

# NEWS TODAY

## MNRE Issued Revised Guidelines on National Bioenergy Programme

The Ministry of New and Renewable Energy (MNRE) has updated the guidelines on 'Waste to Energy' and 'Biomass' components of the National Bioenergy Programme.

➤ **Bioenergy:** It is a form of renewable energy generated when we burn biomass fuel which comes from organic material such as harvest residues, crops and organic waste from our homes, etc.

**What is the National Bioenergy Programme?**

➤ **Launched:** In 2022

➤ **Implementation:** Two phases with a total budget of Rs. 1715 Crore; **Phase-1 (2021-22 to 2025-26).**

➤ **Objective:** Utilize surplus biomass (primarily from rural areas) for power generation, while providing additional income for rural households.

➤ **Central Financial Assistance (CFA):** To be provided to project developers based on various aspects of projects.

⊕ For special categories like the North East Region, hilly states, SC/ST beneficiaries, etc., **20% more CFA** will be provided.

➤ **There are 3 components of the programme**

⊕ **Waste to Energy Programme:** Support projects for generating Biogas, BioCNG, Power, or Syngas from urban, industrial, and agricultural waste/residues.

⊕ **Biomass Programme:** Support Biomass Briquette/Pellet manufacturing plants and Biomass (non-bagasse) based cogeneration projects.

⊕ **Biogas Programme:** Support biogas plants for clean cooking fuel, small power needs, improved sanitation, women empowerment, etc.

◆ **Biogas is 95% methane (CH<sub>4</sub>) and CO<sub>2</sub>, with traces of N<sub>2</sub>, H<sub>2</sub>, H<sub>2</sub>S, and O<sub>2</sub>**

### Key Features of Revised Guidelines



#### Waste to Energy Programme

- **Simplified Processes:** E.g., easier approvals for MSMEs and industry.
- **Improved CFA Disbursal:** Two-Stage Release:
  - 50% CFA after consent from the State Pollution Control Board, with bank guarantee.
  - Remaining CFA after 80% capacity achievement or maximum limit. (lower of two).
- **Other:** Streamlined inspections, flexible & performance-based funding, etc.



#### Biomass Programme

- **Simplified Processes:** E.g., no clearance documents needed for briquette/pellet plants.
- **Tech Integration:** E.g., enabling the use of IoT-based monitoring solutions.
- **Stubble Burning Support:** Pellet producers in NCR and nearby states can choose MNRE or Central Pollution Control Board (CPCB) scheme.
- **Other:** Flexible market access, performance-based subsidy, etc.

## Delhi Prepares For Its First-Ever Artificial Rain

The Delhi government is all set to conduct its first-ever artificial rain through cloud seeding to combat air pollution. The initiative, led by IIT Kanpur, involves cloud seeding using modified aircraft.

**What is Artificial Rain?**

➤ Artificial rain, also known as cloud seeding, is a weather modification technique aimed at enhancing precipitation (generate artificial rain) from clouds.

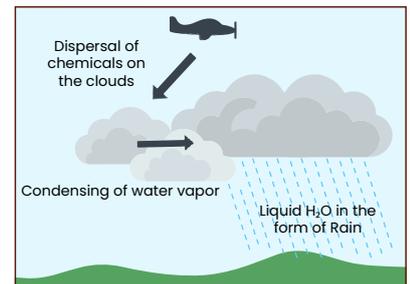
➤ **Method:** Uses chemicals like silver iodide, potassium iodide, and dry ice, which are dispersed into the sky via airplanes and helicopters.

⊕ These chemicals attract water vapour (acting as nuclei), helping form rain clouds.

➤ **Types:** **Hygroscopic Cloud Seeding** (accelerates the merging of droplets in liquid clouds) and **Glaciogenic Cloud Seeding** (induces ice formation in super cooled clouds).

**Way Forward**

Cloud seeding offers potential as a supplementary solution for water scarcity and agricultural support. However, its use must be guided by scientific research, environmental safeguards, and clear regulations.



