Centre for Policy and Governance

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POLICY MEMO

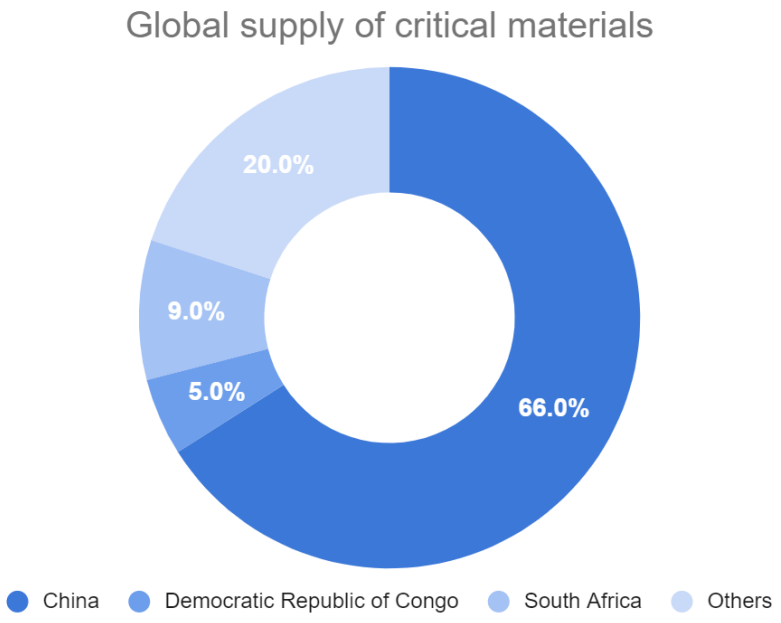
Critical raw materials in Bosnia and Herzegovina

Structural changes in global raw material markets

The raw materials market has seen significant changes in recent years, driven by shifts in global demand, technological advances, and geopolitical factors. These changes have a profound impact on the growth of demand and prices of key critical raw materials (lithium, cobalt, copper, nickel, and rare earth materials) needed by the fast-growing renewable energy, consumer electronics, and automotive industries.

The International Energy Agency predicts a 400% increase in global demand for these five materials by 2030. Demand for lithium is especially predicted to grow as much as 40 times by the end of the decade. The global supply of critical materials is concentrated in a few countries, namely China with 66% of the total share, followed by South Africa with 9% and Democratic Republic of Congo with a 5% each in the global supply of critical materials.

Across the world, governments, businesses, research institutions, and civil society are actively dealing with challenges and opportunities brought by the evolution of the material market, including the issues of secure and responsible supply, sustainable exploitation, environmental impact, improvement of resource efficiency, development of alternative materials, and improvement of recycling technologies.



Source: IEA

European Union and critical raw materials

The European Union's Critical Materials Act was adopted to ensure that Europe becomes a manufacturing base for electric vehicles, wind turbines, and other green products, and to reduce its dependence on particular sources and diversify in this context. The act defines the policy objectives for the European Union to ensure a sustainable supply of raw materials for the needs of the European economy while minimizing environmental and social impacts during extraction, processing, use, and recycling.

Europe is set to become the leading manufacturing base for electric vehicles, wind turbines, and other green products by 2030.

The act prioritizes the diversification of supply, reduction of import dependencies on critical raw materials, promotes sustainable extraction, and uptake in recycling and reuse of materials in line with circular economy principles. The act emphasizes issues of fair and transparent access to raw materials, responsible sourcing, and supply chain transparency. It requires the development of national geological resource exploration programs and measures to improve the collection and recycling of waste rich in critical materials.

Since 2011, the European Commission regularly updates the EU list of strategic materials, which in 2023 expanded to 34 materials. It sets targets for extraction, processing, recycling, and diversification of supply chains for the EU until 2030.

