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**DAILY
CURRENT AFFAIRS**

Important Current News for UPSC & UPPSC

13th May 2026

TOPICS:-

- 1. AI-Based Nitrate-to-Ammonia Technology**
- 2. Construction Welfare Cess under Code on Social Security, 2020**
- 3. Sardar Patel Cooperative Dairy Federation Limited (SPCDF)**
- 4. Kuljeet Kaur Marhas and The Meteoritical Society**
- 5. India's Solar Capacity Expansion**
- 6. SEBI's GARUDA Mechanism for AIFs**
- 7. Fourth India-Africa Forum Summit (IAFS-IV)**
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AI-BASED NITRATE-TO-AMMONIA TECHNOLOGY

TOI The Times of India

China develops AI-powered technology that converts dirty wastewater into valuable fertiliser



Chinese researchers have made a significant advancement in circular resource recovery by creating a new way to turn nitrate-laden wastewater...

Why in News

- China developed an **AI-powered electrochemical technology** to convert nitrate-rich wastewater into **ammonia (NH₃)** for fertiliser production.

AI-Driven Catalyst Innovation

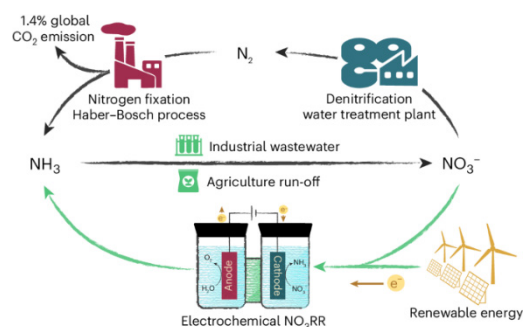
- The process uses an **AI-optimised Dual-Atom Catalyst (DAC)** containing two adjacent active metal atoms.
- The catalyst improves reaction selectivity and **nitrate-to-ammonia conversion efficiency**.
- The technology converts nitrates from **agricultural runoff** and industrial effluents into ammonia.

Energy-Efficient Ammonia Production

- The technology uses **electrochemical reduction** to convert nitrates into ammonia at room temperature.
- It is nearly three times more efficient than earlier **nitrate-to-ammonia** conversion methods.
- Unlike the **Haber-Bosch Process**, it does not require high temperature and pressure conditions.
 - The **Haber-Bosch Process** produces ammonia from nitrogen and hydrogen and is highly energy-intensive.
- Ammonia is the main raw material for nitrogen fertilisers such as **urea** and ammonium compounds.

Ammonium

- **Ammonium (NH₄⁺)** is a **positively charged ion** formed when **ammonia (NH₃)** gains a hydrogen ion.
- It is an important source of **nitrogen** in fertilisers such as **ammonium sulphate** and **ammonium nitrate**.
- Ammonium compounds are **highly soluble in water** and are easily absorbed by plants.
- Excess **ammonium** in water bodies can cause **water pollution** and **eutrophication**.



CONSTRUCTION WELFARE CESS UNDER CODE ON SOCIAL SECURITY, 2020

Why in News

- The Centre notified a **1% construction welfare cess** under **Section 100(1) of the Code on Social Security, 2020**.



Coverage and Exemptions

- The cess applies on total construction cost incurred by employers for building activities.
- Commercial construction projects remain fully covered under the levy.
- Individual houses costing below **₹50 lakh** are exempt from the cess from **21 November 2025**.
- Earlier exemptions applied to houses below ₹10 lakh or under 100 square metres.

Worker Welfare and Administration

- The cess funds are managed through **Building and Other Construction Workers Welfare Boards**.
- Welfare measures include health support, insurance, pensions, and educational assistance.
- The Centre plans integration of cess benefits with **Employees' State Insurance Corporation (ESIC)** healthcare.

Regulatory Framework

- The **Code on Social Security, 2020** is one of India's four labour codes.
- **Rule 42 of Draft Social Security Rules, 2025** provides a self-assessment mechanism for cess payment.
- The self-assessment must be certified by a chartered engineer.
- The **CBDT** granted **Section 10(46)** tax exemption to the West Bengal Construction Workers Welfare Board in 2026.

SARDAR PATEL COOPERATIVE DAIRY FEDERATION LIMITED (SPCDF)

Why in News

- **Jayen Mehta** became the first chairman of the **Sardar Patel Co-operative Dairy Federation Limited (SPCDF)** on 8 May 2026.

BW People

Jayen Mehta Elected Chairman Of Sardar Patel Co-operative Dairy Federation

Amul MD to lead the national dairy cooperative body as Sangram Chaudhary takes charge as Vice Chairman.



Federation Structure

- SPCDF is a newly formed **multi-state cooperative dairy federation** inaugurated on 6 July 2025.
- The federation has a **five-year term** beginning from **5 May 2026**.
- The board includes representatives from Gujarat and cooperative milk societies of **Assam, Maharashtra, and Uttar Pradesh**.

