

Clearline Consulting

<u>Team Member Name</u>	<u>Year</u>	<u>Major</u>
Jaïm Steele	4 th	Economics & Sustainability
Sahana Vijay Krishna	2 nd	Finance
Kaylee Yaw	1 st	Information Systems
Thomas Zelek	1 st	Finance

Advisor(s): Dr. Brian Ray

Topic Title: Opening Gateways to Green Tech Through Sub-Saharan African Partnerships

Audience: The African Development Bank Group: Energy, Environment and Climate Change Department

Sustainable Development Goal

SDG #9 Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation

SDG #17 Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

Executive Summary

The rare earth mining industry in Sub-Saharan Africa faces a structural ethical dilemma: its operations are rooted in extractive institutions that have proven unable to develop mining regions into states with strong institutions, resulting in rampant human rights abuses and environmental damage.

Despite the fact that the critical mineral and rare-earth supply chain is vital for the development of most green technologies, it currently cannot ensure sustainable or equitable growth in the countries of origin of inputs. We propose a partnership between the African Development Bank Group's Energy, Environment, and Climate Change Department within Zambia, Botswana, and Namibia, in collaboration with the United States' Development Finance Corporation, to develop strong, precedential, and sustainable partnerships in the Sub-Saharan mining industry. By broadening existing trade partnerships within these three already-closely allied nations, the AfDB can provide concessional financing, technical expertise, and institutional capacity-building, while US federal agencies structure blended developmental finance facilities, establish ESG frameworks, and de-risk private investments. Investing in institution-building as opposed to extractive infrastructure, this partnership will ensure a sustainable and ethical supply chain with a broader manufacturing focus in Africa, aiding in overcoming overreliance on aid, and creating strong and equitable trade partnerships. Beyond supply chain security and institutional development, this initiative prioritizes sustainable development by directing investment toward clean processing technologies and developing sustainable energy infrastructure, ensuring that the extraction and processing of minerals do not perpetuate the ecological and social

harms of legacy resource exploitation. In doing so, this partnership will model a development pathway in which green technology supply chains build themselves green from the ground up.