



DAILY CURRENT AFFAIRS

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1. Critical Minerals: Foundation of Strategic Power

Why in News?

Source: Indian Express

Subject: Environment/ Geography

Critical minerals have emerged as a strategic priority for India due to their indispensable role in the clean energy transition, advanced manufacturing, defence technologies and digital infrastructure. India is strengthening domestic capabilities and international partnerships to secure resilient mineral supply chains.

Key Highlights

- **Critical minerals** such as **lithium, cobalt, nickel, graphite, copper and rare earth elements (REEs)** are essential for electric vehicles (EVs), batteries, semiconductors, renewable energy and defence systems.
- The **top three refining countries** accounted for **nearly 86%** of global refining capacity for critical minerals in **2024**, highlighting supply chain concentration.

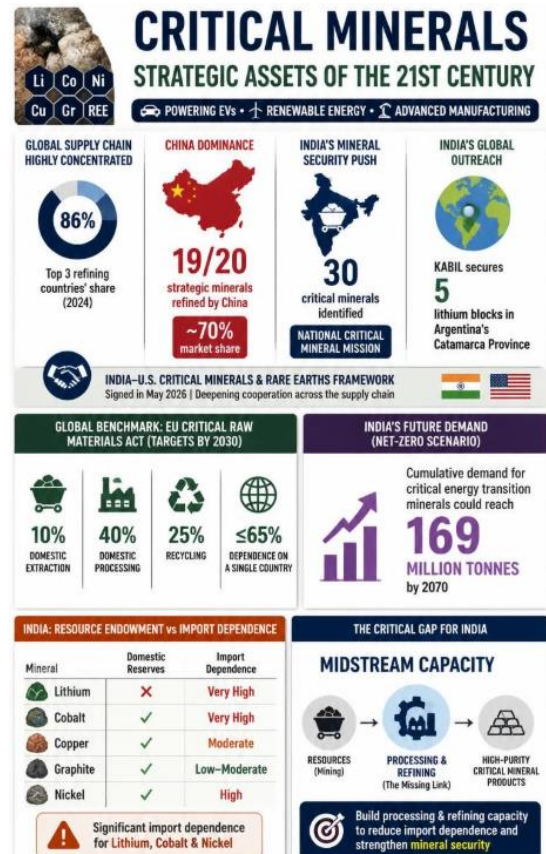
- **China dominates the refining of 19 out of 20 strategic minerals**, controlling nearly **70% of global refining capacity**.
- India has identified **30 Critical Minerals** and launched the **National Critical Mineral Mission (NCMM)** to strengthen exploration, processing and supply security.
- **Khanij Bidesh India Limited (KABIL)** has secured **five lithium blocks** in **Catamarca Province, Argentina** for overseas exploration.
- India and the **United States** signed a **Critical Minerals and Rare Earths Framework (May 2026)** to deepen cooperation across the mineral value chain.

Why are Critical Minerals Important?

- **Energy transition** depends on critical minerals for batteries, solar panels, wind turbines and energy storage systems.
- **Strategic industries** such as aerospace, defence, electronics and semiconductors require uninterrupted access to these minerals.
- **Digital technologies** including artificial intelligence, telecommunications and advanced electronics rely heavily on rare earth elements and specialty metals.
- **National security** increasingly depends on secure mineral supply chains, making mineral security comparable to traditional energy security.

India's Challenges

- **Import dependence** remains high for lithium, cobalt and nickel despite possessing reserves of graphite, copper, cobalt and rare earth elements.
- **Processing and refining capacity** remains limited, creating dependence on foreign midstream industries.
- **Global supply chains** are highly concentrated, exposing India to geopolitical risks and export restrictions.
- **Rising domestic demand** driven by electric mobility and renewable energy is expected to increase significantly over the coming decades.



National Critical Mineral Mission (NCMM)

- Aims to strengthen **domestic exploration, mining, processing and recycling** of critical minerals.
- Targets completion of **1,200 exploration projects** across India by **2030-31**.
- Supports acquisition of **50 overseas mineral assets** by Indian companies.
- Promotes strategic stockpiling and development of resilient mineral supply chains.