#### Benefits

- **Enhances Rainfall in Drought-Prone Areas:** E.g. Dubai cloud seeding project.
- **Supports Agriculture:** Rain during dry spells, improving crop yields and farmer incomes.
- **Helps Regulate Weather Conditions:** Controls water vapor to reduce damage from hail, storms, or heavy snowfall in winter.
- **Reduces Air Pollution:** Can help clear pollutants and dust from the atmosphere.
- **Other:** Wildfire mitigation, enhancing winter snowfall etc.



#### Concerns

- **Floods and Landslides:** Excessive rain from cloud seeding can lead to flash floods & landslides.
- **Disturb Natural Weather Patterns:** It may disrupt natural weather cycles, causing droughts in other regions.
- **Environmental Damage:** Contaminated lakes & rivers affect aquatic life, & overall biodiversity.
- **Health Risks:** Chemical buildup in soil & water harms plants, animals, & disrupts ecosystems

## Model Rules for "Felling of Trees in Agricultural Land" to Promote Agroforestry

The rules aim to **simplify agroforestry processes** and encourage farmers to integrate trees into farming without procedural hurdles.

### Key Highlights

- **State Level Committee (SLC):** The existing SLC Constituted under the 'Wood-Based Industries (Establishment & Regulation) Guidelines, 2016' will oversee these rules.
  - ⊕ It will **advise the state on promoting agroforestry & boosting timber production** by easing tree felling and transit rules.
- **Registration of Plantation Area:** Applicants (owning agricultural lands) shall register in the **National Timber Management System** with land ownership details.
- **Felling Permission:** A **Felling Permit** is issued for agricultural lands with more than 10 trees, while a **No Objection Certificate** is issued for lands with 10 or fewer trees.

### What is Agro-forestry?

- **Definition:** Agroforestry involves **growing trees & agricultural crops** together on the same land.
- **Types:** **Agrisilviculture** (Crops + Trees); **Silvopasture** (Trees + Livestock); **Agrosilvopastoral** (trees + crops+ pasture/animals) etc.
- **Agroforestry in India:** It covers **8.65% (28.42 million hectares)** of India's **total geographical area**.
  - ⊕ The government defines agroforestry, for calculation purposes, as having over **10% tree cover on agricultural land**.

### Benefits

- **Environment Benefits:** It supports increasing tree cover outside forests & promotes **sustainable land use**, aligning with India's **Nationally Determined Contributions (NDCs)** under the Paris Agreement.
- **Economic Benefits:** It helps **double farmers' incomes** by boosting productivity, improving soil health, and conserving water.
- **Social Benefits:** Improvement in **rural living standards** from sustained **employment** and higher incomes.

### Initiatives to promote agroforestry

- **National Agroforestry Policy, 2014:** To promote agroforestry and to create a framework for research, development, and scaling up agroforestry practices.
- **Sub-Mission on Agroforestry (SMAF):** It is under the **National Mission for Sustainable Agriculture (NMSA)**.
- **GROW initiative:** Launched by **NITI Aayog**, aiming to transform India's wastelands through agroforestry.
- **The amendment to the Forest Act 1927 in 2017:** Redefined **bamboo as grass** instead of a tree, simplifying its harvesting and transit.

## UN Reports Highlighted India's Achievements in Child and Maternal Health

Recently, 'Trends in maternal mortality 2000 to 2023' and 'Levels & Trends in Child Mortality 2024' reports released by UN Inter-agency groups highlighted the global trends in maternal and child mortality rates.

### Key Achievements of India

- **Decline in Zero-Dose Children:** Zero-dose children are those who did not receive their first dose of DTP (diphtheria-tetanus-pertussis) vaccine.
  - ⊕ Reduced from **0.11% (2023)** to **0.06% (2024)** of the total population.
- **Reduction in Maternal & Child Mortality:**
  - ⊕ **Maternal Mortality Ratio (MMR): 86% decline** (vs. global 48% reduction since 1990).
    - ◆ **MMR:** Number of maternal deaths during a given time period per 100 000 live births during the same time period.
  - ⊕ **Under-Five Mortality Rate (U5MR): 78% decline** (vs. global 61%).
    - ◆ **U5MR:** Number of deaths of children under 5 years of age per 1,000 live births.
  - ⊕ **Neonatal Mortality Rate (NMR): 70% decline** (vs. global 54%).
    - ◆ **NMR:** Number of neonatal deaths that from birth to 29 days per 1,000 live births.
  - ⊕ **Polio-Free Status:** Maintained since **2014** through **National Immunization Days (NIDs)**.

