

Blue Economy

A group of five fishermen are on a sandy beach, pulling a large, brown fishing net from the ocean. The net is stretched across the beach, and the fishermen are holding it from both ends. The ocean is blue with white waves breaking on the shore. The sky is blue with some white clouds. The fishermen are wearing simple clothing, including t-shirts and shorts. The scene is captured from a low angle, emphasizing the length of the net and the effort of the fishermen.

KEY MESSAGES

- The main driving sectors of the Blue Economy in the 38 coastal countries of Africa are fisheries, aquaculture, tourism, transport, ports, coastal mining, and energy. However, these sectors depend on the marine ecosystem health and productivity, which is under constant threat from extreme weather events.
- Institutional development of the Blue Economy in Africa is very varied, with two-thirds of African countries having no formal strategies on their Blue Economies and a select few according great importance to Blue Economy development and adaptation to climate change.
- In the Nationally Determined Contributions of many African nations, there is a tendency to focus more on land-based spatial planning than on marine planning, despite most countries recognizing the potential devastating impacts that ocean-related climate change impacts could have on the environment and people.
- The lack of marine spatial planning (MSP) in the island countries is particularly concerning as they are highly vulnerable to climate change impacts. MSP could help them predict the impacts of such disasters, be better prepared for them, and thus prevent the loss of many lives and livelihoods.



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- As the natural resources critical to Blue Economies are, at times, shared by several countries, the prominent Regional Economic Communities (RECs) of Africa, which have developed individually and have different areas of focus, have a unique opportunity to contribute to shared resource management and encourage such management to follow sustainable Blue Economy principles.
- Coastal and marine protected areas (MPAs) can provide long-term protection for ecologically significant areas including salt marshes, seagrass beds, mangroves, and kelp forests. These ecosystems, when healthy, help to build resilience to climate change through their ecosystem services.

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African economies need more trade and investment so they can adapt to climate change. Africa already faces a tremendous amount of costs, with respect to adaptation. Through trade, we can increase the return on investment and increase the resources available to African governments for adaptation.”

Ngozi Okonjo-Iweala
Director-General, World Trade Organization

INTRODUCTION

The Blue Economy of coastal countries in Africa is critical for their development. The potential of sustainable and integrated management of marine resources can be immense in areas such as job creation, poverty elimination, and coastal urban and rural development. The Blue Economy not only includes critical sectors such as tourism and fisheries, but holds enormous potential for future sectors such as blue energy, ocean mining, and blue carbon. According to the African Union (AU), the Blue Economy of the continent generates nearly US\$300 billion and supports 49 million jobs.¹

However, Africa's Blue Economy is currently facing enormous challenges, from the overexploitation of fisheries to coastal erosion. Pollution and the loss of coastal and marine biodiversity are putting substantial pressure on economic sectors that depend on a healthy environment. The impacts of climate change are amplifying and accelerating the pressures on the environment.

This chapter reviews the climate risks to African Blue Economies, the status of Blue Economy strategic development in African countries, and considerations of climate change in such strategic documents.

It outlines the adaptation measures necessary for a sustainable development of African Blue Economies, and ends with some recommendations for policymakers.

CLIMATE RISKS TO THE BLUE ECONOMY OF AFRICA

The main climate change impacts on the Blue Economy of Africa include sea-level rise, sea warming, increasing frequency and intensity of floods and storm surges in coastal areas, and heatwaves. Climate change amplifies the impacts caused by environmental degradation, the overexploitation of fisheries, coastal erosion, and pollution.

The Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report highlights several climate change impacts of concern for Africa's Blue Economy.² For example, African sea levels are currently rising slightly faster than the global average. By 2100, sea-level rise can reach 0.4 to 0.5 meters under low-warming scenarios and 0.8 to 0.9 meters under high-warming scenarios. As discussed in the State and Trends in Adaptation 2021 report, the rise of sea levels, combined with more intense and frequent rainstorms, will change the current 1-in-100-year coastal flooding events to a return period of only 10 to 20 years by 2050. By 2100, this return period reduces to between 5 years to annually, even under moderate warming. The implications of this trend for urban and rural populations of coastal Africa are enormous.

