaging.
  - ❖ Measures to **reduce tobacco demand and supply**, including taxation and public smoking bans.
  - ❖ **Regulation of illicit trade and protection from industry interference** in policy-making.

## First Indian Woman to Race a Ferrari Internationally

### Why in News?

Diana Pundole has made history by becoming the **first Indian woman** to race a **Ferrari 296 Challenge** car on international circuits.

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### Key Points

- 💡 Diana Pundole is competing in the **Ferrari 296 Challenge**, a prestigious international one-make racing series featuring the brand's latest high-performance race car.
- 💡 Her participation across **Middle Eastern circuits** — including **Dubai Autodrome** and **Yas Marina, Abu Dhabi** — makes her the **first Indian woman to officially race a Ferrari at the global level**.
- 💡 **About the Ferrari 296 Challenge:**
  - ❖ The Ferrari 296 Challenge is the **latest model in Ferrari's Challenge racing series**, replacing the 488 Challenge Evo.
  - ❖ The series runs under Ferrari's global **one-make championship format**, featuring professional and gentleman racers from around the world.

## Operation Chhatri

### Why in News?

Security forces have launched **Operation Chhatri**, a major anti-terror operation in Kishtwar district of Jammu & Kashmir.

### Key Points

- 💡 **About the Operation:**
  - ❖ The operation began in the **early hours of 5<sup>th</sup> November, 2025**, in the **Chhatri area of Kishtwar**.
  - ❖ It is being jointly conducted by the **Indian Army's White Knight Corps** and the **Jammu & Kashmir Police**.
- 💡 **Strategic Importance of Kishtwar:**
  - ❖ Located in the **Chenab Valley**, Kishtwar lies between **South Kashmir** and the **Pir Panjal ranges**, making it strategically significant for counter-insurgency operations.

- ❖ The area had remained largely peaceful in recent years, but recent reports suggest **renewed militant infiltration attempts**.



## Indian Navy to Commission 'Ikshak'

### Why in News?

The Indian Navy will commission **INS Ikshak**, the third vessel of the **Survey Vessel (Large) [SVL] class**, at Naval Base Kochi.

### Key Points

- 💡 **About the Vessel:**
  - ❖ The name Ikshak means **“Guide,”** which perfectly matches the ship's job of **accurately mapping and navigating the seas**.
  - ❖ It is the **first SVL-class vessel** to be based at the **Southern Naval Command (Kochi)**.
  - ❖ Built by **Garden Reach Shipbuilders and Engineers (GRSE) Ltd., Kolkata**, the vessel features over **80% indigenous content**.

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### 💡 Role and Functions:

- ❖ Designed for coastal and deep-water hydrographic surveys of ports, harbours, and navigational channels.
- ❖ The vessel's survey data will aid safe maritime navigation, port management, and marine resource assessment.
- ❖ It enhances India's capability to produce accurate nautical charts, supporting both civil and military maritime operations.

#### Survey Vessel (Large) [SVL] Class

- 💡 The Survey Vessel (Large) [SVL] class project was launched to modernise India's hydrographic survey fleet and replace ageing Sandhayak-class vessels.
- 💡 A total of four ships are part of this class — INS Sandhayak, INS Nirdeshak, INS Ikshak, and INS Sanshodhak (under construction).
- 💡 These vessels are being built by Garden Reach Shipbuilders and Engineers (GRSE), Kolkata under the Aatmanirbhar Bharat initiative.
- 💡 They are designed to conduct hydrographic, oceanographic, and cartographic surveys to produce navigational charts and support both civil and defence maritime operations.



## 150 Years of National Song Vande Mataram

### Why in News?

Prime Minister Narendra Modi inaugurated the year-long commemoration of 150 years of the National Song "Vande Mataram" on 7<sup>th</sup> November 2025.

### Key Points

- 💡 **Historical Background:** Vande Mataram was written by Bankimchandra Chatterji on Akshaya Navami, 7<sup>th</sup> November 1875.
- ❖ It first appeared in the literary journal **Bangadarshan** as part of his iconic novel **Anandamath**.
- 💡 **Adoption:** Declared India's National Song; the first two stanzas were adopted by the **Constituent Assembly** on 24<sup>th</sup> January 1950.
- 💡 **Language:** Originally written in Sanskritised Bengali.
- 💡 **Music Composition:** Set to tune by Rabindra Nath Tagore, first sung at the 1896 Indian National Congress session.
- ❖ The song invokes **Bharat Mata (Mother India)** as the embodiment of strength, prosperity, and divinity, inspiring generations during India's freedom struggle.

## Special Campaign 5.0

### Why in News?

The Department of Health Research (DHR) and the Indian Council of Medical Research (ICMR) have successfully concluded Special Campaign 5.0.

### Key Points

- 💡 **Special Campaign 5.0:**
  - ❖ The Special Campaign 5.0 is a nationwide initiative of the Government of India to ensure cleanliness, efficient records management, and timely resolution of pending matters, including PMO and MP references and public grievances.
  - ❖ The DHR and ICMR, along with 27 institutes across India, actively participated in the campaign.
  - ❖ **Major Achievements:**
    - ⌚ 100% target achievement in resolving public grievances, PG appeals, and PMO references during the campaign period.
    - ⌚ Conducted comprehensive cleanliness drives in all affiliated offices and field institutes.

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# National Cancer Awareness Day 2025

## Why in News?

India observes National Cancer Awareness Day on 7<sup>th</sup> November 2025, focusing on prevention, early detection, and awareness of cancer.

## Key Points

### 💡 Date and Background:

- ❖ The day coincides with the **birth anniversary of Marie Curie (7<sup>th</sup> November 1867)**, whose groundbreaking research on **radioactivity** revolutionized cancer diagnosis and treatment.
- ❖ It was **first announced in 2014** by the **Union Ministry of Health and Family Welfare** to promote awareness about cancer prevention and screening.

### 💡 Purpose and Significance:

- ❖ Aims to educate citizens on the **importance of lifestyle modification, regular health check-ups, and timely medical intervention**.
- ❖ Cancer cases in India are rising, with over **14 lakh new cases reported each year**, many detected at advanced stages.

### 💡 Theme 2025:

Though India's campaign has a domestic focus, it aligns with the **global World Cancer Day theme (2025–27): "United by Unique"**, highlighting personalized care and inclusivity in cancer treatment.

