African Union

Study for Mapping the **BLUE ECONOMY** in the African Union Member States.

by
Dr Khalid Bichou
Blue Economy Consultant

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ACRONYMS & ABBREVIATIONS

AAMA: Association of African Maritime Administration
ABES: Africa Blue Economy Strategy
ACPC: African Climate Policy Centre
AfCTA: African Continental Free Trade Area Agreement
AfDB: African Development Bank
AIMS: Africa's Integrated Maritime Strategy
AMTC: African Maritime Transport Charter
ANBO: African Network of Basin Organisation
AU: African Union
AUC: African Union Commission
BE: Blue Economy
COMESA: Common Market for Eastern and Southern Africa
DWF Distant Water Fleet
EAC: East African Community
ECA (UN): Economic Commission for Africa
ECCAS: Economic Community of Central African States
ECOWAS: Economic Community of West African States
EEZ: Exclusive Economic Zone
EIA: Environmental Impact Assessment
EU: European Union
FAO: Food and Agriculture Organization
FPA: Fisheries Partnership Arrangement
GDP: Gross Domestic Product
GEF: Global Environment Facility
ICZM: Integrated Coastal Zone Management
IGAD: Intergovernmental Authority on Development
IMO: International Maritime Organization
IOC: Indian Ocean Commission
IORA: Indian Ocean Rim Association
IPCC: Intergovernmental Panel on Climate Change
ISA: International Seabed Authority

PPP: Public-Private Partnership
SADC: Southern Africa Development Community
SDG: Sustainable Development Goal
SIDS: Small Island Developing States
UNCLOS: United Nations Convention on the Law of the Sea
UNCTAD: United Nations Conference on Trade and Development
UNEP: United Nations Environmental Programme
UNFCCC: United Nations Framework Convention on Climate Change
WTO: World Trade Organization

DISCLAIMER

The views, opinions, findings and interpretations expressed in this Report are those of the Consultant and do not necessarily reflect the views, positions or official policy of the African Union or of Expertise France.

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1. Background and Introduction

1.1. Blue Economy Concept and Pillars

The scope of ocean, sea, lake and river resource opportunities covers a wide spectrum ranging from traditional and established areas such as fisheries and aquaculture, offshore Oil and Gas (O&G), shipping and ports, and coastal development and tourism, to new and emerging areas such as deep-sea mining and exploration, offshore wind and wave energy, freshwater and desalination, blue carbon trading (carbon sequestration), and marine biotechnology and bioprospecting.

Because sea and inland water resources and activities are limited, stressed by rising demand and intense exploitation, and threaten by climate change risks and impacts; unlocking and growing their economic potential requires an integrated and sustainable approach. On the one hand, competing economic sectors and operators must integrate and coordinate their activities and interventions in ways that compromise their various, sometimes conflicting, interests in the sea and inland water space. On the other hand, the economic benefits of ocean and waterways activities must be balanced against the risks and impacts of resource depletion, habitat destruction, environmental degradation and social disruption; in ways that safeguard the sustainability of the ocean, coastal and inland water ecosystems.

Figure 1: Blue Economy: sectors, sustainable components and enabling drivers (Consultant)

The modern concept of the Blue Economy (BE) is set to achieve this dual objective with the promise that the more environmentally and socially sustainable a BE activity is, the more economic and durable benefits it will generate. A successful BE is also the one that integrates and coordinates sectoral strategies with institutional, planning and regulatory frameworks so as to achieve a cohesive and effective waterways and ocean governance. To this end, the BE must encompass at least 4 pillars or components (*Figure 1*):

- An economic and service component that integrates relevant BE activities and resources,
- An environmental and conservation component that underpins and manages the environmental sustainability of ocean and waterway spaces and ecosystems,
- A social component that incorporates the social, cultural and livelihood needs of coastal, lake and river communities, and
- An enabling and management component that establishes and oversees the tools and mechanisms needed to manage, coordinate and implement BE strategies and interventions.

1.2. The Importance of the Blue Economy for Africa

Africa has vast coastlines, extensive maritime and inland waterway zones. Africa's long coastline is over 47,000 km, while the combined maritime zone under African jurisdictions totals 13 million km2, including approximately 6.5 million km2 over the continental shelf. Africa is also home to some of the largest lakes and longest rivers in the world including Lakes Victoria, Tanganyika and Malawi and rivers Nile, Congo, Niger, Zambezi, Orange, Volta and Senegal. In total, there are 63 transboundary river basins in the continent, some of which operate under well-established institutions and/or basin-wide programs.

Within its waters, the continent is endowed with abundant living and non-living resources, while above and adjacent to those waters several trade, transport, tourism and costal development activities can take place. These resources and endowments, if managed efficiently, responsibly and sustainably, can provide enormous opportunities for economic and social development, enabling several key service and industrial activities, generating direct and indirect socio-economic growth and development, and supporting the livelihoods of people, communities, and regions.

For Africa, the BE can provide a durable complement, and even a viable alternative to the terrestrial and inland economy. Many African countries and communities lacking in food, water and energy security can turn to the BE resources to fill in the gap, while at the same time generating socio-economic growth and reducing unemployment and poverty. Similarly, investing in efficient, smart and green shipping and ports will reduce Africa's exorbitant trade and logistics costs, enhance transport mobility and connectivity, and reduce safety, environmental and congestion costs and impacts. Elsewhere, promoting safe and sustainable nautical and coastal tourism will generate significant opportunities for socio-economic and spatial development. Last, but not least, tapping on new and innovative uses of the BE, from offshore and wave energy to marine biotechnology and blue carbon credits, opens the potential of significant growth and development prospects.

The potential of an Africa-wide BE is therefore immense, but so are the risks and challenges from disjointed, unstructured or unsustainable policies and practices. While some of Africa's BE resources

are intensely used and at times overexploited, others remain underutilised or barely explored. Even for BE sectors where there have been noticeable strides, the continent's participation in the BE's Global Value Chains (GVCs) remains patchy and limited.

Conscious of the significant potential of Africa's BE resources and the need to boost and guide their growth in an environmentally sustainable and socially inclusive way, several African States and institutions have elaborated policies and programmes that champion the role and importance of the BE. Among these, the African Union (AU) Integrated Maritime Strategy (AIMS) and Blue Economy Strategy (ABES) stand as two key reference strategies for developing and promoting an all Africa-wide BE.

Even though, no formal inventory or stocktaking of the scope and status of BE policies and strategies in Africa has been carried out to date. In a similar vein, limited work exists on the relevance and impact of these strategies as well as on the tools and instruments used for operationalising, implementing and monitoring them. This not only restricts our understanding of the full scope and potential of the BE within and across the continent but also acts as a barrier against aligning and coordinating national strategies and sectoral policies with continent-wide strategy frameworks such as the AIMS and the ABES.

To close this gap and have a better understanding of the various frameworks, policies, and strategies applicable to the BE in African countries, it is therefore timely and necessary to carry out a structured mapping and review of the existing BE frameworks, projects, and initiatives in Africa with a view to identifying and assessing the enabling and constraining factors for and against their successful implementation, coordination and alignment with broad AU strategies and frameworks in the field.

2. BE Policies and Strategic Orientations in Africa

2.1. Mapping Approach

2.1.1. Scope

A BE strategy is one that brings together relevant sectors operating in the ocean and inland water spaces and harnesses their economic and strategic priorities into common goals and objectives, while also reconciling those economic and growth objectives with the needs and imperatives of environmental and social sustainability.

With this in mind, the mapping exercise subject to this study is primarily focused on BE strategies and policy frameworks instead of individual strategies pertaining to discrete sectoral, spatial or sustainability components of the blue ecosystem. Although most African countries and regions were only recently exposed to the modern and integrated concept of the BE, many of its individual strategy components have long been in existence. Yet, neither those individual strategies nor their simple aggregation amounts to a proper BE strategy or policy.

Another highlight of this mapping review is its emphasis on strategic and policy frameworks rather than standalone projects. There is already a plethora of projects and initiatives on various aspects of the BE, but many of them are designed and implemented as standalone projects with no link to a BE strategy or programme. Where such initiatives are not component projects of an established strategic plan or policy programme for the BE, they are not covered by this mapping review.

2.1.2. Approach

Countries and stakeholders may have different views on what constitutes a BE and what drives its growth and development. Some may prioritise economic and social objectives while others may focus on ecological and environmental dimensions. Countries can also frame their approaches to BE governance in different ways; from broad BE policy statements to detailed action plans. They may also have diverging views about the most appropriate policy instruments for implementing the BE or the most suitable tools and mechanisms to support its development.

Recognising that African countries and institutions are at different stages of a BE strategy development, implementation and monitoring, this mapping exercise covers a broad range of strategy documents (blueprints, policy directions, strategic guides, action plans, etc.), policy instruments (planning, institutional, legal, regulatory, etc.) and enabling tools (financing, capacity, skills, innovation and partnerships). This approach, depicted in ***Figure 2*** below, provides a systemic and structured approach for exploring different frameworks and applications of the BE. This, in turn, will help assess their adequacy and coherence within and across African countries and vis-a-vis the AU's BE goals and policies.

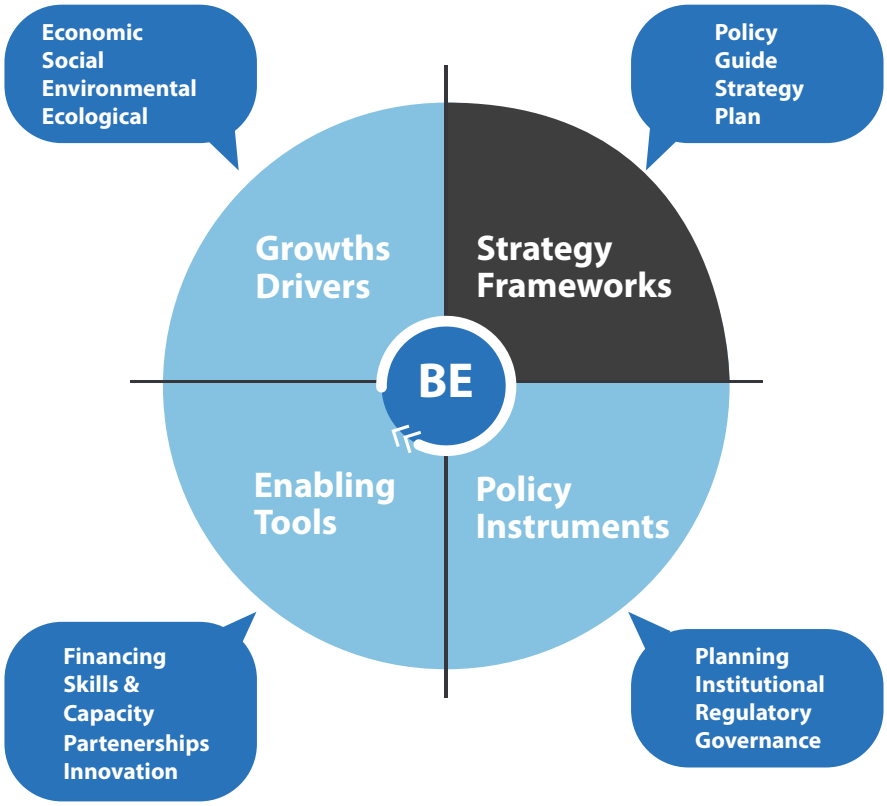

Figure 2: Structured Approach for Mapping BE Strategy Frameworks (Consultant)

2.1.3. Methods

To map the status of BE strategy and policy frameworks in Africa, an extensive top-down desktop review of publicly available materials on the BE in Africa was carried out at two levels:

- At national level, referenced documents were sourced directly from published reports, Government websites and formal communications at both local and national levels.

- At regional and international levels, we relied on references and publications from multilateral agencies and institutions such as UN agencies (FAO, IMO, IOC/UNESCO, UNEP, UNECA, UNCTAD, UNDP, etc.), regional communities (AU, IGAD, SADC, COMESA, ECOWAS, IORA, etc.), and multilateral funds and development banks (AfDB, IBRD, GEF, WWF, MPA Fund, etc.). Referenced secondary data in the desktop review was also collected from reliable sources and further cross-checked before use.

Complementing the top-down (desktop) review, a bottom-up (primary research) review was carried out to fill information and data gaps and gauge the views and feedbacks of relevant BE stakeholders. Referenced primary data was collected by combining:

- Semi-structured questionnaires to provide feedbacks on BE strategies and barriers, and,

- Targeted interviews to gauge the views and feedbacks of relevant BE stakeholders.

2.2. Overview of Strategy and Policy Frameworks on the BE in Africa

For the purpose of this mapping exercise, the review of the BE strategy frameworks is carried at four levels of spatial organisation:

- At the Pan-African level, the African Union (AU) has taken the lead by launching the 2050 Africa Integrated Maritime Strategy (AMS), endorsing the African Maritime Transport Charter and the Maritime Security, Safety and Development (Lomé) Charter, entrenching the BE within the mandate of the AU Commission, then subsequently elaborating and adopting the Africa Blue Economy Strategy (ABES).

