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Biodiversity and Inclusive CSR: Exploring an Integrative Framework for Ecological Sustainability in Africa

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The African Continental Free Trade Area (AfCFTA) intensifies trade and demand for Africa's natural resources, hence, heightens the risks to Africa's biodiversity and ecosystems. We explored the integration of biodiversity into corporate social responsibility (CSR) framework and posited an eco-centric approach to managing the biodiversity crisis. The inclusive CSR model aligns biodiversity with Sustainable Development Goals (SDGs) and environmental, social, and governance (ESG) principles. The implications of the eco-centric framework are action steps requiring businesses, governments, institutions, and policymakers to adopt eco-centric strategies that balance economic growth with ecological preservation through biodiversity-inclusive CSR policies and ESG reporting regimes to preserve Africa's natural environment.

INTRODUCTION

The ratification of the AfCFTA in 2021 marked a significant milestone for Africa, unlocking opportunities for increased cross-border business. Projections indicate a 159% rise in foreign direct investment (FDI) by 2035 and a staggering 400% growth in intra-Africa trade by 2045 (The World Bank, 2020; UNECA, 2021). However, these developments also signal heightened demand and pressure on Africa's natural resources, a critical component for industries worldwide. Historically, Africa has played a role in the Global Value Chain as an upstream supplier of unprocessed agricultural and mineral resources (UNCTAD, 2023), with resource extraction posing serious challenges to environmental health, biodiversity preservation, and ecosystem balance. Home to unparalleled biodiversity, unique ecosystems, and indigenous communities, Africa faces profound impacts from the global biodiversity crisis (Africa Center for Strategic Studies-ACSS, 2022).

According to the UN, Africa lags behind other regions in achieving the SDGs for 2030, with environmental degradation standing out as a major obstacle. Sub-Saharan Africa is projected to be unsustainable by 2050 due to severe ecological threats such as "Galamsey" (artisanal mining) (African News, 2022). The decline in Africa's rich biodiversity jeopardizes millions of livelihoods, exacerbates food insecurity, and fuels conflict over land (ACSS, 2022). Biodiversity—encompassing ecological diversity such as species diversity, ecosystems, and genetic resources—is vital for maintaining ecosystem balance and ensuring the availability of natural resources that sustain human well-being and indigenous communities (Convention on Biological Diversity-CBD, 2021). Given this dire situation, two critical questions arise:

1. How can Africa preserve its natural resources while fostering increased business activities?
2. How can businesses, institutions, policymakers, and researchers integrate biodiversity preservation into African business models?

Current models are insufficient in addressing these challenges effectively, contributing to Africa's lag in global SDG progress. To tackle this issue, we propose a framework incorporating biodiversity, the non-human actor, as a central element of an inclusive corporate social responsibility (CSR) model tailored to Africa. Inclusivity here refers to recognizing and integrating all components and actors within an ecosystem, particularly biodiversity. This framework builds on prior research (e.g., Panwar, 2023) and adapts elements from the global biodiversity framework, aligning biodiversity targets with the Sustainable Development Goals (SDGs) and environmental, social, and governance (ESG) principles to create an eco-centric CSR model for Africa.

Integrating biodiversity into CSR and ESG models is essential for fostering environmental integrity and promoting ecologically sustainable development that honors Africa's diverse natural heritage. Such integration ensures the preservation of natural resources that underpin Africa's economic strength and its contribution to the global value chain. By embracing a holistic approach to inclusivity that prioritizes biodiversity alongside economic and social considerations, the eco-centric model offers a pathway toward ecological sustainability in Africa.

SUSTAINABILITY FRAMEWORKS

SDG FRAMEWORK

Businesses and governments are prioritizing sustainable practices within the SDG framework (Schmitz, Ommen, & Karlshaus, 2023), and such practices can be applied to CSR models that integrate biodiversity. The SDGs represent a set of interconnected global objectives aimed at addressing critical challenges such as poverty, inequality, climate change, and environmental degradation by 2030. These goals provide a shared blueprint for peace and prosperity for people and the planet, emphasizing the balance between social, economic, and environmental sustainability through its 169 specific targets. Biodiversity is deeply intertwined with the SDGs since the biosphere is the foundation for all human activities and sustainable development (Panwar, 2023).

