

NEWS TODAY

Union Minister for Commerce and Industry launches National Turmeric Board

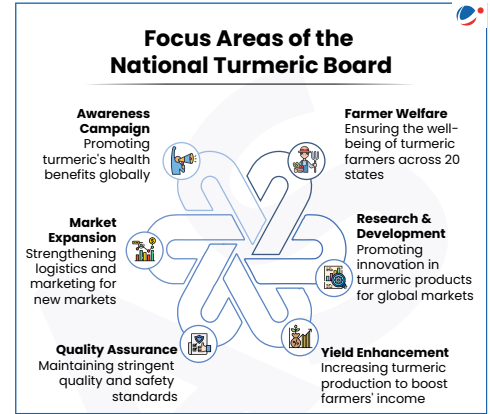
In October 2023, the Union government had officially notified the establishment of the **National Turmeric Board**.

About National Turmeric Board (NTB)

- **Headquarters:** Nizamabad, Telangana (a major turmeric-producing region).
- **Ministry:** Ministry of Commerce and Industry.
- **Prominent Members:**
 - ⊕ **Key Department & Ministries:** Representatives of Ministry of AYUSH, Department of Pharmaceuticals, Department of Agriculture & Farmers Welfare and Department of Commerce.
 - ⊕ **States:** Will be represented on the Board by rotation.
- **Type:** NTB is an executive body (not a Statutory Body).

India's Dominance in the Global Turmeric Industry

- **India** is the **largest producer, consumer, and exporter** of turmeric.
- **Accounts for:** 70% of global production & 62% of global trade.
- **India in 2023-24:** Cultivated turmeric on 3.05 lakh hectares & produced over 10 lakh tonnes of turmeric.
- **The largest producing states of Turmeric:** Maharashtra, Telangana, Karnataka and Tamil Nadu.
- More than **30 varieties of Turmeric** are grown in India and it is grown in over **20 states in the country**.
 - ⊕ **Major varieties with GI (Geographical Indication) Tags:** Erode Turmeric (Tamil Nadu), Lakadong Turmeric (Meghalaya, known for high curcumin content), Kandhamal Haldi (Odisha).
- **Targets:**
 - ⊕ **Double the production** to 20 lakh tonnes in five years.
 - ⊕ By **2030**, turmeric exports are projected to reach **\$1 billion USD**.



About Turmeric (*Curcuma longa*); also called 'Golden Spice'

- **Type:** Perennial, rhizomatous herbaceous plant native to the Indian subcontinent and Southeast Asia.
- **Significance of Turmeric:** It has **anti-inflammatory, antioxidant, and detoxifying properties**. It helps protect the liver from damage, supports detoxification, etc.
- **Climatic conditions:** Turmeric thrives in **tropical and subtropical climates** with the following conditions:
 - ⊕ **Temperature:** Between 20°C and 30°C.
 - ⊕ **Rainfall:** Between 1,500 to 2,500 mm annually.
 - ⊕ **Soil:** Well-drained, fertile soils rich in organic matter.
 - ⊕ **Altitude:** Grows best at elevations up to 1,500 meters above sea level.

Centre Issues Operational Guidelines for Implementation of Various Components under PM-Surya Ghar: Muft Bijli Yojana

Ministry of New and Renewable Energy has notified guidelines for implementing 'Central Financial Assistance' & 'Payment Security Mechanism' components of the scheme.

Key Highlights of Guidelines

- Models for installation of rooftop solar plants (RTS) for consumers:
 - ⊕ **Renewable Energy Service Company (RESCO) Model:**
 - ◆ RTS plants are **procured, installed, & maintained by a RESCO** (private body), & **consumers pay a tariff for consumption**.
 - ◆ RESCO may sell **excess power to DISCOM** under a Power Purchase Agreement.
 - ⊕ **Utility Led Aggregation Model (ULA) Model:** DISCOM, state government/state-owned entities install solar projects on behalf of households.
- **Central Financial Assistance (CFA):** To be given to **1 crore residential consumers** for rooftop solar installations.
 - ⊕ **Eligibility:** RTS plant **must be grid-connected & tagged** to a residential power connection of local DISCOM.
 - ◆ Solar modules **must be domestically manufactured & existing RTS are not eligible** for CFA.
 - ◆ **For the ULA Model**, it is limited to households with installations **up to 3 kW**.
- **Payment Security Mechanism:** For **de-risking investments** in RESCO based models by ensuring timely payments to RESCO.
 - ⊕ **A corpus of Rs 100 crore** is established, managed by **National Project Implementation Agency**.
 - ⊕ The corpus **can be supplemented by additional grants or funds** with approval from Ministry.

