

NEWS TODAY

Parliamentary Committee recommends measures to deal with Stubble burning and related issues

Committee examined the **imposition of the Environmental Compensation (EC)** on the farmers for **stubble burning** under the **Commission for Air Quality Management in National Capital Region and Adjoining Areas Rules, 2023 (amended in 2024)**.

➤ EC is a policy instrument for the protection of the environment which works on the **Polluter Pay Principle**.

Key Recommendations

- **Unified National policy:** Formulate a unified policy for integrating agricultural residue into bioenergy generation.
 - ⊕ It should address **ex-situ costs for crop residue management, etc.**
 - ⊕ Also, it should prioritize the adoption of technologies like **bio ethanol, compressed biogas, and biomass pellets**.
- **Economic incentives:** There is a need to provide **minimum support price** for residue.
- **Strengthening governance and redressal mechanism:** Appoint an authority to address farmers' grievances promptly related to erroneous or disputed challans.
- **Other:**
 - ⊕ State Governments should incentivize the adoption of **short-duration paddy varieties** as an alternative to **long-duration varieties** such as **PUSA 44**.
 - ⊕ Assess impact of ongoing **crop diversification incentives** under schemes like the **Crop Diversification Plan**.
 - ⊕ Establishment of **Real-time Mapping of Crop Acreage and Forecasting of Crop Maturity** and Weather system.
 - ⊕ Establish interim storage facilities in different districts for **collecting crop residue**.
 - ⊕ Need to utilise EC funds for promoting sustainable agriculture.



Conserving the Immortal Marks of Archaeological Sites

Climate change and extreme weather patterns are putting India's heritage sites at significant risk.

➤ **Archaeological Survey of India (ASI)** has been adopting various climate-resilient measures along with legal and security initiatives for preservation of cultural heritage sites.

How ASI is protecting Cultural Sites from Environmental Damage?

- **Use of Scientific methods:** E.g. Chemical, Biocidal and Hydrophobic treatment .
- **Setting up of Automated Weather Stations (AWS)** at sites in collaboration with ISRO
- **Air Pollution Monitoring Laboratories:** E.g. at sites such as Taj Mahal (Agra)
- **Development of Disaster Management Guidelines:** in collaboration with **NDMA and ASI** covering risk assessment, disaster preparedness, and recovery plans.

Legal and security measures:

- **Legal Protection:** Under the **Ancient Monuments and Archaeological Sites and Remains Act, 1958**, to protect sites from encroachments and misuse.
 - ⊕ **Penalty for Misuse:** **Section 30** of the act enforces penalties for actions that damage or misuse.
- **Encroachment Control:** Superintending Archaeologists have the authority to issue eviction notices under the **Public Premises (Eviction of Unauthorised Occupants) Act, 1971**, to remove encroachments.
- **Deployment of Personnels:** E.g. **CISF** at various sites
- **Adoption of National Conservation Policy, 2014:** for maintaining and conserving monuments.

Archaeological Survey of India

- It was **established in 1861** and is responsible for **protecting archaeological sites of national importance**
- **Operation:** under **Ancient Monuments Preservation Act of 1904** and the **Ancient Monuments and Archaeological Sites and Remains Act of 1958**.

UNESCO launches "Imagine a world with more women in science" campaign

The campaign marks the 10th anniversary of **International Day of Women and Girls in Science** & highlights positive impact of diverse perspectives by using hashtag **#EveryVoiceInScience**.

➤ **UNGA has in 2015 declared 11th February as International Day of Women and Girls in Science.**

Gender Gap in Science

➤ Global:

- ⊕ **Low Representation:** Women make up only **one-third** of the global scientific community.
- ⊕ **Leadership Gap:** Just **1 in 10 STEM leadership roles** are held by women.

➤ India:

- ⊕ Women constitute **43% enrolment in STEMM** (Science, Technology, Engineering, Mathematics & Medicine).
- ⊕ The number of **women scientists** is **18.6%**, **R&D projects** run by Women are **~25%**.

Challenges

➤ **Social & Cultural Norms** (restrictive gender roles), **Lack of role models** (few visible female leaders in science limits aspirations), **workplace inequality** (biased work cultures) etc.

Steps to be Taken

Parameters	Recommended actions
Dismantle Gender Stereotypes and biases in Science	Enhance visibility of women role models by: <ul style="list-style-type: none"> ➤ Including more discoveries and stories from female scientists, with images in school textbooks ➤ Ensure an equitable representation of women on relevant boards, committees and panel
Opening Educational Pathways for Girls in Science	Use of innovative and inspiring educational strategies and initiatives:- <ul style="list-style-type: none"> ➤ Remove gender bias and stereotypes from teaching and learning materials ➤ Encourage businesses to implement corporate social responsibility initiatives supporting women and girls in science
Creating Workplace Environments that Attracts, Retain and Advance Women Scientists	Adopt policies to promote inclusion, diversity and equity at workplace:- <ul style="list-style-type: none"> ➤ Take action against gender-based violence, including sexism and sexual harassment ➤ Promote women in leadership positions

Unlocking India's bioenergy potential

India's potential in the sphere of bioenergy was highlighted during India Energy Week 2025.