Government Initiatives

- **KABIL** is securing overseas mineral assets through partnerships with resource-rich countries.
- **Rare Earth Corridors** proposed in **Odisha, Andhra Pradesh, Kerala and Tamil Nadu** aim to integrate mining, processing and manufacturing.
- **International cooperation** with trusted partners seeks to diversify supply sources and reduce import vulnerabilities.
- **Research and innovation** are being promoted to develop indigenous processing technologies and recycling capabilities

Way Forward

- **Domestic exploration** should be accelerated to identify commercially viable mineral deposits.
- **Processing and refining infrastructure** must be expanded to reduce dependence on imported intermediate products.
- **Strategic mineral reserves** can strengthen resilience against global supply disruptions.
- **Circular economy approaches**, including recycling and resource recovery, should supplement primary mineral production.
- **International mineral partnerships** should continue to diversify India's sourcing strategy and strengthen long-term resource security.

UPSC Prelims Practice Question

Q. Consider the following statements regarding **critical minerals**:

1. They are essential for renewable energy technologies and electric vehicle batteries.
2. India has launched the **National Critical Mineral Mission** to strengthen domestic exploration and supply security.
3. Khanij Bidesh India Limited (KABIL) has secured lithium blocks for exploration in Argentina.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
(b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3

Answer: (d)

UPSC Mains Practice Question

Q. *Critical minerals have become the foundation of strategic autonomy in the era of energy transition and technological competition. Examine India's strategy for securing critical mineral supply chains and discuss the associated challenges. (15 Marks, 250 Words)*

2.Glaw Lake

Source: PIB

Subject: Environment

About

- **Glaw Lake** has been designated as **India's 101st Ramsar Site**, becoming the **first Ramsar Site in Arunachal Pradesh**.
- It is located within the **Kamlang Tiger Reserve** in **Lohit district, Arunachal Pradesh**.
- The lake is a **pristine freshwater wetland** situated in the **Eastern Himalayan region**.

Key Features

- The lake supports rich biodiversity, including **more than 150 species of trees** and **49 species of orchids**.
- It provides habitat for several rare and threatened species of flora and fauna found in the Eastern Himalayas.
- The wetland plays an important role in maintaining the ecological balance of the region and supports the livelihoods of nearby communities.

Significance

- The Ramsar designation strengthens the conservation and sustainable management of this ecologically important wetland.
- It enhances the protection of biodiversity while promoting sustainable use of wetland resources.
- The recognition also marks a significant milestone for wetland conservation in Northeast India.

Ramsar Convention

The **Ramsar Convention on Wetlands** is the oldest of the modern global intergovernmental environmental agreements, signed on **2 February 1971** in the Iranian city of Ramsar. Unlike many other treaties, it is dedicated to a specific ecosystem: wetlands.

IN India's Latest Status (2025–2026)

India has seen a massive surge in designations recently, hitting the "century" mark and beyond:

- **The 101st Site: Glaw Lake in Arunachal Pradesh** was designated on August 3, 2026, becoming the state's first-ever Ramsar site.
- **The 100th Site: Jai Prakash Narayan Bird Sanctuary (Surha Tal) in Uttar Pradesh** achieved this milestone in June 2026.
- **State-wise Leader: Tamil Nadu** holds the highest number of sites (20), followed by **Uttar Pradesh** (13).
- **Area-wise Leader: West Bengal** (due to the **Sundarbans**) holds the largest total area under Ramsar protection.

3.Gyan Bharatam Mission (GBM)

Source: PIB

Subject: Culture

About

- The **Gyan Bharatam Mission (GBM)** is a flagship initiative of the **Ministry of Culture** aimed at preserving, documenting, and digitising India's manuscript heritage.
- It was announced in the **Union Budget 2025–26** with a total outlay of **₹491.66 crore** for the period **2025–2031**.
- The mission covers manuscripts across **all scripts, languages, and knowledge traditions** found in India.

Key Features

- The mission seeks to conduct **surveys, registration, cataloguing, digitisation, conservation, and documentation** of manuscripts across the country.