The SDGs are designed to be universal, applying to all countries regardless of their development status, and encourage collaboration among governments, businesses, and civil society to achieve a sustainable future for all. This inclusivity underscores the importance of linking business activities and the SDGs (e.g., Lopez, 2020).

This study focuses on three inclusive SDG targets:

- **Target 5:** Achieving gender equality and empowering all women and girls by eliminating discrimination, violence, and harmful practices while promoting their full participation in all aspects of life.
- **Target 8:** Promoting sustained, inclusive, and sustainable economic growth alongside full and productive employment and decent work for all.
- **Target 10:** Reducing inequality within and among countries by addressing income disparities, fostering social inclusion, and ensuring fair representation in global institutions.

These inclusive targets highlight the interconnected nature of social equity in sustainability within the SDG framework, but ignore the non-human actors. By incorporating biodiversity, stakeholders can contribute meaningfully to global progress while addressing ecological challenges.

BIODIVERSITY FRAMEWORK

The Kunming-Montreal Global Biodiversity Framework, adopted at COP15 in December 2022, sets ambitious goals to halt and reverse biodiversity loss by 2030, and includes four overarching goals with 23 targets. Key elements include conserving 30% of land and sea areas, reducing extinction rates, restoring degraded ecosystems, and phasing out harmful subsidies. The framework also emphasizes the rights of indigenous peoples, sustainable use of biodiversity, and increased financial resources for conservation. It aims to transform society's relationship with nature, integrate biodiversity into decision-making across sectors, and contribute to sustainable development (CBD, 2021) as the biosphere underpins economies and societies. Excerpts

of the three biodiversity targets identified as inclusive are shown below in [Table 1](#).

ESG FRAMEWORK

The ESG framework serves as a guide for organizations to assess their environmental and social impacts while promoting responsible governance through reporting. As ESG becomes increasingly influential in investing and business decision-making, stakeholders have grown more interested in companies' environmental impact. Biodiversity conservation aligns with the 'Environmental' component of ESG; equitable participation of Indigenous communities and resource sharing relate to the 'Social' component, while the *Governance* component focuses on the company's internal practices, controls, and leadership (Raymond et al., 2022). Thus, the ESG framework incorporates inclusivity within its social focus.

African countries and businesses are increasingly adopting ESG frameworks (e.g., Brand, 2024), such as the Global Reporting Initiative (GRI), driven by investor demands and sustainability goals. However, challenges persist due to infrastructure gaps and informal economies, but ESG offers opportunities to showcase sustainable growth. The ESG framework provides a platform for demonstrating inclusive corporate social responsibility through its reporting regime.

CORPORATE SOCIAL RESPONSIBILITY FRAMEWORK

The corporate social responsibility (CSR) framework outlines a company's responsibilities towards society and the environment. It guides businesses in integrating social and environmental concerns into their operations, balancing profit-making with positive societal impact and sustainable practices. CSR includes environmental, ethical, and human responsibilities, but integrative CSR is crucial for maintaining societal support and securing long-term business sustainability (Mele, 2009). Similarly, sustainable CSR addresses social challenges such as fair practices, diversity, and inclusion (Lopez, 2020). However, biodiversity—representing the non-human elements of our ecosystem—is also critical, as the biosphere underpins economies and societies (Schmitz et al., 2023).

Embedding biodiversity in CSR models is strategic and pivotal for fostering sustainable business environments. This integration helps companies operationalize inclusive initiatives within their CSR strategy, ensuring a holistic approach to sustainability that can overcome some of the CSR challenges in Africa, such as limited resources, weak governance, and the lack of standardized metrics (Ntoutoume, 2023). Thus, the CSR framework is the foundation of our integrative framework for ecological sustainability in Africa.