About PM-Surya Ghar: Muft Bijli Yojana

- **Ministry:** Ministry of New and Renewable Energy
- **Objective:** to **increase the share of solar rooftop capacity** and empower residential households to generate their own electricity.
- **Duration:** Till FY 2026-27.
- **Implementation:** **National programme Implementation Agency (NPIA)** at the National level and by the **State Implementation Agencies (SIAs)** at the state level.

India Develops World's Most Powerful Hydrogen Train Engine

It will undergo its **first trial** run on the **Jind-Sonipat route** in Haryana.

- ▶ The engine has been made by **Indian Railways** using **Indigenous technology** having a capacity of **1,200 horsepower**.
- ▶ **Only 4 countries (Germany, France, Sweden, and China)** in the world have **hydrogen-powered Train Engine**, producing between 500 to 600 horsepower.

Hydrogen as a clean Fuel

- ▶ Hydrogen is a **clean & versatile energy source** with potential to decarbonize transportation, industry, & power generation.

Types

- ⊕ **Blue Hydrogen:** produced from **natural gas with a process of steam methane reforming**, where natural gas is mixed with very hot steam and a catalyst. **Carbon dioxide is also produced as a by-product.**
- ⊕ **Grey Hydrogen:** Produced from natural gas via steam methane reforming (SMR). It emits **significant carbon dioxide (CO₂)**.
- ⊕ **Green Hydrogen:** Produced through **water electrolysis** powered by renewable energy sources (e.g., wind, solar) with **no harmful by-products.**
- ⊕ **Pink hydrogen:** Generated through **electrolysis powered by nuclear energy.**

Advantages

- ▶ **Abundance:** It contributes 75% of the mass of the universe.
- ▶ **Clean Energy:** Water is the only byproduct when used in fuel cells.
- ▶ **Highly Efficient when Compared to Other Energy Sources**

Challenges

- ▶ Currently **expensive**, Storage and transportation of hydrogen is more complex, safety (**highly flammable**) etc.

Initiatives Undertaken

- ▶ **Green Hydrogen Policy (2022):** To make India a leading producer and supplier of Green Hydrogen in the world.
- ▶ **National Green Hydrogen Mission (2023):** To make India a global hub for green hydrogen production and export.
- ▶ **Strategic Interventions for Green Hydrogen Transition (SIGHT) programme:** Incentives for manufacturing of electrolyzers & production of green hydrogen.

Union Minister approves 56 new watershed development projects under Watershed Development Component of PMKSY 2.0

Watershed development: It's the process of managing the natural resources within a watershed to conserve water and improve the quality of land and vegetation.

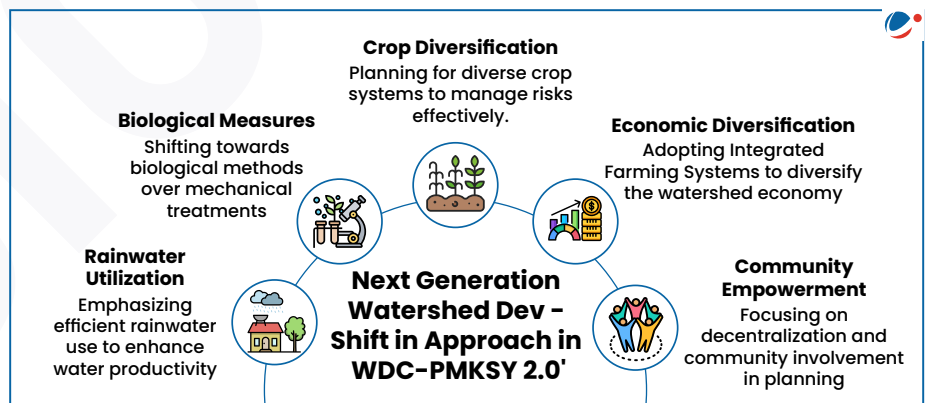
- ▶ **Watershed:** It's a land area that channels rainfall and snowmelt to creeks, streams, and rivers.