What is Bioenergy?

- **Bioenergy** is a source of energy from the organic material that makes up plants, known as biomass.
 - ⊕ **Biomass** is material of biological origin, for example wood, dung or charcoal.
- **Key Categories:**
 - ⊕ **Traditional bioenergy:** Refers to the combustion of biomass in such forms as wood, animal waste etc.
 - ⊕ **Modern bioenergy:** Include **liquid biofuels, biogas, etc.**

India's Status

- **Energy Mix Contribution:** Modern bioenergy accounts for 13% of total energy, projected **45% growth (2023-2030)**.
 - ⊕ India will account for more than a **third of global bioenergy demand growth**.
- **Key driving factor:** Annual Biomass production in the Country is around **750 MMT**
- **Key Targets for using Bioenergy**
 - ⊕ **20% ethanol blending** (by 2025/26) and **5% biodiesel blending** (by 2030)
 - ⊕ **5% Compressed Bio-Gas (CBG)** blending requirement (by 2028/29).

Key challenges: Inadequate **feedstock supply** (fuel reliability and quality), Lack of public data on biomass availability across geographies, Limited storage options, etc.

Measures Required: Develop centralised and comprehensive feedstock assessment, Establish a centralised registry to track CBG production, Setting technical standards For biogas and biomethane facilities, etc.

Benefits of Bioenergy			
Achieving Net Zero	Reduces Oil Imports	Boosts Farmers Income	Other Benefits
Striving for carbon neutrality by 2070.	Reducing dependence on foreign oil sources.	Increasing farmers' earnings through bioenergy crops.	Includes promoting a circular economy.

Key Initiative taken for Promoting Bioenergy

- **National Bioenergy Programme (NBP)**, it includes **Waste to Energy, Biomass and Biogas Programme**
- **National Policy on Biofuels** (2018, Revised 2022)
- **SATAT (Sustainable Alternative Towards Affordable Transportation) Initiative**
- **GOBAR-Dhan Scheme** (Galvanizing Organic Bio-Agro Resources)
- **Pradhan Mantri JI-VAN Yojana**, financial support for **advanced biofuels projects**.

Protein Deficiency haunts Rural India despite Accessible and Affordable Nutrition: ICRISAT Study

The study depicts a surprising paradox as protein deficiency remains widespread in rural households that sufficiently produce or have access to protein-rich foods.

- More than >2/3rd of households (across semi-arid tropics in India) consume less protein than recommended protein sources leading to hidden hunger.
 - ⊖ **Hidden hunger** (also known as **micronutrient deficiencies**) occurs when the **quality of food that people eat does not meet their nutrient requirements (FAO)**.

Key findings

- **Underutilisation of protein-rich foods such as pulses, dairy, eggs:** It is mainly due to cultural food preferences, limited nutritional awareness, and financial constraints.
- **Unbalanced Nutrient uptake:** Cereal-heavy diets (rice and wheat) lack Essential Amino Acids leading to imbalanced nutrition."
- **Public Distribution System (PDS):** PDS has improved calorie intake but inadvertently promoted cereal-dominated diets.
- **Women's Education:** Households with women's education were more likely to consume balanced food.

Recommendations:

- **Nutrition education:** Integrating nutrition education into public health programmes and school curriculum.
- **Context specific approach:** Need to adopt context-specific approach and region specific strategies rather than One-size fits all approach.
- **Reforming PDS:** Need to include protein rich food items.
- **Diversification of Farming Systems:** Including the cultivation of nutrient-dense crops like millets, legumes, and integrating dairy animals.

International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)

- **Established:** 1972
- Government of India has extended the status of a specified "International Organisation" to ICRISAT under section 3 of the **United Nations (Privileges and Immunities) Act, 1947**
- **Vision:** prosperous, food-secure, and resilient dryland tropics
- **Mission:** to reduce poverty, hunger, malnutrition and environmental degradation in the dryland tropics



Also In News



National Institute of Mental Health and Neuro Science (NIMHANS)

The National Institute of Mental Health and Neuro Sciences celebrated its 50th Institute Day.

About NIMHANS

- **Established:** 1972 (Bengaluru)
- **Mission:** Tripartite mission of delivering unparalleled patient care, conducting pioneering research, and imparting cutting-edge training.
- **Status of Organisation:** Declared **Deemed University** (1994), conferred status of 'Institute of National Importance' (2012) through a separate act of Parliament.
- **Designated nodal centre for the ambitious Tele MANAS** (Tele mental health Assistance and Nationally Actionable Plan through States) programme.
 - ⊖ **Tele MANAS** is a toll-free helpline (14416) available nationwide, offering a wide range of mental health services.



NAMASTE Scheme

Union Minister for Social Justice and Empowerment distributes PPE Kits and Ayushman Cards to Sewer and Septic Tank Workers under NAMASTE Scheme.