#### Maria Skłodowska-Curie (1867–1934)

- 💡 **Nationality:** Polish-born, later became a French citizen
- 💡 **Major Discoveries:**
  - ❖ Discovered the radioactive elements **Radium (Ra)** and **Polonium (Po)**.
  - ❖ Pioneered the concept and medical use of **radioactivity** in cancer treatment (radiotherapy)
- 💡 **Awards and Honours:**
  - ❖ First woman to win a Nobel Prize
  - ❖ Only person to receive two Nobel Prizes in two different sciences — **Physics (1903)** and **Chemistry (1911)**

💡 **Scientific Impact:** Her research laid the foundation for **nuclear medicine** and **radiation therapy** used in cancer diagnosis and treatment today.

# Google's Project Suncatcher

## Why in News?

Tech giant **Google** has announced **Project Suncatcher**, an ambitious research initiative to develop **AI-powered data centres in space**.

## Key Points

### 💡 About Project Suncatcher:

- ❖ Project Suncatcher envisions **solar-powered satellites** hosting **AI data centres** in space to reduce Earth's energy and water consumption used for cooling terrestrial facilities.
- ❖ These orbiting data centres will use **free-space optical links** to transfer data at speeds of **tens of terabits per second**, forming a **distributed network** similar to satellite internet constellations like *Starlink*.
- ❖ Google plans to launch **two prototype satellites by early 2027** to test its space-based TPU (Tensor Processing Unit) hardware.

### 💡 Rationale for Space-Based AI Centres:

- ❖ **AI data centres** consume enormous electricity and water for cooling — a growing environmental concern as AI adoption increases globally.
- ❖ In space, **solar panels are up to 8 times more efficient** than on Earth, providing a continuous and clean energy supply.

### 💡 How It Works:

- ❖ The satellites will rely on **solar energy** and **optical data transmission** to function as a cohesive high-performance computing network.
- ❖ **TPUs (Trillium v6e)** are being tested for radiation resistance and performance in extreme conditions.

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## Emissions Gap Report 2025

### Why in News?

The United Nations Environment Programme (UNEP) released its **Emissions Gap Report 2025**, titled “*Off Target*”, warning that current climate pledges under the Paris Agreement are insufficient to meet the 1.5°C target.

### Key Points

#### Projected Warming Levels:

- ❖ Under the current policies, the world is projected to warm by approximately **2.8°C by 2100**.
- ❖ If all **Nationally Determined Contributions (NDCs)** are fully implemented, the projected warming could be reduced to around **2.3–2.5°C** by the end of the century.
- ❖ Only a **marginal improvement** from last year's (2024) estimate of **2.6–2.8°C**, showing limited new ambition.

#### Influencing Factors:

- ❖ **Methodological adjustments** improved projections by 0.1°C.
- ❖ **US withdrawal from the Paris Agreement** expected to offset the same 0.1°C gain.

#### Reduction Targets by 2035:

- ❖ To limit global warming to **2°C**, global greenhouse gas emissions must decline by **35% below 2019 levels by 2035**.
- ❖ To achieve the more ambitious **1.5°C target**, emissions need to fall by **55% below 2019 levels** within the same period.
- ❖ However, **UNEP warns that a temporary overshoot of the 1.5°C threshold is very likely within the next decade**, underscoring the urgency for deeper and faster emission cuts.

#### Positive Indicators:

- ❖ Projected temperature rise has dropped from **3–3.5°C (2015)** to around **2.5°C (2025)**, reflecting progress since the **Paris Agreement**.

- ❖ **Solar and wind** technologies are rapidly scaling, cutting deployment costs globally.

### United Nations Environment Programme (UNEP)

💡 Established in **1972**, following the **UN Conference on the Human Environment (Stockholm)**.

💡 **Headquarters:** Nairobi, Kenya

💡 Acts as the **leading global environmental authority**, coordinating international environmental efforts and assisting nations in implementing sustainable policies.

#### Flagship Reports:

- ❖ Emissions Gap Report
- ❖ Adaptation Gap Report
- ❖ Global Environment Outlook (GEO)

## State of Food and Agriculture (SOFA) 2025 Report

### Why in News?

The **Food and Agriculture Organization (FAO)** has released the State of Food and Agriculture (SOFA) 2025 report titled “**Addressing Land Degradation Across Landholding Scales**”.

### Key Points

#### Key Findings:

- ❖ **Global Cropland Decline:** Around **20% of global croplands** show declining productivity due to soil erosion, nutrient depletion, and loss of organic carbon.
- ❖ **Regional Impact:** Asia and Africa are the **most affected**, with severe yield gaps (up to 70% below potential levels) in South Asia and sub-Saharan Africa.
- ❖ **India's Status:** India recorded **one of the highest yield gaps globally**, attributed to land misuse and declining soil fertility.
- ❖ **Key Drivers:** Deforestation (90% of forest loss), monocropping, excessive fertilizer use, unsustainable irrigation, and poor soil management.

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💡 **Land Degradation:**

- ❖ **Land degradation** is defined as the long-term decline in land's ability to provide essential ecosystem services, caused by natural processes and human actions like **deforestation**, overgrazing, and unsustainable irrigation.

💡 **Land Degradation Neutrality (LDN):**

- ❖ It refers to a global goal aimed at ensuring that the **amount and quality of land resources remain stable or improve over time**.
- ❖ The concept was adopted under the **United Nations Convention to Combat Desertification (UNCCD)** in **2015** as part of the **Sustainable Development Goal (SDG) 15.3**.
- ❖ **Land Degradation Neutrality (LDN) Hierarchy:** Avoid > Reduce > Reverse land degradation- a core FAO principle to restore ecological balance.

**Food and Agriculture Organization (FAO)**

- 💡 The **Food and Agriculture Organization (FAO)** was **established in 1945**.
- 💡 It is **headquartered in Rome, Italy**.
- 💡 It functions as a **specialized agency of the United Nations**.
- 💡 It has **194 member countries**, including the **European Union**.
- 💡 It aims to **end hunger, improve nutrition, ensure food security, and promote sustainable agriculture**.
- 💡 **Flagship Reports:**
  - ❖ State of Food and Agriculture (SOFA)
  - ❖ State of Food Security and Nutrition in the World (SOFI)
  - ❖ State of World Fisheries and Aquaculture (SOFIA)
  - ❖ State of the World's Forests (SOFO)
- 💡 **India and FAO:** India is a founding member; FAO supports India's National Food Security Mission, Soil Health Card Scheme, and Sustainable Land Management initiatives.