- At the African regional level, policies and strategies on the BE have been led by Africa's regional economic communities (SADC, IDAG, ECOWAS, COMESA, etc.) as well as by multilateral agencies with active presence and interest in Africa's BE agenda (e.g. AfDB, UNECA, WB, EU, etc.)

- At the international level, African countries are party of several collaborative BE frameworks whether elaborated by specialised international agencies (e.g. FAO, UNEP, IMO, and IOC/UNESCO), horizontal regional organisations (e.g. the Commonwealth and IOPR), or within Africa's maritime regions (Atlantic Ocean, Mediterranean Sea, Red Sea and Indian Ocean).

- At the national level, many African Governments have elaborated strategy and policy frameworks for the BE, often at various levels of BE development or in collaboration with international donors and regional partners.

2.2.1. Pan-African BE Strategies

A. Africa Integrated Maritime Strategy (AIMS)

Adopted in 2014, the AU's 2050 Africa's Integrated Maritime Strategy (AIMS) provides a broad and ambitious framework for the protection and sustainable exploitation of the Africa's Maritime Domain (AMD). The AIMS sets 12 overarching objectives centered around a combined and coordinated approach to the African maritime space, including the establishment of a Combined Exclusive Maritime Zone for Africa (CEMZA).

The AIMS emphasises the role of the BE as new economic frontier that can harness maritime prosperity and incubate the renaissance of the African continent. The aim is to take advantage of the untapped resources and prospects of the BE in Africa, through fostering collaborations and partnerships between the AU's member States. The AIM Strategy also takes a broad view of the BE, extending beyond the traditional maritime domain to include the continent's inland water bodies, lakes, rivers and estuaries, thereby extending the relevance of the BE to all AU Members States, including landlocked countries.

B. African Charter on Maritime Security, Safety and Development (Lomé Charter)

The African Charter on Maritime Security, Safety and Development in Africa, also known as the Lomé Charter, was adopted in October 2016 to signal the responsibilities and commitments of the member States towards maritime safety and security issues, thereby cementing the position of AIM as an overarching continent-wide document. The Lomé Charter is a binding agreement that is currently signed by 35 AU member States but ratified by Togo and Benin only.

The Lomé Charter, is organised into 7 chapters, covering, among others, the prevention and control of transnational crimes at sea, including terrorism, piracy, trafficking and smuggling, Illegal, Unreported and Unregulated (IUU) fishing, the safety of navigation and crew, the prevention of marine accidents and pollution at sea and other unlawful acts, and the enhancement of maritime cooperation and good governance. This broad coverage is further explained in the 56 separate articles of the Charter.

Among specific recommendations of the Charter is the establishment a Maritime Security and Safety Fund, the delamination of Member States' maritime boundaries. Other chapters and articles reinforce several provisions of the AIM Strategy in terms of the development of a BE for Africa, the protection of marine biology, the reduction of maritime disaster risk, and the promotion of cooperation and partnership. The coherence between the Lomé Charter and the 2050 AIM Strategy indicates strategic commitment on the part of governments to combating the numerous threats militating against Africa's BE.

C. African Maritime Transport Charter (AMTC)

Back in 1993, the AU introduced the African Maritime Transport Charter (AMTC), but was only adopted in a revised format in 2010. The AMCT is set to promote cooperation and coordination among Member States for the development of their maritime transport sector, including through the establishment of the Association of African Maritime Administrations (AAMA).

D. Africa Blue Economy Strategy (ABES)

Following the adoption of the AIM and the Lomé Charter, the AU adopted in 2019 the Africa Blue Economy Strategy (ABES). ABES is a broad document outlining the BE's sectoral components, drivers, and challenges; based on which a series of goals and strategic objectives are devised and structured around 5 thematic areas as listed below:

1. Fisheries, aquaculture, conservation, and sustainable aquatic ecosystems,
2. Shipping/transportation, trade, ports, maritime security, safety, and enforcement,
3. Coastal and maritime tourism, climate change, resilience, environment, infrastructure,
4. Sustainable energy and mineral resources and innovative industries, and
5. Policies, institutional frameworks and governance, employment, job creation and poverty eradication, innovative financing.

The 5 ABES themes reflect the AU's broad BE strategic priorities and orientations and further guide policy makers about specific areas to be considered under each priority or orientation. Another advantage of the thematic approach used by ABES is its coverage of both traditional and emerging areas of the BE while highlighting the need of incorporating policy, financing, and institutional governance components in strategy elaboration and implementation

E. Africa Blue Economy Strategy (ABES) Implementation Plan

Following the adoption of the ABES in 2019, a consulting study was commissioned by the Inter-African Bureau for Animal Resources (IBAR), a specialised technical office of the African Union Commission (AUC), to develop the ABES implementation plan for 2021-2025 (AU-IBAR, 2020). The implementation plan which was published in 2021 provides substantive guidance on strategy formulation and monitoring by further outlining the institutional set up for each thematic area and devising them into targets, actions, and mode of verification.

F. Africa Network of Basin Organisations (ANBO) Strategy and Implementation Plan

Established in 2002, the Africa Network of Basin Organisations (ANBO) is an international non-profit organisation that represents African basin organisations, coordinates and promotes cooperation among them. To this end, ANBO has developed a 10-year strategy (2015-2024) and a 5-year action plan (2015-2019) aimed at strengthening its role as a Pan-African body in charge of transboundary water resources management in Africa.

While the ANBO strategy is not a BE strategy per se, it has elements that encompass some BE resources and strategies across pan-African lake and river basins. Specifically, its emphasis on trans-boundary water resource mobilization and management as well as on information capacity and knowledge sharing provides a framework through which national and/or regional BE strategies targeted at lakes and rivers can be coordinated at the pan-African level

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2.2.2. Sub-Regional African BE Strategies

A. SADC Blue Economy Draft Strategy

The Southern African Development Community (SADC) covers 16 countries and are active in developing various programmes on the BE. Among these, both the indicative strategic development plan (2020-2030) and the industrialization strategy and roadmap (2015-2063) identify the BE as a potential area for sustainable growth in the region. In particular, the two documents call for:

- The BE Initiative to be mainstreamed in developing the infrastructure required to accelerate industrialization. This includes the development and upgrade of regional ports and maritime corridors to facilitate shipping networks.

- The ocean resources to be exploited in a sustainable manner so as to minimize the negative impact on environment, and

- The sustainable development and growth of the ocean wealth to be supported by coherent planning, policies and regulatory frameworks.

B. IGAD Blue Economy Strategy and Implementation Plan

Having endorsed ABES and its implementation plan, the Inter-Governmental Authority on Development (IGAD) countries of Djibouti, Ethiopia, Kenya, Somalia, South Sudan, Sudan and Uganda recently adopted in April 2022 a 5-year Regional BE Strategy and its Implementation Plan (BESIP). In line with the ABES, the BESIP has identified four main strategic axes of intervention:

- Axis 1: Structuring the BE in IGAD Member States,
- Axis 2: Strengthening of traditional sectors and the development of emerging sectors,
- Axis 3: Implementation regional initiatives, and
- Axis 4: Strengthening cooperation and regional integration.

Despite the above, no framework or mechanism exists yet on how the BESIP is operationalised and institutionalised. This is particularly important given that the objective of structuring the strategy's implementation plan at both national and regional levels requires not only further push for regional cooperation and integration but also a major strengthening of current institutional governance and capacity. To fill some of the gaps, a 3-year Technical Assistance (TA) project funded by Sweden was recently launched on 'Enhancing Blue Economy in the IGAD Coastal Member States for Biodiversity Conservations and Livelihood diversification'.

C. IOC Regional Action Plan for the BE

The Indian Ocean Commissions (IOC) was established in 1984 between five African Island Countries in the Indian Ocean, namely Comoros, Mauritius, Madagascar, Seychelles and Réunion (represented by France). In 2019, the IOC adopted its Regional Action Plan for the BE, which serves as a framework for conducting responsible and sustainable BE projects across the region.

Several programmes and projects have been, or are currently being, carried out to implement specific pillars of the IOC's BE Action Plan. Among these, worth mentioning the EU-funded EcoFish Project, the AFD-funded RESCO (Coastal Resilience), the JICA-funded EMCP (Enhancing Maritime Connectivity), the World Bank funded SWIOFISH (South-West Indian Ocean Fisheries Governance and Shared Growth), the EU-funded PSP (Port Security and Safety of Navigation), the AFD-funded ExPloi (Plastic Expedition), the EU-funded MASE (Maritime Security).

D. ECOWAS Integrated Maritime Strategy (EIMS)

In 2016, member states of the Economic Community of West African States (ECOWAS) developed a draft ECOWAS Integrated Maritime Strategy (EIMS) with the objective of promoting 'a prosperous, safe, peaceful and sustainable ECOWAS Maritime Domain (EMD) based on efficient management and good governance'. The Strategy identifies the challenges to the EMD and sets five strategic objectives (strengthening maritime governance, maritime security and safety, maritime environmental management, optimising ECOWAS maritime economy, and promoting maritime awareness and research), each with a number of priority action plans.

E. Draft COMESA BE Strategies

Early in 2021, the Common Market for Eastern and Southern Africa (COMESA) regional community announced its intention to develop its own regional BE strategies, respectively. In April 2022, a draft BE strategy, formulated through the support of the UK and Norway, was presented to delegates from the Members States, where it was reported to have been reviewed and validated. However, there is no information on when it will be published or officially endorsed. It is also no clear whether the COMESA BE Strategy will use AIMS and ABES or other reference guidelines.

F. Congo Basin Blue Fund

The Congo Basin Blue Fund is a financial mechanism supported by 16 Central African States, plus Morocco as an associate member, and aimed at preserving the biodiversity of the Congo Basin region, home to the second largest tropical forest and deepest river in the world. The fund was launched in 2016 and is currently hosted by the Central African Development Bank (BDEAC). Although in itself not a BE strategy, the fund has 24 sectoral programmes, all, but one, are directly related to the BE. To date, the fund has invested in 254 referenced projects and earmarked over $14 billion for their financing.

G. West Med BE Initiative

Launched in 2018, the Initiative for the Sustainable Development of the BE in the Western Mediterranean region (West MED Blue Initiative) is a partnership programme between the 5 West Mediterranean EU Countries (France, Italy, Portugal, Spain and Malta) and their 4 Southern West Mediterranean counties of Morocco Algeria, Tunisia and Libya plus Mauritania aimed at working on a common roadmap for the development of a sustainable BE.

The Initiative has sets 6 BE priorities centred around maritime safety and pollution, maritime cluster development, fisheries and aquaculture, sustainable production and consumption, biodiversity and conservation, and skills development. To operationalise the West Med Initiative, an assistance mechanism was set up with funding from the European Commission to support countries develop the BE priorities and objectives. Examples of the technical assistance provided under the Initiative included the study leading to the elaboration of the national BE strategy in Algeria, the creation of maritime cluster in Mauritania, a BE research partnership in Tunisia.

H. Other Regional Programmes and Initiatives

In addition to the above dedicated BE strategies, other programmes have been put in place for shared ocean and inland water spaces. Broadly speaking, those can be grouped under 3 categories:

- Regional Fisheries Management Organizations (RFMOs) are international bodies set up by treaties or international agreements and dedicated to the sustainable management of fishery resources in a particular region of international waters (areas beyond national jurisdiction) or for highly migratory species. Relevant examples in Africa include the Southeast Atlantic Fisheries Organisation, the International Commission for the Conservation of the Atlantic Tuna, and the Indian Ocean Tuna Commission. The Ministerial

Conference on Fisheries Cooperation Among African States Bordering the Atlantic Ocean (ATLAFCO) is currently examining the possibility of raising its status to an RFMO.

- Regional Fisheries Bodies (RFBs) have a mandate of coordinating the management of shared fisheries resources within their geographical areas of competence. RFBs are constituted by member states with established conventions and working protocols. The main RFBs in Africa are the Regional Fisheries Committee for the Gulf of Guinea, and the Fisheries Committee for the West Central Gulf of Guinea, and the Lake Victoria Fisheries Organization.

- Regional River or Basin Commissions are established by riparian states of a river or lake to jointly manage its water resources. Unlike RFMOS or RFBs, the focus of RRBCs is on water, hydroelectric energy, irrigation and river transport. Examples of RRBCs in Africa include the Nile Basin Commission, the Lake Victoria Basin Commission, the River Niger Basin Authority, and the Organization for the Development of the Senegal River. Most basin commissions and river authorities in Africa are affiliated to the Africa Network of Basin Organisations (ANBO).