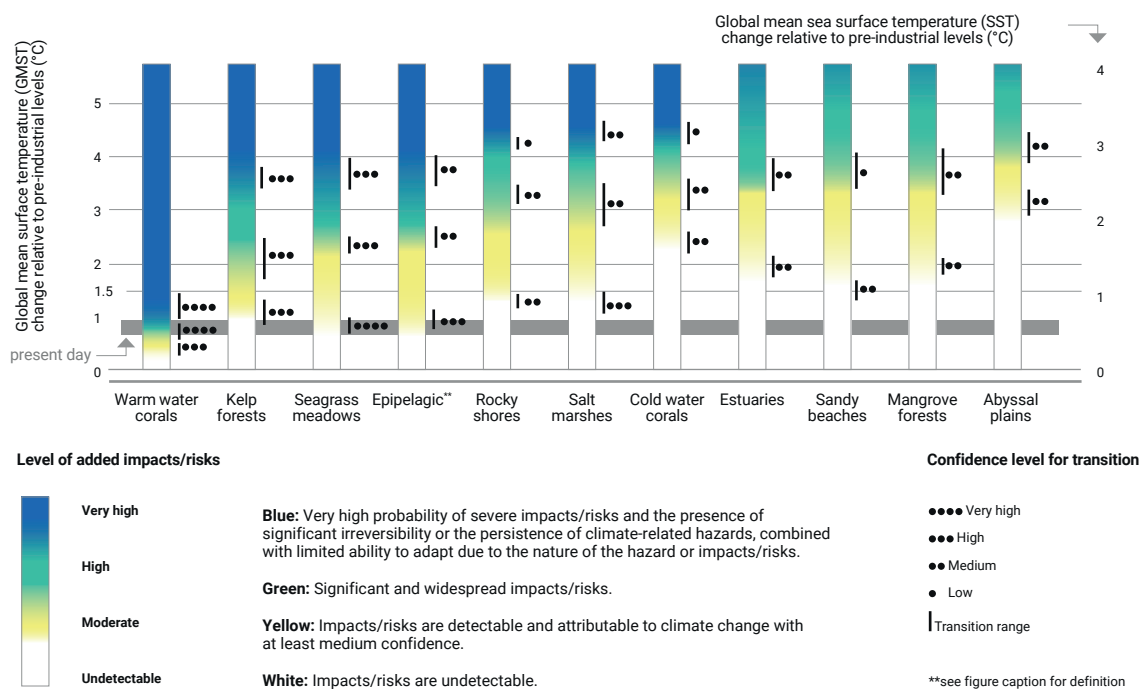
The rising temperature of sea water is projected to have significant impacts on marine biodiversity. For example, primary production by phytoplankton, as also fish distribution and abundance, are projected to be significantly affected. According to the IPCC, marine heatwaves are expected to continue to increase in frequency and intensity, especially around the Horn of Africa. Finally, increased water acidification due to climate change will lead to coral reef bleaching, destroying the habitat of fish and other marine life. West African countries may be some of the most affected countries.

Figure 1 shows the impacts and risks to ocean ecosystems in general from climate change, according to the IPCC's Special Report on the Ocean and Cryosphere (2019).³



Photo: Gideon Ikigai/Shutterstock

Figure 1. Key Impacts and Risks to Ocean Ecosystems from Climate Change



Source: Adapted from Figure SPM.3, frame (d), in IPCC, 2019.⁴

INSTITUTIONAL ASSESSMENT OF AFRICA'S BLUE ECONOMY

The AU has identified Blue Economy development as a priority goal toward achieving the goals of “a prosperous Africa based on inclusive growth and sustainable development.” The African Blue Economy Strategy, launched in 2020,⁵ outlined five key driving sectors:

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, and infrastructure;
4. Sustainable energy, mineral resources, and innovative industries; and
5. Polices, institutions and governance, employment, job creation and poverty eradication, and innovative financing.

The main driving sectors of the Blue Economy in Africa today are fisheries, aquaculture, tourism,

transport, ports, coastal mining, and energy.⁶ However, these sectors depend on the health and productivity of the marine ecosystem, which is under constant threat from extreme weather events, pollution, eutrophication, and widespread loss and modification of coastal habitats, including mangroves, estuaries, lagoons, and coral reefs.⁷

Status of Institutional Development of Africa's Blue Economies

For this chapter, the status of institutional development of Blue Economies in Africa was analyzed.⁸ Figure 2 presents the summary results. Ten coastal countries have no strategic or policy documents guiding their Blue Economies. Another 16 have indicated that they intend to develop some form of Blue Economy planning or policies. This means that, in total, 26 African coastal countries, or about two-thirds, have no formal strategies or policies on their Blue Economies. However, eight countries have drafted and published official Blue Economy strategies, and only four additional countries have drafted action plans for their strategies. No African

country has a holistic policy, with regulatory tools for Blue Economy development over the long term, passed into law.

