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INDIA-EUROPE RESILIENCE FORUM

Building India-EU Resilience on Critical Raw Materials

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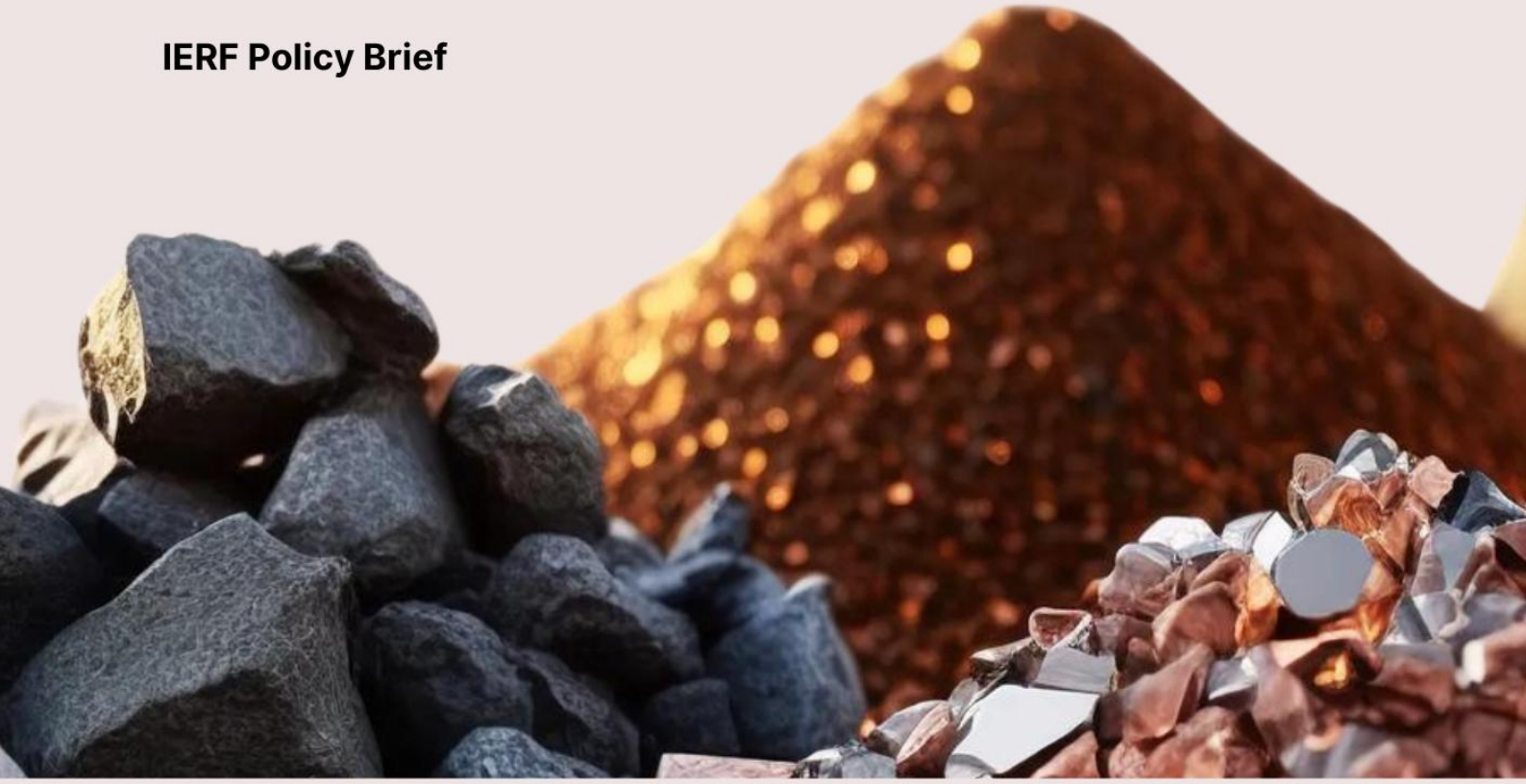
IERF Policy Brief



