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Review Article

Deep-Sea Mining as a New Resource Trap: Implications for Africa's Blue Economy and Sovereignty

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Abstract

The global transition to a low-carbon economy has catalyzed a surging demand for critical minerals such as cobalt, nickel, and manganese, which are essential for electric vehicle batteries and renewable energy technologies. In response, deep-sea mining (DSM) has emerged as a new frontier for mineral extraction, promising to unlock vast, untapped resources. For the African continent, a region rich in both terrestrial mineral deposits and extensive maritime zones, DSM presents a strategic, yet profoundly complex, challenge. This report argues that while DSM offers potential economic benefits, including new revenue streams and job creation, these opportunities are significantly outweighed by substantial financial, environmental, and geopolitical risks. The development of this nascent sector threatens to destabilize Africa's vital land-based mining economies and marine fisheries while perpetuating a model of resource exploitation that offers minimal financial returns to sponsoring states. A passive or poorly regulated approach would lead to a net negative outcome for the continent. The analysis concludes that the only viable path forward for African nations is a unified, proactive, and well-regulated engagement, as demonstrated by the strategic stance of the African Group at the International Seabed Authority (ISA).

Keywords: Deep-sea mining (DSM), Africa, Critical minerals, Economic benefits, Resource exploitation

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Introduction

The global push towards sustainable energy and technological advancement has dramatically increased the demand for critical minerals (Boafo et al., 2024; Calderon et al., 2024; Watari et al., 2019).). The International Energy Agency (IEA) reports that energy applications are a major driver of this demand, particularly for minerals such as lithium, cobalt, graphite, and rare earth metals used in electric vehicles, battery storage, and grid networks (IEA, 2025). This rising demand, coupled with concerns over the security and concentration of land-based supply chains, has renewed international interest in deep-sea mineral resources (CSR, 2025).

The deep sea (Figure 1) hosts a variety of mineral deposits that are increasingly being recognized as potential alternative sources of critical raw materials required for renewable energy technologies, advanced electronics, and strategic industries. Among the most studied (Table 1) are polymetallic nodules, polymetallic sulphides, and cobalt-rich ferromanganese crusts, each forming in distinct marine environments such as abyssal plains, mid-ocean ridges, and seamounts. These deposits are enriched in metals like manganese, cobalt, nickel, copper, and rare earth elements, which are essential for electric vehicle batteries, clean energy systems, and high-performance alloys (Hein et al., 2013; Petersen et al., 2016). The distribution and composition of these resources not only make them economically significant but also place them at the center of ongoing discussions on the future of sustainable mineral supply.

Deep-sea mining involves the extraction of valuable resources like manganese, nickel, and cobalt from the ocean floor (Sharma, 2017; Leng et al., 2021). While the concept of DSM has existed for decades, it has only become technologically and commercially viable in recent years due to advancements in subsea equipment and vessel-based systems (Sharma, 2011; GAO, 2021; CSR, 2025). This emerging industry is now a matter of economic and geopolitical priority for major powers, with the United States, for instance, keen to secure its own critical mineral reserves rather than rely on countries like China (GAO, 2021).

This report provides an in-depth, strategic analysis of the economic implications of deep-sea mining for the African continent (Blanchard et al., 2023; Pickens et al., 2024). The purpose is to move beyond a simple cost-benefit analysis and examine the complex, interconnected systems at play, including the relationship between DSM and Africa's existing land-based mineral and marine-based industries (Kang & Liu 2021**)**. The analysis explores the policy and regulatory frameworks that are essential for African states to secure equitable benefits while effectively mitigating the significant risks.