The assessment also shows that the island nations of the Seychelles and Mauritius are the most advanced in their institutional approach to the Blue Economy, given its significant role in their economies overall. Both nations have an active Blue Economy coordinating unit (the Seychellois Ministry of Fisheries and the Blue Economy, and the Mauritian Ministry of Blue Economy, Marine Resources, Fisheries and Shipping).

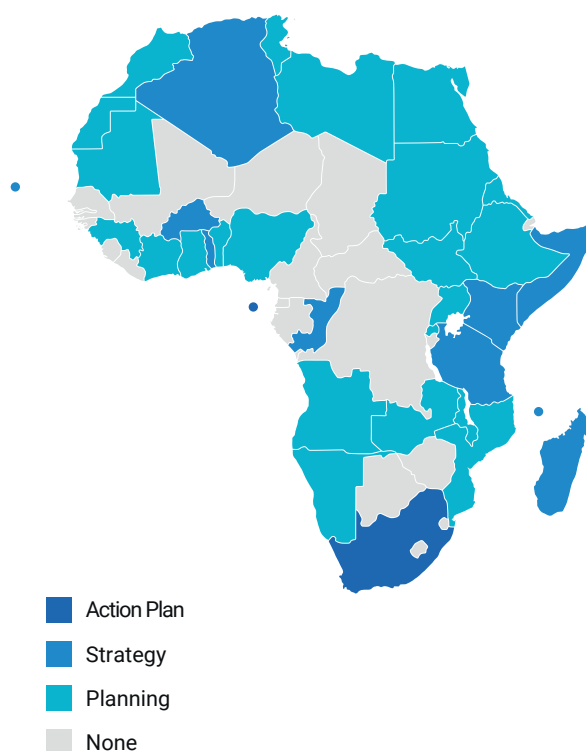
In the institutional development of Blue Economies, a holistic multisectoral approach that systematically develops plans, strategies, action plans, and policies is indispensable. Furthermore, countries building their Blue Economies have at their disposal a variety of planning and finance tools developed in recent years, including marine spatial planning (MSP), blue accounting, and blue financing.

Of the countries that have indicated a commitment to develop their Blue Economies—34 African countries in total—18 countries are using MSP, two are using blue accounting, three have established blue financing tools, and 11 have established national coordination units. Finally, there are only four countries (South Africa, the Seychelles, São Tomé and Príncipe, and Mauritius) that have a Blue Economy action plan to implement their respective strategies. An action plan is required to put a holistic strategy into practice.

While many countries have begun the development of policies and programs for various marine resources (such as tourism or fisheries), these cannot be equated to Blue Economy development because of the lack of cross-sectoral coordination and a holistic approach. The complexity of the multiple sectors involved in the Blue Economy calls for a national coordinating unit.

Few countries in Africa have put systems in place for blue financing, the most developed of which is Seychelles.

Figure 2. Institutional Status of the Blue Economy in Coastal African Countries as of June 2022



Source: Authors' own work.

The Role of Regional and International Bodies in the Development of Africa's Blue Economies

Regional and overseas bodies have played a notable role in supporting Blue Economy development across the continent. The United Nations Economic Commission for Africa (UNECA) has been instrumental in the drafting of several African states' Blue Economy strategies and action plans.⁹ It has also pioneered the construction and application of the Blue Economy Valuation Toolkit in many African countries.¹⁰

In March 2022, the Kigali Declaration of the African Regional Forum for Sustainable Development organized by UNECA in collaboration with the AU, the African Development Bank (AfDB) and the UN System called at the ministerial level on African countries to support the Great Blue Wall Initiative. The goal of this initiative is to accelerate and upscale ocean conservation actions while enhancing socioecological resilience and the development of a regenerative Blue Economy. The initiative has set ambitious targets to protect 2 million square kilometers of protected and conserved areas, achieve net gain of critical blue ecosystems by conserving and restoring more than 2 million hectares of critical ecosystems and thereby sequestering more than 100 million tonnes of carbon, and unlocking regenerative livelihood opportunities for 70 million people in the Western Indian Ocean.

The additional innovative benefit of this initiative would be to unlock additional blue financing through the exploration of the development of a regional Blue Bond, taking into account the fiscal and debt constraints of the countries in the region and the limited capacity of these countries to attract substantial investments solely through national Blue Bonds.