## Exercise Malabar 2025

**Why in News?**

The Indian Naval Ship (INS) Sahyadri has reached Guam, Northern Pacific, to participate in the multilateral naval exercise Malabar 2025.

**Key Points**

💡 **Exercise Malabar:**

- ❖ It is a **multilateral naval drill** involving **India, the United States, Japan, and Australia** under the **QUAD** framework.
- ❖ Aims to **enhance joint maritime coordination, interoperability, and operational readiness** in the **Indo-Pacific**.
- ❖ Participation of **INS Sahyadri** reflects India's **Aatmanirbhar Bharat** push and **naval self-reliance**.
- ❖ **2025 Venue-Guam:** The choice of Guam underlines India's growing engagement in the Pacific and alignment with Quad's strategic goals.
  - 💡 **Guam** is an **unincorporated U.S. territory** in the Western Pacific Ocean, located between the **Philippines and Hawaii**.
  - 💡 It hosts key American military bases such as **Andersen Air Force Base** and **Naval Base Guam**, making it a **strategic hub** for Indo-Pacific security operations.

💡 **INS Sahyadri:**

- ❖ It is a **Shivalik-class (Project 17) guided missile stealth frigate**, commissioned in **2012** as part of **India's first stealth frigate series**.
- ❖ Built by **Mazagon Dock Shipbuilders Limited (MDL)**, Mumbai, it was designed for **multi-role operations including anti-air, anti-surface, and anti-submarine warfare**.

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## National Legal Services Day 2025

### Why in News?

9<sup>th</sup> November is observed as **National Legal Services Day**, marking the enforcement of the [Legal Services Authorities Act, 1987](#), which came into effect in 1995 to ensure free and fair access to justice for all citizens, especially the underprivileged.

### Key Points

#### 💡 National Legal Services Day:

- ❖ It is celebrated annually on 9 November, established by the National Legal Services Authority (NALSA) **under the Legal Services Authorities Act, 1987**.
- ❖ It is celebrated to **promote awareness of citizens' legal rights**, ensure access to justice for all, and uphold the principle of justice for the weaker sections of society.

#### 💡 Legal Services Framework:

- ❖ Established under the **Legal Services Authorities Act, 1987**, the structure includes:
  - ❖ **NALSA** (National Legal Services Authority) – headed by the [Chief Justice of India](#).
  - ❖ **SLSAs** (State Legal Services Authorities) – headed by **Chief Justices of High Courts**.
  - ❖ **DLSAs** (District Legal Services Authorities) – headed by **District Judges**.
- ❖ Provides free legal representation, counselling, and aid to the **economically and socially weaker sections**.
- ❖ Funding is shared through the **National, State, and District Legal Aid Funds**.

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💡 To strengthen dispute resolution and access mechanisms, several complementary institutions and schemes such as **Lok Adalats**, **Legal Aid Defence Counsel System (LADCS)**, **Fast Track and Special Courts**, and Grassroots Justice Initiatives like **Gram Nyayalayas** and **Nari Adalats** operate under this framework.

## National Urban Conclave 2025

### Why in News?

Union Minister for Housing and Urban Affairs Manohar Lal inaugurated the **National Urban Conclave 2025** at **Yashobhoomi, New Delhi** to accelerate India's urban transformation.

💡 The two-day conclave, themed "**Sustainable Urban Development and Governance**", aims to deliberate on urban innovation, investment, and governance.

### Key Initiatives Launched

💡 **Mission-Mode Dumpsite Remediation (DRAP):**

- ❖ DRAP is a **year-long national initiative** to **fast-track the clearance of legacy waste dumpsites** and reclaim valuable urban land by September 2026.
- ❖ It **focus on 214 high-impact landfill sites across 202 Urban Local Bodies (ULBs)** containing **8.8 crore tonnes (80%) of India's legacy waste**.
- ❖ Its Implementation follows the **5P framework**- Political leadership, Public finance, Public advocacy, Project management, and Partnerships.
- ❖ DRAP also includes **real-time monitoring** through a **dedicated national portal** for progress tracking and transparency.

💡 **Urban Invest Window (UiWIN):**

- ❖ UiWIN, anchored by **HUDCO**, is a **one-stop investment facilitation platform** for urban infrastructure.
- ❖ It aims to **attract private and multilateral funding** (e.g., World Bank, ADB) for long-term, concessional financing of projects in waste management, mobility, water, sewerage, and climate-resilient infrastructure.

💡 **Swachh Bharat Mission – Knowledge Management Unit (KMU):** A dedicated knowledge and capacity-building platform hosted by NIUA to strengthen institutional learning under SBM-Urban.

💡 **AMRUT Anthem "Jal Hi Janani":** Promotes water conservation awareness under Atal Mission for Rejuvenation and Urban Transformation (AMRUT).

## India Joins Tropical Forests Fund as Observer

### Why in News?

India has joined the **Brazil-led Tropical Forests Forever Facility (TFFF)** as an **observer**, reaffirming its commitment to multilateral climate action under the **Paris Agreement**, which marks its **10<sup>th</sup> anniversary** this year.

### Key Points

💡 **About Tropical Forests Forever Facility (TFFF):**

- ❖ It was launched by Brazil in November 2025 at **COP30** in Belém, Brazil to reward countries for conserving and restoring **tropical forests** through **financial incentives**.
- ❖ It seeks to **mobilise USD 125 billion via public and private investment**, distributing returns to nations based on measurable success in forest protection and expansion.
- ❖ The initiative aims to build a **results-based global finance model for forest conservation and climate resilience**, strengthening the role of tropical nations in the global climate agenda.

💡 **COP30 Climate Change Conference:**

- ❖ COP30, the 30<sup>th</sup> session of the **UNFCCC Conference of the Parties**, is being held in **Belém, Brazil, from 10<sup>th</sup> to 21<sup>st</sup> November, 2025**.
- ❖ It marks the **10<sup>th</sup> anniversary** of the Paris Agreement (2015–2025) and focuses on implementing commitments made under it.
- ❖ The agenda is to **review progress** on Paris goals, push for updated and ambitious NDCs

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(Nationally Determined Contributions), and ensure greater financing and technology transfer for climate adaptation and mitigation.