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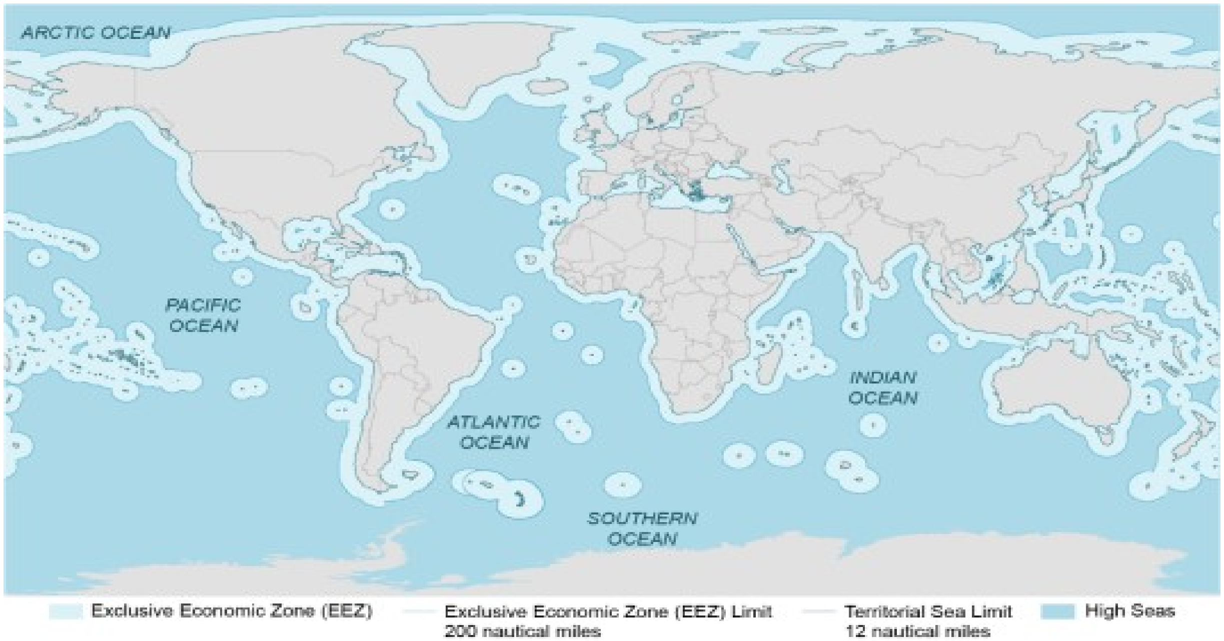

Figure 1 High Seas and Exclusive Economic Zone Boundaries. (Adapted from CRS, 2025).

Table 1: Key DSM Mineral Deposits and Economic Significance

Deposit Type	Primary Minerals	Typical Location	Economic Significance
Polymetallic Nodules	Manganese, Nickel, Cobalt, Copper, Rare Earth Elements	Clarion-Clipperton Zone (Pacific Ocean); Indian Ocean; Peru Basin	Most readily minable ore type; high concentration of critical minerals for EV batteries and electronics
Polymetallic Sulphides	Copper, Gold, Silver, Lead, Zinc	Mid-Atlantic Ridge; hydrothermal vents in active tectonic zones (e.g., Papua New Guinea)	Associated with hydrothermal activity; rich in base and precious metals
Cobalt-Rich Ferromanganese Crusts	Cobalt, Manganese, Iron, Rare Earth Elements	Seamounts in the Atlantic and Indian Oceans; Pacific Federated States of Micronesia	Rich source of cobalt; often found in shallower waters than nodules

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Methodology

This study adopts a qualitative, policy-oriented, and multidisciplinary approach to evaluate the implications of deep-sea mining (DSM for African nations within the context of the global low-carbon transition. First, a systematic literature review is conducted, drawing on peer-reviewed journal articles, technical reports, policy briefs, and legal documents from international bodies such as the International Seabed Authority (ISA), World Bank, International Energy Agency (IEA), and African Union. This review establishes the current state of knowledge on DSM technologies, critical mineral demand, environmental impacts, and regulatory frameworks. Second, a comparative policy and governance analysis is employed to assess DSM regulatory models, focusing on the ISA framework and the collective position of the African Group. This analysis examines benefit-sharing mechanisms, sponsorship obligations, environmental safeguards, and institutional capacity gaps relevant to African states. Third, the study applies a political-economy and risk-assessment framework to evaluate economic viability, financial exposure, environmental risks, and geopolitical implications. Particular attention is given to potential impacts on Africa's land-based mining sector, marine fisheries, and blue economy. Finally, the findings are synthesized using thematic analysis, allowing for the integration of economic, environmental, and governance dimensions. This approach supports evidence-based conclusions and policy-relevant recommendations on whether and how African nations should engage with deep-sea mining.

