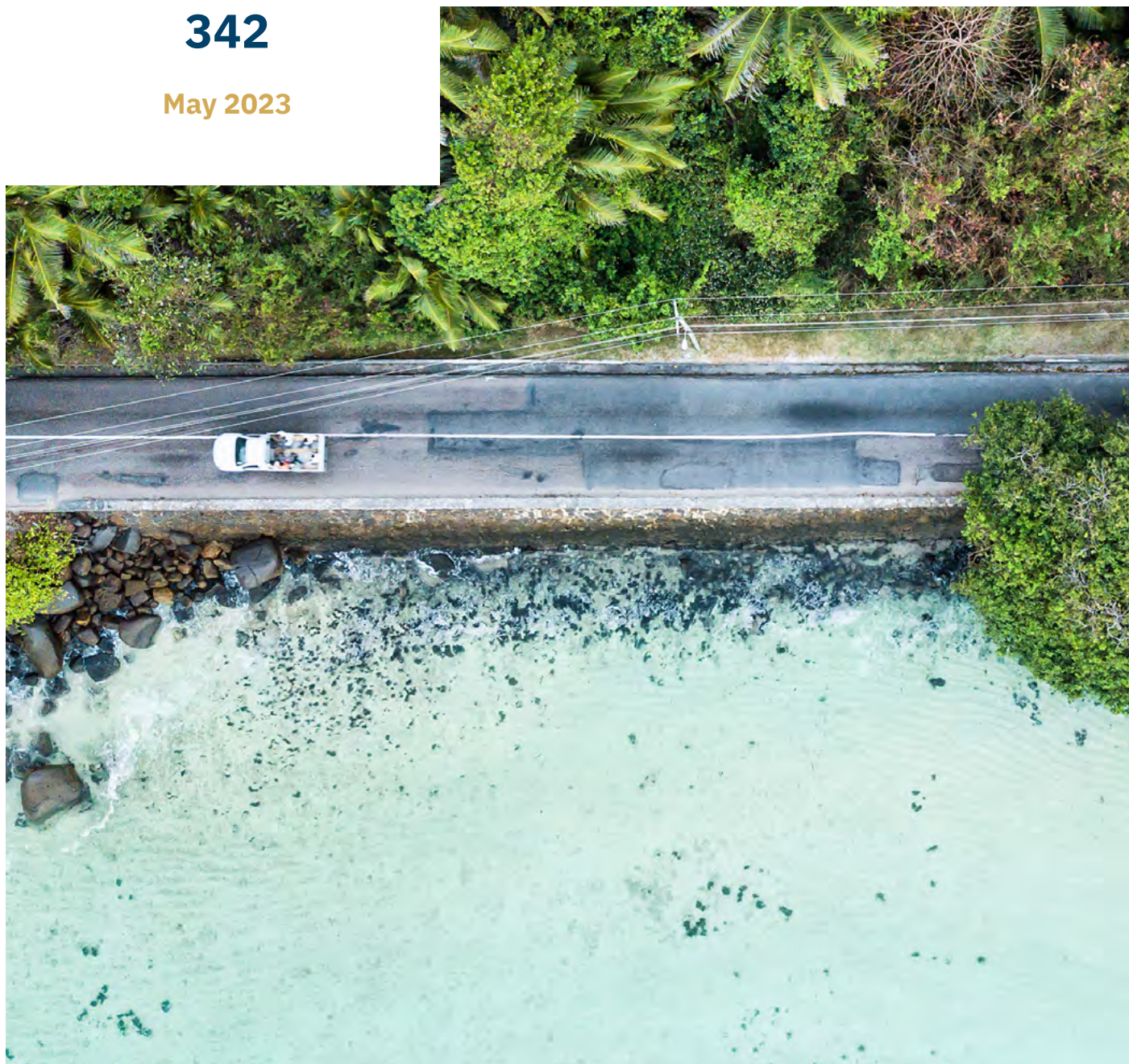


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Financing EbA for Marine and Coastal Resources