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Cover Image: Critical Raw Materials. Source: https://www.oecd.org/en/topics/sub-issues/export-restrictions-on-critical-raw-materials.html

The India–Europe Resilience Forum (IERF), established in 2025, was conceived through the collaborative efforts of four institutions: the Institute of Peace and Conflict Studies (IPCS), the Hanns Seidel Foundation (HSF) India, the Centre for Social Research (CSR), and the Centre for Educational & Social Studies (CESS)/Chanakya University (CU). The IERF aims to foster dialogue and collaboration between key stakeholders in India and Europe on common 'non-traditional' security challenges. Initially set up for a period of three years, the forum aspires to strengthen resilient India–Europe foreign policy cooperation in a time marked by geopolitical upheaval.

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Introduction

Resilience enables countries to prepare, adapt, and recover from external challenges. It is an essential factor in securing a country's interests in an increasingly fragmented global system, whether by itself or in concert with like-minded partners. The India-Europe Resilience Forum (IERF), launched by the Institute of Peace and Conflict Studies (IPCS) and Hanns Seidel Foundation (HSF) India, with their partners, the Centre for Social Research (CSR) and Centre for Educational and Social Studies (CESS)/Chanakya University (CU), on 28 March 2025 in New Delhi, acknowledges this reality.

The IERF aims to foster policy dialogue between key stakeholders in India and Europe on common, 'non-traditional' security challenges. One such subject area is critical raw materials (CRM)[1], with both asking the question, "How do we achieve resilience in CRM?" After all, CRMs are the building blocks of all modern industry, including but not limited to the defence, medicine, and clean energy. India and Europe—specifically, the EU and its member states—face significant challenges in this domain primarily due to supply chain constraints. This can slow economic growth and the clean energy transition, derailing the fight against climate change.

The first roundtable that accompanied the IERF launch was thus designed to achieve clarity on:

1. What 'resilience in CRM' means for India and the EU;
2. Why 'resilience' is important; and
3. What steps are necessary for meaningful cooperation.

[1] Critical raw materials (CRMs) are raw materials of great economic importance to a country which are highly vulnerable to supply disruption due to reasons associated to lack of availability, concentration in a few geographical locations or other geo-political factors. For more information, see "An EU critical raw materials act for the future of EU supply chains." The European Council, 2025.; and "National Critical Mineral Mission Powering India's Clean Energy Future." Press Information Bureau, April 9, 2025.
The European Commission has identified 34 CRMs, while India lists 30, with 20 common to both India and EU which includes minerals like Cobalt, Gallium, lithium, Rare Earth Elements, and Platinum group metals etc. For more information, see Schaik , L. Van, Jayaram, D., & Havstrup , E. "Can Europe and India deepen ties through critical raw materialscooperation?" Clingendael Institute, Policy Brief, August 26, 2024.

The discussion focused on a set of policy pathways, suggestions for improvements in existing policy, and new recommendations on how to address the geopolitical, strategic, and trade and investment bottlenecks surrounding CRM resilience in the context of India-EU cooperation. This IPCS x HSF Policy Brief distills the roundtable's key insights into five policy recommendations.

Recommendations:

1. Create a digital information repository of all existing policies, partnerships, and mechanisms between India and the EU related to CRM
2. Set up a dedicated Resilience Task Force under the Trade and Technology Council
3. Integrate CRM into broader Indian national security frameworks
4. Establish an International Critical Mineral Alliance to be led by India and the EU
5. Establish a platform for trilateral partnerships that includes India, the EU, and a third country/regional partner.

#1 Create a digital information repository of all existing policies, partnerships, and mechanisms between India and the EU related to CRM

The digital information repository would be a centralised source for all key policies, strategies, and project updates related to CRM across India and the EU. It would provide real-time updates on existing and upcoming CRM initiatives and projects relevant to both parties.

Rationale

Indian initiatives—such as Khanij Bidesh India Limited (KABIL) projects[2]—and those by the EU—such as global gateway projects[3] and the European Raw Materials Alliance (ERMA)[4]—have already made significant strides in the CRM sector. Information about these initiatives is however dispersed across various platforms, reports, and databases, which limits accessibility. The inconsistent availability of data can create challenges for policymakers,

[2] *Khanij Bidesh India Limited (Kabil) - joint venture company*. KABIL.