THE INTEGRATIVE FRAMEWORK FOR ECO-CENTRIC CSR STRATEGY

The strategic integration of biodiversity into CSR and ESG frameworks has been emphasized as crucial for ecological sustainability (Kopnina, Zhang, Anthony, Hassan, &

Table 1. Inclusive Biodiversity Targets

Target 3: <i>Ensure that at least 30% globally of land areas and sea areas, especially areas of particular importance for biodiversity and its contributions to people, are conserved through effectively and equitably managed, ecologically representative, and well-connected systems of protected areas and other effective area-based conservation measures and integrated into the wider landscapes and seascapes.</i>
Target 13: <i>Implement measures at the global level and in all countries to facilitate access to genetic resources and to ensure the fair and equitable sharing of benefits arising from the use of genetic resources and, as relevant, of associated traditional knowledge, including through mutually agreed terms and prior and informed consent.</i>
Target 21: <i>Ensure equitable and effective participation in decision-making related to biodiversity by Indigenous peoples and local communities and respect their rights over lands, territories, and resources, as well as by women, girls, and youth.</i>

Source: Convention on Biological Diversity (2021)

Maroun, 2024), which we also propose as part of the eco-centric CSR model for Africa. Businesses can play a pivotal role in advancing biodiversity conservation through transformative practices (Panwar, 2023), which are central to our integrative CSR framework. The proposed integrative framework for biodiversity-inclusive CSR aims to address ecological threats and environmental degradation in Africa. This framework positions biodiversity as a cross-cutting enabler of the SDGs and ESG, emphasizing that ecosystem health underpins social equity, economic resilience, and governance integrity.

With this framework, the inclusive goals from the SDGs and biodiversity targets are identified. The biodiversity targets are content matched to related SDG components and subsequently mapped onto the ESG components to serve as an inclusive CSR model. The results presented in Table 2 show that biodiversity targets 13, 21, and 3 are content matched to SDG 5 (gender equality) and mapped onto the three ESG components. Similarly, biodiversity targets 13 and 21 are matched to SDG 8 (decent work) and the ESG components. Additionally, biodiversity targets 13, 21, and 3 are content matched to SDG 10 (reduced inequality) and the ESG components. The matchings demonstrate the linkages between biodiversity targets, SDGs, and ESG components necessary to foster inclusivity in sustainability. The framework enables the inclusion of non-human stakeholders to form an integrative and eco-centric CSR model for Africa.

IMPLICATIONS OF THE INTEGRATIVE FRAMEWORK

The integrative framework links three inclusive biodiversity targets (3, 13, 21) to three SDG goals (5, 8, 10) and maps them onto ESG components for sustainability reporting. This alignment builds on prior research integrating biodiversity and ESG targets (Kopnina et al., 2024) and suggests that incorporating biodiversity and SDG elements into CSR models can enhance biodiversity conservation and ecological sustainability in Africa. The framework further proposes that ESG reporting in Africa should include these biodiversity elements to improve environmental reporting, such as extinction accounting (Kopnina et al., 2024) and the International Financial Reporting Standards -IFRS S1 & S2 (IFRS, 2023). This approach can direct CSR activities to address biodiversity degradation, advance the 2030 SDGs, and

contribute to the African Union's biodiversity strategy and action plan (ABSAP) for 2030 and Agenda 2063 for sustainable development.

The integrated model has implications for management practices and policies, requiring collaboration among stakeholders such as AfCFTA secretariat, African governments, higher education institutions, and businesses (MNCs and SMEs) to ensure eco-centric CSR strategies. For SDG implementation in Africa, goals 5 (gender equity), 8 (decent work), and 10 (reduced inequality) must incorporate biodiversity targets 3, 13, and 21 as inclusive elements. This integration would promote fair distribution of natural resources, protect the rights of women, girls, and youth, and ensure Indigenous communities' participation in decision-making processes.

The framework also emphasizes the need for stakeholders to include biodiversity in addition to inclusivity SDGs (5, 8, 10) in ESG reporting. For the environmental component (E), reporting should address biodiversity targets 3 and 13 by focusing on conserving land and sea resources, fair ecological resource distribution, traditional knowledge use, and agreements with communities. For the social component (S), institutions must incorporate biodiversity targets 21 and 13 to ensure equitable participation of Indigenous communities in decision-making processes and protect their rights over land and resources. For governance (G) reporting, institutions should demonstrate efforts aligned with biodiversity targets 3 and 21.