Key Highlights of the Sanctioned Projects under Watershed Development Component of PMKSY 2.0

- ▶ **Implemented by:** Department of Land Resources (DoLR), Ministry of Rural Development (MoRD)
- ▶ **States Covered:** Rajasthan, Madhya Pradesh, Karnataka, Odisha, Tamil Nadu, Assam, Nagaland, Himachal Pradesh, Uttarakhand, and Sikkim
- ▶ **Area Coverage:** Approximately 5,000 hectares per project (lesser in hilly areas).

About Watershed Development Component of Pradhan Mantri Krishi Sinchayee Yojana (PMKSY -WDC)

- ▶ **Background:**
 - ⊕ The DoLR had been implementing a **Centrally Sponsored Scheme (CSS)** 'Integrated Watershed Management Programme' (IWMP) since 2009-10.
 - ⊕ **WDC-PMKSY 1.0':** In 2015-16, IWMP was amalgamated as **the Watershed Development Component** of the umbrella scheme of PMKSY
- ▶ **'WDC-PMKSY 2.0'** is the continuation of the success of **PMKSY -WDC 1.0**
 - ⊕ **Period of WDC-PMKSY 2.0:** 2021-2026
 - ⊕ **Targets:** 49.50 lakh ha.
 - ⊕ **Aim:** Address land degradation, enhance farmers' income, and improve climate resilience by supporting activities such as soil conservation, rainwater harvesting, and pasture development.



About Pradhan Mantri Krishi Sinchayee Yojana (PMKSY)

- ▶ PMKSY was launched **during the year 2015-16** to enhance physical access of water on farm and expand cultivable area under assured irrigation.
- ▶ PMKSY is an **umbrella scheme**, consisting of two major components being implemented by **Ministry of Jal Shakti, namely:**
 - ⊕ Accelerated Irrigation Benefit Programme (AIBP).
 - ⊕ Har Khet Ko Pani (HKKP).
- ▶ Further, **Per Drop More Crop (PDMC)** component being implemented by **Department of Agriculture and Farmers Welfare (DoA&FW)** was also a component of PMKSY during 2016-21, and is now being implemented separately by DoA&FW.

India Celebrates the 150th Foundation Day of India Meteorological Department (IMD)

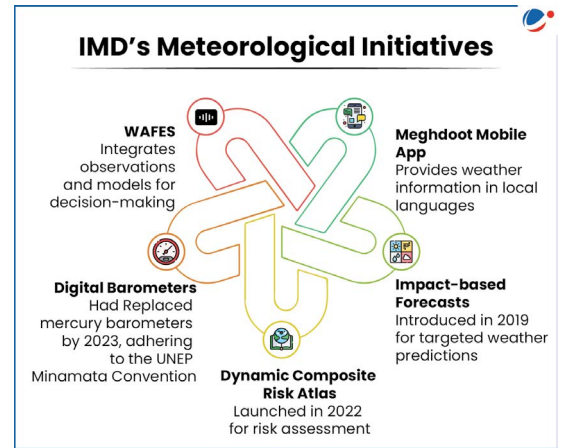
To mark the occasion, the **Prime Minister** inaugurated **Mission Mausam**, which had previously received Cabinet approval in September 2024.

Overview of IMD

- **Established:** In 1875, the IMD is the National Meteorological Service of India.
- **Ministry:** Operates under the Ministry of Earth Sciences.
- **Headquarter:** New Delhi. IMD has **6 Regional Meteorological Centres:** Mumbai, Chennai, New Delhi, Calcutta, Nagpur and Guwahati.
 - ⊕ IMD is also **one of the six Regional Specialised Meteorological Centres** of the **World Meteorological Organisation**.
- **IMD's Role:** It provides critical weather and climate services, playing a vital role in **disaster management, agriculture, aviation, and public safety.**

Key Achievements of IMD

- **Cyclone Predictions:** Reduced cyclone-related deaths from 10,000 in 1999 to zero in 2020-2024 & successfully predicted cyclones like Phailin (2013), Hudhud (2014), Fani (2019), etc.
 - ⊕ **Numerical Weather Prediction:** Improved forecast accuracy by 40% since 2014.
- **IMD in Public Outreach and Services**
 - ⊕ **Early Warning for All:** Weather alerts and forecasts now reach over 90% of India's population.
 - ⊕ **10-Day Weather Forecasts:** People can access weather information for the past 10 days and the next 10 days at any time.
 - ⊕ **Farmer Outreach:** Weather-related advice usage by farmers and livestock farmers increased from 10% to over 50% in the last decade.