❖ **Six Pillars of Action:**

- ❖ **Mitigation:** Reducing greenhouse gas emissions.
- ❖ **Adaptation:** Building resilience to climate impacts.
- ❖ **Finance:** Mobilising public and private climate funds.
- ❖ **Technology:** Innovation and clean tech transfer.
- ❖ **Capacity-Building:** Empowering local actors and systems.
- ❖ **Means of Implementation:** Integrating all efforts into practical, on-ground change.

**India's Climate Progress**

- 💡 India achieved a **36% reduction in emission intensity** between **2005 and 2020**, surpassing its initial **NDC goals**.
- 💡 It has installed over **200 GW of renewable energy capacity**, ranking **third globally**, with **non-fossil fuel sources exceeding 50%** of total power capacity.
- 💡 India's **forest and tree cover** now spans **25.17%** of its area, creating an **additional carbon sink of 2.29 billion tonnes of CO<sub>2</sub> equivalent** between **2005 and 2021**.

💡 Globally, India leads key green initiatives such as the **International Solar Alliance (ISA)** with France (2015), and domestic efforts like the **National Hydrogen Mission** and **Biofuel Programme**, advancing its clean energy transition.

## 18<sup>th</sup> Urban Mobility India (UMI)

### Why in News?

The 18<sup>th</sup> Urban Mobility India (UMI) Conference & Exhibition 2025 concluded in **Gurugram, Haryana**, highlighting innovations in sustainable urban transport.

### Key Points

💡 **Urban Mobility India (UMI) Conference:**

- ❖ It has been organised annually since **2008** under the National Urban Transport Policy (NUTP), **Ministry of Housing and Urban Affairs**.
- ❖ It aims to **promote sustainable urban mobility** through knowledge sharing, capacity building, and policy dialogue.

💡 **About the 18<sup>th</sup> Edition:**

- ❖ It was organised in **Gurugram, Haryana** with the theme of "**Urban Development and Mobility Nexus**" focusing on cleaner transport, innovative financing, and inclusivity in public transit.

❖ **Award Winners:**

Category	Winner	Organisation
<b>Best Public Transport System</b>	Chennai	Metropolitan Transport Corporation (Chennai) Ltd.
<b>Best Non-Motorized Transport System</b>	Udaipur	Udaipur Smart City Ltd.
<b>Most Innovative Financing Mechanism</b>	Pimpri Chinchwad	Pimpri Chinchwad Municipal Corporation
<b>Best Green Transport Initiative</b>	Hyderabad	Telangana Renewable Energy Development Corporation Ltd.
<b>Best Multimodal Integration (Metro Rail)</b>	Chennai	Chennai Metro Rail Ltd.
<b>Best Passenger Services (Metro Rail)</b>	Delhi	Delhi Metro Rail Corporation Ltd.
Special Award – Traffic Management System	Aizawl	Town & Country Planning Dept., Mizoram

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## National Education Day 2025

### Why in News?

India celebrates **National Education Day** on **11<sup>th</sup> November**, to mark the **137th birth anniversary of Maulana Abul Kalam Azad**, the first Education Minister of independent India and a key architect of the nation's modern education system.

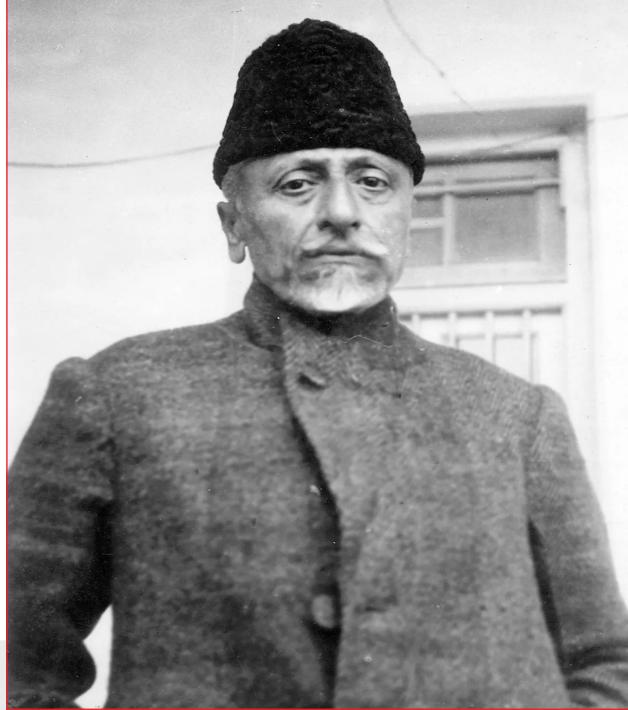
### Key Points

#### 💡 National Education Day:

- ❖ It is observed every year on **11<sup>th</sup> November** to commemorate the birth anniversary of **Maulana Abul Kalam Azad (1888–1958)**
- ❖ The observance was first announced in **2008** by the then **Ministry of Human Resource Development** (now the **Ministry of Education**).

#### 💡 Maulana Abul Kalam Azad:

- ❖ He was born on **11<sup>th</sup> November 1888**, in Mecca and later settled in **Calcutta (Kolkata)**, where he emerged as a leading scholar and nationalist.
- ❖ He served as **India's first Minister of Education (1947–1958)** and introduced major reforms to strengthen scientific, technical, and cultural education.
- ❖ He was instrumental in establishing the **University Grants Commission (UGC)**, **Indian Institutes of Technology (IITs)**, and **Indian Institute of Science (IISc)**, as well as cultural bodies like the **Sahitya Akademi**, **Lalit Kala Akademi**, and **Sangeet Natak Akademi**.
- ❖ In recognition of his immense contributions, he was **posthumously awarded the Bharat Ratna in 1992**.



## India's First MWh-Scale Vanadium Redox Flow Battery (VRFB)

### Why in News?

Union Minister for Power and Housing & Urban Affairs inaugurated **India's first megawatt-hour (MWh) scale Vanadium Redox Flow Battery (VRFB)** in Greater Noida.

### Key Points

#### 💡 About:

- ❖ The 3 MWh **Vanadium Redox Flow Battery (VRFB)** is developed by **National Thermal Power Corporation (NTPC)**'s NETRA (National Energy Technology Research Alliance)
- ❖ It aims to demonstrate **Long Duration Energy Storage (LDES)** technology for large-scale renewable energy integration and grid stability.

