

1. **Prime Minister Dhan-Dhaanya Krishi Yojana (PMDKY):** Recently, the Finance Minister has announced the launch of PMDKY during the Union Budget speech.
 - **About PMDKY:** Inspired by the Aspirational Districts Programme (ADP), which aimed to uplift 112 underdeveloped districts through Convergence, Collaboration, and Competition.
 - **ADP, launched in 2018,** measured progress across **49 Key Performance Indicators (KPIs)** in five socio-economic areas- Health & Nutrition, Education, Agriculture & Water Resources, Financial Inclusion & Skill Development & Infrastructure.
 - **Coverage:** The scheme will cover **100 districts**, identified based on **three** parameters- Low agricultural productivity, Moderate crop intensity & Below-average credit access.
 - **Objectives:** The scheme aims to enhance agricultural productivity → Promote crop diversification & sustainable agriculture → Improve post-harvest storage at the Panchayat & block level → Develop irrigation facilities → Facilitate access to long-term & short-term credit
 - **Implementation:** The Ministry of Agriculture & Farmers' Welfare will collect data to identify target districts.
 - The Department of Financial Services & NABARD will provide farm credit data.
 - **Funding:** No separate budget allocation has been announced. Funds will be pooled from existing schemes under the Ministries of Agriculture, Fisheries, Animal Husbandry & Dairying.
 - **Expected Impact:** The scheme is expected to benefit 1.7 crore farmers, improving agricultural sustainability and rural development.
2. **Experimental Advanced Superconducting Tokamak (EAST) Reactor:** Recently, China's Experimental Advanced Superconducting Tokamak (EAST) set a world record by sustaining a plasma for 1,066 seconds at 100 million degrees Celsius.
 - EAST plays a key role in advancing nuclear fusion research, which aims to provide a clean and sustainable energy source.
 - **What is EAST?**
 - EAST is a superconducting tokamak (donut-shaped nuclear fusion reactor) developed by China for achieving controlled nuclear fusion.
 - It is the world's only tokamak that uses both toroidal and poloidal magnetic fields for plasma confinement.

- **How does EAST work?**
 - **Magnetic Confinement:** Uses superconducting electromagnets to generate strong magnetic fields for plasma stabilization.
 - **Plasma Heating:** Plasma reaches millions of degrees Celsius to allow deuterium-tritium fusion.
 - **Energy Generation:** The fusion reaction produces helium-4, neutrons, and 17.6 MeV of energy, which can be converted into electricity.
 - **Other Nuclear Fusion Approaches:**
 - **Tokamaks (EAST, ITER):** Use **magnetic confinement** but require **external current for plasma stability**.
 - **Stellarators:** More complex but offer **continuous plasma confinement** without additional electric currents.
 - **Laser-Based Fusion (NIF - USA):** Uses **high-power lasers** to compress and heat a **deuterium-tritium pellet** to fusion conditions, achieved **fusion ignition in 2022**, producing **3.15 MJ energy**—more than the input energy.
3. **Aravalli-Delhi Fold Belt:** Recently, a magnitude 4 earthquake struck near Dhaula Kuan, Delhi (Zone 4), marking the strongest locally generated quake in at least five years.
- **About Aravalli-Delhi Fold Belt:** Extends from southern and eastern Rajasthan to Haryana and Delhi.
 - **Formation:** Consists of deformed rock layers that were folded due to geological stress hundreds of millions of years ago.
 - **Seismic Activity:** Historically, the region was more active, but tectonic activity has slowed, making it relatively stable.
 - Residual geological faults still trigger occasional mild earthquakes.
 - Unlike the Himalayan region, where earthquakes occur due to subduction of the Indian plate under the Eurasian plate, Delhi's quakes arise from localized stress release within ancient rock formations.
 - **About Earthquakes:** It is the sudden shaking of the Earth's surface caused by the release of energy from the Earth's crust due to stress accumulation.

• Types of Earthquakes:

- **Tectonic Earthquakes** – Caused by movement of tectonic plates, the most common type (e.g., Himalayan earthquakes).
- **Volcanic Earthquakes** – Associated with volcanic activity due to magma movement (e.g., Mount St. Helens eruption).
- **Collapse Earthquakes** – Result from cave or mine collapses, generally of low magnitude.
- **Induced Earthquakes** – Triggered by human activities like reservoir-induced seismicity, mining, and geothermal energy extraction.

Earthquake hazard map

Himalayans and north-east are among the most earthquake-prone regions of the world

ZONE V: Very High Damage Risk Zone (MSK IX or more)

ZONE IV: High Damage Risk Zone (MSK VIII)

ZONE III: Moderate Damage Risk Zone (MSK VII)

ZONE II: Low Damage Risk Zone (MSK VI or less)

*MSK scale measures susceptibility of an area to an earthquake, based on the local geology and other factors, two places can feel a quake differently, even if equidistant from epicentre

Source: Vulnerability Atlas of India by Building Materials and Technology Promotion Council (BMTPC)

Important towns and earthquake zones they fall in

City	State	Zone
Ritui	Gujarat	5
Darbhanga	Bihar	5
Gowahati	Assam	5
Imphal	Manipur	5
Jorhat	Assam	5
Kohima	Nagaland	5
Mandi	Himachal Pradesh	5
Port Blair	Andaman & Nicobar	5
Sadiya	Assam	5
Srinagar	Jammu & Kashmir	5
Tezpur	Assam	5
Almora	Uttarakhand	4
Amhala	Haryana	4
Amritsar	Punjab	4
Baharich	Uttar Pradesh	4
Barauni	Bihar	4

Source: Ministry of Earth Sciences

THE SOUND OF A QUAKE

MANY IN DELHI reported having heard a peculiar sound as the earth shook on Monday morning. The sound convinced many that this earthquake was "different".