About Mission Mausam

- Mission Mausam is envisaged to be a **multi-faceted initiative to tremendously boost India's weather and climate-related science, research, and services**
- **Key Features:**
 - ⊕ Establish a **wide network** of radars and satellites, wind profilers, radiometers, High-Performance Computers (HPC) and Artificial Intelligence/Machine Learning (AI/ML) based models for **multi-faceted weather observation and prediction.**
 - ⊕ Setting up a 'cloud-simulation chamber' at the **Indian Institute of Tropical Meteorology (IITM)** to be used for testing weather interventions like cloud seeding.
- **Implementing Ministry:** Ministry of Earth Sciences (MoES)

Also In News



Diego Garcia

15 Indian fishermen from Kanniyakumari detained near Diego Garcia island.

About Diego Garcia

- Diego Garcia is one of about **60 islands** that make up the **Chagos Archipelago** or British Indian Ocean Territory (BIOT) - It is the **largest southernmost member island** of the Chagos Archipelago.
- **History:** BIOT was the last colony established by the UK by separating it from Mauritius in 1965.
- **Strategic Importance:** Hosts a strategic U.S. military base used for surveillance, refueling, and operations in the Middle East, Asia, and Africa.
- Recently UK had ceded sovereignty of **Chagos Islands** to Mauritius after decades of dispute but has retained Diego Garcia.



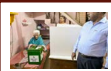
Bhargavastra

India has successfully tested its **first indigenous micro-missile system**, Bhargavastra, designed to counter the **threat of swarm drones**.

- Swarm drones are **multiple unmanned aerial vehicles (UAVs) working together** as a **coordinated system.**

Key Features of Bhargavastra

- **Detection Capability:** Capable of detecting small incoming drones at **distances exceeding 6 kilometers.**
- **Rapid Response:** Designed for rapid deployment on mobile platforms.
- **Multi-Target Engagement:** can simultaneously detect and track & engage up to 64 targets.
- **Guided Micro Munitions:** Utilizes micro munitions that can be guided towards identified threats.



Home Voting

Recently, over **2,900 senior citizens and persons with disabilities (PWDs)** applied for home voting for the upcoming Delhi Legislative Assembly Election.

About Home Voting

- It is a postal ballot facility that was **first introduced during the 2024 Lok Sabha elections** to facilitate senior citizens and people with disability in casting their votes.
- **Eligibility:** **Senior citizens aged 85 and above** and PwDs with a **benchmark disability of 40% or more.**
- The Union Law Ministry **amended the Conduct of Elections Rules-1961** to allow postal ballots for those aged 85 and above just before the 2024 Lok Sabha Election.



Ranthambore Tiger Reserve

Ranthambore Tiger Reserve faces risk of submergence under water due to proposed Parbati-Kalisindh-Chambal-Eastern Rajasthan Canal Project (PKC-ERCP).

About Ranthambore Tiger Reserve

- **Location:** It is located between Aravali and Vindhya hills.
- It was declared Tiger reserve in 1973. It comprises Ranthambore National Park, Sawai Madhopur Sanctuary, Keladevi Sanctuary, part of National Gharial Sanctuary etc.
- **Rivers:** It lies between Banas River (north) & Chambal River (south).
- **Flora:** Most dominant tree is Dhok (Anogeissus pendula).
- **Fauna:** Royal Bengal tiger, leopards, Indian wild boars, chital, serpent eagle, waterfowl, cormorant, painted spurfowl, sarus crane, etc.
- **Cultural Significance:** Ranthambore Fort within the reserve is a UNESCO World Heritage Site.