The Global Landscape of Deep-Sea Mining: Context and Controversy

Driving Forces and the Technological Frontier

The primary driver behind the renewed interest in DSM is the exponential demand for critical minerals needed for the green energy transition (UNCTAD, 2024; UNDESA, 2025). Although new electric vehicle battery chemistries are emerging that reduce the need for certain minerals like cobalt and nickel, the overall demand for these and other rare earth elements for battery storage and grid networks continues to climb (GAO, 2021; CSR, 2025).

The technological capability to conduct DSM has only recently begun to catch up with commercial interest. Modern DSM operations rely on a combination of heavy equipment (Figure 2), including Production Support Vessels (PSVs), subsea collectors, and Riser Air-Lift Systems (RALS) (Zhao et al., 2021; Guo et al., 2023; Szabó, 2025). These systems are designed to operate thousands of meters below the surface, collecting polymetallic nodules from the abyssal plains and transporting them to a surface vessel for initial processing (Zhao et al., 2021). Despite these advances, the technology is still in a developmental phase, and significant work remains to ensure the equipment can be safely and efficiently operated.

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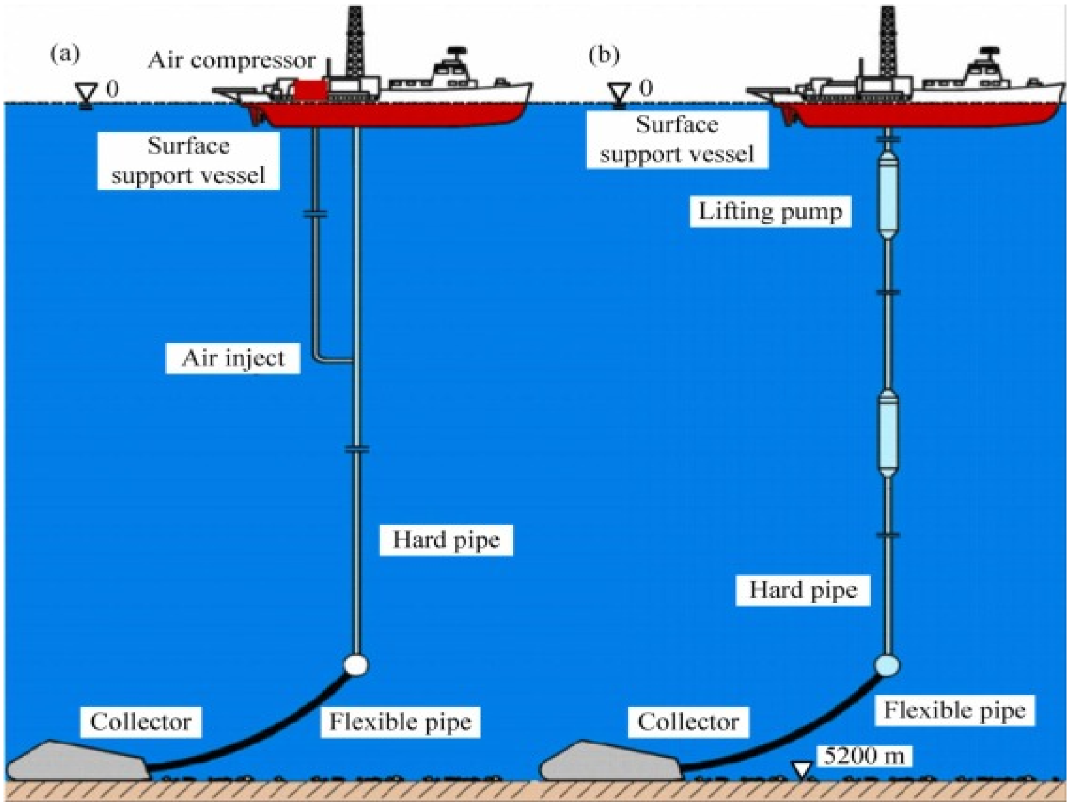

Figure 2 The Subsea lifting system: (a) pneumatic lifting system; (b) hydraulic lifting system (Adapted from Zhang et al., 2025)

International Governance and the Role of the International Seabed Authority (ISA)

The international legal framework for deep-sea mining (DSM) is governed by the 1982 United Nations Convention on the Law of the Sea (UNCLOS), which established the International Seabed Authority (ISA). Headquartered in Kingston, Jamaica, the ISA is tasked with overseeing mineral-related activities in the international seabed, known as "the Area," which UNCLOS designates as the *common heritage of humankind* (UNCLOS, 1982; Lodge, 2012). The ISA's dual mandate is to regulate mineral extraction while safeguarding the marine environment and ensuring that economic benefits are shared equitably, with particular attention to the needs of developing nations (Jaeckel, Ardron, & Gjerde, 2016).