2.2.3. International BE Programmes with African Participation

A. Commonwealth Blue Charter

The Commonwealth membership currently includes 56 countries of which 21 are from Africa. In 2018, the 54 Commonwealth member countries (which did not include Uganda and Rwanda at the time) signed the Blue Charter agreement for developing sustainable blue economy initiatives and cooperating on various ocean-related issues and challenges. Since its adoption, the Blue Charter has developed several initiatives and funding incubators and delivered over 100 training workshops on the BE to its members.

The Blue Charter is structured and implemented through 10 Action Groups, each devoted to a key thematic area. Currently, 16 Commonwealth member States have taken the lead in championing the action groups and setting priorities and strategic plans. The Action Groups (AG) co-championed by African members are: AG2 (Coral Reef Protection and Restoration) co-championed by Mauritius, AG4 (Marine Protected Areas) co-championed by the Seychelles, and AG9 (Sustainable Blue Economy) co-championed by Kenya.

B. IORA Blue Economy Declaration

The Indian Ocean Rim Association (IORA), which includes the 9 African countries of Comoros, Madagascar, Mauritius, Mozambique, Kenya, Seychelles, Somalia, South Africa, and Tanzania, adopted in 2015 the BE Declaration with the objective of harnessing oceans and maritime resources in order to drive economic growth, job creation and innovation, while safeguarding sustainability and environmental protection.

Soon after the BE declaration, the IORA Action Plan 2017-2021 established a BE Working Group which identified six priority pillars in the blue economy and established in 2019 the IORA Blue Carbon Hub to provide knowledge, build capacity and develop partnerships among IORA countries in priority areas of the BE.

C. UNEP Regional Seas Conventions and Action Plans (RSCAPs)

The United Nations Environment Programme (UNEP) implements several Regional Seas Conventions and Action Plans (RSCAPs), which are aimed environmentally sustaining world's seas and oceans. There are currently 18 RSCAPs of which 7 are UNEP administered, 7 are non-UNEP administered, and 4 are independent.

There are 4 RSCAPs relevant Africa; 3 are UNEP administered (Mediterranean, West Africa, and East Africa) and one is non-UNEP administered (Red Sea and Gulf of Aden). Each programme is governed by one or several conventions and associated protocols and initiatives (Table 1).

A recent development under the UNEP Mediterranean Action Plan (UNEP/MAP) is the forthcoming designation in December 2022 of the Mediterranean Sea Emission Control Area for Sulphur Oxides and Particulate Matter (Med SECA). The Mediterranean SECA will become the 1st region in Africa, and the 4th region in the world, where sulphur content in fuel oil used on board ships operating will be capped at 0.10% m/m.

Programme	Convention	Contracting Parties	Relevant Protocols
Medi-terranean	Barcelona Convention	Mediterranean countries incl. Morocco, Algeria, Tunisia, Libya and Egypt	- Mediterranean Action Plan (MAP) - Dumping Protocol - ICZM Protocol - LBS Protocol (Pollution from Land Based Sources) - MPS Protocol (Med. Specially Protected Areas) - Hazardous Wate Protocol - Prevention & Emergency Protocol (Pollution from Ships) - Offshore Protocol
Eastern Africa and Western Indian Ocean	Nairobi Convention	Comoros, Kenya, Somalia, Madagascar, Mauritius, South Africa, Tanzania, Mozambique, Seychelles, France (representing Réunion).	- LBS Protocol (Pollution from Land-Based Sources in the Western Indian Ocean) - Protocol Concerning Protected Areas and Wild Fauna and Flora in the Eastern African Region. - Prevention and Emergency Protocol (Pollution from Ships in Eastern Africa) ICZM (Upcoming)
Western and Central Africa	Abidjan Convention	Benin, Congo, Cameroon, Côte d'Ivoire, S. Africa, Senegal, Gabon, Gambia, Ghana, Guinea, Liberia, Nigeria, Sierra Leone, Togo. Angola, Guinea, Cape Verde, DRC, Equatorial Guinea, Guinea-Bissau, Mauritania, Namibia, Sao Tome & Principe have not ratified yet	- ICZM (Pointe Noire Protocol) - LBS Protocol (Pollution from Land-Based Sources) - Environmental Standards for Offshore O&G Exploration (Malabo Protocol) - Pollution from Land-based Sources (Grand Bassam Protocol)
Red Sea and Gulf of Aden	Jeddah Convention	Egypt, Djibouti, Somalia, Sudan, Saudi Arabia, Jordan, Yemen	- Action Plan for the Conservation of the Marine Environment and Coastal Areas - Protocol on the Conservation of Marine Diversity and network of Protected Areas - LBS Protocol - Protocol on the Cooperation in Management of Fisheries and Mariculture

Table 1: Relevant Conventions and Protocols under the Regional Sea Programmes for Africa

2.2.4. National Strategies and Policies on the BE

To identify the status of national BE strategies in the 55 AU member States, a detailed desktop search and literature review was carried out then complemented with brief telephone queries made to relevant Ministerial departments and public agencies in several countries. We have also reached out to contacts in the ECOWAS, IOC, and SADC communities as well as in the EU and the World Bank to further validate our scouting and mapping approach. We ended up with a list of over 120 official documents and non-official publications, both had to be read and analysed to establish their relevance to the main inquiry. The scoping and analysis shown here does not include regional or supra-national BE strategies, some of which are already listed in the previous section.

At the national level, countries may have different levels of engagement with the BE. To this end, the scoping exercise assigns countries to five groups according to their level of progress in the BE:

- Countries with both a dedicated BE strategy and an action/implementation plan,
- Countries which an established BE policy or strategy, but no implementation plan (as yet),
- Countries currently in the process of developing and elaborating a BE policy or strategy,
- Countries with broad policy support to the BE, but (yet) with no formal plan or intention to develop a dedicated BE strategy or policy, and
- Countries where we there is no clear policy objective or statement in support for the BE.

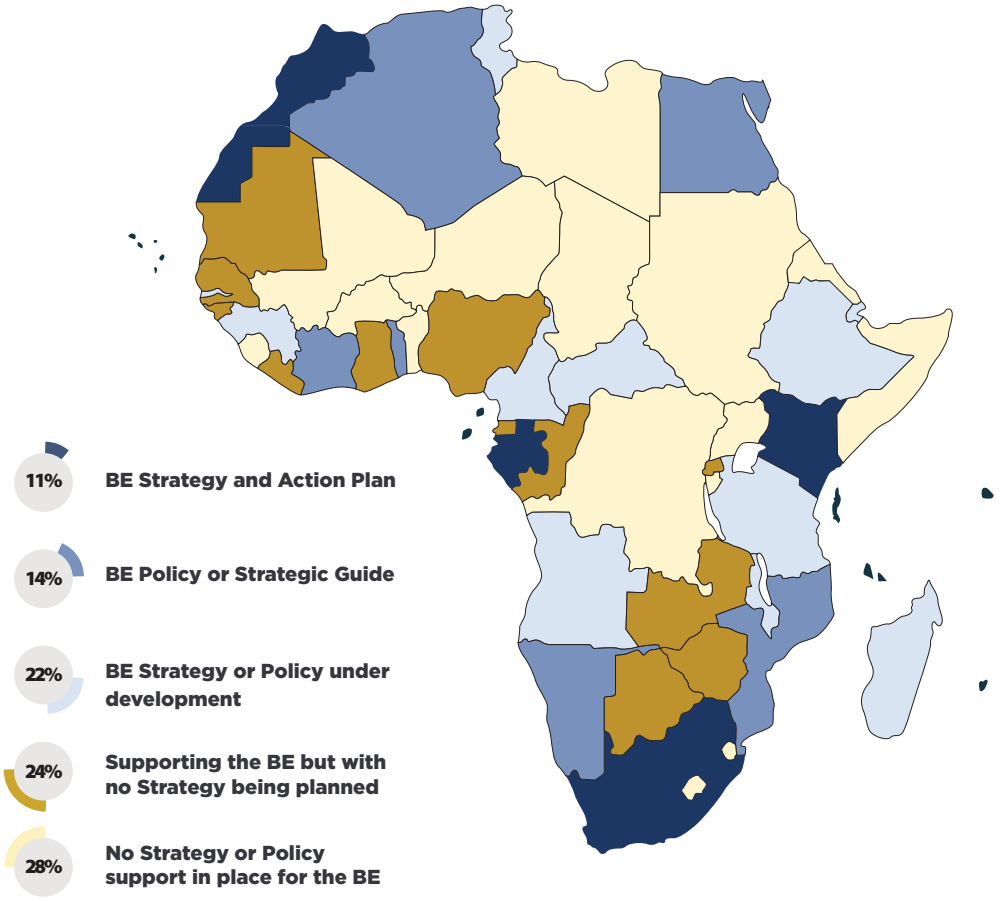

Figure 3: Status and Progress on National BE Strategies for AU States (Consultant)
**: Map and Countries not to scale*

Figure 3 shows the current status of national BE strategy and policy frameworks in Africa. Of the 55 member States of the AU, only 14 countries have developed national strategies or policies on the BE. Of these 7 countries (Cape Verde, Gabon, Mauritius, Morocco, Kenya, Seychelles and South Africa) have advanced BE strategy frameworks including multi-year action and implementation plans currently under execution, 5 countries (Algeria, Cote d'Ivoire, Mozambique, Namibia and Togo) are in the process of developing action and implementation plans for their BE strategies, and 2 countries (Comoros and Egypt) are yet to fully publish their recently announced BE strategies. Zanzibar, a devolved local Government of the Republic of Tanzania, has also developed a local BE Policy although it is yet to operationalise its strategic priorities into actionable targets. *Table 2* highlights the main strategy frameworks and programmes for this 1st Group of countries.

Of the remaining AU countries that are yet to establish a national BE policy or strategy, 12 are currently in the process of developing a BE strategy or policy (Angola, Central African Republic, Djibouti, Ethiopia, Gambia, Ghana, Guinea, Madagascar, Malawi, Sao Tome and Principe, Tanzania and Tunisia) and 13 are planning to develop a national BE strategy (Botswana, Burundi, Cameroun, Equatorial Guinea, Guinea Bissau, Liberia, Mauritania, Nigeria, Republic of Congo, Rwanda, Senegal, Zambia, Zimbabwe). Elsewhere, we could not find a clear national objective or policy direction in support of the BE for the countries of Benin, Burkina Faso, Burundi, Chad, DRC, Eretria, Eswatini, Lesotho, Libya, Mali, Niger, Sierra Leone, Somalia, South Sudan and Sudan.

Country	Strategy or Policy Document(s)	Action or Implementation Plan
Algeria	National Strategy for the Blue Economy	Not available
Cape Verde	Blue Growth Charter Blue Economy Strategy Framework	BE National Investment Plan
Comoros	Strategic Framework for a National Policy on the BE	Not available
Cote d'Ivoire	National Strategy for the State Action at Sea	Not available
Egypt	National Blue Economy Strategy	Not available
Gabon	Gabon Blue	Incorporated
Kenya	Blue Economy Sector Plan (2018 -22)	Incorporated in the Sector Plan
Mauritius	National Plan for Ocean Based Activities	Incorporated in the National Plan
Morocco	Blue Economy Development Programme	Incorporated Blue Belt Initiative
Mozambique	Policy and Strategy of the Sea	Not available
Namibia	Sustainable Blue Economy Policy	Not available
Seychelles	BE Strategic Policy Framework and Roadmap	Incorporated in the Road Map
South Africa	Oceans Economy Operation Phakisa	Incorporated in Operation
Togo	National Strategy for the Sea and Coastline	Not available
Zanzibar*	Zanzibar Blue Economy Policy	Not available

Table 2: Reference Documents for AU Countries with Established BE Strategy (Consultant)
**: Zanzibar is a devolved Government of the Republic of Tanzania.*

3. BE Drivers, Policy Instruments and Enabling Frameworks in Africa

3.1. BE Priority Drivers

A BE does not exist nor develop in a vacuum. It is the reflection of an ocean and inland water ecosystem that drives its functioning and development. BE drivers span economic (sectoral), social (livelihood), environmental (sustainability) and ecological (conservation) components.

- For many countries, the drivers of the BE stem from the mix of their ocean and inland water ecosystems focusing on areas with abundant resources or highest socio-economic output.
- Sometimes, countries with abundant ocean and waterway resources may not be able to capitalise on them, either due a lack of skills and capacity or because of the planning constraints and environmental/-conservation conditions put on their uses.
- Elsewhere, countries may target specific BE areas that maximise their strengths and/or align with their development model, for instance by prioritising coastal tourism to create jobs or by focusing on shipping and ports to reduce the cost of trade and logistics.
- In some cases, countries and communities may still develop a thriving BE without necessarily being endowed with a BE resource, for instance by focusing on supporting areas such as shipbuilding, maritime transport, seafaring, and marine technology.