ANGELIQUE POUPONNEAU



Abstract

This paper is a response to the question, ‘How will we finance ecosystem-based adaptation (EbA) for marine and coastal resources?’ Finance provided for climate adaptation is not commensurate with the finance required for adaptation action. EbA for marine and coastal resources provides countries with an opportunity to use nature as a solution to the most pressing concern of our time, climate change. However, such commitments are hampered by having the necessary finance to support implementation. Using predominantly SADC regional case studies of financing opportunities, this paper discusses opportunities for the financing of EbA from various sources, including public, private, philanthropic and blended finance. Each option poses its own strengths and challenges and the various options should be carefully considered. This paper provides practical recommendations for policy, and for institutional, regulatory and advocacy steps that should be taken to unlock financing for states that opt to pursue EbA action for their marine and coastal resources.

Introduction

There is growing interest in ecosystem-based adaptation (EbA) action as an effective adaptation action that supports people and the planet. In some instances, such action also provides mitigation co-benefits that can be implemented immediately. Once a country decides on taking EbA action, it soon becomes evident that EbA comes at a cost. The critical question is, 'How do we finance EbA?' Financing nature-based solutions, including EbA action for marine and coastal resources, has not received significant scholarly attention.¹ The literature on this subject focuses on estimating the cost of EbA action, such as conservation and restoration efforts, while neglecting the question of how these efforts are to be funded. This paper investigates financing options; in other words, the generation of financing instruments to fund the costs of EbA in SADC countries.

How much will it cost?

Accurate costing for the funding of sustained EbA action is a challenge. Costs may include those associated with mapping marine and coastal ecosystems, protection and enforcement measures, monitoring spatial and temporal changes in ecosystems, and evaluating the effectiveness of these measures once implemented. Additionally, such efforts need to be accompanied by projects and programmes that require human capital. Overall, this requires sustained long-term funding. There are no established methodologies for calculating the costs of EbA action. Understanding the needs, and the cost of those needs, is a critical first step, which often underestimates the associated challenges. To date, the costing of EbA action has focused on the conservation of marine and coastal ecosystems. Such costing exercises have employed different methodologies and have produced varying estimates. Considering those methodologies is beyond the scope of this paper. Nevertheless, it cannot be ignored that the funding gap to meet the costs of marine conservation varies between \$300 billion and \$7 trillion.²

There are multiple sources and forms of funding that can support EbA action, each with its own strengths and limitations

1 Melissa Bos, Robert Pressey and Natalie Stoeckl, "Marine Conservation Finance: The Need for and Scope of an Emerging Field", *Ocean & Coastal Management* 114 (September 2015): 116–28.

2 Credit Suisse, WWF and McKinsey & Company, *Conservation Finance: Moving beyond Donor Funding toward an Investor-Driven Approach* (Zurich: Credit Suisse, 2014); Trucost, *Natural Capital at Risk: The Top 100 Externalities of Business*, Report on behalf of The Economics of Ecosystems and Biodiversity for Business Coalition (London: Trucost, 2013).

In 2019 the Seychelles, a small island developing state (SIDS) in the Western Indian Ocean (WIO), undertook a costing of its 30% marine protection commitment based on three different management scenarios, from basic to optimal. It found that the annual cost of managing 400 000km² of marine protected areas in the Seychelles was between \$75 and \$106 per km², depending on the scenario implemented.

With the continuation of the COVID-19 pandemic in 2021, the Seychelles government identified the need to update this costing analysis to take into consideration the changes in resource availability.

Source: Seychelles Conservation and Climate Adaptation Trust, "Financing Options to Implement 400,000km² of New Marine Protected Areas under the Seychelles Marine Spatial Plan", <https://seyccat.org/financing-options-to-implement-400000km2-of-new-marine-protected-areas-under-the-seychelles-marine-spatial-plan/>

Who will pay for it?