The AU has developed a Blue Governance Framework for the implementation of the African Blue Economy Strategy.¹¹ This is an institutional arrangement that refers to the coordination, planning and monitoring of the Blue Economy activities initiated by AU bodies, Regional Economic Communities (RECs), other regional organizations, and member states.

Several African RECs have also drafted Blue Economy strategies, or are currently preparing them. These include the Common Market for Eastern and Southern Africa (COMESA);¹² the Intergovernmental

Authority on Development (IGAD);¹³ the Southern African Development Community (SADC); the Economic Community of Central African States (ECCAS);¹⁴ and the 2014 Integrated Marine Strategy developed by the Economic Community of West African States (ECOWAS), which was accompanied by a regional action plan. Other regional organizations, such as the Indian Ocean Commission, have also been active in Blue Economy development in Africa. In addition, some North African countries are parties to the WestMED initiative, which promotes Blue Economy development centered on the Mediterranean Sea.

As the natural resources critical to Blue Economies are, at times, shared by several countries (e.g. river deltas, large marine ecosystems, and fish stocks), RECs have a unique opportunity to contribute to shared resource management and encourage such management to follow sustainable Blue Economy principles. RECs are also able to mediate the communications of their member states in resource management disputes and large-scale Blue Economy development plans.

The Intergovernmental Oceanographic Commission (IOC) has facilitated Blue Economy development for African Small Island Developing States (SIDS) such as Comoros, Mauritius, and Seychelles. The IOC's approach to the Blue Economy emphasizes the integration of social, economic, and environmental concerns, and encourages countries to work on developing the Blue Economy at the national level while simultaneously increasing cooperation and regional integration.¹⁵

CLIMATE CHANGE ADAPTATION AND RESILIENCE MAINSTREAMING IN BLUE ECONOMY POLICIES

The Blue Economy and climate change adaptation action are closely connected. Ecosystem services and nature-based solutions play a key role in supporting climate change adaptation efforts, since they reduce the negative effects of extreme weather events, sea-level rise, storm surges, eutrophication, and ocean acidification. Equally, many of the adaptation measures that coastal and marine environments need—from pollution reduction to sustainable management of fisheries and biodiversity conservation—rely on stronger ecosystems and their services.

This section reviews the climate change adaptation and resilience measures included in Blue Economy action plans and policies adopted by coastal African nations. This section also reviews these countries' Nationally Determined Contributions (NDCs) to see how much attention they pay to the Blue Economy.

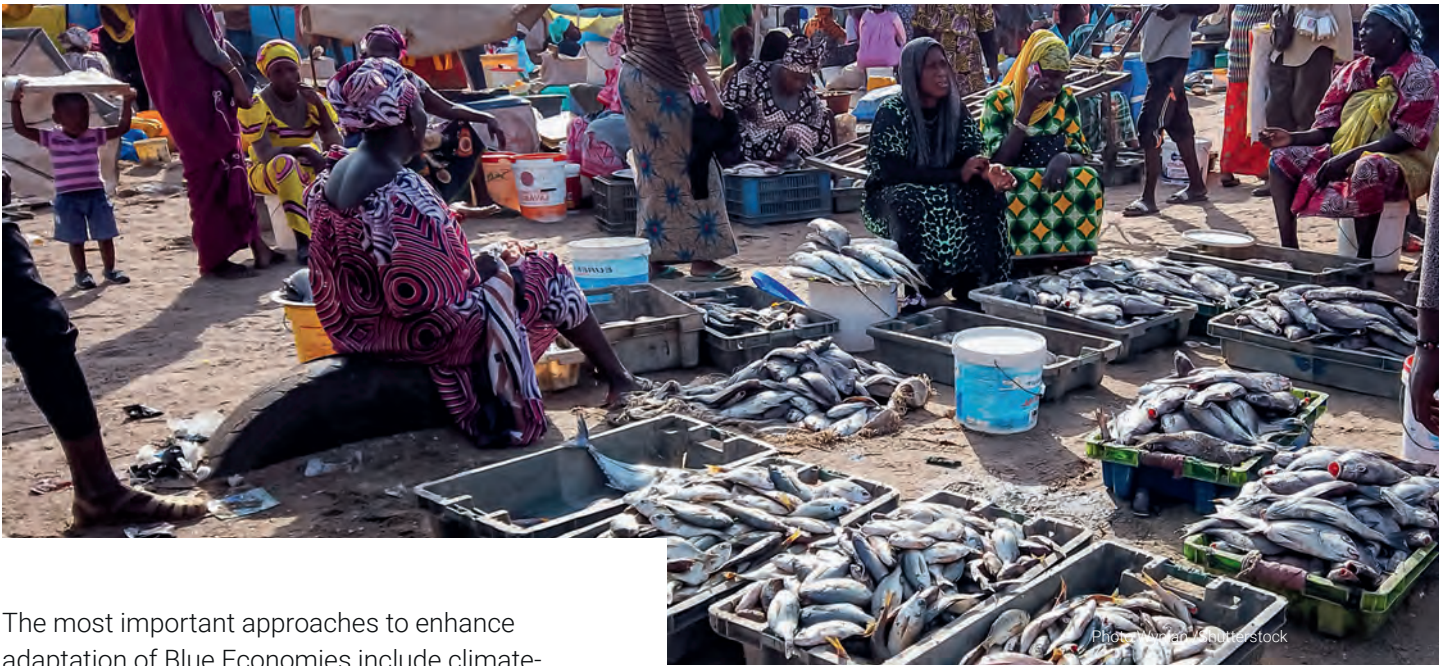
Of the 12 African coastal countries that are implementing Blue Economy strategies or action plans, two—Mauritius and Seychelles—recognize the severity of climate change impacts on marine

