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BRIEFING NOTE


Title: Ocean Accounting for Africa: A Framework for Measuring Progress in Ocean Sustainability

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Objective – A briefing note/policy brief aims to provide a concise outcome-based synopsis of recent research or expert opinion that may inform decision making and activities by authorities, NGOs and NPOs. The policy note series aims to complement the academic peer reviewed literature published by NRF-SAEON, and highlight key messages from high-level engagements.



Ocean Accounting for Africa: A Framework for Measuring Progress in Ocean Sustainability

Briefing Note

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Recommendation

Promote Regional Collaboration on the implementation of Ocean Accounting in Africa: The African Ocean Decade Task Force is recommended to support efforts to establish regional collaborations on Ocean Accounting through platforms such as the Africa Natural Capital Accounting Community of Practice, the GOAP Africa Community of Practice, as well as regional and national ocean accounting initiatives and imperatives, and highlighting Ocean Accounting as a novel approach to decision-making through existing UN Ocean Science Decade platforms.

Introduction

As the African Ocean Decade Task Force (Task Force) embarks on its mission to promote sustainable development and safeguard the region's marine resources, the introduction of innovative tools and frameworks to inform decision-making processes is essential. Among these tools, Ocean Accounting (OA) stands out as a critical tool that can provide African nations with the ability to systematically integrate ocean-related data with national economic accounting systems, thereby integrating ocean environmental, economic and social metrics within an Ocean Accounting Framework (OAF). This policy brief outlines why OA should be recognised as a key research area by the Task Force, benefitting from the outreach and potential for research funding if recognised as a tool for development. The brief highlights the value of Africa taking a lead in developing components of OA for measuring and evaluating the progress of ocean-related economic, social, and environmental policies, aligning with the broader objectives of the UN Ocean Science Decade and Africa's specific priorities.

The Ocean Accounting Framework

Ocean Accounting (Box 1) advances a novel approach to ocean management through the adoption of standardised methodologies for collecting, organising, and analysing data on ocean resources, their associated ecosystem services and flow to and from society. OA aims to create a more holistic picture of how marine resources and resource-uses contribute to economic activities, ecological balance, and social well-being. Integrated within OA are marine ecosystem accounting as outlined within the System of Economic-Environmental Accounts-Ecosystem Accounts, which quantifies the benefits humans derive from ocean and coastal ecosystems, asset accounts, which track the stocks of marine resources such as fish populations, coral reefs, and other biodiversity, flow accounts, which measure the flows of both natural resources from the environment to economic activities, and of industry residuals from economic sectors to the environment (and the associated environmental activity accounts of the costs of their management (as SEEA Central Framework Accounts). Economic accounts (such as

Ocean Economy Satellite Accounts) provide the contribution of ocean industry sectors to national economies (within the framework of the System of National Accounts), while novel Social accounts capture the benefits and costs of changing oceans, ocean resources and resource uses at both formal and informal economic activities, including in often intangible cultural ecosystem services. Novel risk and governance accounts aim at using Ocean Accounting Frameworks to investigate the mitigation of ocean resource use risk within ocean governance processes that lie at the heart of ocean sustainable development.

OAF is especially relevant for Africa's coastal and island nations (Box 2), where the ocean plays a

central role in economic development, food and energy security, and social cohesion. Integrating multi- and transdisciplinary ocean data within existing national economic accounts enables countries to make informed decisions about the sustainable use of marine resources, balancing economic growth with social inclusivity and environmental sustainability goals. Furthermore, the spatial component of OA, which maps marine ecosystems, and their resource use benefits, provides decision-makers with region-specific insights, crucial for addressing local community, environmental and economic challenges in adaptive policy cycles.

Box 1: The Global Ocean Accounting Partnership and the Africa Natural Capital Accounting Community of Practice

The Global Ocean Accounts Partnership (GOAP), established in 2019, is a multi-institutional global initiative aimed at helping countries move beyond GDP to measure and manage progress towards ocean sustainable development. Currently co-chaired by Indonesia's Ministry of Marine Affairs and Fisheries and the Charles Darwin Foundation in Ecuador, GOAP unites governments, international organizations, and research institutions to create a global community of practice for ocean accounting. Hosted by the Centre for Sustainable Development Reform of the University of New South Wales in Australia, and funded by several international programs, GOAP's objectives include developing standardised ocean accounting guidance, supporting 30 countries by 2030 in building national ocean accounts, and promoting the integration of ocean accounting into decision-making and governance processes. As an Action Group of the High Level Panel for a Sustainable Ocean Economy, GOAP aligns its goals with international agendas, including the UN's Sustainable Development Goals. It fosters global collaboration by connecting experts, providing technical support, and facilitating capacity building and knowledge sharing in ocean accounting. The GOAP is the primary platform through which components of the framework are being tested, with best practice shared through their Technical Guidance on Ocean Accounting. Several regional Communities of Practice have been established including the GOAP Africa Community of Practice (Africa CoP).