[3] *Global gateway projects*. International Partnerships. European Commission.

[4] *About Us*. European Raw Materials Alliance (ERMA). The European Raw Materials Alliance.

researchers, and industries to efficiently locate, access, and compare information. A dedicated information repository would provide a single, structured source for existing policies, programmes, ongoing initiatives, and their timelines.

By hosting real-time updates, the repository can help prevent unintentional competition and price inflation between India and the EU, such as in sourcing resources like lithium in Australia and cobalt in the Democratic Republic of Congo (DRC). Instead of working in isolation, the repository would provide insight into project timelines on either side, enabling India and the EU to align while working in the same region. For example, this would mean synchronising the EU's lithium mining schedule in a particular year with India's processing or refining plans for the next year, or vice versa. This would, in turn, open more avenues for joint ventures between the two.

#2 Set up a dedicated Resilience Task Force under the Trade and Technology Council

The Critical Minerals Resilience Task Force (CRTF) would work closely with Trade and Technology Council (TTC)[5] working groups that are already in existence. It would operate as an incubation centre to develop new, innovative joint projects between India and the EU. The CRTF would coordinate between TTC's Group 2 (Green & Clean Energy Technologies) and Group 3 (Trade, Investment & Resilient Value Chains) to establish a joint research and development fund specifically focused on CRM technologies. As an incubation centre, CRTF would design and develop innovative models for India-EU collaboration in the CRM sector.

Rationale

Both India and the EU bring different but complimentary skills to the table in CRM-related projects. While the EU possesses cutting-edge technologies in urban mining, digital traceability, and automation crucial for efficient CRM

[5] The TTC is a high-level coordination platform between India and the EU, created to increase cooperation, boost trade and investment, and capitalise on their respective strengths. It currently operates through three working groups focused on: (i) strategic technologies, digital governance and digital connectivity; (ii) green and clean energy technologies; and (iii) resilient value chains, trade and investment. For more information, see "EU-India Trade and Technology Council - European Parliament." European Parliament. 2024.

extraction and recycling, India offers strong industrial capabilities, growing market demand, and cost-effective deployment potential. The proposed CRTF would allow India and the EU to understand and combine these capability complementarities.

TTC's working groups 2 & 3, which currently work as per their own mandates and mostly in isolation, would come together with a directive to establish a joint R&D fund. The CRTF would facilitate coordination between the two working groups by organising regular joint meetings and creating a shared understanding of technological gaps and transfer mechanisms, such as in lithium-ion battery recycling and sustainable processing technologies. The R&D fund could focus on developing eco-friendly mining technologies and cost-effective methods for refining and recycling CRM. It could place greater emphasis on urban mining and recycling. At present, only 1 per cent of rare earth elements (REE)[6] demand is met by e-waste recycling. The fund could support pilot projects, technology commercialisation, and industrial deployment, plus events like the June 2024 EV battery recycling matchmaking,[7] which connected 12 startups—six each from India and EU.

In its additional role as an incubation centre, the CRTF would build on the digital repository proposed in the first recommendation. The data from the repository would enable the CRTF to work on innovative ideas to transform national initiatives into strategic partnerships. For example, instead of separately pursuing lithium projects in the same location, India and the EU can leverage their capability complementarities by combining India's skilled workforce and Global South connections with the EU's advanced technology and financial resources. As a further illustration, the CRTF could examine the possibility of forming a joint venture to explore India's REE with the EU's separation technologies through technology transfer agreements.

[6] Baldé, C. P., McDonald, R., Yamamoto, T., Kuehr, R., Fernandez-Cubillo, E., Deubzer, O., Bel, G., Althaf, S., D'Angelo, E., Wagner, M., Pralat, N., Nnorom, I., Lobuntsova, Y., Cortemiglia, V. L. di, Khetriwal, D. S., Iattoni, G., Honda, S., Herat, S., Gray, V., & Forti, V.. "The Global E-Waste Monitor 2024." International Telecommunication Union (ITU) and United Nations Institute for Training and Research (UNITAR). 2024.