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💡 **Vanadium Redox Flow Battery (VRFB):**

- ❖ It uses **vanadium ions in different oxidation states** to store and discharge electricity efficiently.
- ❖ The system offers long operational life, and excellent scalability compared to lithium-ion batteries.
- ❖ Non-flammable electrolytes make it safer for large-scale energy storage applications.
- ❖ It is well-suited for grid-scale **renewable energy** storage, microgrids, and peak-load management.
- ❖ VRFBs are increasingly viewed as a sustainable alternative for integrating intermittent renewable sources like solar and wind into the grid.

- ❖ The award aims to promote **excellence in English-language fiction** and encourage wider readership.
- ❖ Indian winners include **Arundhati Roy (1997)**, **Kiran Desai (2006)**, and **Aravind Adiga (2008)**.

### Difference Between Booker Prize & International Booker Prize

- 💡 The **Booker Prize** was first awarded in **1969** and is for the best **single work of fiction** originally written in **English**.
- 💡 The **International Booker Prize** was established later in **2005** and is for the best single work of **fiction translated into English** from any other language.
- ❖ It recognizes the achievement of both the author and the translator.

## Booker Prize 2025

### Why in News?

Author **David Szalay** has won the **2025 Booker Prize** for his fictional novel **Flesh**.

### Key Points

💡 **About the Winner:**

- ❖ **David Szalay** is a Hungarian-British novelist known for his **precise, economical prose** and deep exploration of masculinity, identity, and contemporary European life.
- ❖ With **Flesh**, he reinforces his reputation as a writer who **captures the inner lives of ordinary men with unusual clarity**, situating their personal struggles against broader social and economic landscapes.

💡 **About Booker Prize:**

- ❖ The **Booker Prize** (formerly the **Man Booker Prize**) is one of the world's most prestigious literary awards. It was **established in 1969** and is run by the **Booker Prize Foundation**.
- ❖ It honours the **best original full-length novel written in English** and published in the **UK or Ireland**. Writers of any nationality have been eligible to compete **since 2014**.

## Ammonium Nitrate

### Why in News?

A blast near **Delhi's Red Fort** has put "**Ammonium Nitrate**" in the spotlight, as investigators suspect the chemical may have been used in the explosion.

### Key Points

💡 **About:**

- ❖ Pure ammonium nitrate ( $\text{NH}_4\text{NO}_3$ ) is a **white, crystalline, water-soluble, nitrogen-rich compound** made by reacting ammonia with nitric acid, and it melts at **about 170°C**.
- ❖ The substance is classified as an **oxidising agent**. It is one of the **base ingredients** used in the manufacture of commercial explosives.
- ❖ It is classified as a **dual-use substance**, meaning it has legitimate industrial uses but can also be weaponised.

💡 **Uses:**

- ❖ In **agriculture**, it is widely used as a **nitrogen fertilizer** due to its high nutrient content.
- ❖ It is used for controlled blasting in **quarries and excavation projects**, and also forms a key component of various emulsions and gels used in **mining-grade explosives**.

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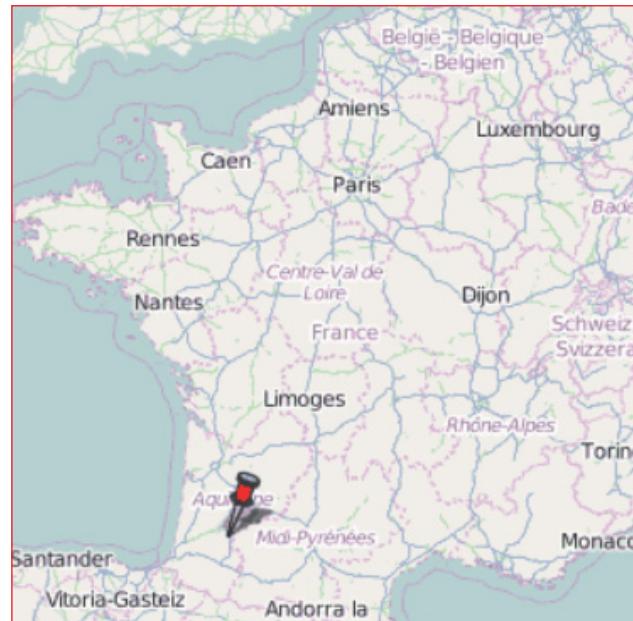
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💡 **Weaponization of Ammonium Nitrate:**

- ❖ Pure ammonium nitrate is **not explosive** by itself and is classified as an **oxidiser** under **United Nations** classification of dangerous goods.
- ❖ It becomes **volatile** when combined with **fuel oil, potassium chlorate, sulphur or other accelerants**. This mixture creates **ANFO (Ammonium Nitrate Fuel Oil)**, a commonly used explosive.
- ❖ However, ANFO cannot detonate on its own; it requires a **trigger such as a detonator**, often initiated with primary explosives like **RDX or TNT**.



## Garuda Exercise 2025

### Why in News?

The **Indian Air Force (IAF)** is taking part in the 8<sup>th</sup> edition of Exercise Garuda-25, a bilateral air combat drill conducted with the **French Air and Space Force (FASF)**.

### Key Points

💡 **About Garuda Exercise:**

- ❖ “Garuda” is a bilateral **air exercise** between the **Indian and French air forces**, conducted periodically since 2003.
- ❖ It is among the **highest-level air force exercises** India conducts with a foreign air force and is held alternately in India and France.
- ❖ Its key objectives include **enhancing mutual operational capabilities**, sharing tactics, building log-operational familiarity and forging strategic ties.

💡 **About 2025 Edition:**

- ❖ The 8<sup>th</sup> edition of Garuda (Garuda-25) is being held from **16<sup>th</sup> to 27<sup>th</sup> November, 2025** at **Mont-de-Marsan Air Base in France**.
- ❖ The **Indian Air Force (IAF)** contingent, featuring **Su-30MKI fighter aircraft** supported by **IL-78 refuellers** and **C-17 Globemaster III** air-lift assets, will operate alongside **French multirole fighters** in complex simulated missions involving **air-to-air combat, air defence, and joint strike operations**.

## Exercise Ajeya Warrior-25

### Why in News?

India and the **United Kingdom** have begun the 8<sup>th</sup> edition of Exercise Ajeya Warrior-25, a bilateral military training exercise between the **Indian Army** and the **British Army**.