The Africa Natural Capital Accounting (NCA) Community of Practice is a regional platform established in November 2019 to bring together professionals from governments, NGOs, and academia who are working on or interested in NCA across Africa. It was created following the Africa Forum on NCA in Uganda, where participants from 18 countries supported the initiative. Backed by global organisations including the United Nations and the Global Program on Sustainability, the community aims to integrate NCA into statistical production and policymaking in African countries, including in African blue economies. The platform facilitates capacity building, knowledge sharing, and collaboration through activities like regular forums, joint communications, case studies, south-south exchanges, and themed working groups. The community has already attracted over 300 members from 39 African countries and seeks to promote partnerships that advance the NCA approach both regionally and globally. NCA forms a component of Ocean Accounts, and OA is therefore one of the themed working groups of the African NCA Forum.

Through these initiatives, Africa is playing leading roles in the development of global economic-environmental accounting best practice including in the continent's blue economy spaces of the oceans and freshwater environments.

For further information see:

1. Global Ocean Accounting Partnership: <https://www.oceanaccounts.org/>

2. GOAP Technical Guidance on Ocean Accounting:

<https://oceanaccounts.atlassian.net/wiki/spaces/WD/pages/950763521/Technical+Guidance+on+Ocean+Accounting>

3. Africa Natural Capital Accounting Community of Practice: <https://ecastats.uneca.org/ncacop/>

Measuring Economic Resilience and Development

African coastal communities and island states depend heavily on marine resources, and the ocean's contribution to their economic development is immense. Fisheries alone contribute significantly to the livelihoods of millions of people across the continent. However, these resources are increasingly under threat from overfishing, climate change, pollution and habitat destruction. Ocean Accounting provides a clear framework to quantify the economic value of marine resources (as a subset of national resource use), enabling governments to accurately assess how these resources contribute to national GDP metrics. By tracking the economic value of sectors such as fisheries, aquaculture, and marine tourism, Ocean Accounting can help countries develop more resilient and diversified ocean economies, while at the same time provide countries with macroeconomic information for advancing ocean sustainable development.

One of the key strengths of Ocean Accounting lies in its ability to inform policy-making. By integrating changing ocean data and statistics with national economic accounts, African nations can better assess trade-offs between different sectors, and between sectors and environmental priorities. One applicable area would be looking at how the extraction of renewable marine resources, such as fish, can be evaluated against long-term sustainability and economic contribution to implement policies that ensure the responsible use of these resources, balancing their optimal current economic potential while ensuring that they are not depleted for future generations. In this way, Ocean Accounting becomes an integrable tool for measuring economic resilience, providing the data needed to support sustainable economic policies.

Enhancing Social Resilience in Coastal Communities

An important aspect of Social OA aims at developing novel methodologies for measuring social resilience in coastal communities. Africa's coastal populations are highly dependent on marine resources for their livelihoods, food, and cultural practices. However, these communities are also highly vulnerable to environmental shocks such as climate change, rising sea levels, and extreme weather events.

Box 2: The Global Dialogue on Sustainable Ocean Development - The 5th Global Dialogue from the Global Ocean Accounts Partnership

The 5th GOAP Dialogue was co-hosted with the Government of Indonesia and the UK International Development Fund, and held in Bali, Indonesia in July 2024. During the Dialogue, the Africa CoP (facilitated by Afriseas Solutions) led several sessions on the development of 'A GOAP African Vision Strategy for Ocean Accounting towards Sustainable Ocean Development (2024-2026)' and an 'African Knowledge Sharing' session. The National Research Foundation-South African Environmental Observation Network (NRF-SAEON) also hosted two side-events. The first side-event, "Illuminating the Data pathways in GOOS and larger Ocean Community", discussed the importance of ocean observations and linkages with Ocean Accounts; discussion was had on valuing the benefits of ocean observations and how the costs, value chains and benefits to society could be captured. The second side-event was "Looking Seaward: Leveraging African Oceans for Sustainable Development within the Ocean Decade Narrative" and focused on sharing experiences in Ocean Accounts developments in Africa. Panellists were from Kenya, Mozambique and South Africa. Each of these countries are testing various components of the Ocean Accounts Framework.

Researchers from Afriseas Solutions and NRF-SAEON are members of the NRF Community of Practice: Ocean Accounts Framework.



Participants in the "Looking Seaward" side-event.

By incorporating social data into the OAF, African governments can critically understand how marine ecosystems support the well-being of coastal communities in an area that are currently not well captured by national accounting practices.

For example, social accounts can track the benefits that communities derive from ecosystem services

like coastal protection, fish provisioning, and tourism opportunities. Understanding these flows from the environment to informal and formal economies allows policymakers to design interventions that enhance the resilience of communities to social and environmental disruptions. Communities with diversified livelihoods, for example, are more likely to withstand economic shocks, such as declines in fish stocks or tourism revenues. By identifying which areas and communities are most vulnerable, social accounts can allow governments to prioritise investments in social infrastructure, such as education, healthcare, and disaster preparedness. In this way, OA contributes to social resilience supporting evidence-based policies that promote equitable access to marine resources and safeguard the livelihoods of vulnerable peoples.