ecosystems and have practical activities for adaptation. Four countries—Algeria, São Tomé and Príncipe, Somalia, and Togo—have some planning for adaptation responses included in their Blue Economy action plan or strategy. Another four countries—Comoros, Republic of the Congo, Madagascar, and Tanzania—recognize the threats of climate change and the need to respond, but have little to no planning or activities in place to do so. Table 1 presents a summary of the findings.

Table 1. Integration of Climate Change Adaptation into African Countries' Blue Economy (BE) Strategies or Action Plans

Country	Extent to which climate change is integrated into BE strategies and action plans	Degree of integration (0–3)
Algeria	Good overall. The BE strategy integrates climate change adaptation in some of the BE sectors (fisheries, aquaculture, coastal infrastructure), but there are few concrete plans yet.	2
Comoros	BE strategy strongly acknowledges the impacts of climate change, but very little focus or planning for adaptation measures to deal with the impacts.	1
Cabo Verde	None. Strong focus on encouraging investments, but no mention of climate change mitigation or adaptation.	0
Rep. of the Congo	Is considering the development of strategies to be more climate change-resilient, but there are presently few concrete plans being prioritized for this purpose.	1
Madagascar	Acknowledges that the consideration of climate change must be scaled up and also made a priority for the fisheries sector, but there are few concrete plans regarding climate change adaptation.	1
Mauritius	Very good integration of climate change. Within the BE action plan it is recognized that climate change is an area of key vulnerability for the BE, and there are well-thought-out measures and plans to adapt to climate change. However, much of the focus for adaptation is on maintaining fisheries and tourism.	3
São Tomé and Príncipe	Relying on the BE to provide economic growth and poverty alleviation; also says that “Climate threats make achieving [a successful BE] even more urgent.” Looking at ways to adapt various sectors to climate change.	2
Seychelles	The BE strategy acknowledges that the focus is foremost on adaptation and then on mitigation. The strategy reveals a holistic approach to BE and climate-associated integration.	3
Somalia	Aware of the risks of climate change to the economy. Although very focused on adaptation, the plans lack specificity.	2
South Africa	Focus of the BE strategy is on economic growth and job creation. Nothing on climate change and very little consideration of the environment.	0
Tanzania (Zanzibar)	Some acknowledgement of the importance of climate, but mostly focused on the more profitable sectors. Instead of utilizing the BE to improve climate resilience, it implies that climate resilience must be achieved first.	1
Togo	Generally well thought out in terms of climate change and related threats, as well as the interconnectedness between the sectors that are affected. Some planning for adaptation responses to climate change in place.	2

Note: The table covers only countries that have Blue Economy plans or strategies in place. The degree of integration is based on the number of times adaptation is mentioned in the Blue Economy strategy or action plan and its contextual relevance and practical application.



The most important approaches to enhance adaptation of Blue Economies include climate-informed coastal and MSP; the protection of marine and coastal ecosystems; and rehabilitation of marine and coastal areas.