Despite this mandate, the ISA faces a significant regulatory vacuum. To date, it has issued more than 20 exploration contracts to states, state-sponsored entities, and private companies, but a finalized regulatory regime for commercial exploitation is

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still lacking (Petersen et al., 2016; Miller et al., 2018). Negotiations to establish binding rules for exploitation have repeatedly failed to achieve consensus, leaving the industry in a state of legal uncertainty. In 2021, Nauru invoked the "two-year rule" under UNCLOS, requiring the ISA to adopt a mining code by July 2023; however, the deadline passed without agreement, and discussions remain ongoing (Blanchard et al., 2023).

Africa's Strategic Stakes: The Proponent's Case for DSM

The "Blue Economy" as a Development Framework

Deep-sea mining is increasingly framed within the context of Africa's broader *Blue Economy* policy. The African Union (AU) has articulated this vision through the **2050** Africa's Integrated Maritime (AIM) Strategy, which seeks to promote the sustainable utilization of the continent's vast maritime resources for economic growth, social development, and environmental protection (African Union, 2012; Voyer et al., 2018). With 38 of its 54 states having a coastal border and a combined 13 million square kilometers of maritime zones, Africa views its oceans as a critical frontier for unlocking new sources of wealth (AU, 2009; Karani et al., 2022). In this framework, deep-sea minerals are positioned as a potential enabler of industrialization, providing access to cobalt, nickel, manganese, and rare earth elements resources that are essential for renewable energy systems, electric vehicles, and high-tech manufacturing (Hein et al., 2013). Thus, the Blue Economy is not only seen as a development pathway but also as a strategic means for Africa to participate in the global energy transition while addressing the economic aspirations of its growing population (Patil, Virdin, Colgan, Hussain, & Failler, 2016).

Economic Opportunities and Projections

Proponents of deep-sea mining (DSM) argue that it could provide a significant new source of revenue and act as a catalyst for economic diversification, especially in resource-dependent regions (OECD, 2016; ISA, 2020). Industry projections suggest that DSM could generate a global annual turnover of approximately €10 billion by 2030, with 5–10% of the world's minerals potentially sourced from the seabed within the next decade (European Commission, 2012; World Bank, 2017).

Beyond revenues, DSM presents opportunities for job creation and workforce transformation. Unlike traditional extractive industries, DSM is highly interdisciplinary, requiring expertise in subsea engineering, robotics, marine geology, environmental consultancy, and maritime logistics (Hein et al., 2013; Miller et al., 2018). This demand for advanced technical skills has the potential to reshape the labor market by fostering the growth of new professional sectors in ocean industries. Such developments align with African development priorities, as

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reflected in South Africa's G20 presidency agenda, which emphasized job creation, skills development, and inclusive growth (South African Government, 2023).

Furthermore, proactive engagement by African states in shaping DSM regulatory frameworks could stimulate technology transfer, enhance capacity building, and provide pathways for building indigenous expertise in marine technology (African Union, 2012; Jaeckel, 2017). By positioning themselves strategically in the evolving governance landscape, African nations could leverage DSM not only for economic gain but also for long-term technological advancement and sustainable development.

A Cautionary Analysis: The Economic and Geopolitical Risks

The "Resource Curse" Reimagined

The enthusiasm for deep-sea mining (DSM) must be tempered by a sober analysis of its potential risks, many of which mirror Africa's historical experiences with terrestrial mining. The primary economic threat stems from a potential disruption to existing land-based mineral economies. A 2020 study commissioned by the International Seabed Authority (ISA) concluded that DSM could lead to a global oversupply of key minerals, resulting in falling commodity prices and undermining export-dependent economies in Africa (ISA, 2020). Similarly, a report by Planet Tracker estimated that DSM could put over US $560 billion in annual export earnings at risk for countries producing copper, cobalt, nickel, and manganese on land. The analysis warns that states such as the Democratic Republic of Congo (DRC) and Zambia (Africa's leading copper producers) could lose up to 79% of their export income if DSM creates a market glut (Planet Tracker, 2022). Such losses would have cascading impacts, eroding national GDP, reducing fiscal revenues, and threatening already fragile public services and employment.