### Universal Immunization Programme (UIP) Achievements

- **Reach:** Provides free vaccination services annually to **2.9 crore pregnant women** and **2.6 crore infants (0-1 year)**.
- **Coverage:** Now includes **12 vaccine-preventable diseases** (up from 6 in 2013).
- **New Vaccines Introduced (2014 onwards):** Inactivated Polio Vaccine, Rotavirus Vaccine, Pneumococcal Conjugate Vaccine, Measles-Rubella Vaccine, Adult Japanese Encephalitis Vaccine, Tetanus-Diphtheria Vaccine.

### India's Vaccination Success

Major Public Health Achievements



#### Zero Dose Implementation Plan 2024:

Rolled out across 143 districts in 11 states with a high burden of unvaccinated children.



#### Mission Indradhanush (Since 2014):

Intensified in 2017, vaccinated 5.46 crore children and 1.32 crore pregnant women.



#### Village Health and Nutrition Days (VHNDs):

Regular community-level immunization and outreach.



#### Other:

U-WIN Platform for digital tracking of immunization status; Regular IEC (Information, Education, Communication) Campaigns to combat vaccine hesitancy, Network of healthcare workers like ASHAs, and ANMs.

## ECI Initiates Delisting of 345 Registered Unrecognized Political Parties (RUPPs)

RUPPs have failed to fulfil the essential condition of contesting even a single election for **the last six years since 2019** and also their **offices could not be physically located anywhere**.

- The ECI will take **the final decision on delisting**, which would end **all benefits enjoyed by RUPPs**.

### Registration Of Political Parties

- **Section 29A of the Representation of the People Act, 1951 (RPA,51):** Lays down the requirements for registration of a political party with the ECI.
- **However, the ECI does not have power to de-register (different from de-listing) any political party** under the RPA, 51 [**case law: Indian National Congress versus Institute of Social Welfare (2002)**]

### Concerns Posed by RUPPs

- **Compliance-Related Concern:** Non-submission of Mandatory Contribution Reports under Section 29C of the RPA, 1951.
- **Financial Irregularities and Tax Abuse**
  - ⊕ **Improper Claims of Income Tax Exemptions:** In FY 2019–20, **219 RUPPs** claimed ₹608 crore.
  - ⊕ **Alleged Serious Financial Impropriety:** Fake donation receipts; Use of shell companies; Bogus transactions and purchases, etc.
- **No Electoral Participation:** In General Elections 2019, around **70% did not contest**, despite being registered.

### Ways to Deal with Errant RUPPs?

- **Law Commission's 255th report (2015):** Automatic de-registration of **parties failing to contest elections for 10 consecutive years**.
- **ECI's 2016 memorandum:** Suggested amending law to **empower ECI to de-register** political parties.

Political Parties Classification	
Understanding RUPPs vs. Recognised Parties in India	
 <b>Registered Unrecognised Political Parties (RUPPs)</b>	 <b>Recognised Parties</b>
<b>Legal Basis</b> Registered under <b>Section 29A</b> of the Representation of the People Act, 1951	<b>Recognition Criteria</b> Recognition as <b>national/state party</b> under the Election Symbols Order, 1968 • Based on <b>seat wins/vote share</b> in Lok Sabha/ State elections
<b>Benefits &amp; Privileges</b> <ul style="list-style-type: none"> <li>• Tax exemptions</li> <li>• <b>Common election symbol</b> for general/state elections</li> <li>• Permission for <b>20-star campaigners</b></li> </ul>	<b>Enhanced Benefits</b> <ul style="list-style-type: none"> <li>• <b>Reserved election symbol</b></li> <li>• <b>40-star campaigners</b> (double that of RUPPs)</li> <li>• Additional privileges and recognition</li> </ul>

## National Turmeric Board Headquarters Inaugurated in Nizamabad, Telangana

Notified in October 2023, the National Turmeric Board was inaugurated in January 2025.

