**IMUN 2026 Research Report**

## General Assembly Issue #1: The question of rare earth mineral extraction for environmentally sustainable technologies.

Rare earth minerals (REMs) are "a subset of critical minerals that includes 17 elements […] used extensively in clean energy systems and other advanced technologies" (Li and Wang). They are indispensable to environmentally sustainable technologies: "Clean energy technologies – from wind turbines and solar panels, to electric vehicles and battery storage – require a wide range of [REMs]." Environmentally sustainable technologies are paramount for the decarbonization of the planet and mitigation of climate change; nonetheless, they rely on extraction and processing that are energy-intensive and degrade land, contaminate freshwater, and create large volumes of hazardous waste (International Energy Agency).

The International Energy Agency (IEA) estimates that the REMs required to meet the Paris Agreement will triple by 2030 and quadruple by 2040 (International Energy Agency). Supply is also highly concentrated, with China refining close to ninety percent of the world's REMs and one-hundred percent of the heavy REMs used in the European Union (European Council). Such dependence can result in the inability to ensure sustainable sourcing. Furthermore, with the global green technology market being expected to grow from 31.05 billion now to 140 billion by 2034, it is likely that unsustainable REM extraction practices will increase in usage over the coming years (Fortune Business Insights).

The United Nations has responded to this issue. In 2024, the Panel on Critical Energy Transition was launched, which published its report, Resourcing the Energy Transition, later that year. The report set out seven voluntary guiding principles and five actionable recommendations. A UN Task Force followed in 2025 to coordinate implementation, supported by United Nations environment and development agencies (United Nations). The European Union adopted the Critical Raw Materials Act in March 2024, setting 2030 benchmarks for domestic extraction, processing, recycling and capping reliance on any single non-EU country at sixty-five percent (European Council).

Import-dependent economies, notably the European Union and the United States of America, may seek to prioritize supply security and diversification from major producers, such as China, through implementation of standards and partnerships, with the goal of ensuring sustainable sourcing for REMs. Export-dependent economies may seek local value addition and fair benefit-sharing practices over exports. Due to the devastating impacts of REM extraction, thirty Member called for a pause in deep-sea mining at the International Seabed Authority (International Seabed Authority).

Delegates should focus primarily on mechanisms that reconcile demand for these minerals with environmental and social protection. Some options include: creation of sustainability and human rights standards throughout the chain of production, predictable financing and technology transfer for producing states, investment in recycling and substitutes, and promotion of transparent sourcing. Resolutions should be realistic for all Member States, should respect sovereignty and human rights, and should recognize that the clean energy transition cannot come at the cost of the environments and communities it seeks to protect.

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