The current international framework, which requires private companies to obtain sponsorship from a state to secure an ISA exploration contract, risks replicating long-standing patterns of exploitative resource governance (Jaeckel, 2017). Wealthy corporations and financial institutions, often originating from industrialized nations, may seek sponsorship from any ISA member state, fueling a competitive environment where developing countries are pressured to offer highly favorable (yet minimally beneficial) terms. This dynamic creates a "race to the bottom" in corporate taxation and royalties, a practice that has historically deprived resource-rich countries such as the DRC of billions of dollars in potential revenues (NRGI, 2021).

As a result, the principle of the "common heritage of mankind" enshrined in

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UNCLOS risks being undermined. Instead of delivering equitable global benefits, DSM may primarily enrich a handful of corporations and their sponsoring states. Indeed, projections (Table 2) suggest that sponsoring nations could earn as little as US $42,000 to US $7.35 million annually in royalties and taxes, a negligible contribution to most national economies (ISA, 2020). Such figures underscore concerns that DSM could perpetuate a neo-colonialist model of extraction, reinforcing dependency rather than empowering developing nations.

Table 2: Financial Gains vs. Economic Risks for African Nations

Category	Potential Gains from DSM (per year)	Potential Risks from DSM (per year)
Corporate Tax	Up to US $6.25 million per sponsoring state; often excluded from agreements (ISA, 2020)	Potential for a "race to the bottom" on tax revenue as companies seek the most favorable jurisdictions (Jaeckel, 2017; NRGI, 2021)
Royalties	US $42,000 to US $7.35 million per ISA member state (ISA, 2020)	Royalty fund could be too small to distribute, and rates are subject to reductions from the ISA (ISA, 2020)
Land-Based Mining	Not applicable; DSM does not directly enhance land-based mining revenues	Up to 79% loss of export income for DRC and Zambia due to market glut (Planet Tracker, 2022); Over US $560 billion in annual export earnings at risk for all land-based producers (Planet Tracker, 2022)
Marine Fisheries	Not applicable	"Catastrophic impacts" on fisheries; potential for loss of significant export revenue, e.g., for Ghana and Seychelles, where tuna fishing is a vital economic pillar (ISA, 2020)

Existential Threat to Marine and Coastal Economies

Beyond the risks to land-based mining, deep-sea mining (DSM) poses an existential threat to Africa's vital marine and coastal economies. The mining process, which involves large machines removing mineral deposits from the seabed and discharging waste back into the water column, generates sediment plumes, noise pollution, and direct habitat destruction (Miller et al., 2018). These impacts are expected to disrupt fish habitats and contaminate marine food chains, with potentially catastrophic consequences for fisheries (ISA, 2020). This risk is particularly acute for coastal states such as Ghana, where tuna fishing contributes significantly to export revenues, and for Seychelles, where tuna exports account for nearly 90% of total merchandise trade

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(Planet Tracker, 2022). For these nations, damage to marine ecosystems is not only an economic risk but, as Seychellois environmental advocates have emphasized, an *existential* one (Planet Tracker, 2022).

Industry claims that DSM is a "greener" alternative to terrestrial mining are contested by scientists and policy experts, who highlight the vast and poorly understood ecological costs. Almost a thousand marine scientists and policy experts have signed a public statement calling for a moratorium on DSM, citing the immense and potentially irreversible damage it could cause to deep-sea ecosystems that remain largely unexplored (DSCC, 2021).

Geopolitical Fragmentation and Investment Volatility

The geopolitical landscape further complicates the economic calculus for DSM. Commodity markets are already vulnerable to fragmentation and geopolitical shocks, which can trigger significant price volatility and supply chain disruptions (World Bank, 2017). For a nascent industry like DSM, this instability adds a layer of financial risk for African nations considering investment. Moreover, unilateral actions by powerful states threaten to undermine the multilateral system. For example, U.S. efforts to accelerate DSM under its domestic legislation, rather than through the ISA, pose a direct challenge to the international rules-based framework (Jaeckel, 2017). By bypassing the ISA (an institution established under UNCLOS to manage seabed resources in the "Area" as the *common heritage of humankind*) the U.S. risks eroding the very governance system on which developing nations rely to secure equitable access and fair benefit-sharing (UNCLOS, 1982; Lodge, 2012). A breakdown of this framework could leave African states at a disadvantage in negotiations with more powerful international actors.

