

QUAD CRITICAL MINERALS INITIATIVE: INTERNATIONAL RELATION

NEWS: Quad launches major initiative to steady supply of critical minerals

WHAT'S IN THE NEWS?

The Quad nations launched the Quad Critical Minerals Initiative to build secure and diversified global supply chains for critical minerals vital to future technologies, countering China's market dominance.

India is advancing complementary efforts through exploration, partnerships, and the National Critical Mineral Mission to reduce import dependency and ensure mineral security.

Quad Critical Minerals Initiative

- Launched during the **Quad Foreign Ministers' Meeting in Washington, D.C. (USA)** by **India, the United States, Japan, and Australia**.
- The initiative is part of a broader Quad strategy to ensure **secure, diversified, and transparent supply chains** for critical minerals vital to future technologies.

Key Objectives of the Initiative

- Enhance **cooperation on electronic waste management**, recovery, and reprocessing of critical minerals.
- Establish **resilient and reliable global supply chains** for critical minerals such as:
 - **Lithium**
 - **Nickel**
 - **Graphite**
- These minerals are essential for:
 - **Electric vehicles (EVs)**
 - **Drones**
 - **Battery energy storage systems**
 - **Renewable energy technology**

Strategic Significance and Geopolitical Context

- **Countering China's Monopoly:**
 - China dominates the critical minerals market and controls major stages of **production, refining, and processing**.
 - Estimated control: **68% of global cobalt, 65% of nickel, 60% of lithium**.
 - Creates strategic vulnerabilities for other countries dependent on Chinese supply.
- **China's Coercive Tactics:**

- China has been accused of **price manipulation** and **export restrictions** to control global markets.
- In **2024**, it banned exports of **gallium and germanium** to the U.S., escalating supply chain threats and geopolitical tensions.
- **Economic and National Security Risks:**
 - Critical minerals are essential for national defence, strategic industries, and high-tech sectors.
 - Any disruption can threaten **industrial output, clean energy transitions, and technological innovation.**

Ports of the Future Partnership (Upcoming Quad Initiative)

- To be formally launched in **October 2025**.
- First **Ports of the Future Conference** will be hosted in **Mumbai, India**.
- Aims to strengthen **regional connectivity, infrastructure, and maritime trade**, complementing the critical minerals initiative.

India's Domestic and International Efforts to Secure Critical Minerals

1. Bilateral and Multilateral Partnerships

- Partnering with **mineral-rich nations:**
 - **Australia, Canada, African countries** (DR Congo, Namibia)
- India joined the **Minerals Security Partnership (MSP)** in 2023 — a U.S.-led initiative to promote **secure and sustainable sourcing** of critical minerals.

2. National Critical Mineral Mission (NCMM)

- Launched in **2025**, this mission aims to:
 - Promote **self-reliance** in critical minerals
 - Increase domestic exploration, processing, and sustainable use
 - Oversee coordinated development across value chains

3. Geological Survey of India (GSI) Exploration Projects

- From **2024 to 2031**, GSI will lead **1,200 mineral exploration projects**.
- Focus areas include lithium, nickel, cobalt, and rare earth elements (REEs).

4. Strategic Stockpiling

- India is developing **strategic reserves of critical minerals** to handle supply disruptions.
- Objective: Maintain long-term industrial and economic security.

5. Khanij Bidesh India Limited (KABIL)

- A **joint venture company** by NALCO, HCL, and MECL.
- Tasked with:
 - Securing overseas mineral assets
 - Facilitating acquisitions and joint ventures in **Argentina, Bolivia, and Chile** (the Lithium Triangle)
 - Negotiating mineral import agreements

6. Public-Private Partnerships (PPP) and Innovation

- Encourages **collaboration between government and industry**.
- Focus areas:
 - **Advanced mining and processing technologies**
 - **Recycling of electronic waste**
 - **Reprocessing of spent minerals**
- Supported under the **Union Budget 2025–26** for building domestic capabilities.

Why Critical Minerals Matter for India and the World

- Enable strategic technologies such as:
 - Electric mobility, AI, drones, satellites, and solar panels
- Promote **green energy transitions** and **industrial competitiveness**.
- Reduce import dependency and improve India's **geostrategic leverage**.
- Secure critical inputs for meeting **net-zero emission targets** and **sustainable development goals (SDGs)**.

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