Climate-informed MSP is a valuable tool for improving climate change resilience in marine and coastal areas. It assesses current and future climate risks and opportunities for informed decisions on the design, plan and implementation of integrated ocean-based strategies that improve countries' capacity to respond to climate events.¹⁶ In particular, MSP can be used as a tool to identify areas especially vulnerable to climate change. For example, it can identify ecosystems and communities that will be displaced and directly affected by sea-level rise in certain coastal areas, or the extent to which sea-level rise will affect these areas. This allows for more informed adaptive responses to be implemented. Significantly, it can also simulate how biodiversity and adaptation capacity will change based on different protection or rehabilitation activities.

Spatial planning and MSP do more than just assist with climate change adaptation. MSP is an integral part of Blue Economy efforts, and it can help make more informed decisions about climate change adaptation actions to protect specific sectors. It can also reveal gaps and missed opportunities for other kinds of social, economic, and environmental development.

Unfortunately, most of the Blue Economy strategies and action plans of the coastal countries of Africa

have low or no prioritization of MSP, with the exceptions of Congo and Mauritius. Similarly, in the case of Nationally Determined Contributions (NDCs), there is a general tendency of these documents to focus more on land-based spatial planning than on marine planning, despite most countries recognizing the potential devastating impacts that ocean-related climate change impacts could have on the environment and people. The Seychelles NDC, however, clearly acknowledges that MSP will help the country achieve "effective management of the 30% marine protected areas within the Seychelles' Exclusive Economic Zone" (Box 1).

The Mauritius Blue Economy strategy includes a high-level analysis of the enabling conditions for MSP and indicates climate change adaptation, aquaculture, and coastal beach erosion as the key drivers. It also looks at various scenarios and potential challenges for implementation.

The lack of MSP in the island countries is particularly concerning, as they are highly vulnerable to climate change impacts. MSP could help them predict the impacts of such disasters, be better prepared for them, and thus prevent the loss of many lives and livelihoods. For a country like Togo, with a relatively small coastline, MSP could help organize that territory optimally for projects such as aquaculture developments near the coast or even in the sea.

Box 1. MSP in Seychelles

The Seychelles Marine Spatial Plan (SMSP) Initiative was launched with three main objectives: to expand protection of marine waters to 30 percent (previously only 0.04 percent of marine waters were in marine protected areas [MPAs]), to address climate change adaptation, and to support the Blue Economy. At the center of this plan was MSP, which was used to help identify new MPAs and provide information about what is allowed and where to Government and stakeholders. Seychelles reached its 30 percent protection target in March 2020, 10 years ahead of the “30 by 30” target.

A case study of the SMSP reveals several factors that are likely to have contributed to its success:¹⁷

- 1. Reliance on expert knowledge and administrative integration:** It was realized that Seychelles lacked previous MSP experience, technical capacity, and knowledge for the MSP process. The country sought out expert project managers to assist with the SMSP process design. It also established working groups for different sectors and topics (e.g. fisheries, tourism, finance, climate change) to provide space for technical discussions and developing draft products.
- 2. Use of knowledge resources and scientific data to ensure that proposals were evidence-based:** The process was designed using numerous resources, including the United Nations Educational, Scientific and Cultural Organization (UNESCO) guidance, publications, reports, and information from discussions with experts. It also incorporated the best practices and lessons learned from other regions. Relevant scientific data and local knowledge were made available from the beginning. The MSP initiative identified many ecosystems within the Seychelles Exclusive Economic Zone (EEZ), including sea mounts, canyons, spawning sites, aggregation sites and more, all of which contribute to the ecological value of the Blue Economy.¹⁸
- 3. Strong political will and involvement from top leaders:** There was strong political will behind the initiative from the beginning. High-ranking leaders understood the aims of and need for a proper MSP. Cabinet received regular updates throughout the project and looked to obtain information from decision-makers. Some stakeholders were concerned that the project focus would be on biodiversity, but they were assured that SMSP was multi-objective and both biodiversity conservation and sustainable livelihoods were Government priorities.
- 4. Clear funding strategies to ensure sustainable finance:** In 2015, the Seychelles debt-for-nature conversion resulted in the Seychelles’ Conservation and Climate Adaptation Trust (SeyCCAT), an independent public-private trust that is responsible for managing debt conversion proceeds and allocates a portion of the repayments for financing of marine conservation and climate change adaptation projects, and for the implementation of the SMSP.
- 5. Consistent feedback and transparency:** Efforts were made to make sure that key stakeholders were present at discussions to ensure a variety of viewpoints were put forward and taken into consideration. This also helped ensure that the project was fully transparent. The public were also consistently informed on the progress of the project through the meetings’ minutes being posted on the website and through public information sessions.
- 6. Realistic time scales:** Stakeholders were given sufficient time to gather the information to present their arguments, and for discussions around these to occur. It was accepted that the process would slow down if disagreements or misunderstandings occurred. These obstacles were handled by focusing on gathering information to help resolve the issues and obtain a higher level of support.