### Key Points

💡 **About Ajeya Warrior Exercise:**

- ❖ Ajeya Warrior is a bilateral military exercise between the **Indian Army** and the **British Army**, held biennially since 2011.
- ❖ It focuses on enhancing **interoperability**, improving **tactical coordination**, and sharing **best practices** in counter-terrorism and peacekeeping operations.
- ❖ It is conducted under a **United Nations mandate**, specifically aligned with **Chapter VII of the UN Charter**, which deals with **peacekeeping** duties related to threats to peace, breaches of peace, and **counter-terrorism** scenarios.

💡 **About the 2025 Edition:**

- ❖ The 8<sup>th</sup> edition is being held from **17<sup>th</sup> to 30<sup>th</sup> November, 2025**, at the **Foreign Training Node, Mahajan Field Firing Ranges, Rajasthan**.

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- ❖ A total of 240 personnel are participating, with **equal representation** from both armies. The Indian Army is represented by the **Sikh Regiment**.
- ❖ Training includes **simulation-based scenarios**, **Brigade-level** mission planning, and **field exercises** resembling real-life counter-terror contingencies.

## BIRSA 101

### Why in News?

The Minister of Science & Technology has launched "BIRSA 101", India's first indigenous CRISPR-based gene therapy for Sickle Cell Disease.

- 💡 Named after **Birsa Munda** on his **150<sup>th</sup> birth anniversary** (15<sup>th</sup> November 2025), the therapy strengthens India's push for a "Sickle-Cell-Free Nation," with significant benefits for affected **tribal communities** in central and eastern India.

### Key Points

#### >About BIRSA 101:

- ❖ The gene therapy was developed by the **Council of Scientific & Industrial Research - Institute of Genomics and Integrative Biology** (CSIR-IGIB) and transferred to the **Serum Institute of India** through a structured **technology-transfer** agreement, ensuring rapid pathway from lab to market.
- ❖ The **public-private model** is designed to deliver **high-quality, affordable** genomic therapies to underserved communities.

#### >About CRISPR Gene Editing:

- ❖ **CRISPR (Clustered Regularly Interspaced Short Palindromic Repeats)** is a naturally occurring defence mechanism found in bacteria, used to cut viral DNA.
- ❖ Modern gene-editing uses **CRISPR-Cas9**, where **Cas9** functions like molecular scissors to cut DNA at specific target sites.
- ❖ It enables **precise, efficient, and low-cost genome editing**, making it a major breakthrough in biotechnology and medical research.

- ❖ First demonstrated as a gene-editing tool in 2012, pioneered by **Jennifer Doudna** and **Emmanuelle Charpentier**, who received the **2020 Nobel Prize in Chemistry**.

### About Sickle Cell Disease (SCD):

- ❖ **Sickle Cell Disease** is an **autosomal recessive genetic blood disorder** caused by an **HBB gene mutation**, producing abnormal **Hemoglobin-S** that makes red blood cells sickle-shaped and rigid. This leads to **anemia, pain crises, infections, and organ complications**.
- ❖ It is **highly prevalent** in tribal communities of central and eastern India and is a focus area under the **National Sickle Cell Anaemia Elimination Mission (2023–2047)**.
- ❖ Conventional treatment includes **hydroxyurea, blood transfusions**, and **stem-cell transplant**.

## World Fisheries Day 2025

### Why in News?

India marked **World Fisheries Day 2025** on 21<sup>st</sup> November, celebrating sustainability, blue-economy growth, and improved livelihoods for fishers.

### Key Points

- 💡 **About:** **World Fisheries Day**, observed annually on 21<sup>st</sup> November, traces its origin to the formation of the **World Fisheries Forum** in 1997, when delegates from 18 countries met in **New Delhi** to promote sustainable fishing and safeguard fisher communities, making India the birthplace of this global observance.

- 💡 **Theme:** The theme for 2025 is "**India's Blue Transformation: Strengthening Value Addition in Seafood Exports.**"

- 💡 **Ranking:** India is the **second-largest fish-producing country** and among the **world's top shrimp producers**.

- ❖ Total fish production more than **doubled** from 96 lakh tonnes (2013–14) to 195 lakh tonnes (2024–25).

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- ❖ Marine product exports rose by 11.08%, from US\$ 0.81 billion (October 2024) to US\$ 0.90 billion (October 2025).
- 💡 **Major Initiatives:**
  - ❖ The government launched the **National Framework on Traceability in Fisheries & Aquaculture** to ensure safe, transparent, and globally compliant seafood supply chains.
  - ❖ The **Sustainable Harnessing of Fisheries in the EEZ Rules** promote environmentally responsible deep-sea fishing, giving priority access to Fishermen Cooperatives and FFPOs, enhancing income opportunities for small-scale fishers.
  - ❖ ReALCRaft is a **digital platform** enabling **online registration, licensing, e-payments, and vessel data updates**, with integrated inspections for **paperless fisheries governance**.
  - ❖ NABHMITRA, a **two-way satellite communication system** for small vessels (<20 m), provides **real-time tracking, SOS alerts, and weather updates**, improving fisher safety and coordination with coastal authorities.

## Guru Tegh Bahadur Martyrdom Day

### Why in News?

The President of India paid tribute to **Guru Tegh Bahadur Ji** on the occasion of his **350<sup>th</sup> Martyrdom Day** on **24<sup>th</sup> November 2025**.

- 💡 He was executed by Aurangzeb on **24<sup>th</sup> November 1675**, for defending **Kashmiri Pandits** against forced religious conversion, and the **Gurdwara Sis Ganj Sahib** in Delhi's Chandni Chowk marks the site of his execution.

### Key Points

- 💡 **Early Life:** Born in the year **1621** in **Amritsar**, Guru Tegh Bahadur was initially known as **Tyagmal** due to his **ascetic nature**. Trained in religious philosophy and martial skills, he was awarded the title "**Tegh Bahadur**" for his **bravery** in battle.
- 💡 **Contribution:** He became the **9<sup>th</sup> Sikh Guru** in **1664** after **Guru Harkishan**. In **1665**, he founded **Anandpur Sahib** and contributed more than **700**

hymns to the **Guru Granth Sahib**, focusing on equality, justice, and devotion.

- 💡 **Legacy:** He opposed forced religious conversions during Aurangzeb's reign and encouraged **fearlessness (Nirbhau)** and **compassion (Nirvair)** among his followers.
- ❖ He is revered for defending freedom of religion and conscience earning him the title "**Hind-di Chadar**" (**Shield of India**).