### About the National Turmeric Board

- **Aim:** To provide leadership on turmeric related matters, augment the efforts, and facilitate greater coordination with Spices Board and other Government agencies in development and growth of the turmeric sector.
- **Ministry:** Ministry of Commerce & Industry
- **Composition:**
  - ⊕ **Chairperson** to be appointed by the Central Government
  - ⊕ Members from the Ministry of AYUSH, Departments of Pharmaceuticals, Agriculture & Farmers Welfare etc.
  - ⊕ Senior State Government representatives from three states (on rotation basis),
  - ⊕ Select national/state institutions involved in research & representatives of turmeric farmers & exporters
  - ⊕ A Secretary to be appointed by the Department of Commerce.
- **Role:** Promotes **R&D, value addition** for exports, **awareness** of turmeric's benefits, yield improvement, and **supply chain enhancement** to expand markets.

### Turmeric production in India

- India is the **largest producer, consumer, & exporter** of turmeric.
- About **30 varieties** of Turmeric are grown in **over 20 states** in the country.
- **Production:** 70% of global turmeric production.
  - ⊕ **Telangana, Maharashtra, Tamil Nadu, & Andhra Pradesh** together contribute **63.4%** of domestic production.
- **Export:** More than **62% share** of world trade.
  - ⊕ The **leading export markets** for India are **Bangladesh, UAE, USA & Malaysia**.
- **Turmeric in India with GI Tag:** **Sangli Turmeric & Waigaon Turmeric** (Maharashtra); **Erode Manjal/Turmeric** (Tamil Nadu); **Lakadong Turmeric** (Meghalaya).

### About Turmeric

- A rhizome (underground stem) often referred to as the **"Golden Spice"**.
- **Climatic Condition:** Grown in diverse tropical conditions
  - ⊕ **Temperature range:** 20-30 degree Celsius.
  - ⊕ **Annual rainfall:** 1500 mm or more.
- **Soil:** Thrives best in **well-drained sandy or clay loam soils**
- **Health Benefits:** **antioxidant and anti-inflammatory** properties etc.

## Also In News



### Remittances

As per a recent RBI report, **remittances to India reached \$135.46 billion in 2024-25** jumping 14% from the previous year.

- Remittances have more than doubled from \$61 billion in 2016-17.
- **Significance of Remittances for India**
- **Contribution to Economy:** Remittances accounted for **over 10% of India's \$1 trillion gross current account inflows** in FY25.
- **Trade Deficit Support:** Represented 47% of India's \$287 billion merchandise trade deficit.
- **Stable Source of Financing:** Remittances surpass gross inward foreign direct investment (FDI), serving as a stable source of external financing.



### Kolhapuri Chappals

Following controversy, a global fashion brand acknowledged drawing design inspiration from 'Kolhapuri chappals'.

### About Kolhapuri Chappals

- It is a **traditional handcrafted leather sandal** that has been awarded **Geographical Indication (GI) status** in 2019.
- Kolhapuri chappals trace their origins to the **12th century** in Maharashtra.
- They are made **entirely by hand using vegetable-tanned leather**.



### Botrytis fungi

Researchers have found that botrytis fungi cannot be cloned as no single nucleus contains a complete set of chromosomes in these fungi.

➤ Instead, the chromosome set is distributed across two or more nuclei.

#### About botrytis fungi (Noble rot)

- Botrytis are ascomycetes fungi.
- Ascomycetes is a type of fungi that produces sexual spores known as ascospores inside small sacs known as asci.
- **It infects grapes:** Causes the berries to lose water by evaporation and shrivel up.

#### About Fungi

- Fungi are **eukaryotic organisms** that lack **chlorophyll and vascular tissue**, living by decomposing and absorbing organic matter.
- **Fungi's cell wall contains chitin**, which is similar to the exoskeleton of insects and arachnids



### Exoplanet

The James Webb Space Telescope has discovered its first new exoplanet named TWA 7b.

#### About TWA 7b

- It was discovered in the debris rings that surround the **low-mass star CE Antilae, also known as TWA 7.**
- **It is ten times lighter** than any exoplanet previously directly imaged.