About NAMASTE Scheme (National Action for Mechanised Sanitation Ecosystem)

- **Objective:** Formalize sanitation workers, promote mechanized cleaning, and ensure safety.
- **Implementing Ministries:** Jointly by Ministry of Social Justice and Empowerment (MoSJE) and the Ministry of Housing and Urban Affairs (MoHUA).
- **Implementing Agency:** National Safai Karmacharis Finance Development Corporation (NSKFDC) under MoSJE
- **Duration:** FY 2023-24 to 2025-26 (3 years).
- **Target Group:** Sewer & septic tank workers (SSWs), and wastepickers (added in 2024).



Exercise Ekuverin

The 13th edition of joint military exercise 'Ekuverin' between the Indian Army and the Maldives National Defence Force has commenced in Maldives.

About Exercise Ekuverin

- It is a bilateral annual exercise conducted alternatively in India and Maldives.
 - ⊕ **Ekuverin means 'Friends' in Dhivehi language spoken in Maldives.**
- **Aim:** Enhancing interoperability in counter insurgency and counter terrorism operations, and carry out joint humanitarian assistance and disaster relief operations.



Anamudi Shola National Park

Kerala has secured approval from the National Board for Wildlife (NBWL) to erect a check dam across the Silandhi river using forest land from Anamudi Shola National Park.

- **Silandhi river**, is a tributary of the **Amaravathy river** which in turn feeds the **Cauvery river**.

About Anamudi Shola National Park

- **Location:** along **Western Ghats (Idukki District Kerala)**
- **Surrounded by:** **Eravikulam National park, Pampadum Shola National park, Chinnar Wildlife Sanctuary and Mathikettan Shola Park.**
- **Tallest peak:** **Anamudi (2,695 m)**
- **Flora:** Southern subtropical hill forests, southern montane wet temperate forests and moist deciduous forests.
- **Fauna:** Elephant, Tiger, Panther, Indian Bison, Nilgiri tahr, Gaur, Spotted Deer, Sambar, etc.



FEMA, 1999

RBI directs state-owned banks to penalize companies for violating **Foreign Exchange Management Act (FEMA), 1999** by obtaining guarantees from overseas banks, as per reports.

About FEMA, 1999

- It replaced the **Foreign Exchange Regulation Act (FERA), 1973**
- **Objective:** **Facilitates external trade & payments**, promotes orderly forex market development
- **Jurisdiction:** **Applies across India** and to **Indian entities abroad.**
- **Directorate of Enforcement** investigates violations under the Act.



Thiruparankundram Hill

Madras High Court directs T.N. government maintain communal harmony in **Thiruparankundram hill**.

About Thiruparankundram hill

- Located in Madurai district.
- Rock cut Thiruparankundram temple is located here.
 - ⊕ It was built here in the 8th century during the **reign of Pandyas.**
 - ⊕ It is **one among the six temples of Lord Muruga**, chief deity of the ancient Tamils of South India, son of the warrior goddess Korravai.
- **A Muslim shrine Sekunder** (Sikandar Shah, the last Sultan of the Madurai Sultanate) is also located here.
- Also, Cave associated with **Jain religion** are also located here.



Global Capability Centers

Madhya Pradesh has become the first state in the country to bring a dedicated **Global Capability Centre (GCC)** policy.

About GCCs

- GCCs are designed to **leverage global talent pools** and technological advancements to enhance organizational capabilities and drive business transformation.
- India's GCC are emerging as **strategic hubs** reshaping the **Indian corporate landscape** while influencing **global business dynamics.**
- **Present Scenario:** Number of GCCs in India has grown from ~1430 (FY 2019) to >1700(FY 2024) in FY24.
 - ⊕ As of FY24, GCCs in India employ nearly 1.9 million professionals.



Ongole breed

A cow of the Ongole breed (named viatina-19), has set a record in Brazil by fetching 41 crores at an auction.

About Ongole breed

- It is also called the **Nellore breed**, belongs to Andhra Pradesh.
- **Characteristics:**
 - ⊕ The Ongole are large-sized animals with loosely knit frames.
 - ⊕ The forehead is broad between the eyes and slightly prominent. Eyes are elliptical in shape.

Other Important indigenous breeds: Gir (Gujarat), Hallikar (karnataka), Khillari (maharashtra), Tharpakar (Rajasthan), and Deoni (Andhra Pradesh).

Personality in News



Jagadish Chandra Bose

Anusandhan National Research Foundation (ANRF) has announced the launch of the **J. C. Bose Grant (JBG)**, a new scheme, to recognize contributions of senior Indian scientists.

About Jagadish Chandra Bose (1858 - 1937)

- He was the **first Asian to be awarded a US patent** in 1904.
- He investigated of **radio microwave optics** and considered as the father of radio and wireless communication.

Key contributions

- He was the first person to prove that plants also have the ability to feel pain and affection.

Key Inventions:

- ⊕ Cresco graph, used for measuring the growth in trees.
- ⊕ Invented **first wireless detection devices.**
- He founded the **Bose Institute**, a premier research institute in 1917.
- **He is considered the father of Bengali science fiction.**

➤ **Key Literary work:** science paper "On the Similarity of Responses in Inorganic and Living Matter", "The Nervous Mechanism of Plants", and Niruddeshar Kahini (The Story of the Missing One).