Photo: Tommy Trenchard/Panos Pictures

Coastal and marine protected areas can provide long-term protection for ecologically significant areas including salt marshes, seagrass beds, mangroves, and kelp forests. These ecosystems, when healthy, help to build resilience to climate change through their ecosystem services. Most of the countries' NDCs and Blue Economy strategies do not prioritize the protection of marine and coastal habitats to the same degree as protected areas, apart from South Africa and Comoros. Many suggest MPAs for protecting economically important fish species, natural capital, and tourism, which would in turn improve resilience, but it does not automatically make it their primary objective.

São Tomé and Príncipe and Algeria are two countries whose Blue Economy strategies consider the protection of marine and coastal areas to be of top priority for "strengthening their resilience and restoring safe and productive oceans." Algeria's strategy calls for urgent action to protect and conserve seagrasses and corals for several reasons, one of which is adaptation to the effects of climate change for maritime and coastal infrastructures and activities. Most of the countries assessed are focused on prioritizing protection of areas that are tourist attractions, habitats for fished species, or ecosystems that help protect the coastline from storms and prevent coastal erosion.

In contrast, the NDCs of Cabo Verde, Republic of the Congo, Mauritius, Seychelles, and Togo prioritize the protection of marine and coastal areas more so than their Blue Economy strategies do. Cabo Verde's NDC strongly encourages all forms of climate adaptation and seeks to implement coastal protection in each island to protect endangered ecosystems (wetlands, seagrasses, salt marshes, sand dunes, reefs) and adapt to potential climate risks.

Similarly, Togo's priority adaptation measures include marine protection, and the country has developed pathways to achieve these. In the case of the NDC of Mauritius, although coastal protection is mentioned throughout the document, the links drawn between protection and adaptation are vague and may be in place more so for future food security and tourism. The Seychelles Blue Economy strategy notes that the country's coastal wetlands, particularly seagrass, mangroves and salt marshes, are critical for climate adaptation as they provide the "protection functions by buffering shorelines against the

impacts of increasingly erratic weather patterns and coastal erosion."

Another key issue with the protection of marine and coastal areas is whether the rules and guidelines around these protected areas are being adhered to. As noted in a 2021 report on MPAs in the Western Indian Ocean, the proclamation of an MPA is no guarantee of effective protection due to a lack of human resources, skills, equipment, or institutional commitment.¹⁹ Therefore, the ability of an MPA to provide climate change resilience largely depends on how well it is being managed, or if at all. Therefore, prior to declaring protected areas, governments need to come up with a set of laws and ensure that they make the surrounding community, as well as other stakeholders, aware of the restrictions. For the goals of the MPA to be achieved over the long term, they need to ensure that they have the personnel and resources available to enforce these laws.

Rehabilitation and restoration of these habitats refers to the intentional planting of nursery-grown corals back onto natural reefs or creating artificial reefs; the planting of mangrove seeds in damaged mangrove habitats; and the spreading of seagrass seeds, the transplantation of kelp, etc. Habitat loss and damage to these ecosystems can be attributed to anthropogenic causes in the area such as a rise in development near coastlines, destructive harvesting and fishing methods, and deteriorating water quality,²⁰ or sand mining as in Mauritius, among others. Prior to 2001, sand mining in coastal lagoons was causing the degradation of seagrasses, but notable recuperation of the seagrasses has been observed since the banning of sand mining. Despite this, the effects of climate change are likely to have the most severe impacts on these ecosystems.²¹

Of the assessed countries, three show moderate to high prioritization of marine habitat restoration across both their Blue Economy strategies and NDCs: Seychelles, Madagascar, and Mauritius. The Mauritius Blue Economy action plan includes restoration of lagoon systems, coral reefs and mangroves, and notes that it is "a 'no-regrets' investment, creating significant sustainable benefits for coastal fisheries, for the tourist industry, and by mitigating coastal erosion."²²