There are multiple sources and forms of funding that can support EbA action, each with its own strengths and limitations. The different funding sources include public, private and philanthropic. Funding can be programmed either bilaterally or multilaterally and can be in the form of grants, loans or other equity-based financial instruments.

TABLE 1 SOURCES AND EXAMPLES OF FUNDING FOR EBA ACTION

Sources of funding	Examples
National	
Public	Taxes, grants
Private	Corporate social responsibility, commercial funding (debt, such as loans, equity or hybrid instruments)
Philanthropic	Donations
International	
Bilateral funders – countries	Germany, United Arab Emirates, UK
Bilateral funders – private	Multinational corporations' (MNCs) investments in the form of, inter alia, corporate social responsibility (CSR) and impact investing, or concessional loans
Bilateral funds – philanthropic	Pew Charitable Trusts, Nekton Foundation, Blue Action Fund
Multilateral funds (climate funds)	Global Environment Facility (GEF) Adaptation Fund (AF) Green Climate Fund (GCF)
Multilateral funds	World Bank's PROBLUE fund
Regional	African Development Bank
Blended	Debt swap Blue bond

Source: Compiled by author

National sources of funding

BOX 2 EXAMPLE B

The International Union for Conservation of Nature's (IUCN) 2020 report *Closing the Gap: Financing and Resourcing of Protected and Conserved Areas in Eastern and Southern Africa* provides many examples of funding options for protected areas. It specifically highlights the use of entry fees collected by protected areas' management authorities as a sustainable source of funding. The report notes that the majority of revenue collected by protected areas' management authorities came from entry fees.

Source: International Union for Conservation of Nature, Eastern and Southern Africa Regional Office, *Closing the Gap: Financing and Resourcing of Protected and Conserved Areas in Eastern and Southern Africa* (Nairobi: IUCN, ESARO, 2020)

Countries that boast expanses of marine ecosystems can use national sources of funding to pay for EbA action. This funding usually comes from the national budget, generated by taxes and other regulatory tools such as entry fees to natural areas and penalties for environmental offences. Governments collect a host of taxes through taxation on goods and services, for example – taxes on bills for water usage, business taxes, CSR taxes and carbon taxes on plane tickets. These taxes are generally channelled into the government's consolidated fund where they are used for numerous government functions. EbA action is seldom at the top of the list of priorities for national funding. However, a good example is the Expanded Public Works Programme in South Africa. Through this programme, the government provides grants to local agencies for poverty and income relief through temporary work for the unemployed, including the rehabilitation of natural resources and biodiversity conservation.³ Another model is through the collection of entry fees to protected areas or wetlands. Models differ from country to country – some collect fees and channel them as described above, while others task a government agency to collect, use and invest the funds for protected areas.

With competing priorities, there is often a need to make a case for investment in EbA

³ Republic of South Africa, "Expanded Public Works Programme", <https://www.gov.za/about-government/government-programmes/expanded-public-works-programme>.

One of the main concerns is the absence of the value of nature in national accounting processes

With competing priorities, there is often a need to make a case for investment in EbA. Ecosystem valuation studies have been undertaken to quantify the contribution of ecosystems to the economy. What value does marine and coastal ecosystems have? Do they generate a profit? Do they contribute to the economy? The economic valuation of marine and coastal ecosystems has been advanced as one way to incentivise the financing of EbA.⁴ However, the subject of the monetary valuation of ecosystem services, and payment for those services, has not been straightforward. Generally, the valuation of ecosystem services is complicated. Given the diversity of ecosystems, valuation studies of ecosystem services have focused on a limited number of services, usually attributed to a sector. This has raised concerns about oversimplification and failure to appreciate the complexity of biological interactions.⁵ One of the main concerns is the absence of the value of nature in national accounting processes. This has led to growing interest in ‘ocean accounting for national processes’ to make the case for a better understanding of the contribution of nature to the economy; thus, attempting to create incentives to channel resources and private investments to support EbA.⁶ The most advanced report from the SADC region is the *Ecosystem Accounts of South Africa*.⁷