As part of this scoping review, we also examine the AU countries' BE drivers and objectives as outlined in their BE strategies and/or stated in broad policy statements. To align various BE drivers and components with the broad thematic areas of the AU's ABES, 16 priority areas have been identified covering not only the traditional and emerging economic sectors of the BE but also its environmental, social and innovation components. (*Figure 4*)

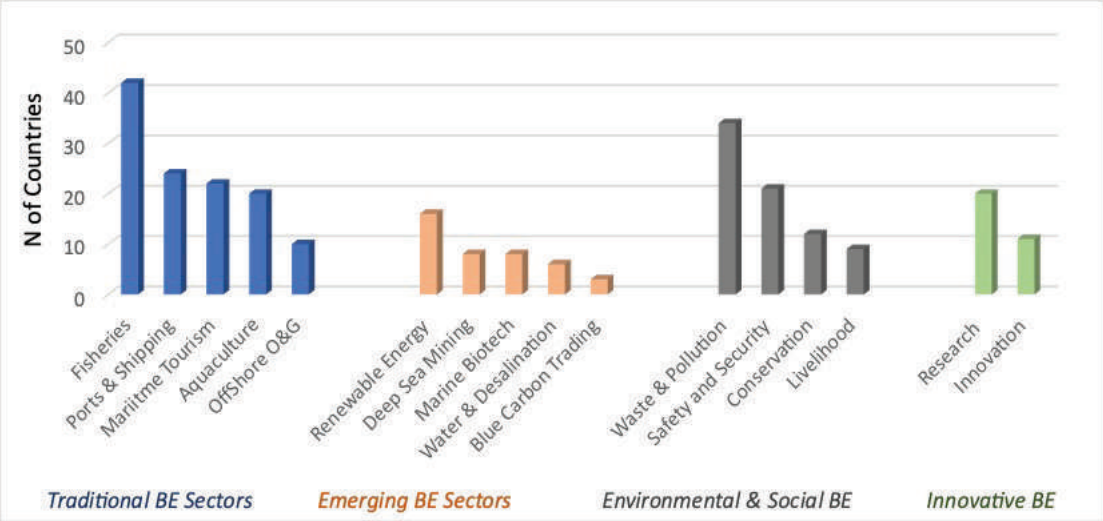

Figure 4: BE Priority Drivers in African Countries (Consultant)

Among the traditional BE sectors, ***Figure 4*** shows that for a large number of AU member States (41 countries) fishing remains by far the biggest economic driver, followed by ports and shipping (23 countries), tourism (21 countries), aquaculture (18 countries) and Oil and Gas (9 countries). While those results reflect the broad BE priorities within the African continent, they mask wide differences within sectors and between countries. For instance, among the countries that prioritise the BE fisheries driver tend to focus primarily on its food security and livelihood dimension (31 countries) compared to its conservation and environmental dimension (19 countries) and even less on its innovation and technology dimension (5 countries). Similarly, countries that prioritise ports and shipping focus mostly on ports (e.g. Morocco, Egypt, Kenya, Djibouti) and flag registration (e.g. Liberia, Sierra Leone, Equatorial Guinea) with only few countries prioritising maritime manufacturing (South Africa) or seafaring (Ethiopia).

At the same time, there seems to be an increasing awareness among African countries of the environmental and social components of the BE despite less than two-thirds of the surveyed countries having systematically incorporated those dimensions into their BE policies and strategic plans. But while the priority area of waste and pollution has gained prominence among most countries, other areas such as safety and security tend to have a regional dimension, reflecting the risks and challenges of maritime piracy and security in the Gulf of Guinea and Horn of Africa.

On new or emerging BE drivers, few African countries have so far incorporated them as strategic priorities for BE growth. In fact, only 20 African countries include research, innovation, or both, in their BE strategic objectives and orientations. Specifically, activities such as blue carbon trading and marine biotechnology only feature in 4 (Seychelles, Cape Verde, Madagascar, Kenya) and 7 (Cape Verde, Mauritius, Morocco, Kenya, Namibia, Seychelles, South Africa) countries, respectively.

3.2. BE Policy Instruments

Once a BE strategy is elaborated and its growth drivers prioritised, then it needs to be operationalised by framing the policy instruments required for its implementation. Policy instruments provide the linkage between a policy or strategy formulation and its execution, by often span planning institutional, and regulatory tools that govern the process of strategy implementation and monitoring. The premise of policy instruments is that BE strategies that have a wish list of objectives and action plans cannot be embedded in any planning or execution framework if they are not linked with the required policy principles and instruments for strategy implementation and monitoring.

3.2.1. Planning Frameworks

As with land-use planning, marine and coastal planning requires a spatial planning framework that informs the BE policy and strategy. As BE sectors, stakeholders and communities compete for the limited sea and ocean space, a planning-led framework based on an inclusive and transparent process is therefore required to enable an integrated decision-making and management.

There are various spatial planning frameworks for the organisation and management of BE activities within the coastal and ocean space, but the most widely and internationally used are the Integrated Coastal Zone Management (ICZM), the Marine/Maritime Spatial Planning (MSP), Marine Protected Areas (MPAs), Locally Managed Marine Areas (LMMAs), Sulphur Emission Control Areas (S/ECAs), Vessel Traffic Systems (VTS), Shipping Fairways and Traffic Separation Schemes (TSS).

Whilst both ICZM and MSP involve a strategic public planning process for allocating the spatial and temporal distribution of BE activities in marine areas, they differ in their spatial and regulatory scope. An ICZM plan has no fixed administrative boundary but is typically applied to marine zones located less than 2 km from the coast, hence focusing on activities such as costal management, maritime tourism, coastal fishing, dredging and port operations. An MSP, on the other hand, can be applied to much wider areas such as coastal watersheds and Exclusive Economic Zones (EEZ), thereby expanding its scope to activities such as deep-sea fishing and offshore mining and energy.

Within ICZM and MSP zones, specifically purpose-use and/or prohibited areas can be designated. For instance, MPAs are established to safeguard marine and coastal biodiversity and achieve long-term conservation and sustainability objectives. MPAs may range from special protection areas to marine reserve and special sites of interest. They can also be set at national, local (e.g. LMMAs), or international/regional levels (e.g. Ramsar sites). In a similar vein, Shipping Fairways, TSS and VTS zones are used for planning and managing maritime transport and navigation in or around port and coastal areas, but are also used to regulated navigation around offshore sites and installations. S/ECAs are internationally designated maritime geographical areas with strict control over ships' emissions. Countries may also set specific emission caps at berthing, anchorage or coastal waters.

While many African countries have developed, or are in the process of developing, BE policies and strategies, it is important to examine the degree of which those BE strategies are supported by, and aligned with, existing planning tools and frameworks. An appropriate BE planning framework reduces conflict and investment risks while fostering transparency, inclusion and coordination.

Table 3 shows the current status of relevant planning frameworks for the BE sea and coastal space in African countries. It shows that while most coastal and island States have established LLMAs and MPAs, less than half of them have fully developed ICZM (21 countries) and MSP (4 countries). On planning for emission areas, only one SECA in the whole of Africa is currently being considered, namely the Mediterranean SECA which is expected to be adopted by the IMO in December 2022. Finally, Somalia appears to be the only country that does not have any planning framework for its costal and ocean space.

Country	ICZM	MSP	MPAs	LMMAs	S/ECAs
Algeria	Underway	X	✓	✓	Underway
Angola	✓	Underway	X	✓	X
Benin	Underway	Underway	X	✓	X
Cameroon	✓	Underway	X	✓	X
Cape Verde	✓	Underway	X	✓	X
Comoros	X	X	✓	✓	X
Cote d 'Ivoire	✓	X	X	✓	X
DRC	X	X	✓	✓	X
Djibouti	✓	X	Proposed	✓	X
Egypt	✓	X	✓	✓	Underway
Equatorial Guinea	X	X	✓	✓	X
Eritrea	X	X	✓	✓	X
Gabon	X	X	✓	✓	X
Gambia	✓	X	✓	✓	X
Ghana	✓	X	X	✓	X
Guinea	✓	Underway	X	✓	X
Guinea-Bissau	X	X	✓	✓	X
Kenya	✓	X	✓	✓	X
Liberia	Underway	X	X	✓	X
Libya	X	X	X	✓	Underway
Madagascar	✓	X	✓	✓	X
Mauritania	N/A	Underway	✓	✓	X
Mauritius	✓	✓	✓	✓	X
Morocco	✓	✓	✓	✓	Underway
Mozambique	✓	X	✓	✓	X
Namibia	Underway	X	✓	✓	X
Nigeria	✓	Underway	X	✓	X
Republic of the Congo	X	X	✓	✓	X
Sao Tome and Principe	X	X	✓	✓	X
Senegal	✓	Underway	✓	✓	X
Seychelles	✓	✓	✓	✓	X
Sierra Leone	X	X	X	✓	X
Sao Tome and Principe	✓	X	✓	✓	X
Somalia	X	X	X	X	X
South Africa	✓	✓	✓	✓	X
Tanzania	✓	X	✓	✓	X
Zanzibar (Tanzania)	✓	X	✓	✓	X
Togo	Underway	X	X	✓	X
Tunisia	Underway	X	X	✓	Underway

Table 3: Status of Coastal and Ocean Spatial Planning in African Countries (Consultant)

For the inland BE, and unlike for ocean, sea and coastal spaces, there is no specific or internationally endorsed approach for the spatial planning of lakes, rivers and estuaries, therefore relying on national and regional efforts and frameworks for managing them. Our review of the strategic and implementation plans of the main lake and river basin commissions in Africa (Nile Basin Commission, the Lake Victoria Basin Commission, the River Niger Basin Authority, and the Organization for the Development of the Senegal River) shows that no particular spatial planning framework is put in place, except for large river ports and associated navigation rules.

3.2.2. Institutional, Governance and Regulatory Frameworks

The transition to the BE requires a profound transformation of institutional structures and governance models. Besides developing a BE policy and strategic plan, countries and regions must establish suitable institutional arrangements for devising, coordinating and overseeing the implementation of those plans and strategies as well as for reviewing and monitoring their progress and achievements. Appropriate legal and regulatory frameworks must also be enacted to promote and grow the BE. These include the legal arrangements for the planning and licencing the maritime space as well as the laws and regulations governing the BE sectors and activities.

Institutionally, an integrated BE strategy requires a high level of institutional coordination to reduce interface risks, institutional fragmentation and policy overlap. Accordingly, many countries have opted for a vertical structure by creating a dedicated Ministry or departmental agencies with the specific mandate of developing and implementing BE growth strategies and action plans. Other countries have opted for a horizontal structure by setting up cross-sectoral governance arrangements, often in the form of BE committees or steering groups, to facilitate institutional harmonization and policy coherence. Yet, for governments that have not updated their institutional organisation to meet the needs for BE coordination and integration, this has manifested into institutional overlap often leading to disjointed and ineffective intervention.

Table 4 depicts the institutional arrangements currently in support of the BE in the AU's member States. Among the fourteen African states that have already adopted a BE strategy, the 6 countries of Cape Verde, Gabon, Mauritius, Kenya, Togo, the Seychelles and the devolved Government of Zanzibar have all established a dedicated Ministry or Governmental Department in charge of the BE; while five other countries (Algeria, Comoros, Morocco, Namibia, South Africa) have set up inter-agency committees and/or Governmental steering groups for the BE. The remaining three countries (Cote d'Ivoire, Gabon and Mozambique) still use legacy governance structures despite having developed an integrated BE strategy.

The legacy fragmented structure seems to dominate the rest of African countries, many of which are currently in the process of developing a BE strategy. Exceptions include Guinea, Senegal and Sao Tome and Principe which have already established dedicated Ministries for the Maritime Economy while still working on an integrated BE strategy, and surprisingly Mauritania which is yet to start on the process of conceptualising and elaborating a BE framework.