Case Studies: Precedent and Policy in Action

Namibia: A Precautionary Tale

Namibia provides an important lesson for African nations contemplating deep-sea mining (DSM). The country has a long-standing history of offshore diamond mining through *Namdeb*, a public–private partnership between the Namibian government and De Beers (Tilton, 2015). However, this experience did not lead the government to embrace new forms of seabed extraction uncritically. In 2013, the Namibian Cabinet imposed an 18-month moratorium on marine phosphate mining, citing environmental and socio-economic concerns (Roux & Horsfield, 2020).

This decision was heavily influenced by strong opposition from the fishing industry and civil society groups, who regarded marine phosphate mining as a *"serious threat"* to both the marine ecosystem and the livelihoods it supports (Kimani, 2015; Republic

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of Namibia, ,2016 ; Leeuwerik et al., 2021). The fishing sector's key argument was that Namibia's oceans could not simultaneously sustain a viable, renewable fishing industry and a finite, environmentally destructive mining industry. Rather than relying solely on industry-funded studies, the government commissioned an independent, science-based Environmental Impact Assessment (EIA) to evaluate the risks before making a final decision (Roux & Horsfield, 2020). Namibia's application of the precautionary principle illustrates a potential blueprint for other African nations, showing that it is possible to safeguard long-term environmental sustainability and economic resilience over short-term extractive promises (Jaeckel, 2017).

South Africa: Operation Phakisa and the Oceans Economy

South Africa provides another relevant case through its *Operation Phakisa: Oceans Economy* initiative, launched in 2014. The program aimed to unlock the economic potential of the country's oceans, with sectors such as marine transport, offshore oil and gas exploration, aquaculture, and marine protection identified as key drivers of growth (Department of Environmental Affairs [DEA], 2014). Early government estimates suggested that the program could contribute up to US$177 billion to GDP by 2033 and create over one million jobs (Loureiro et al., 2022).

However, the initiative quickly revealed the challenges of balancing economic ambitions with environmental stewardship. Critics pointed to insufficient consultation with coastal communities, limited integration of precautionary principles, and risks to marine biodiversity from offshore oil and gas drilling (Kotzé, 2017). Despite these concerns, Operation Phakisa demonstrates how African states are attempting to institutionalize the "blue economy" narrative, positioning oceans as strategic assets for national development. For DSM governance, South Africa's experience highlights the risks of pursuing rapid industrialization of ocean spaces without parallel frameworks for ecological safeguards. Unlike Namibia's moratorium, South Africa illustrates a more market-driven approach that could expose its marine ecosystems to higher levels of vulnerability if precautionary oversight is not strengthened.

Madagascar: Seabed Exploration Licensing

Madagascar offers a contrasting case as one of the few African nations to actively license seabed exploration activities in its Exclusive Economic Zone (EEZ). In the early 2010s, the government granted offshore exploration licenses to international companies targeting polymetallic sulphides and other seabed resources (World Bank, 2017). Unlike Namibia's moratorium, Madagascar adopted a more permissive

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approach, motivated by hopes of diversifying its resource-dependent economy and attracting foreign investment (Benkenstein, 2014).

However, this openness has been met with criticism. Civil society organizations and environmental groups have expressed concern over the lack of transparency in licensing processes, limited consultation with local fishing communities, and insufficient environmental baseline data to support informed decision-making (Devenish et al., 2023;). Moreover, Madagascar's political instability has exacerbated governance challenges, raising fears that weak regulatory oversight could expose the country to "neo-colonial" forms of marine resource extraction (Jaeckel, 2017). Madagascar's case emphasizes the need for strong governance, environmental safeguards, and inclusive decision-making in seabed resource management. While licensing may provide short-term revenue, the long-term risks to marine ecosystems and fishing-dependent livelihoods demonstrate the dangers of prioritizing foreign investment over precaution.