International sources of funding

As a result of national budget limitations, governments of developing countries have opted for international financing.⁸ Because EbA is a form of climate action within the global climate crisis, it needs to be informed by the international climate architecture. In 2015, developed countries that were party to the Paris Agreement committed to the delivery of a collective \$100 billion annually by 2020 to developing countries.⁹ It was agreed that this amount would be balanced between mitigation and adaptation efforts.¹⁰ By 2021, however, neither the \$100 billion per year goal nor the mitigation and adaptation balance had been

4 Roger Ullman, Vasco Bilbao-Bastida and Gabriel Grimsditch, “Including Blue Carbon in Climate Market Mechanisms”, *Ocean & Coastal Management* 83 (October 2013): 15–8.

5 Irene Ring et al., “Challenges in Framing the Economics of Ecosystems and Biodiversity: The TEEB Initiative”, *Current Opinion in Environmental Sustainability* 2, no. 1–2 (May 2010): 15–26.

6 Jordan Gacutan et al., “Marine Spatial Planning and Ocean Accounting: Synergistic Tools Enhancing Integration in Ocean Governance”, *Marine Policy* 136 (February 2022).

7 South Africa National Biodiversity Institute and Statistics South Africa, *Ecosystem Accounts for South Africa: Report of the NCAVES Project*, Report developed in partnership with UN Statistical Division and UNEP (Pretoria: SANBI, 2021).

8 Nagisa Shiiiba et al., “How Blue Financing Can Sustain Ocean Conservation and Development: A Proposed Conceptual Framework for Blue Financing Mechanism”, *Marine Policy* 139 (May 2022).

9 UN Framework Convention on Climate Change, *Report of the Conference of the Parties on its 21st session, Held in Paris from 30 November to 13 December 2015*, Decision 1/CP.21 (Geneva: UN, 2016), para. 53.

10 UN, Paris Agreement, Article 9(4) (Geneva: UN, 2015).

achieved; consequently, there was a renewed commitment to ‘double adaptation finance’.¹¹ The way in which funds are programmed, ie, whether they are channelled bilaterally (directly to a country) or multilaterally (via multilateral climate funds [MCFs] or multilateral development banks [MDBs]), is at the discretion of the funder.

As a result of national budget limitations, governments of developing countries have opted for international financing

Bilateral

Donor countries may opt to programme their funds bilaterally. This enables them to decide who will receive the funding and for what the funding will be used. Using bilateral channels to programme international funding has its advantages and disadvantages. On one hand, it is based on existing long-term relationships, does not necessarily involve writing a project application and can be engaged in with the agreement of both countries. On the other hand, bilateral funding is subject to the interests of the donors and influenced by geopolitics.¹² This leads to a lack of predictability, sustainability and transparency. The perception among donor countries that the donor-recipient relationship that emerges from bilateral funding is an equal partnership has been questioned by recipient countries.¹³ The move to partnerships denotes more autonomy and sovereignty for countries in deciding for what purposes they require funding and how they will address their challenges, instead of having conditions imposed on them, as was the case in the 1980s. However, there has been growing criticism of whether this is actually happening or whether this is merely a buzzword used in international discourse.¹⁴

Multilateral

Channelling funding through multilateral funds overcomes some of the criticisms of bilaterally programming. On one hand, it places the responsibility for project selection in the hands of an independent board that uses set criteria to evaluate projects. This is the case with the AF and the GCF. Additionally, it does not require any eligibility criteria that hamper developing countries from accessing climate funding. Multilateral funding, therefore, provides adequate, predictable and sustainable funding for countries.