- It leverages **advanced digital technologies** to accelerate the digitisation process and improve public access to manuscript collections.
- It aims to establish a **National Digital Repository (NDR)** to preserve and provide access to digitised manuscripts.
- The mission also promotes **research in manuscriptology**, publications, and machine-readable digital formats to facilitate wider academic use.
- Access to digitised manuscripts is provided in accordance with the rights of custodians and copyright holders.

Implementation

- The mission is being implemented through **Cluster Centres, Independent Centres, and State/UT Nodal Coordinating Authorities**.
- The **National Manuscript Survey**, launched in **March 2026**, forms the foundation for identifying and documenting manuscript collections across India.

Current Status

- The **National Manuscript Survey** has identified **more than 1.19 crore manuscripts** across the country.
- More than **4.40 lakh digitised manuscripts** are already available for public access through the **Gyan Bharatam Portal**.

4. Lab-Grown Diamonds (LGDs)

Source: The Hindu

Subject: Science & Technology

About

- **Lab-grown diamonds (LGDs)** are diamonds produced in laboratories using advanced technologies that replicate the natural conditions under which diamonds are formed.
- They are **chemically, physically, and optically identical** to natural diamonds but are produced in a much shorter time under controlled conditions.
- They are increasingly being adopted as a **sustainable and ethical alternative** to mined diamonds.

Production Technologies

- **High Pressure High Temperature (HPHT):** This method replicates the high pressure and temperature conditions found deep inside the Earth to produce diamonds.
- **Chemical Vapour Deposition (CVD):** This method grows diamonds by depositing carbon atoms from carbon-rich gases onto a diamond seed crystal.

Advantages

- Lab-grown diamonds significantly reduce **environmental damage** caused by mining, such as deforestation, soil erosion, water pollution, and land degradation.
- They eliminate concerns related to **conflict (blood) diamonds**, forced labour, and unsafe mining conditions.
- Their production offers **traceability** throughout the supply chain.
- When manufactured using **renewable energy**, they have a substantially lower carbon footprint.
- Improved production efficiency has made lab-grown diamonds **more affordable** than mined diamonds.



Applications

- Besides jewellery, lab-grown diamonds are used in **cutting and drilling tools**, **electronics**, **semiconductor manufacturing**, **quantum computing**, and other high-precision industrial applications.

India's Initiatives

- The **Union Budget 2023–24** announced support for research and innovation in **HPHT** and **CVD** technologies.
- **IIT Madras** has established the **India Centre for Lab-Grown Diamond (InCent-LGD)** with a **five-year grant of about ₹243 crore** to promote indigenous research and manufacturing.

Significance

- Lab-grown diamonds support **sustainable manufacturing**, reduce dependence on mined diamonds, and align with the principles of the **circular economy** and the **UN Sustainable Development Goals (SDGs)**.
- They also present significant opportunities for India to become a global hub for diamond technology and value-added manufacturing.

5.MSME Development (Amendment) Bill, 2026

Source:The Hindu

Subject: Polity

Why in News?

The **Rajya Sabha** has passed the **Micro, Small and Medium Enterprises Development (Amendment) Bill, 2026**, aimed at strengthening the MSME ecosystem by improving access to finance, ensuring timely payments, and enhancing ease of doing business.

Key Highlights

- The Bill replaces the **Micro, Small and Medium Enterprises Development Act, 2006** with a modern framework to improve the competitiveness and sustainability of MSMEs.
- It provides for a National Digital MSME Registry, enabling free and voluntary online registration to facilitate access to government schemes, credit and market opportunities.
- The Bill mandates all Central Public Sector Enterprises (CPSEs) to settle payments to MSMEs through the Trade Receivables Discounting System (TReDS), ensuring quicker realization of dues.

- It introduces time-bound dispute resolution through mediation and arbitration to address delayed payment disputes efficiently.
- MSMEs contribute around 31% of India's GDP, 36% of manufacturing output, 41% of exports, and are among the country's largest employment generators.