Country	N° Agencies	Lead Implementing and Coordinating Agency(ies)
Algeria	4	Ministry of Agriculture, Rural Dev. & Fisheries BE National Committee
Angola	3	Ministry of Agriculture and Fisheries
Benin	5	Ministry of Living Environment and Sustainable Development
Botswana	4	Department of Water and Sanitation
Cameroon	4	Ministry of the Environment, Nature Protection and Sustainable Dev.
Cape Verde	1	Ministry of Maritime Economy
Comoros	6	Ministry of Agriculture, Fisheries, Environment
Cote d'Ivoire	5	Ministry of the Environment and Sustainable Development
DRC	4	Ministry of Forest Economy and Sustainable Development
Djibouti	4	Ministry of Agriculture and Rural Development
Egypt	7	Ministry of Environment
Equatorial Guinea	4	Ministry of Fisheries and Environment
Eritrea	5	Ministry of Marine Resources
Ethiopia	3	Ethiopia Maritime Authority
Gabon	4	Ministry of Fisheries and Maritime Economy
Gambia	3	Ministry of fisheries and Water Resources
Ghana	4	Ministry of Fisheries and Aquaculture Development
Guinea	3	Ministry of Fisheries, Aquaculture and Maritime Economy
Guinea-Bissau	4	Ministry of Environment and Biodiversity Ministry of Fisheries
Kenya	2	Department for Fisheries, Aquaculture and the Blue Economy
Liberia	4	National Fisheries and Aquaculture Authority
Madagascar	5	Ministry of Environment
Mauritania	4	Ministry of Fisheries and Maritime Economy
Mauritius	1	Ministry of Blue Economy, Marine Resources, Fisheries and Shipping
Morocco	5	Ministry of Agriculture and Fisheries BE Intergovernmental Committee
Mozambique	2	Ministry of Sea, Inland Water and Fisheries
Namibia	4	Ministry of Fisheries and Marine Resources
Nigeria	6	Ministry of Fisheries
Congo	5	Ministry of Tourism and Environment
Sao Tome & Principe	3	Ministry of Planning, Finance and Blue Economy
Senegal	2	Ministry of Fisheries and Maritime Economy
Seychelles	1	Ministry of Fisheries and Blue Economy
Sierra Leone	4	Ministry of Fisheries and Marine Resources
South Africa	4	Department of Environmental Affairs Operation Phakisa Steer. Group
Tanzania	5	Ministry of Natural Resources and Tourism
Zanzibar (Tanzania)	1	Ministry of Blue Economy and Fisheries
Togo	3	Ministry of Maritime Economy, Fisheries and Coastal Protection National Agency for State Action at Sea (OANEM)
Tunisia	4	Ministry of Environment

Table 4: Current Institutional Arrangements in Support of the BE in African Countries (Consultant)

On the regulatory front, although MSP, ICZM and related instruments are primarily planning tools and frameworks, it is their legal underpinning that reduce ambiguity and conflict between BE users and stakeholders and deliver clarity and certainty to investors and operators. As such, their legal dimension and operationalisation, beyond the simple process of zoning and narrative of consensus, are key to the success of any BE framework or strategy.

Complementing the legal underpinnings of maritime planning tools, other regulatory instruments are required to provide consistency in policy making for the BE. In this respect, accession to and implementation of relevant conventions and regulations at both international and regional levels provide the legal basis and commitment towards operationalising BE growth and development.

Annex I outlines the status of compliance of African countries with various maritime regulations. It shows wide variations among AU member States in their level of adherence to and implementation of relevant maritime and ocean regulatory instruments, but the overall picture is that of a low level of commitment and compliance among most African countries in several key legal instruments. This is a major legal and policy barrier as countries and cannot be expected to promote or implement specific BE strategies or policies without appropriate legal commitments.

For example, African countries seeking to promote the BE component of maritime transport and labour markets cannot do so without adhering to the AU's AMTC (African Maritime Transport Convention) and IMO's STCW (Standards for Training, Certification and Watchkeeping) Code. Currently, only 5 African countries feature in the STCW white or grey lists meaning that only seafarers certified by those countries are able to work onboard international ships especially those flagged in developed and most emerging countries.

In another example, countries seeking to manage and protect their BE space and resources against illegitimate and illicit use cannot practically do so if they have not adhered to relevant international and regional legal instruments. Currently, only 23 African countries have signed or implemented the FAO Agreement on Port State Measures against IUU Fishing and a mere 3 countries have endorsed the AU Lomé Charter aimed at preventing and deterring maritime crime and piracy.

3.3. Enabling Tools and Capabilities

Next to the policy context spanning planning, institutional and legal frameworks and instruments, additional supporting tools and capabilities are needed to successfully enable and operationalise a BE strategy or policy. For the purpose of this scoping review, we focus on four areas that are most relevant to the promotion and growth of the BE: innovation, financing, skills and capacity, and partnerships and collaboration.

3.3.1. Innovation

Given that the BE is relatively a new concept covering both established areas and newly emerging activities while also requiring a balancing approach between the drivers of economic growth and the imperatives of sustainability and conservation; research and innovation stand as one of the key tools for enabling and supporting the BE.

Across Africa, most universities have affiliated schools, academies and departments specialising in one or a combination of research themes on the BE. Elsewhere, many African countries have established apex institutions on BE research but these tend to focus on specific subjects such as oceanography, fisheries and aquaculture, and shipping and maritime transport (*Table 5*) rather than carrying out or coordinating research and innovation across various fields and themes of the BE.

Country	BE related Apex research institution
Algeria	Centre National de Recherche et de Développement de la Pêche et de l'Aquaculture
Angola	The Instituto Nacional de Investigação Pesqueira
Benin	Centre de Recherches Halieutiques et Océanologiques
Cameroon	Centre de Recherche pour Écosystèmes Marin
Cape Verde	Instituto do Mar- IMAR
Cote d'Ivoire	Centre National de Recherche Océanographique
Egypt	National Institute of Oceanography and Fisheries
Gambia	GREAT Institute
Guinea-Bissau	Centre d'Investigation des Pêches Appliquées
Kenya	Kenya Marine and Fisheries Research Institute
Liberia	National Fisheries and Aquaculture Authority
Madagascar	Centre National de Recherche Océanographiques
Mauritania	Institut Mauritanien de Recherches Océanographiques et des Pêches
Mauritius	Albion Fisheries Research Centre
Morocco	Institut National de Recherche Halieutique
Mozambique	National Institute of Hydrography and Navigation
Namibia	National Marine Information and Research Centre
Nigeria	Institute for Oceanography and Marine Research
Senegal	Centre de Recherches Océanographiques Dakar-Thiaroye
Seychelles	Blue Economy Research Institute
Sierra Leone	Institute of Marine Biology and Oceanography
South Africa	South Africa International Maritime Institute
Tanzania	Tanzania Fisheries Research Institute- TAFIRI
Tunisia	National Institute of Marine Sciences and Technology

Table 5: Main Apex Research and Innovation Institutions in Support of the BE in African Countries (Consultant)

Other observed gaps on existing BE research in Africa include its focus on traditional areas of BE innovation, the dominance of close and centralised networks, the lack of research collaboration and knowledge sharing, and a host of barriers against innovation diffusion and inclusion.

- On the focus of BE innovation, the lack of an integrated approach impedes the development of horizontal multidisciplinary research and innovation networks. Similarly, research and innovation on the BE in Africa is concentrated on traditional BE areas compared to research on emerging BE markets (e.g. seabed mining and marine energy) and fields (e.g. blue financing and carbon trading).
- Innovation in the BE shall not be confined to product or technology innovation alone but must also extend to innovation in BE financing, institutional and governance structures, the latter is urgently required to adapt legacy structures in ways that support an integrated management of the BE and respond to the needs of new BE fields and markets. Examples such as Cape Verde's multi-strategy framework, Mauritius's vertical BE structure, and Zanzibar's devolved institutional framework provide good regional benchmarks on how to deploy innovative governance schemes that balance the need of BE market growth against the requirement of government oversight.
- On the lack of collaboration and partnership, national R&D programmes on the BE in Africa are often criticized because of their centralised and closed structures. Among notable exceptions, worth mentioning the African Network for Research Institutes on Fisheries and Marine Sciences (RAFISMER in French), the Western Indian Ocean Marine Science Association, and the Gulf of Guinea Maritime Institute (GoGMI). Initiatives such as Oceans Research company in South Africa, which collaborates with researchers world-wide, and Bazaruto Centre for Scientific Studies (BCSS) in Mozambique, which hosts a permanent ocean observatory, provide unique platforms for promoting co-innovation and access to shared knowledge about the BE.
- Another observation about existing BE R&D institutions in Africa is the absence of key stakeholder groups such as industry operators, environmental groups and social communities. Few BE research initiatives in Africa are industry or community led, and even fewer purpose-built BE research or innovation programme in Africa that is both cross-disciplinary and trans-boundary for open knowledge sharing and innovation diffusion.

3.3.2. Financing and Investment

BE strategies, policies and innovations require investment and financing to enable and implement them. However, most BE initiatives and programmes in Africa still largely rely on grant assistance and development aid to finance their activities and interventions (***Table 6***). African BE opportunities are often constrained by the lack of sufficient and adequate financing and investment, and there is an urgent need to unlock both public and private capital to support BE growth potential in the continent.

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On the one hand, only a handful of African countries have developed a dedicated financing and investment framework for the BE leaving its economic and growth potential at the mercy of constrained government budgets and conventional private financing. Recent initiatives such as the Seychelle's Blue Bond provide a valuable insight into successful BE innovative financing programmes which can be replicated to other countries and sectors.

On the other hand, most financing instruments in Africa are conservative, highly fragmented and primarily focused on terrestrial activities. To finance the typical cross-border, cross-industry and multi-annual BE projects, there is a need to funnel innovative financing and venture capital and build a viable African BE asset class for investors. The Congo Basin Blue Fund is a transboundary initiative that could serve as a regional benchmark for innovative financing instruments.

Origin Institution/Country	Amount disbursed (in USD million)
Japan	1,190
International Development Association (IDA)	1,108
EU Institutions	736
France	436
Germany	301
USA	231
Global Environmental Facility (GEF)	231
Norway	126
UK	220
International Fund for Agricultural Development (IFAD)	217
Sweden	99
Other	541

Table 6: 2020 ODA disbursements for financing sustainable BE in Africa (Complied from OECD 2021)

3.3.3. Skills, Capacity and Awareness

As the African continent slowly but surely embraces the BE, there will need to be a corresponding transition in the skills of the workforce and the capacity of relevant institutional and governance structures. This requires investing in new skills and competencies as well as in technical and institutional capacity. If not addressed timely or adequately, the lack of adequate personnel for the BE could be a barrier to its long-term development growth.

As shown above, several BE programmes and initiatives in Africa have either stalled or failed because of the lack of adequate financing, effective operationalisation and good governance. Some of these shortcomings may be traced back to the weaknesses in BE skills and capacity in Africa. Despite being endowed with huge BE resources and ecosystems, many African countries and their institutions still lack appropriate awareness of BE ocean and waterways ecosystems, often as a result of the dominance and long legacy of the terrestrial economic, social and cultural life.

At the same time, most African countries do not have the adequate resources and platforms to properly operationalise and monitor BE strategies and action plans. The surge of IUU fishing, maritime crime and piracy incidents in African waters highlights the weaknesses of existing planning and regulatory frameworks for the BE in Africa and the need for adequate policy tools and mechanisms to manage and coordinate its implementation.

Among the relevant tools developed to bridge the above capacity gaps, worth mentioning the ECA's Blue Economy Valuation Toolkit (BEVTK). The tool aims at guiding data collection and analysis for the socio-economic assessment of blue resources, including goods and services generated; therefore informing decisions makers with a detailed view of the potential of the BE in a national economic system. To date, the BEVTK has been used in both Djibouti and the Seychelles and is being extended to other African countries. Another noticeable capacity building initiative is provided by the African Natural Resources Centre (ANRC), a non-lending department of AfDB with a mandate of assisting African countries maximize development outcomes derived from natural and BE resources. ANRC has produced a number of knowledge sharing and practical guides for improving management of BE resources in Africa.

3.3.4. Collaboration and Partnerships

The transboundary dimension of the BE requires the development of collaborative frameworks, planning, institutional, legal and regulatory, for coordinating and managing shared risks and resources. But even within a single jurisdiction, the BE encompasses a range of stakeholders, policymakers implementing agencies, investors, economic operators, communities, research institutions, environmentalist, conservationists, and civil society broadly, each with different views, exposures to and interests in the BE. Partnerships and partnership mechanisms are therefore required for a successful BE policy and strategic plan.

While some regional initiatives are already in place to coordinate the BE in Africa, fundamental differences and challenges still persist, most notably the delimitation of maritime jurisdictions and territorial interests among member States and the management of various or conflicting priorities across borders. Equally, many of the existing frameworks and processes of the BE in Africa have not been designed or implemented in ways that ensure stakeholders' participation and inclusion.

The above makes cooperation and partnerships both between and within governments as well as between Governments and the private sector an imperative for any successful BE strategy or policy. Relevant BE partnership programmes in Africa include the Blue Belt Initiative led by Morocco and the Ocean Hub Africa led by South Africa. While both initiatives support partnership and collaboration among BE stakeholders, their scope and field of intervention remain small and limited. For larger and stronger BE partnership programme, Africa and African countries can learn from the experience of other continents such as Asia and Europe. The EU's experience in designing and coordinating BE shared policies, platforms and mechanisms among its member States can be viewed as a benchmark for pan-African institutions such as the AU.

4. BE Dashboard, Risks and Barriers in Africa

4.1. BE Dashboard

4.1.1. Dashboard Components and Consultation Process

The above sections outline the work and outcome of a detailed mapping exercise of the BE frameworks, strategies and policies within and across the AU's member States. The discussion that followed allowed for a structured analysis of the scoping exercise in ways that map African countries and regions according to several key criteria pertaining to BE growth and strategies.

To further inform policy making and decision, a dashboard matrix was conceptualised so that AU member States can be ranked and benchmarked according to four key components: (i) the economic and sectoral drivers of their BE systems, (ii) the sustainability dimensions and focus of their BE policies and strategies, (iii) the policy instruments and frameworks used for their BE implementation and governance, and (iv) the tools and capabilities needed for supporting their BE growth and development (*Figure 5*).