Policy Imperatives for a Sustainable Future

The African Group's Position at the ISA: A Blueprint for Equitable Governance

The economic future of deep-sea mining (DSM) in Africa is not predetermined; it depends on how African states engage strategically, collectively, and within robust governance frameworks. One of the most significant interventions in this regard has been the African Group's submission to the International Seabed Authority (ISA**),** which emphasizes not prohibition, but equitable regulation. The Group's position insists that DSM should only proceed if it is *"demonstrably beneficial to humankind"* and if humanity is *"fairly compensated"* for the irreversible loss of common resources (Lodge et al., 2014; ISA, 2022).

A central pillar of the African Group's proposal is its detailed blueprint for a payment regime (Table 3). This marks a shift from a historically reactive stance to a more agentive and assertive role in global resource governance (Iwunze, 2019). Rejecting the low royalty rates (2–9%) favored by some industrialized states and contractors, the Group argues that such rates would enable companies to secure billions of dollars in profits while contributing minimal revenues to the international community (ISA, 2022). Instead, the African Group developed its own financial model to justify substantially higher royalty rates that align with those imposed on land-based mining operations.

Their analysis demonstrates that these proposed rates would not only maximize ISA revenues but also prevent DSM from undermining the competitiveness of terrestrial mineral producers in Africa, such as copper and cobalt exporters in the Democratic

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Republic of Congo and Zambia (Planet Tracker, 2020). By advancing a financially rigorous and morally grounded framework, the African Group has positioned itself as a rule-shaper rather than a rule-taker in the emerging global DSM regime. This proactive stance provides a potential blueprint for equitable governance: one that safeguards Africa's developmental interests while promoting fairness in the stewardship of resources legally designated as the *"common heritage of humankind"* under UNCLOS (United Nations, 1982)

Table 3: The African Group's Proposed Royalty Rates to the ISA

Payment Regime	**Proposed Royalty Rates**	**Rationale**	**Reference**
Single Rate Royalty	14.4%	Proposed as the sole tax to maximize ISA revenues and ensure fair compensation to humankind.	ISA, 2022
Time-Varying Royalty	6.4% and 19.3%	Designed as a time-dependent regime to optimize ISA revenues using a more realistic financial model.	ISA, 2022
Price-Varying Royalty	12% to 25%	Adjusts based on mineral prices to guarantee fair compensation, preventing windfall profits for contractors.	Iwunze, 2019; ISA, 2022
Hybrid Regime	5% royalty, 30% profit share, 30% additional profit share	A combined regime with an excess profit trigger (IRR of 12%), ensuring higher revenues and equity in benefit-sharing.	Lodge et al., 2014; ISA, 2022

Table 3 demonstrates the African Group's proactive approach to global seabed governance. The proposed single rate royalty of 14.4% sets a strong benchmark to maximize ISA revenues, far exceeding the 2–9% rates suggested by some industrialized states and contractors (ISA, 2022). The time-varying regime (6.4%–19.3%) introduces flexibility, scaling royalties to financial realities over time, while the price-varying model (12%–25%) directly links revenues to commodity prices, ensuring that the benefits of high mineral prices are shared more equitably. Finally, the hybrid regime, combining royalties and profit-sharing with an "excess profit" trigger, is designed to prevent contractors from reaping windfall gains at the expense of the international community (Lodge et al., 2014).

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Taken together, these models reflect an insistence on aligning DSM with land-based mining standards and preventing deep-sea contractors from gaining an unfair competitive advantage. This positions Africa not as a passive participant, but as a rule-shaper in the evolving regime of seabed governance (Iwunze, 2019).

The African Group's models (single rate, time-varying, price-varying, and hybrid) consistently propose significantly higher royalty or profit-sharing rates than the 2–9% range favored by contractors and some industrialized states (Figure 3). This approach seeks to align deep-sea mining with land-based mining taxation levels, prevent unfair competitive advantages, and maximize revenues for the International Seabed Authority (ISA, 2022).