11 UN Framework Convention on Climate Change, *Report of the Conference of the Parties on its 21st session, Held in Paris from 30 November to 13 December 2015*, Decision 1/CMA.3 (Geneva: UN, 2016), para. 18.

12 Hannes Öhler and Peter Nunnenkamp, “Needs-based Targeting or Favoritism?: The Regional Allocation of Multilateral Aid within Recipient Countries”, *Kyklos* 67, no. 3 (August 2014): 420–46; Javed Younas, “Motivation for Bilateral Aid Allocation: Altruism or Trade Benefits”, *European Journal of Political Economy* 24, no. 3 (September 2008): 661–74.

13 Karen del Biondo, “Moving beyond a Donor-Recipient Relationship?: Assessing the Principle of Partnership in the Joint Africa–EU Strategy”, *Journal of Contemporary African Studies* 38, no. 2 (September, 2020): 310–29.

14 Del Biondo, “Moving beyond a Donor-Recipient Relationship?”.

Unfortunately, multilateral funds are generally underfunded, have complex accreditation and application processes, and are limited by the politics of each board member. The Financial Mechanism of the UN Framework Convention on Climate Change (UNFCCC) includes three main international funds: GEF, AF and GCF. Another distinction that should be made is that funding through climate funds differs from funding through MDBs. MDBs can impose eligibility requirements and conditions that climate funds cannot. This raises the issue of the challenge of access to finance, which is explored below.

MDBs can impose eligibility requirements and conditions that climate funds cannot. This raises the issue of the challenge of access to finance

Climate funds

The GCF and AF have been providing funding for EbA projects to SADC marine and coastal ecosystems since 2019 and 2011 respectively. A review of the projects indicates that approximately \$366 million has been provided to countries in the SADC region to support resilience building for a variety of ecosystems. These ecosystems include coral reefs and mangroves. It is also evident that these EbA projects have close community engagement. Annexure 1 showcases EbA projects that have benefited the SADC region. It is worth highlighting that, in some instances, there are different projects focused on different ecosystems in the same country, and across national boundaries. Potentially these approaches make the case for projects that amplify the connectivity between ecosystems and the continuity of marine ecosystems beyond national jurisdictions.

Development funds

Another opportunity for EbA in coastal and marine ecosystems is the growing interest in the link between nature and development through development agendas such as the 2030 Agenda for Sustainable Development, and in the blue economy. This has raised the profile of development pathways that support the health of marine ecosystems and thereby mobilise both interest and resources to support such pathways. Development agencies, including the UNDP, World Bank and regional development banks, have been contributing both technical and financial resources to support EbA projects. For example, marine protection is one of the top five sectors receiving development finance. In 2020 marine protection received approximately \$3.9 billion in overseas development assistance.¹⁵ Yet public sources of funding have limitations. To date, the delivery of public sources of

¹⁵ Organisation for Economic Co-operation and Development, "Trends of ODA for a Sustainable Ocean Economy", Sustainable Ocean for All Initiative: Data Platform on Development Finance for the Sustainable Ocean Economy, <https://oecd-main.shinyapps.io/ocean/>.

funding has not been successful. This is evident from the failure of developed countries to deliver on their legal obligation of \$100 billion annually in funding, and the continuing decline in overseas development finance. In addition to dwindling funding, access to existing funds has also been identified as a challenge.

Marine protection is one of the top five sectors receiving development finance

BOX 3 EXAMPLE C

The World Bank's PROBLUE is a multi-donor trust fund 'that supports the development of integrated, sustainable and healthy marine and coastal resources'. One of its key areas is building government capacity to manage marine resources, including nature-based infrastructure (such as mangroves), in an integrated way to deliver greater and longer-term benefits to countries and communities.

PROBLUE has a portfolio worth over \$9 billion that is channelled to different projects, including integrated coastal and marine ecosystem management.