[7] "EU and India join hands for Green Innovation in Electric Vehicle Battery Recycling." DD News. 2024.

#3 Integrate CRM into broader Indian national security frameworks

India must establish a CRM security framework under the National Security Council Secretariat (NSCS) to incorporate CRM into national security planning, and recognise CRMs as strategic industries. This recommendation is specific to India as the EU has taken steps to integrate CRM into strategic policy frameworks through legislation such as the Critical Raw Materials Act (CRMA).

Rationale

Modern defence, healthcare, energy, and critical infrastructure systems rely significantly on CRMs such as lithium, REE, and silicon, among others. CRM usage is widespread, ranging from smartphones and electric vehicles to robotics, drones, military aircraft, and medical devices. Every smartphone contains different critical minerals like lithium for batteries and REE for speakers. Military systems like the Sukhoi Su-30 MKI use gallium for radar and REE for jamming systems. Healthcare devices, including MRI machines and pacemakers, utilise REE for superconducting magnets and lithium batteries. Clean energy technologies, like solar panels and wind turbines, also depend on CRM, including silicon, lithium, and REE.

The dual use of modern technologies and their significant reliance on CRM is prompting countries, including India and in Europe, to consider the several strategic uses of CRM. Such strategic thinking goes beyond traditional military concerns to include areas such as economic security, the environment, and climate change. Establishing a national CRM security framework is thus crucial to integrate these materials into national security planning. Recognising CRM as a strategic industry will ensure long-term policy focus, dedicated funding, and investment support both domestically and internationally. This would follow the logic of cyber security, which was mainstreamed into India's national security discourse through the appointment of a National Cyber Security Coordinator (NCSC) under the NSCS.[8] Such an approach can decrease reliance on external sources, strengthen modern industries, enhance competitiveness,

[8] P.S. Raghavan. "The Evolution of India's National Security Architecture," Journal of Defence Studies, Vol. 13, No. 3, pp. 33-52. July-September 2019.

and create a more resilient supply chain for high-tech sectors. It can also promote collaboration across various sectors and improve resource allocation and optimisation.

#4 Establish an International Critical Mineral Alliance to be led by India and the EU

An International Critical Mineral Alliance or ICMA would have three integrated mechanisms: a dedicated investment fund, due diligence framework, and public engagement mechanism to address challenges faced by India and the EU. With these integrated mechanisms, ICMA will have an established institutional and governance framework to secure CRM supply.

Rationale

The CRM supply chain faces several challenges, including market concentration, insufficient finance, lack of due diligence, poor implementation of environmental, social and governance (ESG) norms, and rising public unrest against CRM projects. 55 per cent of critical minerals[9] for low-carbon technologies are concentrated in just 15 countries, and the top three refining countries control 86 per cent of key energy minerals,[10] creating supply vulnerabilities. Despite rising demand projections, investment growth in the sector has slowed down from 14 per cent in 2023 to only 5 per cent in 2024.[11] ESG compliance, too, is inconsistent, particularly in geopolitically sensitive regions like the DRC. Public protests have derailed major projects, from Kerala's offshore mining blocks to Serbia's Jadar Valley lithium operations. ICMA's integrated system would combine an investment fund, due diligence framework, and public engagement mechanism to best address these shortcomings. Through this system, ICMA could provide consultation templates, grievance redressal mechanisms, and best practice guidelines for CRM projects, which would help India and the EU to address challenges related to CRM supply.

An investment fund could pool India's US$ 3.91 billion National Critical Mineral

[9] CEEW, IEA, UC-DAVIS and WRII. "Addressing Vulnerabilities in the Supply Chain of Critical Minerals." MInistry of Mines, Government of India. 2023.

[10] "Global Critical Minerals Outlook 2025." International Energy Agency. 2025.

[11] Ibid.