Environmental Sustainability

A central component of the OAF is its focus on environmental sustainability, i.e., ecosystem extent and ecosystem condition accounts, that underpin ecosystem and environmental assets and their benefits to people. Africa's marine ecosystems are not only vital for the continent's economy and social fabric but also play a critical role in regulating the global climate. Coastal ecosystems such as mangroves, seagrasses, corals and kelp forests provide essential services such as carbon sequestration, water filtration, and habitat protection. However, these ecosystems are under increasing pressure from human activities, including coastal development, climate, pollution, overfishing and even species translocations. The OAF offers a robust framework for tracking the health of marine ecosystems and evaluating the impact of economic activities on these systems (in two-way flows between ecosystems and economic sectors). By incorporating ecosystem accounting, the OAF quantifies the social and economic benefits provided by healthy ecosystems, such as the value of carbon sequestration by mangroves or the protection from storm surges offered by coral reefs. These data are critical for developing ecosystem management strategies and policies aimed at protecting marine ecosystems. Additionally, tracking changes in ecosystem health over time allows African nations to assess the effectiveness of environmental policies, such as the establishment of marine protected areas

(MPAs) or regulations on pollution and overfishing within adaptive policy cycles. With Ocean Accounting, governments can measure progress towards international imperatives and commitments, including the Sustainable Development Goals (SDGs), particularly (but not only) SDG 14, which focuses on conserving and sustainably using the oceans, seas, and marine resources.

Addressing Climate Change and Disaster Risk Management

Climate change poses a significant threat to Africa's marine environments and the communities that depend on them. Rising sea levels, ocean acidification, and changing weather patterns are already affecting coastal ecosystems, fisheries, and infrastructure. The OAF provides a powerful tool for addressing climate change and disaster risk management (Box 3) by incorporating risk and governance accounts, e.g., including climate data into national decision-making processes, and identifying relevant responsible authorities or policies. The information collated across the framework can be used to assess the vulnerability of marine ecosystems to climate change, helping countries develop targeted adaptation strategies. By integrating data on climate resilience, Ocean Accounting can also guide investments in nature-based solutions, such as restoring mangroves and coral reefs, which provide natural barriers against storms and coastal erosion. These ecosystems not only protect coastal communities but also act as carbon sinks, helping to mitigate the effects of climate change. Additionally, Ocean Accounting can support warning systems for natural disasters by providing a system for tracking and reporting on ocean condition changes (annual to decadal), such as sea-level rise or changing ocean temperatures. This data is essential for developing disaster risk management plans and ensuring that communities are prepared for and able to recover from environmental shocks.

The South African NRF OAF CoP was established in 2019 with a funding grant from the South African National Research Foundation and is hosted at the Nelson Mandela University (NMU). The project aimed to assess the applicability of the GOAP's OAF within South Africa with the intention to leverage existing partnership to expand case studies into the Western Indian Ocean Region as a central component of a wider strategy to ensure that ocean governance contributes as optimally as possible to the broader sustainability goals to ensure the inclusivity, safety, security and sustainability of coastal communities.

CoP members have included researchers from NMU, the South Africa International Maritime Institute (SAIMI), the NRF-SAEON, the Human Sciences Research Council (HSRC), the Council of Scientific & Industrial Research (CSIR), the Cape Peninsula University of Technology (CPUT), AfriSeas and the University of the Western Cape (UWC). The CoP has focused on seven accounting areas including ecosystem, social and economic accounting; novel accounting areas such as risk accounts, governance accounts; and the data structures needed to integrate information across the accounts for best governance practices. Included in these are novel methodologies under development by African researchers which are likely to have global opportunities and impact.

For further information see:

1. Algoa Bay Project: <https://www.algoabayproject.com/ocean-accounts-framework>
2. NRF-CoP OAF: <https://oceansea.saeon.ac.za/>

Conclusion

The African Ocean Decade Task Force has a critical role in guiding the continent towards a sustainable and resilient future for its marine environments and resources. Recognising OA as a key research and development area would be a significant step towards achieving this goal. By acknowledging the OAF, the Task Force would provide legitimacy of this tool and open up opportunities for researchers working on the OAF to access networks developed through the UN Ocean Science Decade. As a tool that integrates economic, social, and environmental data and information, Ocean Accounting provides a starting point for the African region to measure and evaluate the progress of marine-related policies, ensuring their contribution to long-term sustainability. The framework's proposed aims to quantify the value of marine resources, assess social and environmental resilience, and provide evidence for informing policy-making makes it an essential tool for addressing the complex challenges facing Africa's oceans. As the UN Ocean Science Decade unfolds, Ocean Accounting will be vital in ensuring that Africa's marine resources are managed in a way that benefits both current and future generations. The Task Force should, therefore, consider promoting the development and implementation of Ocean Accounting to achieve sustainable and equitable ocean governance across the continent.

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