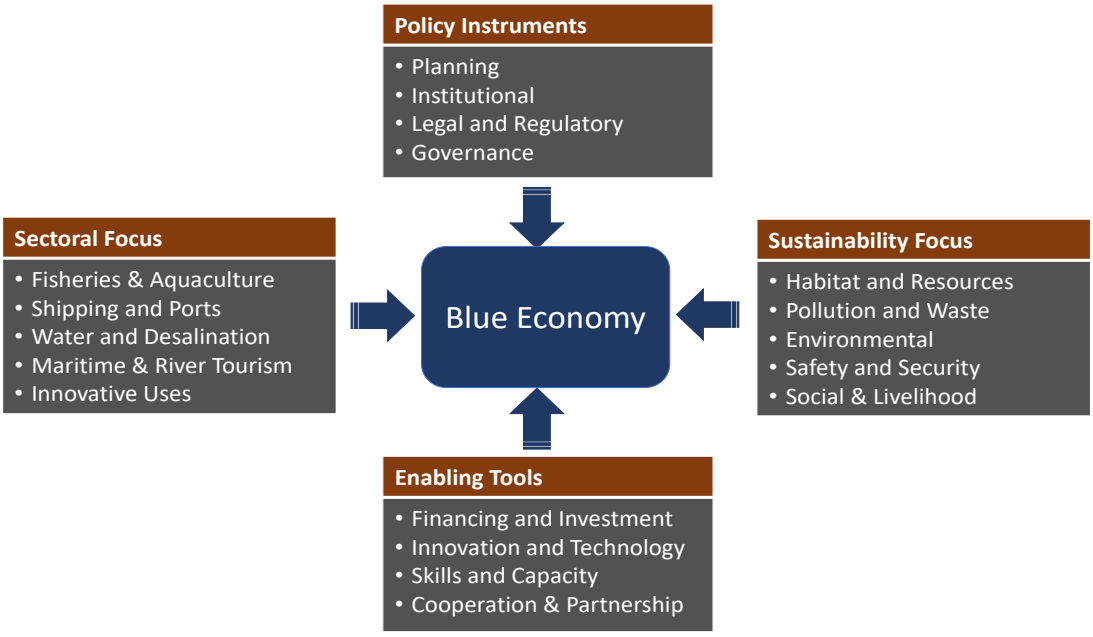

Figure 5: BE Dashboard Matrix Components (Consultant)

For each component, each AU member State is assigned an initial ranking score on a 5-point Likert scale (1: very low, 2: low, 3: medium, 4: high, 5: very high) based on the results of the mapping and scoping exercise. Note that the scores are not always exclusive, i.e. a similar score may be allocated within and across components depending on how each country is perceived to plan, manage and operate its BE sector(s).

Because the initial dashboard and scores were based on a top-down diagnostic assessment, a bottom-up consultation process was carried out whereby feedbacks were gauged directly from national BE stakeholders (policy makers, implementing agencies, private operators, research centres, and other relevant BE communities and interest groups) so that they can comment on the dashboard ranking and highlight any observed gaps and overlaps in the management and coordination of BE strategies and frameworks.

An initial sample of 80 stakeholders (***Annex 2***) covering most African countries and regions has been drawn up, of which 43 participants, representing a 52% response rate, sent their comments and responses while also completing a short survey on BE risks and barriers (See further below). Of the 43 respondents, representing 39 countries in Africa, 32 corroborated the initial scores, 8 requested changes to the initial scores and 3 could neither confirm nor refute them. The dashboard scores were therefore amended accordingly but were left unchanged for the 15 countries where no response or feedback was received.

4.1.2. Dashboard Results and Analysis

Table 7 depicts the dashboard scores per African country and BE component post consultation. At an aggregate level, the focus of the BE among African countries is still skewed towards traditional sectors such as fisheries & aquaculture and shipping & ports with limited interest in emerging sectors and innovative uses. Individually, there are variations between countries and group of countries, for instance river basin countries focus on water resource management while those with a large tourism sector prioritise coastal and maritime tourism. Similarly, the sustainability focus of the BE across African countries is largely driven by social and livelihood concerns whereas pollution and waste issues appear to be of a priority less in BE policy and strategy frameworks. Again here, there are differences between countries and regions, for instance maritime security is a top priority for West African countries while for livelihood protection is a key priority for countries with large fishing communities (***Figure 6***).

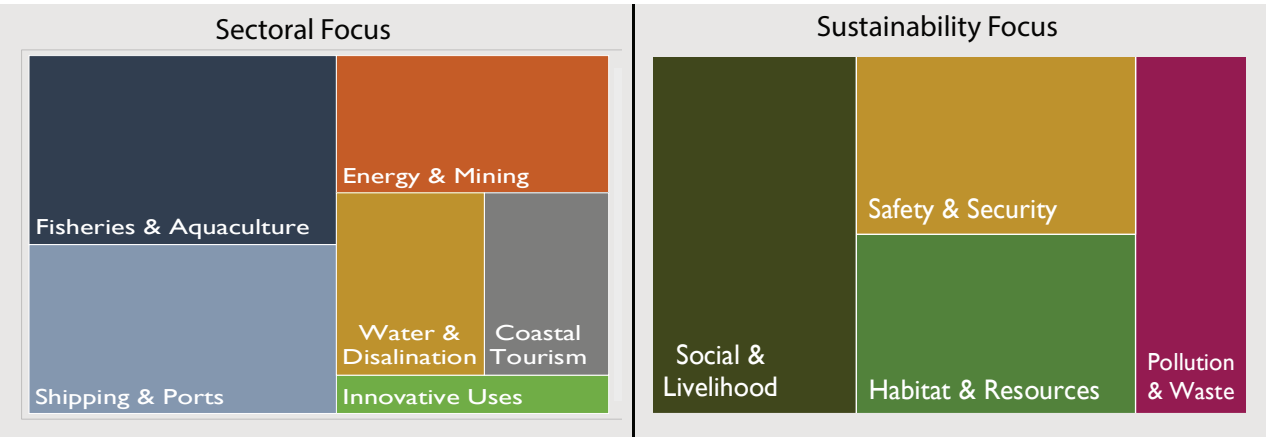

Figure 6: Dashboard distribution of BE sectoral and sustainability components among AU countries (Consultant)

	Sector Focus					Sustainability Focus				Policy Instruments			Supporting Tools		
	Fisheries & Aquaculture	Energy & Mining	Shipping & Ports	Coastal Tourism	Innovative Uses	Habitat & Resources	Pollution & Waste	Safety & Security	Social & Livelihood	Planning	Institutional	Legal & Regulatory	Technology & Innovation	Skills & Capacity	Collaboration & Partnerships
Algeria	5	1	2	1	1	1	3	4	4	2	2	2	3	2	1
Angola	5	5	5	5	1	2	2	2	4	1	2	1	1	1	1
Benin	5	5	5	5	1	2	2	2	4	1	2	1	1	1	1
Botswana	1	2	1	4	1	4	4	1	3	3	3	2	3	1	2
Burkina Faso	1	1	2	1	1	1	3	3	4	2	3	2	2	2	3
Burundi	3	1	3	2	1	3	4	3	5	2	3	3	2	2	3
Cameroon	5	5	5	5	1	2	2	2	4	1	2	1	1	1	1
Cape Verde	5	1	5	1	1	5	5	5	5	5	5	5	1	2	5
C. African Republic	4	1	3	1	1	4	2	3	5	1	2	2	1	2	2
Chad	1	1	1	1	1	5	1	4	5	2	2	2	2	2	2
Comoros	5	5	5	5	1	2	2	2	4	1	1	1	1	1	1
Djibouti	5	5	5	5	1	2	2	4	4	1	1	1	1	1	1
DRC	5	5	5	5	1	2	2	2	4	1	1	1	1	1	1
Egypt	3	4	4	3	2	2	3	4	4	4	3	2	3	3	3
Equatorial	5	5	5	5	1	2	2	2	4	1	1	1	1	1	1
Eritrea	5	5	5	5	1	2	2	2	4	1	1	1	1	1	1
Ethiopia	1	5	5	1	1	1	1	4	5	3	5	5	2	5	5
Eswatini	1	1	1	1	1	3	1	1	4	3	1	1	2	2	1
Gabon	5	5	5	5	1	2	2	2	4	1	1	1	1	1	1
Gambia	5	5	5	5	1	2	2	2	4	1	1	1	1	1	1
Ghana	5	5	5	5	1	2	2	2	4	1	1	1	1	1	1
Guinea	5	5	5	5	1	2	2	2	4	1	2	1	1	1	1
Guinea-Bissau	5	5	5	5	1	2	2	2	4	1	1	1	1	1	1
Ivory Coast	5	5	5	5	1	2	2	2	4	1	1	1	1	1	1
Kenya	5	5	5	5	3	3	3	3	3	3	3	1	1	1	1
Lesotho	3	4	1	1	2	4	2	2	5	3	2	3	3	2	5
Liberia	5	5	5	5	1	2	2	3	4	1	1	1	1	1	1
Libya	5	5	5	5	1	2	2	3	4	1	1	1	1	1	1

Table 7: BE Dashboard for AU Member States

	Sector Focus					Sustainability Focus				Policy Instruments			Supporting Tools		
	Fisheries & Aquaculture	Energy & Mining	Shipping & Ports	Coastal Tourism	Innovative Uses	Habitat & Resources	Pollution & Waste	Safety & Security	Social & Livelihood	Planning	Institutional	Legal & Regulatory	Technology & Innovation	Skills & Capacity	Collaboration & Partnerships
Madagascar	5	5	5	5	1	2	2	2	4	1	1	1	1	1	1
Malawi	4	2	4	1	3	4	3	1	4	4	4	3	2	3	4
Mali	4	1	1	1	2	5	2	5	5	2	2	2	1	2	2
Mauritania	5	5	5	5	1	2	2	2	4	1	1	1	1	1	1
Mauritius	5	5	5	5	5	5	5	5	5	5	5	5	1	5	5
Morocco	5	4	5	5	4	3	3	4	4	5	4	4	4	4	3
Mozambique	2	2	2	2	2	4	3	2	4	3	4	3	1	2	1
Namibia	3	3	3	3	3	3	3	3	3	3	3	3	3	1	3
Niger	4	1	3	1	1	4	4	3	5	1	2	2	1	2	2
Nigeria	2	5	5	2	1	3	3	3	5	2	3	2	2	2	4
Congo	5	5	5	3	1	1	1	1	4	1	1	1	1	1	1
Rwanda	4	3	3	1	2	5	2	2	5	1	4	1	1	3	3
Sao Tome and Principe	5	5	5	5	1	2	2	4	4	1	2	1	1	1	1
Senegal	5	5	5	5	1	2	2	4	4	1	1	1	1	1	1
Seychelles	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Sierra	5	5	5	5	1	2	2	4	4	1	2	1	1	1	1
Somalia	5	5	5	5	1	2	2	4	4	1	1	1	1	1	1
South Africa	3	3	3	3	1	3	1	1	1	3	3	5	1	3	5
South Sudan	4	1	4	2	2	3	3	4	5	2	1	1	1	1	4
Sudan	5	5	5	5	1	2	2	4	4	1	1	1	1	1	1
Tanzania	3	3	3	3	1	3	3	3	3	3	3	3	3	3	3
Togo	5	1	5	5	1	2	2	4	4	1	2	1	1	1	1
Tunisia	5	5	5	5	1	2	2	4	4	1	2	1	1	1	1
Western Sahara	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Uganda	4	4	4	1	2	5	2	2	5	3	2	2	2	3	4
Zambia	5	4	3	1	1	5	2	2	5	3	4	3	2	3	3
Zimbabwe	5	4	4	4	2	5	2	3	5	2	3	2	1	3	2

Table 7: (Continued)

To assess the dashboard scoring and distribution for the policy instruments and supporting tools, we plot the scores in the boxes shown in *Figure 7* to infer more insightful perspectives. The plotted boxes represent the inter-quartile range of scores with the x sign indicating the median and the lower and upper edges of the box indicating the first and third quartiles, respectively. The maximum and minimum scores are represented by end-lines which extend above and below the boxes, respectively. Lastly, the dots at the top of the graphs show outlier extreme upper scores.