Hydroclimatic Whiplash

Experts attribute the severity of the wildfires in USA to hydroclimate whiplash, a phenomenon intensified by climate change.

About Hydroclimate whiplash

- It is a rare meteorological Hydro climatic volatility condition wherein an extremely wet season is succeeded by an extremely dry season.
- **Impact**
 - ⊕ **Amplification of hazards** like flash floods, wildfires, landslides, disease outbreaks etc.
 - ⊕ **Affect water quality** via harmful algal blooms or the influx of excess organic and/or mineral content.
 - ⊕ **Affect food security** through decreased plant productivity, crop failures, livestock mortality etc.



Electrokinetic Mining

Recently, a research team has developed Electrokinetic Mining (EKM), an eco-friendly method for extracting rare earth elements (REEs).

- REEs are a **group of 17 metallic elements** with unique magnetic, electronic, and chemical properties, **critical for modern technologies.**

About Electrokinetic Mining (EKM)

- It is an innovative technique that uses electrokinetics, the **movement of particles or fluids under an electric field** to extract rare earth elements (REEs) from ore bodies.
- **Key Features**
 - ⊕ **High Recovery Rate:** over 95% recovery of REEs.
 - ⊕ **Environmental Benefits:** Reduces chemical leaching by 80% & energy consumption by 60% making breakthrough in sustainable mining.



Gangasagar Mela

Lakhs of devotees took a dip at Gangasagar Mela on the occasion of Makar Sankranti.

About Gangasagar Mela

- **Location:** The mela is held at Sagar Island, located in the Sundarbans delta of West Bengal.
- ⊖ The island is situated at the point where the **Ganges River merges with the Bay of Bengal.**
- It is an **annual religious fair** where the main ritual involves **taking a dip in the waters at the confluence**, especially at sunrise on Makar Sankranti.
- **The pilgrimage site:** Kapil Muni Temple, dedicated to the sage Kapil Muni.
- **Significance:** Second-largest human gathering after Kumbh Mela.



Central Suspect Registry

Since the launch of the online 'suspect registry', the Centre has declined six lakh fraudulent transactions and saved Rs 1,800 crore in just 90 days.

Central Suspect Registry

- **The Indian Cyber Crime Coordination Centre (I4C)** has established the suspect registry in collaboration with banks and financial intermediaries.
- **Aim:** To enhance fraud risk management in the financial ecosystem.
- **Features**
 - ⊕ It contains data of **1.4 million cybercriminals.**
 - ⊕ The registry will serve as a **central-level database** with consolidated data on cybercrime suspects.
 - ⊕ Using data from the **National Cybercrime Reporting Portal (NCRP)**, the registry makes it possible to identify cybercriminals as potential threats.

Place in News



Spain (Capital: Madrid)

India and Spain will celebrate 2026 as the 'dual year,' focusing on culture, tourism, and advancements in Artificial Intelligence.

Physical Features

- Spain, located in **southwestern Europe**, occupies most of the **Iberian Peninsula.**
- **Land Boundaries:** Portugal (West), France (Northeast), Andorra (Northeast), Gibraltar (South).
- **Maritime Borders:** The Atlantic Ocean and the Mediterranean Sea.

Geographical Features

- **Climate:** Mediterranean climate.
- **Mountain Range:** Pyrenees (natural border between Spain and France).
- **Major Rivers:** Ebro, Tagus, Douro, and Guadalquivir rivers.
- **Other features:** Tabernas Desert (only true desert of Europe), Meseta Central (Plateau) and Andalusian Plain.
- **Islands:** Balearic Islands in the Mediterranean Sea and the Canary Islands off the coast of Africa.



Errata:

- In 'News Today' dated January 09, 2025, in the News titled '**Marathi Language has officially been granted the status of a Classical Language**', it was incorrectly mentioned that '**Gathasaptasati**, is a collection of poetry attributed to the **Satavahana King Hala**, is one of the earliest known literary works in Marathi.'
- ⊖ Correct information is that '**Gathasaptasati**, is a collection of poetry attributed to the **Satavahana King Hala**, is one of the earliest known literary works in **Maharashtri Prakrit.**'
 - ◆ **Marathi Language** evolved from the **Maharashtri Prakrit**, a dialect of the Prakrit languages spoken during the **Satavahana era.**