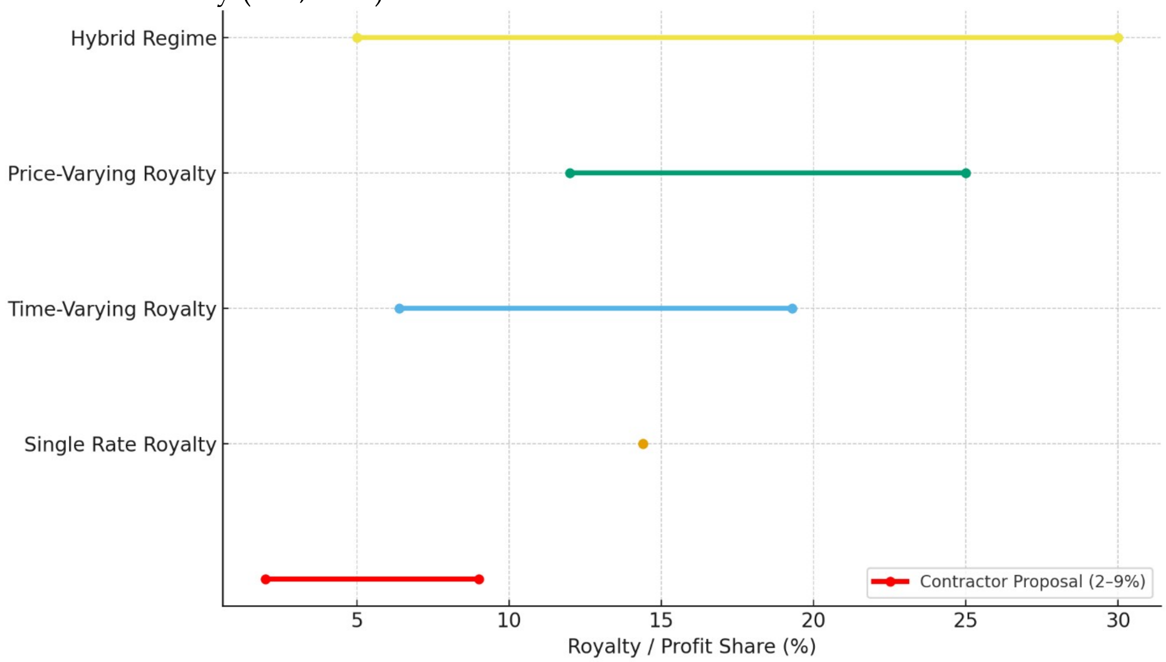

Figure 3 Comparison of the African Group's proposed payment regimes for deep-sea mining with contractor proposals. (modified after ISA, 2022)

Actionable Recommendations for African Policy makers

Based on this analysis, the following policy imperatives (Figure 4) are crucial for a sustainable and equitable engagement with deep-sea mining:

(a) Strengthening National and Regional Legal Frameworks: African nations must develop robust domestic laws to govern DSM within their exclusive economic zones (EEZs), as the ISA's authority only extends to international waters.

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(b) Prioritizing Intra-African Cooperation: A unified approach is essential to prevent a "race to the bottom". African nations should establish a trans-African coordinating body to harmonize their involvement and pool resources
(c) Demanding Equitable Benefit Sharing: African states should demand technology transfer and capacity building as a condition of any public-private partnership, as the UNCLOS framework intended.
(d) Applying the Precautionary Principle: Following the Namibian model, policy decisions must be based on independent, science-based environmental impact assessments rather than industry-funded studies. This is the only way to ensure that the irreversible environmental and economic risks are fully understood before any extraction activities proceed.

Figure 4 Policy Pathways for Africa's Engagement in Deep-Sea Mining

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Conclusion

The global demand for critical minerals and the emerging viability of deep-sea mining present African nations with a critical juncture. While the "Blue Economy" framework offers a compelling vision for leveraging the continent's maritime resources, the potential for economic gains from DSM is uncertain and speculative, while the risks are profound and, in some cases, existential. The evidence suggests that a poorly regulated rush to exploit these resources could destabilize land-based economies, devastate vital fisheries, and perpetuate a neo-colonial model of resource extraction that offers minimal returns to African sponsoring states. The path forward is not pre-determined. It hinges on the strategic choices made by African policymakers today. The assertive and unified stance of the African Group at the ISA, which demands fair compensation and a level playing field, provides a powerful blueprint for action. Deep-sea mining is not just a new frontier; it is a test of Africa's capacity to assert its resource sovereignty and chart a sustainable course in a complex and changing global order.

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