### Ten Gurus of Sikhism

<b>Guru Nanak Dev (1469–1539)</b>	<ul style="list-style-type: none"> <li>💡 <b>First Sikh Guru</b> and founder of Sikhism</li> <li>💡 Initiated 'Guru ka Langar'</li> <li>💡 Contemporary of <b>Babur</b></li> <li>💡 <b>Kartarpur Corridor</b> was inaugurated on his 550<sup>th</sup> birth anniversary</li> </ul>
<b>Guru Angad (1504–1552)</b>	<ul style="list-style-type: none"> <li>💡 Invented the <b>Gurmukhi script</b></li> <li>💡 Popularized the practice of 'Guru ka Langar'</li> </ul>

Guru Amar Das (1479–1574)	<ul style="list-style-type: none"> <li>Introduced the <b>Anand Karaj marriage</b> ceremony</li> <li>Abolished <b>sati</b> and purdah practices among Sikhs</li> <li>Contemporary of <b>Akbar</b></li> </ul>
Guru Ram Das (1534–1581)	<ul style="list-style-type: none"> <li><b>Founded Amritsar</b> in 1577</li> <li>Began the extraction and construction of the <b>Holy Tank (Sarovar)</b> at the site of the <b>Golden Temple</b>.</li> </ul>
Guru Arjan Dev (1563–1606)	<ul style="list-style-type: none"> <li>Compiled the <b>Adi Granth</b> in 1604</li> <li>Completed the Golden Temple's construction</li> <li>Known as '<b>Shaheed-e-Sartaj</b>'</li> <li>Executed by Jahangir for helping <b>Prince Khusrau</b></li> </ul>
Guru Hargobind (1594–1644)	<ul style="list-style-type: none"> <li>Transformed Sikhs into a <b>martial community</b></li> <li>Known as the "<b>Soldier Saint</b>"</li> <li>Established the <b>Akal Takht</b> in Amritsar</li> </ul>
Guru Har Rai (1630–1661)	<ul style="list-style-type: none"> <li><b>Peace-loving Guru</b></li> <li>Dedicated his life to missionary work and maintaining the Sikh army.</li> </ul> <p>Met with <b>Dara Shikoh</b> (Aurangzeb's brother).</p>
Guru Harkishan (1656–1664)	<ul style="list-style-type: none"> <li>Youngest Sikh Guru, became Guru at age 5</li> <li>Summoned by <b>Aurangzeb</b></li> </ul>
Guru Tegh Bahadur (1621–1675)	<ul style="list-style-type: none"> <li>Founded <b>Anandpur Sahib</b></li> <li>Opposed forced conversions under Aurangzeb</li> <li>Martyred in 1675 for defending Kashmiri Pandits</li> </ul>
Guru Gobind Singh (1666–1708)	<ul style="list-style-type: none"> <li>Founded the <b>Khalsa</b> in 1699</li> <li>Introduced the initiation ceremony "<b>Pahul</b>"</li> <li><b>Last human Sikh Guru</b> and the <b>Five Ks</b></li> <li>Declared <b>Guru Granth Sahib</b> as the <b>eternal Guru</b></li> </ul>

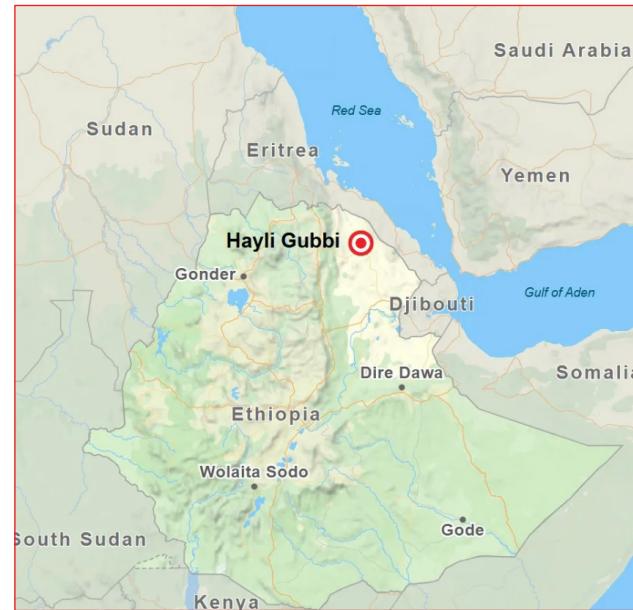
## Hayli Gubbi Volcano

### Why in News?

The **Hayli Gubbi volcano** in **Ethiopia** has erupted explosively, sending high-altitude ash plumes thousands of metres up, some of which have drifted into **Indian airspace**, triggering **aviation advisories**.

### Key Points

- Hayli Gubbi volcano is located in **Afar, northeastern Ethiopia**, within the **Danakil Depression** - one of the **hottest and lowest places on Earth**.
- The current eruption is significant because the volcano is believed to have **erupted after nearly 12,000 years**, based on geological evidence from the Afar Rift.
- The Hayli Gubbi eruption highlights the **geological volatility** of the **East African Rift System (EARS)** where active volcanism, fissure eruptions, and **spreading ridges** are common.
  - It is one of the world's most tectonically active rift systems where the **Arabian, Nubian, and Somali plates** are diverging.
- The region is characterised by **basaltic lava**, fissure systems, and frequent **seismic activity** linked to the continental rifting process.



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### Volcanic Ash & Aviation Risks

- 💡 **Volcanic ash** is made of tiny, abrasive particles of rock and glass that can melt inside **jet engines** and cause serious damage.
- 💡 Jet engines can **stall** when ash **melts and resolidifies** on turbine blades.

## J&K's First Limestone Block Auction

### Why in News?

Jammu & Kashmir hosted its **first-ever limestone block auction** on **24<sup>th</sup> November, 2025**, marking a major milestone in the Union Territory's mineral sector reforms under the **MMDR Act, 2015**.