Leadership and Cooperative Significance

- Jayen Mehta is the Managing Director of **Gujarat Cooperative Milk Marketing Federation (GCMMF)**.
- **Amul** is the consumer brand of **GCMMF**.
- **Sangram Chaudhary** was elected vice-chairman of the federation.
- Multi-state cooperatives are governed under the **Multi-State Cooperative Societies Act, 2002**.

KULJEET KAUR MARHAS AND THE METEORITICAL SOCIETY

TOI The Times of India

[Meet Kuljeet Kaur Marhas: First Indian woman elected Fellow of The Meteoritical Society for pioneering pl](#)

Science News: Kuljeet Kaur Marhas has made history by becoming the first Indian woman elected Fellow of The Meteoritical Society, one of the...



Why in News

- **Kuljeet Kaur Marhas** became the first Indian woman elected Fellow of **The Meteoritical Society** for 2026.

Scientific Contribution

- She is associated with the **Physical Research Laboratory (PRL), Ahmedabad** under the **Department of Space**.
- Her research focuses on radionuclides, stable isotopes, pre-solar grains, and meteorite materials.
- She studied **Calcium-Aluminium-rich Inclusions (CAIs)**, among the oldest known Solar System materials.

Space Missions and Techniques

- She analysed samples from the **Stardust, Hayabusa, and Apollo** missions.
- Her work uses **Secondary Ion Mass Spectrometry (SIMS)** and nanoSIMS techniques.
- The Meteoritical Society studies meteorites and planetary materials linked to Solar System evolution.

INDIA'S SOLAR CAPACITY EXPANSION

DH Deccan Herald

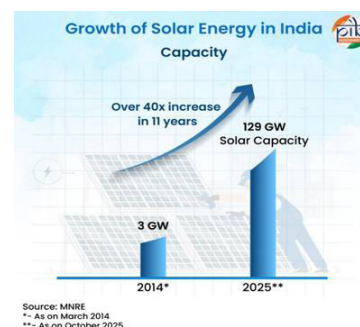
India Solar Milestone: 150 GW Reached with Record 44 GW Jump

India Solar Power 2026: Total capacity hits 150 GW as the country adds a record 44 GW in one year. MNRE highlights PM Surya Ghar and PLI...



Why in News

- India added **44 GW** solar capacity in 2025, raising total installed solar capacity to **150.2 GW** by March 2026.



Renewable Energy Growth

- India became the **world's third-largest producer** of solar power.
- Total renewable energy capacity reached **276.5 GW**, forming **51.7%** of installed power capacity.
- India added **14.4 GW** solar photovoltaic capacity in the first quarter of 2026.

Government Support Measures

- Expansion is linked to **PM Surya Ghar Yojana, PM-KUSUM, and the PLI Scheme.**
- The **Ministry of New and Renewable Energy (MNRE)** is the nodal ministry for renewable energy.
- **Solar photovoltaic systems** generate electricity directly from sunlight using semiconductor cells.

SEBI'S GARUDA MECHANISM FOR AIFS

BS Business Standard

Sebi proposes 'GARUDA' mechanism to speed up AIF scheme launches

The regulator noted that the number of registered AIFs has risen to 1849 as of March 31, 2026, from 732 five years ago.



Why in News

- **SEBI** proposed **GARUDA**, a green-channel mechanism for faster launch of **Alternative Investment Fund (AIF)** schemes.

Key Features

- GARUDA stands for **Green-Channel: AIF Rollout Upon Document Acknowledgement.**

- The proposal reduces launch timelines from 30 days to 10 working days after filing the **Placement Memorandum (PPM)**.
- AIFs are regulated under the **SEBI (Alternative Investment Funds) Regulations, 2012**.


Special Provisions

- Accredited Investor-only schemes and **Angel Funds** may directly file PPMs with SEBI.
- Merchant banker due diligence may be replaced by undertakings from CEOs and Compliance Officers.
- **Angel Funds** finance start-ups and **early-stage ventures**.

Industry Trends

- Registered AIFs increased from 732 to 1,849 in five years.
- Total AIF commitments reached **₹15.74 lakh crore** by December 2025.
- **SEBI** invited public comments on the proposal till **1 June 2026**.

FOURTH INDIA-AFRICA FORUM SUMMIT (IAFS-IV)

 Vivekananda International Foundation (VIF)

Pathways to the 4th India-Africa Forum Summit (IAFS)

The Vivekananda International Foundation (VIF) organised a Roundtable Discussion on the theme "Pathways to the 4th India-Africa Forum Summit..."



Why in News

- India will host the **Fourth India-Africa Forum Summit (IAFS-IV)** in **New Delhi** from 28–31 May 2026.

Theme and Participation

- The summit is organised with the **African Union Commission**, representing 55 African countries.
- The theme is **"IA SPIRIT: India-Africa Strategic Partnership for Innovation, Resilience, and Inclusive Transformation."**
- The previous India-Africa Forum Summit was held in 2015.