EARTHQUAKES sometimes produce sound, but it is not always heard. Earthquakes are energy waves travelling through the ground, causing vibrations along the way.

VIBRATIONS and shaking do sometimes produce low frequency sounds that are beyond the hearing capacity of human beings. Sounds in the audible range are relatively rare.

4. Kashi Tamil Sangamam: Recently, the **Kashi Tamil Sangamam 2025** has commenced, celebrating the civilizational ties between Kashi (Varanasi) and Tamil Nadu.

• About Kashi Tamil Sangamam 2025:

- **Celebrates North-South Cultural Bond:** Showcases the historical and civilizational ties between Kashi (Varanasi) and Tamil Nadu.
- **Promotes Literary Exchange:** Multi-language and Braille translations of Thirukkural, Manimekalai, and other classic Tamil texts launched.
- **Kanyakumari-Varanasi Tamil Sangamam Train:** Flagged off by the PM.
- **Knowledge Partners:** Banaras Hindu University (BHU) and IIT Madras collaborating to enrich academic discussions.

- **About Thirukkural:** Written by Thiruvalluvar, meaning "Sacred Couplets", covers ethics, governance, love, and spirituality. Divided into **three sections**: Aram (Virtue), Porul (Wealth) & Inbam (Love).

- **Manimekalai: A Buddhist Epic** - Sequel to Silappadikaram, often termed an "anti-love plot".
 - Story of Manimekalai, a dancer-turned-Buddhist nun.
 - Written by Cittalai Sattanar, a Buddhist grain merchant and Tamil writer.
 - Offers insights into Tamil society, culture, and Buddhism during the Sangam period.
 - **Historical & Cultural Connections between North and South**
 - **Brahmanda Purana Reference:** King Dasharath of Ayodhya visited Kanchipuram to seek blessings from Goddess Amba Kamakshi.
 - **15th-century Link:** King Parakrama Pandya of Madurai built the Shiva temple in Sivakasi, inspired by Kashi's sacredness.
 - **Pandya's Contribution:** Constructed Kasi Viswanathar Temple in Tenkasi, reflecting their spiritual ties with Kashi.
 - **Silk Trade Connection:** Varanasi and Kanchipuram, both renowned for silk weaving, facilitated cultural exchanges.
5. **Exercise Komodo:** INS Shardul & P8I aircraft (Long Range Maritime Surveillance), have arrived in Bali, Indonesia to participate in the International Fleet Review (IFR) 2025 and the Exercise Komodo.
- **About Exercise Komodo:** Launched in 2014 by the Indonesian Navy.
 - Non-combat military exercise focused on maritime cooperation.
 - Multilateral naval exercise to enhance maritime interoperability and regional security.
 - Theme for 2025: "Maritime Partnership for Peace and Stability".
 - Fleet review showcasing naval capabilities including warships, helicopters, and aircraft.
 - **Key Activities of Exercise Komodo 2025:** Naval exercises and officer exchange forums.
 - Bilateral meetings between participating naval forces.
 - International Maritime Security Symposium.
 - Defense exhibition and cultural parades.
 - **Participants:** 39 countries involved, with 34 foreign and 18 Indonesian Navy warships.
6. **PM-AASHA Scheme:** The Government of India has recently approved the continuation of the integrated Pradhan Mantri Annadata Aay Sanrakshan Abhiyan (PM-AASHA) Scheme till **2025-26** under the 15th Finance Commission cycle.

- **About PM-AASHA Scheme:** It is an umbrella scheme aimed at ensuring remunerative prices to farmers for their produce. It has **three components**, and states can choose one to implement:
 - **Price Support Scheme (PSS):** Physical procurement of pulses, oilseeds, and copra by Central Nodal Agencies (NAFED, FCI) with state government support.
 - Central Government bears procurement costs and losses.
 - **Price Deficiency Payment Scheme (PDPS):** Covers oilseeds with MSP notifications. Direct payment of the difference between MSP and the selling price to pre-registered farmers.
 - ✓ Payments are made directly to the farmer's bank account. No physical procurement involved.
 - **Pilot of Private Procurement and Stockist Schemes (PPPS):** Allows private players to participate in procurement for oilseeds on a pilot basis.
 - ✓ Implemented in selected districts/APMCs for crops with MSP notifications.
 - ✓ Only one scheme (PSS or PDPS) can be operational for a commodity in a state.
 - **Scheme Objective:** To provide remunerative prices to farmers, control price volatility, and ensure affordable availability of essential commodities.
- 7. Aravali Safari Park Project:** The Haryana government has recently proposed the creation of the world's largest Aravali Safari Park, spanning **3,858 hectares** across the districts of **Gurugram** and **Nuh**.
- **About Aravali Safari Park Project:** The project is designed to feature a range of amenities including animal cages, guest houses, hotels, restaurants, auditoriums, animal hospital, children's parks, botanical gardens, aquariums, cable cars, tunnel walk with exhibits, open-air theatre, and eateries.
 - The Aravalis are the world's **oldest fold mountain range**, which acts as a **barrier to desertification** in eastern Rajasthan and functions as an **aquifer** that recharges groundwater in **Gurugram** and **Nuh** districts.
 - **Legal Protection:** The Aravalis in Haryana are protected by multiple laws - Punjab Land Preservation Act (PLPA), 1900, Indian Forest Act, T.N. Godavarman Thirumulpad judgment (1996).