Major Provisions of the Bill

- **Mandatory TReDS Integration:** All CPSEs must process invoices raised by MSMEs through RBI-regulated TReDS platforms, improving liquidity by enabling invoice discounting through multiple financiers.
- **National Digital Platform:** Establishes a unified digital platform for MSME registration, reducing compliance burdens and improving access to government benefits.
- **Faster Dispute Resolution:** Introduces structured mediation and arbitration mechanisms for speedy settlement of payment-related disputes.
- **Ease of Doing Business:** Simplifies regulatory procedures and promotes greater formalisation of MSMEs through digital integration.

Micro, Small and Medium Enterprises Development (Amendment) Bill, 2026

1. New Classification & Registration Framework

The Bill moves away from the rigid investment thresholds defined in the original Act to a more flexible, government-notified system.

- **Modified Criteria:** Enterprises will now be classified based on **Investment** (in plant, machinery, or equipment) AND **Turnover**. The specific thresholds will be notified by the Central Government, allowing for easier future adjustments without amending the Act.
- **Voluntary Digital Registration:** It proposes a national digital platform for **free and voluntary** registration for all MSMEs. This replaces the previous mandatory filing of a memorandum for medium manufacturing enterprises.

2. Mandatory TReDS for CPSEs

To address the "working capital chokehold" caused by delayed payments, the Bill introduces mandatory digital invoice settlement.

- **Mandatory Usage:** All **Central Public Sector Enterprises (CPSEs)** must now settle invoices from MSMEs through the **Trade Receivables Discounting System (TReDS)**.
- **State Inclusion:** State governments are also empowered to mandate similar TReDS usage for state PSUs and other notified entities.

3. Streamlined Dispute Resolution

The Bill aims to make the Micro and Small Enterprises Facilitation Councils (MSEFCs) more efficient through strict timelines.

- **Mediation Timelines:** Mediation must be completed within **90 days** from the date of the first appearance.
- **Arbitration Timelines:** Arbitral awards must be issued within **90 days** from the completion of pleadings.
- **Online Proceedings:** It formally recognizes and provides for online mediation and arbitration to reduce physical delays.

Significance of the Amendment

- Addresses the persistent issue of delayed payments, one of the biggest constraints faced by MSMEs.
- Improves working capital availability, enabling businesses to expand production and investment.
- Encourages formalisation and digitalisation of MSMEs through a centralized registration system.
- Strengthens the contribution of MSMEs towards employment generation, manufacturing growth, exports and inclusive economic development.

Challenges

- Smaller enterprises may face **digital literacy and onboarding challenges** while adopting new digital platforms.
- Effective implementation depends on **strict compliance by CPSEs** and timely participation of financial institutions.
- Private sector buyers are not covered under mandatory TReDS provisions, leaving a significant portion of delayed payments unaddressed.

- Awareness regarding digital financing mechanisms remains limited among micro enterprises.

Way Forward

- Expand **TReDS adoption** beyond CPSEs to large private enterprises for wider payment discipline.
- Improve digital awareness and financial literacy among MSMEs through targeted capacity-building programmes.
- Strengthen credit access by integrating TReDS with other digital lending and credit guarantee mechanisms.
- Ensure effective monitoring of payment timelines and speedy enforcement of dispute resolution mechanisms.

UPSC Prelims Practice Question

Q. With reference to the Trade Receivables Discounting System (TReDS), consider the following statements:

1. It is an electronic platform regulated by the Reserve Bank of India.
2. It enables MSMEs to obtain immediate finance against their trade receivables through invoice discounting.
3. Under the MSME Development (Amendment) Bill, 2026, all Central Public Sector Enterprises (CPSEs) are required to route MSME invoice settlements through TReDS.

Which of the statements given above is/are correct?

- (a) 1 and 2 only
- (b) 2 and 3 only
- (c) 1 and 3 only
- (d) 1, 2 and 3

Answer: (d)

UPSC Mains Practice Question

Q. Delayed payments remain one of the biggest challenges affecting the growth of India's MSME sector. Examine how the MSME Development (Amendment) Bill, 2026 seeks to improve liquidity and competitiveness of MSMEs. Discuss the role of the Trade Receivables Discounting System (TReDS) in this context. (15 Marks, 250 Words)