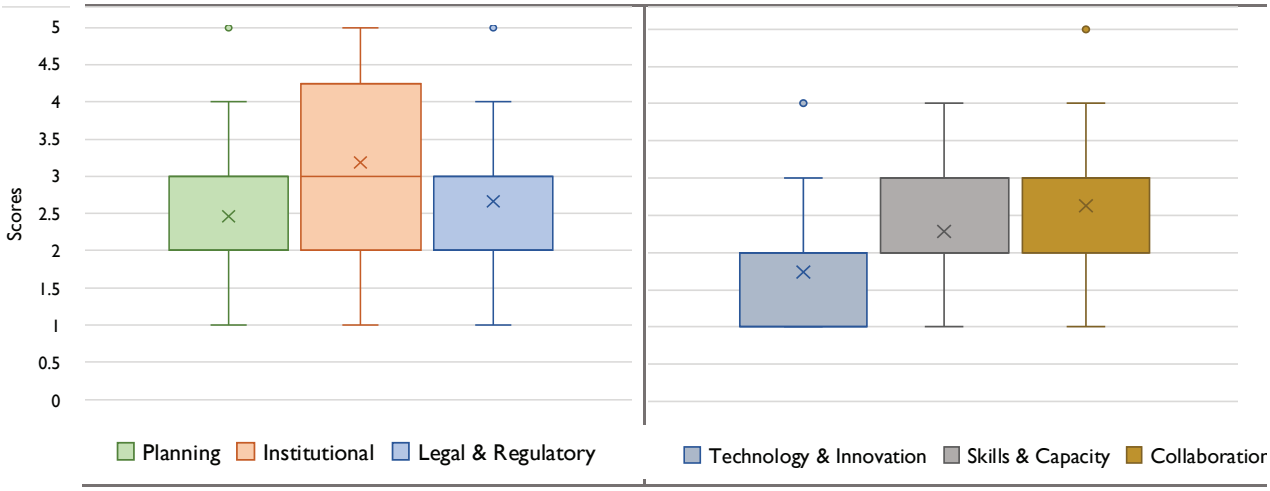

Figure 7: Dashboard score distribution of BE policy instruments and supporting tools in Africa (Consultant)

On the policy instruments, Figure 7 shows that planning remains the weakest component with over 58% of the AU countries scoring low or very low on this policy instrument, against just over 50% for the legal and regulatory component. On the other hand, 47 have scored 3 or above on the institutional component suggesting that many African countries have adequate institutional settings for the BE. Of the countries that scored the highest, 4 did on the planning instrument and 6 on the legal framework, positioning them as outliers in the graph.

On the supporting tools, Figure 7 shows that 55% of countries scored low or very low across all components. Specifically, 47 countries scored poorly on BE innovation and technology, that is 8% of all AU member States. On skills and capacity and awareness, 36 countries (65%) have scored poorly and no country has achieved the highest score of 5 or very high. Lastly, while only 23 countries (42%) have scored poorly on collaboration and partnership, most of the remaining 32 countries have scored 3 or medium leaving more ground to cover on this front as well.

The above dashboard scores and their distribution highlight several gaps and shortcomings across the key components, drivers and enablers of the BE in Africa, both within and across countries. This provides a valuable and evidence-based reference tool for policy makers and stakeholders for devising BE priority interventions, opportunities, and resource mobilization at country, region or pan-African levels. The dashboard also serves as benchmarking tool allowing African countries and regions to seek best-practice policies and implementation tools from their performing peers.

4.2. BE Risks and Barriers

4.2.1. BE Risk Questionnaire

In addition to validating the desktop assessment review and the dashboard, a parallel objective of this bottom-up exercise is to capture some insight from BE stakeholders about their perceived risks and barriers to developing, elaborating, and implementing BE strategies and policies in their respective countries and/or regions. To do so, a quick survey was carried out where the 63 participants who commented on the dashboard scores were also asked to rank individual BE risk barriers or challenges in the medium-to-long-terms based on a 10-point scale where 1 reflects the least probability or least critical barrier and 10 reflects the most likelihood or most critical barrier.

Of the 63 responses, only 58 were considered in this assessment as 2 responses were completed and the 3 responses have too extreme values and were considered as outliers. For each of the identified seven barriers or risk issues, the average score reported by all respondents was computed to rank-order risks from highest to lowest probability. This allows the comparison of mean scores between medium-term and long-term horizons to capture changes in the perceived level of risk. To further discuss the ranking and allocation of risk and barriers, a follow up online interview was carried out with 8 available respondents to gauge their perspectives on the most specific risks in their countries and regions.

4.2.2. Ranking of Risks and Barriers

As shown in Table 8, the most significant barrier to BE growth is financing. Reported BE projects in the continent have traditionally relied on national budget and multilateral funding, and there is scant involvement of private investment and blended finance in BE projects. Online interviewees have further pointed out the scarcity of tailored financing instruments to the needs and peculiarities of African countries and regions in the BE space. The lack of a targeted and dedicated BE investment framework in many African countries further hampers the financing of BE growth. Innovative financing instruments such as through PPP structures, blended finance and venture capital could bridge this gap and take a lead in financing priority BE projects.

Risks and Barriers to Developing and Implementing BE in Africa	Perception (2025 rank)	Perception (2030 rank)
Investment and financing barriers	9	8
Legal and regulatory barriers	8	6
Institutional and governance barriers	8	6
Poor knowledge or understanding of the BE concept and principles	8	5
Lack of technical, human and management capacity	8	5
Lack of integrated BE strategy and/or policy	7	2
Interface, coordination and partnership barriers	7	7

Table 8: Ranking of BE risks and barriers in Africa (Consultant)

Next to the financing barriers, legal and institutional barriers have also been ranked as critical and high in the medium-term and-long term horizons, respectively. This reflects the need for a stable and consistent policy landscape where appropriate legal frameworks and institutional structures are put in place to support the BE development and growth. The persistent high-risk scores across both time horizons reflects the bureaucracy and inertia of many Government and public sector agencies in Africa for addressing the observed BE regulatory and institutional gaps.

The other two critical barriers and risks both related to BE knowledge and capacity. On the former, there is a strong feeling among participants that appropriate awareness of the BE concepts and their applications is lacking among various shareholders as evidence by the lack of knowledge about integration, innovation and sustainability issues most pertinent to the BE in Africa. On the latter, the implementation and monitoring of BE strategies require educated and capable BE management teams especially at the level of government and public sector implementing agencies. Targeted programmes of technical capacity building and institutional development would help overcome those barriers, especially if carried out at the level of regional or pan-African institutions such as the AU.

The last two critical risks and barriers are those related to strategy integration and to coordination and partnership, respectively. On the BE strategy integration, almost all participants have pointed out the need, but also the difficulty, to establish an integrated approach to the BE spanning both economic and sustainability dimensions. However, such barriers are perceived to be significant in the long run as African countries and regions are becoming more aware of the need to integrate their various BE sectors and processes.

On the coordination and partnership risks, the respondents pointed out that this is a persistent problem at more than one level. On the one hand, coordinated and harmonised BE strategies, policies and implementation processes are key success criteria in a multi-faceted and complex BE landscape. The lack of coordination in the African BE landscape is most evidenced in the amount of duplication and overlap between technical assistance projects and interventions on the subject. On the other hand, interface risks and partnership barriers are a major drag on BE growth and development in Africa.

There are few BE partnership projects in Africa, whether they involve cross-border, cross-industry or multistakeholder arrangements. Experience from well-coordinated BE programmes both in Africa and elsewhere, e.g. Asia and Europe, can provide a good benchmark for successful management and implementation of cross-cutting and multidimensional BE projects and activities. One area that can benefit the most from coordination and partnerships is BE innovation. The follow-up interview with selected participants has confirmed that innovation in the BE is not perceived as risk or barrier, but innovation and technological change are rather hampered by the barriers to accessing and sharing knowledge. Open innovation and knowledge sharing platforms can overcome those barriers by pooling resources, reducing costs, and developing synergies.

5. Summary and Conclusions

5.1. Study Summary

Africa is endowed with huge BE resources and ecosystems spanning both traditional sectors and emerging fields, but these BE resources must also be managed in an environmentally and socially sustainable way. Over recent years, both African governments and institutions, led by the AU, have embarked on a series of programmes and initiatives to promote the BE as a key priority for economic and sustainable development. As result, several strategies and policy frameworks have been elaborated at national and regional levels, with the AU's Africa Blue Economy Strategy (ABES) championing a shared goal towards an Africa-wide BE strategy.

Yet, despite the plethora of programmes and initiatives on the BE, no formal review or assessment was conducted to date on the scope and status of the BE in Africa. This commissioned Study by the AU and Expertise France attempts to close this gap by carrying out a structured mapping of the BE strategies in Africa, reviewing the policy instruments and frameworks put in place for their operationalisation, identifying the critical barriers and risk factors hampering their successful delivery, and assessing their alignment with ABES and other related AU strategies.

Starting with a top-down assessment, an extensive review of the BE strategy frameworks in Africa was carried at four levels of spatial organisation: the international level, the Pan-African level, the regional level, and the national level. The review identified 102 strategic and policy documents on the BE in Africa, yet only few of them qualify as a BE strategy or policy. Among the 55 member States of the AU, only 7 countries have developed advanced BE strategies while another 7 countries have elaborated partial BE strategies with no action plans in place. Of the remaining AU countries, 12 are in the process of developing a BE strategy, 13 are planning to develop a national BE strategy, and 16 have currently no stated strategy or policy framework in support of the BE.

Looking at the policy instruments that link a BE strategy and its execution, the Study identified several gaps that hinder the operationalisation of BE plans and activities. Starting with the planning framework, the review found that less than half of African countries have Integrated Coastal Zone Management (ICZM) plans, whereas only 4 countries have Maritime Spatial Plans (MSPs). Moving to the legal and regulatory framework, the Study found that most African countries lag behind international counterparts in maritime and ocean compliance. This not only weakens the fight against piracy, maritime crimes and illegal, unreported and unregulated (IUU) fishing, but has also limits the participation of African countries in key BE value chains such as seafaring, green shipping and marine biotechnology. The review of the institutional component of BE policy frameworks found that only 11 countries have established a dedicated institution for the BE, be it a vertical Government department or a horizontal coordinating agency. The other 44 African countries still manage their BE systems through legacy fragmented institutions, which is inducive to the principles of BE coordination and integration.

As for the tools and capabilities that support BE strategies, the scoping exercise identified several weaknesses and shortcomings. On innovation, the highly centralised and closed structures governing BE apex and research institutions in Africa restricts knowledge sharing and diffusion and hinders cooperation and partnership. On the latter, the lack of collaboration and partnership has been found to extend beyond research and innovation into areas of trans-boundary coordination and policy implementation. Most crucially, significant gaps in BE skills, capacity and awareness have been reported across both BE institutions and stakeholders.

To summarise the results of the mapping exercise, a BE dashboard matrix was constructed to score and benchmark African BE policies and frameworks according to their sectoral and sustainability focus, policy instruments, and supporting tools. The scores and rankings were further adjusted to incorporate the feedbacks of 63 survey participants representing various BE interests in Africa. Their comments and feedbacks were part of a wider bottom-up stakeholders' consultation used to complement the top-down diagnosis review. The adjusted dashboard matrix shows that despite differences between countries, the overall picture is that of a weak BE strategy and implementation landscape particularly in the policy areas of planning and regulations and in the input tools of skills and innovation.

As part of the bottom-up analysis, a survey-based questionnaire was distributed to stakeholders for them to prioritise the main risks and barriers to the BE in Africa. The results showed that financing and policy risks were perceived as the most critical for the BE alongside the lack in BE skills and capabilities. Interface and coordination risks, while less critical than financing and governance risks, are more persistent and counterproductive as evidenced by the amount of duplication and overlap between TA projects and interventions.

5.2. Conclusions and Way Forward

Conscious of the growth and development opportunities the BE can bring to their economies, regions and communities, many African countries and regions have over recent years developed and executed programmes, plans, actions and initiatives for supporting and promoting the BE. While these programmes and initiatives are still relevant to the BE, many of them are designed or implemented as standalone projects and are not part of an integrated BE strategy or policy. A successful BE strategy requires a cross-sectoral approach that reconcile various economic sectors and interests operating in the ocean and inland water spaces, while also balancing the objectives of economic growth with the imperatives of environmental and social sustainability.

The structured mapping exercise carried out as part of this Study has uncovered several gaps and overlaps in the strategic and policy framework that underpins BE growth and operationalisation across Africa. At the other end of the scale, the scoping exercise has also identified several successful BE policies, strategic plans, innovation schemes and partnership initiatives, both within and between African countries and regions.

To close the gap between excelling and underperforming BE actions and interventions, while aligning and coordinating the different national and regional BE programmes towards a harmonised continent-wide BE strategy framework, such as the AIMS and the ABES, six practical recommendations are put forwarded for consideration in the short-to-medium term horizons:

a) Design and implement capacity building and institutional development programmes to bridge the skills and knowledge gap among BE implementing agencies.
b) Support the African countries and regions that have not yet developed or elaborated structured BE strategies and action plans, including for landlocked and river basin countries for which the BE and its applications present a different set of opportunities and challenges.
c) Promote trans-boundary and partnership arrangements between African BE institutions and policy makers, including through joint BE planning and financing, coordinated projects and programmes, and collaborative innovative research and development.
d) Establish a pan-African BE database for lodging, updating and coordinating BE programmes and initiatives. Such BE database, which can be located at and managed by the AU, would serve as a meeting platform for shared knowledge, innovation and partnerships between various BE interests (lenders, investors, policy makers, research community, etc.).
e) Operationalise the ABES framework and Action Plan through a priority programme centred around key thematic areas of the BE, with target projects and outcome. The combination of an updated BE database and thematic priority programmes could be further developed to serve as BE project proposals for investment and financing.