Source: World Bank, "PROBLUE: Healthy Oceans, Healthy Economies, Healthy Communities", <https://www.worldbank.org/en/programs/problue>

Access to finance

The challenge of access to finance is pressing, as some SADC countries have been excluded from or are no longer eligible for concessional finance because their economic categorisation has been downgraded. Of the 16 SADC countries, nine are categorised as least-developed countries (LDCs), two are high-income countries and five are low- to upper-middle-income countries. These categories are determined by the country's annual per capita gross national income (GNI). Countries with a per capita GNI of between \$1,086 and

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\$13,205 do not have access to grants; while countries with a per capita GNI of \$13,205 and above do not have access to either grants or concessional finance.¹⁶

The SADC countries' economic categorisation is set out in Table 2.

Least-developed countries	Low- to upper-middle-income countries	High-income countries
Angola ^a	Namibia	Seychelles
Comoros	Botswana	South Africa
Democratic Republic of Congo (DRC)	Eswatini	
Lesotho	Zimbabwe	
Madagascar	Mauritius	
Malawi		
Mozambique		
Tanzania		
Zambia		

a Angola was set to graduate from the LDC category in 2022

Source: World Bank, "Countries and Economies", <https://data.worldbank.org/country/>

The issue of economic categorisation as a criterion to access finance is particularly difficult for SIDS in the SADC region. Seychelles is categorised as a high-income country and Mauritius is set to graduate in the next few years. This economic categorisation ignores the fact that both countries are also categorised as SIDS, a category acknowledged to be particularly vulnerable under the UNFCCC process, yet Seychelles does not have access to grants or concessional finance. In the context of climate change, this is inequitable for a SIDS country that is 'particularly vulnerable to the adverse effects of climate change'.¹⁷ Seychelles is not eligible because of its high-income category – a category based purely on its GNI, which is skewed because of the country's small population of fewer than 100 000 people. The story of Seychelles is explored in more depth below. Its situation should not be seen as an anomaly, as countries continue to graduate annually.

The issue of economic categorisation as a criterion to access finance is particularly difficult for SIDS in the SADC region

16 World Bank, "World Bank Country and Lending Groups", World Bank Data Help Desk, https://datahelpdesk.worldbank.org/knowledgebase/articles/906519#High_income.

17 UN, *Paris Agreement*, Article 9(4), 11(1).

MCFs, such as the GCF, AF and GEF, provide funding to all SADC countries without any eligibility requirements. Multilateral funds are established to provide developing countries with predictable, adequate and sustainable finance without being hindered by multiple eligibility requirements. Despite all developing countries having access to these multilateral funds, access to finance is still a challenge; in particular, application processes are complex and bureaucratic. In 2017 the GCF introduced the simplified approval process (SAP), but complaints persist. It is worth noting that Mozambique and Namibia, both in the SADC region, have been successful in accessing funding from the GCF through the SAP. Another challenge to the procurement of climate funds is that access to these funds is sometimes affected by the politics of the UNFCCC process.

Despite all developing countries having access to these multilateral funds, access to finance is still a challenge; in particular, application processes are complex and bureaucratic

Moving away from public funds...

Besides admitting to the inherent limitations of public funds, the international community has also acknowledged that public sources of funding are not sufficient to meet development costs, and that countries need to attract private capital.¹⁸ Hence, efforts to attract private capital, such as philanthropic and blended finance, have been suggested as ways to close the funding gap.

The international community has also acknowledged that public sources of funding are not sufficient to meet development costs, and that countries need to attract private capital

Philanthropic funding

Philanthropists employ various legal persona, such as foundations or high net-worth individuals. In recent years, philanthropists have shown a growing interest in the ocean. Such

¹⁸ UN General Assembly, "Resolution 69/313, Addis Ababa Action Agenda of the Third International Conference on Financing for Development" (Addis Ababa Action Agenda) A/RES/69/313 (July 27, 2015).

interests are usually tied to conservation of the ocean, resulting in funds being channelled to the EbA of marine and coastal ecosystems. Similar to bilateral donors, philanthropists have their own interests and often provide once-off donations, such as grants.¹⁹ In some instances, depending on the financial tools, philanthropists may also offer low-interest (concessional) loans. Unfortunately, once-off donations fail to provide the sustained and predictable financing required for long-term EbA efforts, resulting in irregular project cycles.²⁰ Notwithstanding, philanthropy can play a key role in financing EbA projects, especially those that will not yield a return on investment, such as the scientific mapping of ecosystems and other feasibility research that scales projects to make them bankable.