Cooperation Areas

- Discussions will cover trade, investment, climate action, defence, health, agriculture, and digital transformation.
- The summit roadmap aims to align India's **Vision 2047** with Africa's **Agenda 2063**.

- India’s trade with Africa reached about **US\$82 billion** in 2024-25.
- India extended over **US\$10 billion** in Lines of Credit and nearly **US\$700 million** in grants to African countries.

OTHER IMPORTANT NEWS OF THE DAY

Person in News

HIMANTA BISWA SARMA’S SECOND TERM AS ASSAM CM

Why in News

- **Himanta Biswa Sarma** is set to take oath for a second consecutive term as **Chief Minister of Assam** on 12 May 2026.



Constitutional and Political Context

- The Chief Minister is appointed by the Governor under **Article 164 of the Constitution**.
- The **Assam Legislative Assembly** has 126 seats, with 64 required for majority.
- The **National Democratic Alliance (NDA)** won 102 seats in the Assembly elections.
- Assam Governor **Lakshman Prasad Acharya** invited Himanta Biswa Sarma to form the government.

Strategic Relevance of Assam

- Assam is important for India’s **North-East connectivity** and **Act East Policy**.
- The swearing-in ceremony is scheduled at **Khanapara, Guwahati**.
- Assam shares international borders with **Bhutan and Bangladesh**.
- Political stability in Assam is important for regional infrastructure and security initiatives.

Places in News

INDIA–TRINIDAD AND TOBAGO RELATIONS

III The Hindu

Cricket gives special dimension to India-Trinidad and Tobago ties: Jaishankar

Jaishankar highlights cricket's role in strengthening India-Trinidad and Tobago ties during his three-nation Caribbean tour.



Why in News

- India and Trinidad and Tobago signed eight **Memoranda of Understanding (MoUs)** during EAM **S. Jaishankar's** visit in May 2026.
- Trinidad and Tobago is a **CARICOM** member and a twin-island republic in the Caribbean.



Areas of Cooperation

- The agreements covered tourism, healthcare, Ayurveda, infrastructure, vector control, and education.
- India will establish an **Indian Chair on Ayurveda** at the **University of the West Indies**.
- India supported solarisation of the Ministry of Foreign and CARICOM Affairs building.
- An agro-processing facility received Indian machinery support worth **USD 1 million**.

India's Soft Power Expansion

- India inaugurated a **National Prosthetics Centre** in Penal during the visit.
- India handed over the first batch of **2,000 laptops** to schoolchildren.
- **Nelson Island** was included in infrastructure cooperation initiatives.

**Environ-
ment**

BINSAR WILDLIFE SANCTUARY

The Times of India

Scientific wildlife census begins in Binsar Sanctuary

Scientific wildlife census begins in Binsar Wildlife Sanctuary: 50 grids, 100+ camera traps to track tigers, leopards, bears, deer and foxes...



Why in News

- A scientific wildlife census was launched in **Binsar Wildlife Sanctuary** to study key species population and wildlife corridors.

Location and History

- It is located in **Almora district** of the **Kumaon region, Uttarakhand**.
- The sanctuary was established in **1988** for conservation of **broad-leaf oak (Quercus) forests**.
- Binsar served as the summer capital of the **Chand Kings**.

Geography and Flora


- The sanctuary covers about **47.59 sq km** with altitude ranging from **900 m to 2,500 m**.
- Vegetation mainly includes **Oak, Deodar, and Rhododendron** forests.
- **Zero Point (Jhandi Dhaar)** offers views of peaks like **Nanda Devi, Trisul, and Panchachuli**.

Fauna and Ecological Importance

- Major mammals include **Leopard, Musk Deer, Himalayan Goral, and Red Fox**.
- It supports over **200 bird species**, including **Himalayan Monal and Kalij Pheasant**.
- The sanctuary protects the fragile **Central Himalayan ecosystem** and important wildlife corridors.

Miscellaneous

PUNE'S LOW EMISSION ZONE (LEZ)

 Hindustan Times

[Pune to have India's first Low Emission Zone, tourist hotspots to follow | India News](#)

In a first for an Indian city, Pune will institutionalise a low-emission zone (LEZ) in its most polluted area, Shivajinagar in the central...



Why in News

- Pune is set to establish India's first **Low Emission Zone (LEZ)** in **Shivajinagar**.

Emission Control Measures

- LEZs restrict entry of highly polluting vehicles in urban areas.
- The **first phase** targets **Bharat Stage-III** and older vehicles registered before 2011.

- Polluting vehicle owners may pay a daily pollution charge for entry.
- Autorickshaws, public buses, and emergency vehicles are likely to remain exempt.

Policy and Monitoring Framework

- The initiative is linked to the **Maharashtra EV Policy 2021** and **National Clean Air Programme (NCAP)**.
- Enforcement will use **Automatic Number Plate Recognition (ANPR)** cameras.
- Pune and Pimpri-Chinchwad still have large numbers of BS-IV and older vehicles.
- **Pimpri-Chinchwad** also plans a **city-wide LEZ** under its Graded Response Action Plan.