The Cabo Verde Blue Economy strategy makes no mention of restoration, but its NDC does have a

holistic view on the restoration of marine habitat for climate change adaptation. It notes that the use of nature-based solutions in planning and implementing coastal restoration “works to combine with or substitute for grey infrastructure” and seeks to “incentivize their use to sequester and

store carbon and improve coastal resilience, while also delivering food, socioeconomic and cultural benefits (artificial wetlands or salt marshes, beach nourishment, reef creation, revegetation, dune fixing shrubs, nutrient cycling, expansion room for the sea or dunes).”²³

Box 2. The Role of Blue Carbon as a Climate Adaptation and Resilience Response

Blue carbon refers to the carbon captured by coastal vegetated ecosystems (mangroves, kelp forests, seagrass beds, salt marshes, etc.) and stored in biomass and sediments. The carbon sequestered over long timescales represents a sink of carbon in these ecosystems. There is considerable global research that quantifies the capacity for sequestration and the contribution this could make to meeting NDC and other climate-related targets, using blue carbon as a mitigation activity.²⁴

In addition to their role as natural carbon sinks, such that their restoration and rehabilitation can reduce net greenhouse gas emissions, coastal vegetated habitats also foster high levels of biodiversity and provide extensive ecosystem services.²⁵ This includes providing services to the fisheries sector by acting as nurseries, breeding grounds, and feeding grounds, which is particularly critical given the declining fish stocks associated with habitat loss and changes in stock distribution due to climate change.



Photo: Richard Volk/USAID-EGAT

Aside from this, these ecosystems also provide protection from coastal erosion. Thus, their protection and restoration as part of blue carbon mitigation efforts will also contribute to climate adaptation and resilience.²⁶ Conversely, when these ecosystems are degraded, the co-benefits are greatly diminished, along with the capacity to sequester carbon, and stored carbon can be released back to the atmosphere, along with other greenhouse gases.²⁷

Blue carbon is at the heart of biodiversity and climate change and alongside its primary role as a mitigation response, acts as an incentive for developing adaptation as it promotes the conservation and rehabilitation of coastal ecosystems and therefore increases the ability for coastal countries to adapt to the effects of climate change. The increase in ecological health of these ecosystems associated with efforts to increase blue carbon sequestration also provides a multitude of indirect services such as filtering water and pathogens, reducing pathogens, and provisioning alternate resources,²⁸ all of which will aid in adapting to environmental fluctuations.

Of all the African coastal countries, only Seychelles refers specifically to blue carbon in its NDC document. Nine of the countries with Blue Economy strategies or action plans make reference to the significance of coastal vegetated ecosystems for adaptation. Within the Blue Economy strategies and action plans themselves, five countries (Seychelles, Mauritius, Republic of the Congo, Somalia, and Burkina Faso) have specific actions around blue carbon.

Given the urgency of coastal nations to respond to climate change, there is significant opportunity through the high potential of blue carbon to offer triple-value benefits in adaptation, mitigation, and resilience. Activities that restore and protect blue carbon also offer the potential for developing market-based mechanisms that take advantage of existing frameworks for carbon offsets.



Photo: ChrisVanLennep/iStock

RECOMMENDATIONS

Blue Economy development varies considerably across Africa. Some countries have achieved excellent progress toward climate-smart Blue Economies that include drafting and implementation of strategies and action plans in areas such as spatial planning and MSP; protection of marine and coastal habitats; restoration, nature-based solutions, and ecological engineering. In others, development is still at a rudimentary stage.

Based on the analysis prepared for this chapter and the lessons learned from leading coastal African nations, the following policy recommendations can be considered for governments and policymakers:

- Achieve a better alignment and integration of climate adaptation strategies with Blue Economy development strategies.
- Prioritize the formulation of Blue Economy action plans to integrate all the diverse elements of the Blue Economy, and make marine planning and marine spatial management an essential part of Blue Economy strategy.
- Accord the same degree of priority and emphasis to the creation of MPAs as other kinds of natural reserves so as to ensure the conservation and/or restoration and sustainable management of blue capital.
- Correct the bias toward land-based spatial planning in national strategies such as NDCs in light of the importance of marine planning and the Blue Economy to the many coastal countries of Africa.
- Empower RECs to play a greater role in the management of shared marine resources and encourage such management to follow sustainable Blue Economy principles.
- Ensure that there is sufficient political will, stakeholder involvement, and personnel deployment to implement marine protection legislation.