This integration creates a model for an inclusive, eco-centric CSR plan that prioritizes biodiversity protection in sustainability reporting and aligns with the goals of the AU biodiversity strategy and action plan (ABSAP). Establishing inclusive CSR requires effective measurement, reporting, and improvement in sustainability performance related to biodiversity. The framework also highlights the need for an Afro-centric ESG reporting standard, such as an "AfCFTA Ecological or Biodiversity Benchmark", to address African-specific sustainability challenges. This benchmark would include the three biodiversity targets as essential standards for ESG reporting.

ACTIONABLE RECOMMENDATIONS FOR STAKEHOLDERS

African Union, AfCFTA Secretariat, African Governments, and Policymakers:

Table 2. Framework for Eco-Centric Integrative and Sustainable CSR

Sustainability & Inclusivity Elements		ESG Framework		
		Environment (E)	Social (S)	Governance (G)
SDG Targets	SDG 5: Gender Equality	<u>Biodiversity target 13</u> -access to genetic resources -fair and equity in distribution -traditional knowledge -mutual agreement	<u>Biodiversity target 21</u> -Equitable participation in decisions -Indigenous/local communities -rights over land, territories, resources, -rights of women, girls, youth	<u>Biodiversity target 3</u> -conserving land/sea for humans -equitable management <u>Biodiversity target 21</u> -Equitable participation in decisions -Indigenous/local communities -rights over land, territories, resources, -rights of women, girls, youth
	SDG 8: Decent Work	<u>Biodiversity target 13</u> -access to genetic resources -fair & equity in distribution -traditional knowledge -mutual agreement (with Indigenes)	<u>Biodiversity target 13</u> -access to genetic resources -fair & equity in distribution -traditional knowledge -mutual agreement (with Indigenes)	<u>Biodiversity target 21</u> -Equitable participation in decisions -Indigenous/local communities -rights over land, territories, resources,
	SDG 10: Reduced Inequality	<u>Biodiversity target 13</u> -access to genetic resources -fair & equity in distribution -traditional knowledge -mutual agreement	<u>Biodiversity target 21</u> -Equitable participation in decisions -Indigenous/local communities -rights over land, territories, resources, -rights of women, girls, youth	<u>Biodiversity target 3</u> -conserving land/sea for humans -equitable management

Authors created integrative framework, 2025

- Require MNCs and SMEs to adopt the eco-centric CSR framework.
- Develop a reporting regime incorporating biodiversity targets 3, 13, and 21 in ESG reporting.
- Create capacity-building initiatives for local businesses and communities to engage in biodiversity-friendly practices.

MNCs and SMEs in Africa:

- Develop eco-centric CSR policies for sustainable ecological management.
- Implement biodiversity impact assessments and mitigation strategies in CSR policies.
- Invest in nature-based solutions like sustainable water management and ecosystem restoration.

Higher Education Institutions (HEIs) in Africa:

- Develop and teach eco-centric business models, including environmental ethics.
- Integrate biodiversity and sustainability into business curricula.
- Encourage research on biodiversity and sustainable business practices.

IB Researchers with an Interest in Africa:

- Conduct research on the impact of international business on local biodiversity.
- Develop case studies of African companies integrating biodiversity conservation into business models.

- Investigate the economic value of ecosystem services provided by African biodiversity.

CONCLUSION

This paper underscores the importance of inclusive CSR frameworks that integrate biodiversity to address Africa's ecological sustainability challenges. This eco-centric CSR model demands action by stakeholders such as MNCs, SMEs, African governments, institutions, and policy makers in the adoption of the framework for their CSR models and policies, as well as ESG reporting. This framework requires a new reporting regime that incorporates biodiversity targets and should promote a deeper integration of ecological considerations into sustainable CSR practices across Africa. The engagement of stakeholders can address operational impact assessments, biodiversity conservation, and collaboration with indigenous communities on ecosystem management.

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