



Exemptions for Mineral Exploration in Forests

[Source: IE](#)

Why in News ?

The [Forest Advisory Committee \(FAC\)](#) has approved enhanced **exemptions** for **mineral exploration drilling** in forest areas, following requests from the **Ministries of Coal and Mines**.

- These exemptions for exploratory drilling were introduced through the **2023 amendment to the [Forest Conservation Act, 1980](#)**.

Why Have Exemptions Been Provided for Mineral Exploration Drilling in Forest Regions?

- **Borehole Limit and Push for Critical Minerals:** The Environment Ministry now **permits 62 to 80 boreholes per 10 sq km**, each up to 6 inches in diameter, for mineral exploration.
 - Earlier rules allowed only **25 boreholes per 10 sq km**, along with **80 shot holes and felling of up to 100 trees**, without requiring forest clearance.
 - This expansion aims to tap **critical minerals** like **lithium, cobalt, and nickel**, vital for clean energy and defence.
- **Ease of Doing Business:** Reduces delays from repeated central clearances for temporary exploration.
- **Private Sector Participation:** Encourages greater investment and involvement in mineral exploration.
- **Economic Growth Support:** Minerals are crucial for infrastructure, manufacturing, defence, and green technologies.
 - Enables quicker project development, cost efficiency, and higher investment inflows.

What Concerns are Associated with Increased Mineral Exploration Drilling in Forest Regions?

- **Environmental and Ecological Concerns:**
 - Increased drilling activities may cause cumulative environmental impact.
 - It can have potential effects on forest flora and fauna despite safeguards.
 - Local and regional precipitation patterns may be impacted by forest loss.
- **Local Communities and Tribal Rights:**
 - Potential conflicts with traditional forest dwellers' rights under FRA 2006.
 - Safeguarding of religiously and culturally significant forest areas.
 - Effects on forest-dependent communities and their traditional occupations.
- **Bypass Forest (Conservation) Act, 1980 Scrutiny:**
 - In the past, the FCA mandated central government certification for any activity on forest land that wasn't directly connected to conservation of forests.
 - There are several issues with mineral exploration being reclassified as a "forest activity."

Critical minerals

- **Critical minerals** are those essential for a nation's **economic growth and national security**, whose limited availability or concentration of reserves/extraction in specific regions creates **supply chain vulnerabilities**.
- **India's Position:** Released a list of **30 critical minerals** (e.g., Bismuth, Cobalt, Copper, Rare Earth Elements, Silicon, Tin, Titanium).
 - India is **heavily import-dependent** for most critical minerals.
- **Significance of Critical Minerals:**
 - **Environment & Energy:** Key for **renewable energy technologies** (solar panels, wind turbines, semiconductors).
 - Essential in **Battery Energy Storage Systems (BESS)**.
 - **National Security:** Vital for **defence sector** – missile systems, aerospace, communication technologies.
 - **Economic & Electronics:** Critical for **electric vehicles (EVs)** via lithium-ion batteries.
 - Required for **semiconductors, smartphones, computers, communication devices**.

India's Initiatives for Critical Minerals:

- **Policy and Regulatory Framework:** [National Critical Minerals Mission \(NCMM\)](#), aims to identify **1,200 deposits by 2030 to meet rising demand for lithium, cobalt, and other critical minerals**, vital for clean energy and EVs.
 - **Mines and Minerals (Development and Regulation) Amendment Act, 2023:** Enables exploration and mining of critical minerals.
 - **National Mineral Policy, 2019:** Focuses on sustainable mining and exploration.
 - Union Budget 2024-25: Removed customs duties on most critical minerals.
- **Exploration and Domestic Production:**
 - **Geological Survey of India (GSI):** Conducting extensive surveys for lithium, rare earths, and other critical minerals.
 - **Lithium Discovery (2023):** Major reserves identified in Reasi, Jammu & Kashmir.
 - **Strategic Mineral Reserves:** Plans to build reserves for lithium, cobalt, and others.
- **International Collaborations & Trade Agreements:**
 - **Khanij Bidesh India Ltd (KABIL), 2019:** Joint venture under the Ministry of Mines to secure overseas mineral assets; partnerships with Argentina, Australia, etc.
 - **Minerals Security Partnership (MSP):** India joined the US-led initiative in 2023 to strengthen global supply chains for critical minerals.

What Should be the Sustainable Roadmap for Mineral Exploration in Forests?

- **Sustainable Exploration Practices:** To Promote **non-intrusive technologies such as geophysical surveys, images from satellites**, and remote sensing and artificial intelligence based mineral forecasting systems and drone-based mapping techniques.
 - Mitigate impact on the environment through decreasing usage on powered drilling.
- **Strengthen Environmental Safeguards:** Establish **strict Standard Operating Procedures (SoPs) like No drilling in wetlands ecosystems, areas for reproduction, or critical ecosystems**.
 - Implement time-specific limitations in place (No drill during the nesting or breeding periods).
- **Cluster Mining Approach:**
 - To utilize resources thorough cluster mining initiatives that **include shared environmentally friendly structures for multiple divisions**.
 - Eco-friendly techniques such as **conveying systems, bucket steering digging machines, and systematic landfill control**.

UPSC Civil Services Examination Previous Year Question (PYQ)

Prelims:

With reference to the management of minor minerals in India, consider the following statements: (2019)

1. Sand is a 'minor mineral' according to the prevailing law in the country
2. State Governments have the power to grant mining leases of minor minerals, but the powers regarding the formation of rules related to the grant of minor minerals lie with the Central Government.
3. State Governments have the power to frame rules to prevent illegal mining of minor minerals.

Which of the statements given above is/are correct?

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

Ans: (a)

Q. What is/are the purpose/purposes of 'District Mineral Foundations' in India? (2016)

1. Promoting mineral exploration activities in mineral-rich districts
2. Protecting the interests of the persons affected by mining operations
3. Authorizing State Governments to issue licenses for mineral exploration

Select the correct answer using the code given below:

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

Ans: (b)

Mains

Q. Despite India being one of the countries of Gondwanaland, its mining industry contributes much less to its Gross Domestic Product (GDP) in percentage. Discuss. (2021)

Q. "In spite of adverse environmental impact, coal mining is still inevitable for development". Discuss. (2017)