### Key Points

- 💡 This is the **first mining block auction** in Jammu & Kashmir since the introduction of mining reforms under the **Mines and Minerals (Development and Regulation) Act, 2015**.
  - ❖ The auction is being conducted under **Section 11 of the Act**, as amended by the **MMDR Amendment Act, 2015**, which introduced the auction regime.
- 💡 **Seven limestone blocks**, spread across **Anantnag, Rajouri, and Poonch districts**, have been identified for auction. The deposits hold high-quality limestone suitable for **cement, construction, and allied industries**.
- 💡 These blocks cover **around 314 hectares** and fall under **UNFC G3 and G4** exploration categories. **UNFC – United Nations Framework Classification** categorises mineral resources by **geological confidence**:
  - ❖ **G1 – Detailed Exploration: Highest confidence**; **drilling and testing clearly establish the size, grade, and exact characteristics of the mineral deposit**.
  - ❖ **G2 – General Exploration: Moderate confidence**; **geological studies and limited drilling indicate the deposit's continuity and economic potential**.

❖ **G3 – Prospecting: Early-stage confidence**; **preliminary surveys** suggest the **presence of minerals** but without firm data on quantity or quality.

❖ **G4 – Reconnaissance: Lowest confidence**; **broad regional studies** only indicate possible mineralisation, requiring further detailed exploration.

### Limestone

- 💡 Limestone is a **sedimentary rock** rich in calcium carbonate ( $\text{CaCO}_3$ ), widely used in **cement, steel, construction, chemicals**, and environmental applications.
- 💡 India has major reserves in **Rajasthan, Andhra Pradesh, Madhya Pradesh, Gujarat, Chhattisgarh, Karnataka, and J&K**, making it vital for mineral-based industrial corridors.
- 💡 It forms the **backbone of the cement industry**, where it is processed into **clinker**, the base material for all major cement types.
- 💡 In the **steel sector**, limestone acts as a **flux** in blast furnaces, helping remove impurities and improving molten metal quality.

## Exercise SURYAKIRAN (2025)

### Why in News?

The **19<sup>th</sup> edition of India–Nepal Joint Military Exercise SURYAKIRAN-XIX** began on **25<sup>th</sup> November 2025** at Pithoragarh, Uttarakhand.

### Key Points

- 💡 **About Exercise SURYAKIRAN:**
  - ❖ **Exercise SURYAKIRAN** is a **bilateral military exercise** between the Indian Army and the Nepal Army, held **annually**, with hosting duties alternating between the two countries.
  - ❖ It aims to **enhance interoperability**, strengthen **military diplomacy**, and deepen **India–Nepal defence cooperation**.
  - ❖ The exercise primarily focuses on **counter-insurgency, counter-terrorism, and jungle/mountain warfare** terrain common to both armies.

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- It is conducted under **Chapter VII of the UN Charter**, which deals with **peacekeeping** duties related to threats to peace, **breaches of peace, and counter-terrorism** scenarios.

💡 **About the 2025 Edition:**

- The 2025 edition of the exercise is being hosted at **Pithoragarh, Uttarakhand**, from **25<sup>th</sup> November to 08<sup>th</sup> December, 2025**.
- The Indian contingent comprises **334 personnel**, mainly from the **Assam Regiment** while the **Nepalese contingent** also includes **334 personnel**, primarily from the **Devi Datta Regiment**.
- The 2025 edition highlights incorporation of **niche and emerging military technologies**, such as:
  - Unmanned Aerial Systems (UAS)**
  - Drone-based ISR (Intelligence, Surveillance & Reconnaissance)**
  - AI-enabled** decision-support tools
  - Unmanned logistics vehicles
  - Armoured protection platforms**

## Nayi Chetna 4.0 Campaign

### Why in News?

The Union Minister for Rural Development, alongside the Union Minister for Women and Child Development, launched 'Nayi Chetna 4.0', a national campaign under the **DAY-NRLM (Deendayal Antyodaya Yojana – National Rural Livelihood Mission)**.

### Key Points

- The fourth edition of **Nayi Chetna – Initiative for Change** focuses on **strengthening women's safety, mobility, dignity, and socio-economic participation**, especially in **rural India**.
- The campaign will run **nationwide from 25<sup>th</sup> November to 23<sup>rd</sup> December 2025**, led by the extensive network of **Self-Help Groups (SHGs)** under DAY-NRLM.
- Emphasis given on elimination of **substance abuse**, which was termed a major cause of **domestic violence**, and village-level campaigns for **violence-free communities**.

**violence**, and village-level campaigns for **violence-free communities**.

- The initiative stresses **women's voices in governance**, safe public spaces, **shared domestic responsibilities**, and recognition of women's economic roles.

### DAY-NRLM (Deendayal Antyodaya Yojana – National Rural Livelihood Mission)

- The DAY-NRLM was launched in **2011** and later **restructured in 2015** to strengthen its implementation framework and outreach. The mission is implemented by the **Ministry of Rural Development**.
- The scheme aims to **reduce rural poverty** by promoting **self-employment, skill development, and sustainable livelihoods** through Self-Help Groups (SHGs).
- It primarily focuses on mobilizing **rural women** into SHGs, providing them with **credit linkages, capacity-building support, and enhanced access to markets**.
- It includes key components such as **financial inclusion, digital literacy, and the diversification of livelihood activities** to improve and stabilize **household incomes** in rural areas.

## India to Host Commonwealth Games 2030

### Why in News?

Prime Minister congratulated the nation as India has officially won the bid to host the **Centenary Commonwealth Games 2030**, a historic sporting milestone marking 100 years of the Games.

### Key Points

- About the Commonwealth Bid:**
  - India will host the **Centenary Commonwealth Games 2030 in Ahmedabad**.
  - This achievement represents a major **diplomatic and sporting milestone**, significantly enhancing India's **visibility and credibility** in global sports governance.

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- Hosting the 2030 Games aligns with India's long-term sporting vision, particularly its efforts to upgrade sports infrastructure, strengthen global event hosting capacity, and enhance athlete support through programmes such as Khelo India and the Target Olympic Podium (TOP) Scheme.
- India last hosted the **Commonwealth Games in 2010**, when the event was held in **New Delhi**.

**>About Commonwealth Games:**

- The **Commonwealth Games (CWG)** is an international multi-sport event held every

four years, bringing together athletes from all 56 Commonwealth nations.

- It was first conducted in **1930** at **Hamilton, Canada** as the **British Empire Games**. India first participated in the **1934 London Games**.
- The event is governed by the **Commonwealth Sport** (earlier known as **Commonwealth Games Federation**), headquartered in **London (England)**, which ensures that the Games uphold the core values of **humanity, equality, and destiny**.
- The **2026 Commonwealth Games** are scheduled to take place in **Glasgow, Scotland**.



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## Key Points

## Details

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