#### About Exoplanet

- Exoplanets are planets that orbit stars other **than the sun and thus exist outside the solar system.**
- Exoplanets that orbit in the **habitable zone** around their star where it's not too hot or too cold are targets for the search for life outside the solar system.
- **Currently, the closest exoplanet to Earth is Proxima Centauri b, 4 light-years away.**



### Synthetic Human Genome (SynHG) Project

Researchers are working on the Synthetic Human Genome (SynHG) project to construct human genetic material from scratch to learn more about how DNA works.

#### About SynHG Project

- It is the **five-year multi-centre** (Universities of Cambridge, Oxford etc) research project.
- **Aim:** To develop the foundational and scalable tools, technology and methods needed to synthesise human genomes.

#### What is Synthetic Genome?

- A **synthetic genome** is a **man-made DNA sequence** that is either completely designed in the lab or heavily modified from natural DNA.
- It could enable **targeted cell therapies**, virus-resistant transplants, and **climate-resilient engineered plants.**



### Secondary pollutants

A study by the Centre for Research on Energy and Clean Air (CREA) found that secondary pollutants, **account for nearly one-third of India's PM2.5 pollution.**

#### Secondary Pollutants

- **Genesis:** It is formed in the atmosphere as a result of the chemical or the **physical interactions between the primary pollutants themselves or between the primary pollutants and other atmospheric components.**
- **Sources:** Primary pollutants, sunlight, and atmospheric conditions.
- **Examples:** Ozone (O3), sulfuric acid (H2SO4), nitric acid (HNO3), etc.



### Dhole (Asiatic wild dog)

The dhole, or Asiatic wild dog, once thought to be extinct in the region, has made a confirmed comeback in **Assam's Kaziranga-Karbi Anglong Landscape (KKAL).**

#### About Dhole (Cuon alpinus)

- **Distribution:** India, Cambodia, Nepal, Bhutan, Thailand, Central Asia, etc.
  - ⊕ **In India,** it inhabits Eastern and Western Ghats, Assam, Meghalaya, West Bengal, Ladakh etc.
- **Characteristics:**
  - ⊕ Carnivores that resemble a small wolf or domestic dog in size.
  - ⊕ Hunt mainly in early morning or late evening.
- **Threat:** Habitat loss, disease, etc.
- **Conservation status:**
  - ⊕ **IUCN:** Endangered
  - ⊕ **Wildlife Protection Act 1972:** Schedule II
  - ⊕ **CITES:** Appendix II



### India Energy Stack (IES)

The Ministry of Power has announced the launch of a task force to **conceive the India Energy Stack.**

#### About India Energy Stack

- It is a **Digital Public Infrastructure (DPI) that will provide a standardised, secure, and open platform to manage, monitor, and innovate** across the electricity value chain.
- **Aim:** To create a **unified, secure, and interoperable digital infrastructure** for India's energy sector.
- **Key Features of India Energy Stack (IES)**
  - ⊕ Unique IDs for consumers, assets, and transactions.
  - ⊕ Real-time, consent-based data sharing.
  - ⊕ Open APIs for seamless system integration.
  - ⊕ Tools for consumer empowerment, market access, and innovation.

### Place in News



### Madagascar (Capital: Antananarivo)

- Minister of State of Defence represented India at the 65th anniversary celebrations of Independence Day of Madagascar
- **Political Features**
  - ⊕ **Location:** Situated in the Indian Ocean 250 miles off the southeast coast of Africa.
  - ⊕ **Maritime borders:** Comoros, France (Mayotte and Réunion), Mauritius, Mozambique and Seychelles.
- **Geographical Features**
  - ⊕ **Fourth largest island** in the world.
  - ⊕ Home to about 5% of the world's plant and animal species, about 80% of which are endemic.
- **Madagascar and Indian Monsoon:**
  - ⊕ The south-west monsoon originates near Madagascar due to the **Mascarene High**, pushing moisture-laden **south-easterly winds** toward Somalia.
  - ⊕ After crossing the equator, these winds deflect to become **south-westerlies**, heading toward India.
  - ⊕ The monsoon retreats via Tibet in September and finally **dissipates over Madagascar**, completing its cycle.