Promote blended financing, PPP procurement and other innovative financing mechanisms to fill in the viability gap in key BE projects and initiatives.

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Annex 1: Status of Compliance of AU member states with Maritime Regulations (as of 27 /09/2022)

	Algeria	Benin	Burkina Faso	Burundi	Cameroon	Cabo Verde	C. Afri. Republic	Chad	Comoros	Congo	Cote d'Ivoire	Dem. Rep. Congo	Djibouti	Egypt	Equatorial Guinea	Eritrea	Eswatini	Ethiopia	Gabon	Gambia	Ghana	Guinea	Guinea-Bissau	Kenya	Lesotho	Liberia	Libya
IMO Convention 48	×	×			×	×			×	×	×	×	×	×	×	×		×	×	×	×	×	×	×		×	×
SOLAS Convention 74	×	×			×	×			×	×	×	×	×	×	×	×		×	×	×	×	×	×	×		×	×
SOLAS Protocol 78	×	×							×	×	×			×	×			×			×	×	×	×		×	×
SOLAS Protocol 88	×									×	×			×	×	×			×		×		×	×		×	×
SOLAS Agreement 96										×									×								
LOAD LINES Convention 66	×	×			×	×			×	×	×	×	×	×	×	×		×	×	×	×	×	×	×		×	×
LOAD LINES Protocol 88	×									×				×	×	×		×	×		×		×	×			×
TONNAGE Convention 69	×	×				×			×	×	×		×		×	×		×	×	×	×	×	×	×		×	×
COLREG Convention 72	×	×			×	×			×	×	×	×	×	×	×	×		×	×	×	×	×	×	×		×	×
CSC Convention 72		×				×				×				×	×							×		×			
CSC amendments 93										×																	
SFV Protocol 93																								×			
Cape Town Agreement 2012										×														×			
STCW Convention 78	×	×			×	×			×	×	×	×	×	×	×	×		×	×	×	×	×	×	×		×	×
STCW-F Convention 95										×										×				×			
SAR Convention 79	×				×	×				×	×		×		×				×	×	×		×	×		×	×
STP Agreement 71										×				×													
Space STP Protocol 73										×				×													
IMSO Convention 76	×	×			×				×					×					×		×			×		×	×
INMARSAT OA 76	×				×									×					×		×			×		×	×
IMSO amendments 2006																											
IMSO amendments 2008																											×
FACILITATION Convention 65	×	×			×	×			×	×	×			×					×	×	×		×	×		×	×
MARPOL 73/78 (Annex I/II)	×	×			×	×			×	×	×		×	×	×				×	×	×	×	×	×		×	×
MARPOL 73/78 (Annex III)	×	×			×	×			×	×	×		×	×	×				×	×	×	×	×	×		×	×
MARPOL 73/78 (Annex IV)	×	×			×	×			×	×	×		×	×	×				×	×	×	×	×	×		×	×
MARPOL 73/78 (Annex V)	×	×			×	×			×	×	×		×	×	×				×	×	×	×	×	×		×	×
MARPOL Protocol 97 (Annex VI)		×								×									×		×		×	×		×	
London Convention 72		×				×					×	×		×	×				×					×			×
London Convention Protocol 96										×				×							×			×			
INTERVENTION Convention 69	×	×			×					×	×		×	×	×				×		×					×	
INTERVENTION Protocol 73	×									×				×												×	
CLC Convention 69	p	×			p						×		p	×	×				p	p	×			d		p	×
CLC Protocol 76					×									×												×	
CLC Protocol 92	×	×			×	×			×	×	×		×	×					×	×	×	×	×	×		×	
FUND Protocol 76																										×	
FUND Protocol 92	×	×			×	×			×	×	×		×						×	×	×	×	×	×		×	
FUND Protocol 2003										×																	
NUCLEAR Convention 71																			×							×	
PAL Convention 74										×				×	×											×	×
PAL Protocol 76																										×	×
PAL Protocol 90														×													
PAL Protocol 02																											
LLMC Convention 76	×	×								×				×	×											×	
LLMC Protocol 96									×	×														×		×	
SUA Convention 88	×	×	×			×			×	×	×		×	×	×		×	×		×	×	×	×	×	×	×	×
SUA Protocol 88	×	×	×			×			×	×	×		×	×	×		×				×	×	×	×	×	×	×
SUA Convention 2005	×									×	×		×								×						
SUA Protocol 2005	×									×	×		×								×						
SALVAGE Convention 89	×									×			×	×								×		×		×	
OPRC Convention 90	×	×			×	×			×	×	×		×	×					×	×	×	×		×		×	×
HNS Convention 96																		×								×	
HNS PROT 2010																											
OPRC/HNS 2000										×	×		×	×												×	
BUNKERS CONVENTION 01									×	×	×		×	×				×	×				×	×		×	×
ANTI FOULING 2001										×				×				×	×				×	×		×	×
BALLASTWATER 2004										×				×					×		×		×	×		×	×
NAIROBI WRC 2007									×	×									×				×	×		×	×
HONG KONG CONVENTION										×											×						

Zimbabwe	Zambia	UR Tanzania	Uganda	Tunisia	Togo	Sudan	South Sudan	South Africa	Somalia	Sierra Leone	Senegal	Sao Tome Principe	Rwanda	Nigeria	Niger	Namibia	Mozambique	Morocco	Mauritius	Mauritania	Mali	Maldives	Malawi	Madagascar	
x	x	x	x	x	x	x		x	x	x	x	x		x		x	x	x	x	x		x	x	x	IMO Convention 48
		x	x	x	x	x		x	x	x	x	x		x		x	x	x	x	x		x	x	x	SOLAS Convention 74
				x	x			x		x	x	x		x		x		x		x					SOLAS Protocol 78
				x	x					x		x		x				x	x			x	x	x	SOLAS Protocol 88
																									SOLAS Agreement 96
	x	x	x	x	x	x		x	x	x	x	x		x		x	x	x	x	x		x	x	x	LOAD LINES Convention 66
				x	x					x	x	x		x		x	x		x				x	x	LOAD LINES Protocol 88
		x		x	x	x		x		x	x	x		x		x	x	x	x	x		x		x	TONNAGE Convention 69
		x	x	x	x	x		x		x	x	x		x		x	x	x	x	x		x		x	COLREG Convention 72
				x				x						x				x							CSC Convention 72
																									CSC amendments 93
																									SFV Protocol 93
								x				x													Cape Town Agreement 2012
		x	x	x	x	x		x		x	x	x		x		x	x	x	x	x		x	x	x	STCW Convention 78
			x	x				x		x		x				x		x		x					STCW-F Convention 95
		x	x	x	x			x			x			x		x	x	x	x					x	SAR Convention 79
												x													STP Agreement 71
												x													Space STP Protocol 73
		x		x				x			x			x			x	x	x						IMSO Convention 76
		x		x				x			x			x			x		x						INMARSAT OA 76
																									IMSO amendments 2006
																									IMSO amendments 2008
	x	x	x	x	x					x	x			x					x		x			x	FACILITATION Convention 65
		x	x	x	x	x		x	x	x	x	x		x		x	x	x	x	x		x	x	x	MARPOL 73/78 (Annex I/II)
		x		x	x	x		x		x	x	x		x		x	x	x	x	x			x	x	MARPOL 73/78 (Annex III)
		x		x	x	x		x		x	x	x		x		x	x	x	x	x			x	x	MARPOL 73/78 (Annex IV)
		x		x	x	x		x		x	x	x		x		x	x	x	x	x		x	x	x	MARPOL 73/78 (Annex V)
				x	x			x		x		x		x				x	x					x	MARPOL Protocol 97 (Annex VI)
		x		x				x		x				x				x							London Convention 72
								x		x				x				x						x	London Convention Protocol 96
		x		x	x			x			x			x		x		x	x	x					INTERVENTION Convention 69
		x		x	x			x								x		x	x	x					INTERVENTION Protocol 73
				d				d		d	x	x		d			d	d	d	d		x			CLC Convention 69
																			x	x		x			CLC Protocol 76
		x		x	x			x		x	x			x		x	x	x	x	x		x		x	CLC Protocol 92
																		x	x						FUND Protocol 76
		x		x				x		x	x			x		x	x	x	x	x		x		x	FUND Protocol 92
																		x							FUND Protocol 2003
																									NUCLEAR Convention 71
														x									x		PAL Convention 74
																									PAL Protocol 76
																									PAL Protocol 90
																								x	PAL Protocol 02
										x				x				x	x						LLMC Convention 76
										x								x						x	LLMC Protocol 96
		x	x	x	x	x		x			x	x		x	x	x	x	x	x	x	x	x	x	x	SUA Convention 88
		x		x	x	x		x			x	x		x	x	x	x	x	x	x	x	x	x	x	SUA Protocol 88
					x									x						x					SUA Convention 2005
																				x					SUA Protocol 2005
				x						x				x				x	x					x	SALVAGE Convention 89
		x		x	x	x		x		x	x			x		x	x	x	x	x				x	OPRC Convention 90
										x								x							HNS Convention 96
								x																	HNS PROT 2010
																			x					x	OPRC/HNS 2000
				x	x					x		x		x		x		x	x					x	BUNKERS CONVENTION 01
				x	x			x		x		x		x				x						x	ANTI FOULING 2001
					x			x		x		x		x				x				x		x	BALLASTWATER 2004
					x			x		x		x		x				x						x	NAIROBI WRC 2007
												x													HONG KONG CONVENTION

Annex 2: Survey target participants and respondents

Country	Affiliation	Target Participants	Actual Respondents
Algeria	Ministère de L'agriculture et du développement rural	1	0
Algeria	Centre de Recherche développement de Pêche et de l'Aquaculture	1	1
Angola	Ministry of Environment	2	1
Angola	The Instituto Nacional de Investigação Pesqueira	1	0
Benin	Centre de Recherches Halieutiques et Océanologiques	1	0
Cabo Verde	Minstry of Agriculture	2	1
Cameroon	Ministère des Forêts et de la Faune	1	1
Cameroon	Centre de Recherche pour Écosystèmes Marin	2	1
Cape Verde	Instituto do Mar- IMAR	2	1
Congo	Ministère de L'Economie Forestière et du Développement Durable	1	0
Cote d'Ivoire	Centre National de Recherche Océanographique	1	1
Cote D'Ivoire	Ministère des eaux et forêts	1	0
Djibouti	Ministère de L'agriculture et du développement rural	1	0
Egypt	Ministry of Agriculture and Land	2	0
Egypt	National Institute of Oceanography and Fisheries	1	1
Gabon	Ministère Forêt, Environnement Protection des Ressources Naturelles	1	1
Gambia	Department of Parks and Wildlife Management	2	0
Gambia	GREAT Institute	2	1
Ghana	Forestry Commission	1	1
Guinea-Bissau	Centre d'Investigation des Pêches Appliquées	1	1
Kenya	Kenya Marine and Fisheries Research Institute	2	1
Liberia	National Fisheries and Aquaculture Authority	1	1
Madagascar	Ministère de L'environnement	2	1
Madagascar	Institut halieutique et des Sciences Marines	2	1
Mauritania	Ministère du cadre de Vie et du Développement Durable	2	1
Mauritius	Ministry of Ocean Economy	2	2
Morocco	Ministère de l'Agriculture et de la Pêche Maritime	2	1
Morocco	Institut National de Recherche Halieutique	2	2
Mozambique	Ministry of Land and Environment	1	0
Namibia	Namibian Maritime and Fisheries Institute	1	1
Nigeria	Federal Ministry of Environment	2	0
Nigeria	Institute for Oceanography and Marine Research	1	1
Senegal	Centre de Recherches Océanographiques Dakar-Thiaroye	2	1
Seychelles	Blue Economy Research Institute	2	1
Sierra Leone	Institute of Marine Biology and Oceanography	2	1
South Africa	Department of Environment Affairs	2	1
South Africa	Oceanographic Research Institute	2	1
Sudan	Ministry of Interior	1	0
Tanzania	Ministry of Natural Resources and Tourism	2	2
Tanzania	Tanzania Fisheries Research Institute- TAFIRI	1	1
Togo	National Agency for State Action at Sea	1	1
Tunisia	National Institute of Marine Sciences and Technology	1	1
Zanzibar*	Ministry of Ocean Economy	1	1
IGAD		2	1
ECOAWS Commission		2	1
SADC Secretariat		2	1
BDEAC		2	1
ANBO		2	1
Comm. Sec		2	1
WB SWIOFISH		2	1
EU-MASE		2	1
Total		**80**	**43**

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