Mission (NCMM) budget[12] with the EU's US$ 26.24 billion Critical Raw Material Act (CRMA) funding[13] to co-finance strategic projects across their regions as well as third countries, particularly in Africa. This fund could utilise sovereign wealth resources, special bonds, and private equity to increase investment predictability and risk mitigation. A due diligence framework would develop unified ESG monitoring standards for the two partners. This could ensure consistent implementation across projects while maintaining ethical sourcing standards, whether it be for India's Jammu & Kashmir lithium deposits or Portugal's Barroso lithium mine, or third partner countries like Kazakhstan and Zimbabwe. A public engagement mechanism would be aimed at addressing community concerns proactively. Such a mechanism would maintain a digital repository documenting successful and failed conflict resolution cases, from India's fisherfolk protests to Serbian farmers' opposition to lithium mining.

#5 Establish a platform for trilateral partnerships that includes India, the EU, and a third country/regional partner

Establish an India-EU+1 trilateral partnership platform that includes three verticals: India-EU-Africa, India-EU-South America, and India-EU-Central Asia. These trilateral partnerships will be rooted in an equitable and sustainable model of development so as to prevent single-point focus on resource extraction. The platform should leverage the benefits of the already proposed CRTF and ICMA.

Rationale

The CRM market is increasingly concentrated and dominated by a few countries like China, Indonesia, and the DRC. That said, developments regarding proven reserves and investment opportunities are also being reported from other parts of the world, such as countries in Africa, South America, and Central Asia. South Africa has 91 per cent of the world's platinum group metal reserves.[14] Central Asia hosts 38.6 per cent of the world's manganese ore,

[12] "Cabinet approves "National Critical Mineral Mission" to build a resilient value chain for critical mineral resources vital to Green Technologies, with an outlay of Rs.34,300 crore over seven years."Press Information Bureau. 2025.

[13] Commission selects 47 strategic projects to secure and diversify access to raw materials in the EU. European Commission. 2025.

[14] South Africa's mineral industry. The Mineral Economics and Statistics Directorate,South Africa. 2025.

30.07 per cent of chromium, and 20 per cent of lead, among other resources.[15] REE reserves of up to 9,35,400 tonnes were recently found in Kazakhstan, making it an attractive investment destination.[16] In recent years, India and the EU have entered into agreements with countries in Africa, South America, and Central Asia with similar expectations, such as stable, affordable, and long-term supplies of CRMs. They therefore face similar challenges. If they were to approach these partnerships together, they could offer better developmental benefits to the host countries while ensuring a secure, confirmed, and long-term demand in the market.

The trilateral partnership platform should use resources from the information repository proposed in the first recommendation, and upgrade this existing information with ongoing and announced projects by India and the EU in Africa, South America, and Central Asia. These trilaterals should also use the practical aspects of the second and fourth recommendations, i.e. the CRTF and the investment fund under ICMA.

[15] Central Asia emerges as strategic battleground in Global Race for Rare Earths. MINEX Forum. 2025.

[16] Sakenova, S. *Kazakhstan on track to become global top-3 rare earth holder.* The Astana Times. 2025.

The Institute of Peace and Conflict Studies (IPCS) is an independent think-tank in India. It was founded in 1996 with the aim of developing an alternative framework for peace and security in South Asia and the extended neighbourhood. IPCS works to bring policy-relevant research into scholarly and public debate through events, capacity building of the next generation of thought leaders, and media and online outreach. Its research and policy recommendations do not subscribe to any particular political view or interest. This Special Report is part of the 2021-2026 IPCS-Clingendael Institute collaboration on climate security in Southern Asia.

The Hanns Seidel Foundation (HSF), founded in 1967, is a German political foundation working in the service of 'Democracy, Peace and Development'. At present, the foundation is engaged in the implementation of over 80 projects across 50 countries worldwide. In India, the foundation works in collaboration with local partners, providing support for capacity-building measures and national and international policy dialogues with the aim of effectively localising and achieving sustainable development goals. HSF India's partnerships and projects are primarily focused on youth engagement, good governance, climate action, and security, including women-led development.