Western Balkans and critical raw materials

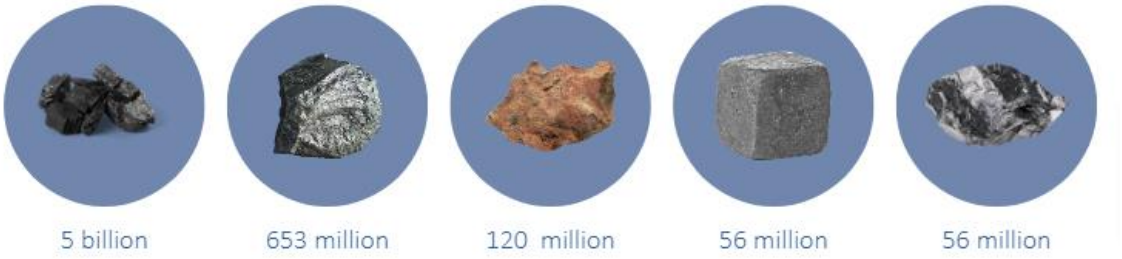
The Western Balkans region is rich in natural raw materials, with a long tradition of mining. The Register of Minerals of the Western Balkans, created as part of the EU RESEERVE project, indicates significant deposits of primary mineral resources that are of great importance for the economy of the European Union, which also brings high risks associated with their procurement. Undoubtedly, the region has the potential to contribute to the production of components for e-vehicles from the EU, especially the battery industry.

As part of the EU RESEERVE project, significant deposits of critical materials were identified, dominated by bauxite, followed by magnesium, antimony, and titanium. Deposits of all mineral raw materials except graphite necessary to produce batteries for electric vehicles have also been identified. A total of 473 locations of primary mineral resources in the countries of the Western Balkans are shown, of which 134 locations are in Bosnia and Herzegovina.

The recently adopted EU Growth Plan for Western Balkans offers the region integration into EU industrial chains through the development of strategic industrial projects on raw materials and batteries, covering all material flow phases from research, extraction, processing/production, to use and recycling. The plan provides an opportunity for companies and organizations from the region to join both EU Raw Materials and Battery Alliances.

Geological potential and mining in Bosnia and Herzegovina

Bosnia and Herzegovina is a mining country with a tradition in the exploration, exploitation, and processing of minerals. In addition to coal reserves (5 billion metric tons), iron reserves in BiH are estimated at 653 million metric tons, zinc and lead reserves at 56 million tons each, and bauxite at 120 million tons. In addition, deposits of magnesite, chromite, chrysotile asbestos, and others are found throughout the country.



Picture 2: Raw material reserves in Bosnia and Herzegovina (in metric tonnes)

Global changes in the raw material markets, as well as EU policies in this area, are already affecting activities in the region and Bosnia and Herzegovina, where the coal mining industry is facing its end in line with global, but particularly EU decarbonization policies, while several critical raw materials research and investments are already taking place.

For example, an investment is underway in a mine in the Municipality of Vareš, where the mining of silver, zinc, copper, and bornite is planned. Geological research is planned on Ozren Mountain with the potential opening of a nickel mine. In the area of Lopare Municipality, geological research on lithium is underway. These processes are already facing controversies and challenges.

Citizens, local communities, and environmental organizations are increasingly expressing concern about the possible negative impacts of mining on the environment including the devastation of forests, rivers, and biodiversity.

Projects of such a scale certainly bring economic benefits (for example only the investment in Vareš Municipality amounts to over 316 million KM so far. However, a systematic and comprehensive assessment of potential economic value in this sector is still to be made, both in BiH and the region. More needs to be done to define expected benefits and risks both to the state and citizens. The extractive industry is a potential source of significant economic benefits but causes natural resources and biodiversity devastation too.

To overcome those challenges and to define strategic interests in this area, a broad public debate among all concerned about the future of mining in the country is urgently needed. Issues such as the negotiating power of the state, nature protection, and balance between economic, environmental, and social interests should be adequately addressed. This should lead to enhancement in the management of these strategic resources based on ecological sustainability and economic justice principles.

Policy recommendations

Review the geological potential of Bosnia and Herzegovina in the context of structural changes in raw materials markets, and policies of the European Union in this area.

Generate independent research to create evidence on economic, social, and environmental effects of activities in this area, to support timely, strategic, and evidence-based decision-making, both on policy and project levels.

Enhance broad public debate with all interested constituencies about economic, social, and environmental perspectives of these processes, giving priority to local communities.