Private sector capital

Private sources of funding are usually from commercial investors (such as banks, asset managers and institutional investors), venture capitalists, impact investors and MNCs, and are usually deemed foreign direct investments. The private sector usually provides funding in the form of loans, either concessional or traditional, or equity. More recently, the private sector, primarily through impact investors, has also engaged in sustainability-linked bonds. In the case of EbA, private sector engagement has been with small projects, as part of larger investments, whereby MNCs have acknowledged the importance of addressing their social and environmental impact through corporate social responsibility.²¹ SADC countries benefit significantly from marine and coastal resources and depend on tourism and fisheries, two fields in which most MNCs invest. Many tourist establishments are located near or adjacent to marine and coastal ecosystems and MNCs have opted to channel their corporate responsibility funds into coral reef or mangrove rehabilitation projects.

Unfortunately, private sector funding has not been particularly forthcoming

Unfortunately, private sector funding has not been particularly forthcoming.²² Firstly, on a macro level, the risks associated with investing in developing countries result in high interest rates. Such risks include political risks, such as governments changing their laws or their socio-economic policies during the lifetime of a project, which may affect the success of economic opportunities. Furthermore, EbA action does not often result in a financial return on investment, whether owing to its nature or its smallness of scale, which

19 Maano Ramutsindela, Marja Spierenburg and Harry Wels, *Sponsoring Nature: Environmental Philanthropy for Conservation* (Abingdon: Earthscan, 2011).

20 Ramutsindela, Spierenburg and Wels, *Sponsoring Nature*.

21 Felipe Arias Fogliano de Souza Cunha, Erik Meira and Renato J Orsato, "Sustainable Finance and Investment: Review and Research Agenda", *Business Strategy and the Environment* 30, no. 8 (December 2021): 3821-38.

22 OECD, "Data Platform on Development Finance".

does not make it very attractive to the private sector. With regard to investment risks, tools have been introduced to minimise these, such as political risk insurance in the US or other risk reduction mechanisms such as partial guarantees by the World Bank. Furthermore, there has been some scepticism around 'blue washing' and, therefore, there has been a desire to have a set of principles that can be used to assess investments. This has led to the development of principles, such as the sustainable Blue Economy Finance Principles.²³ With regard to the latter, there have been growing efforts to explore financial mechanisms and instruments to enable EbA action to generate an acceptable return on investment.

There have been growing efforts to explore financial mechanisms and instruments to enable EbA action to generate an acceptable return on investment

Impact investors have stepped in to demonstrate that private sector engagement can support EbA action and still generate a return on investment. As Jenn Pryce, CEO of Calvert Impact Capital, states:²⁴

The blue bond demonstrates the potential for capital markets to scale sustainable oceans solutions that expertly align marine conservation and economic opportunity. The oceans finance market is quite nascent, but the need for capital to address threats to the health of our ocean is increasingly urgent. The blue bond sets a great example of the type of bold leadership from governments and financing from public and private that we need more of.

The Seychelles sovereign blue bond is examined in depth later in this paper.

Blended finance

Blended finance is defined as leveraging public funds to attract private finance.²⁵ As it uses public and private sources of funding, blended finance offers both grants and loans (or other commercially based funding). Blended finance has been identified as the main means to bridging the funding gap.

23 European Commission et al., "The Principles: Sustainable Blue Finance", <https://www.unepfi.org/blue-finance/the-principles/>.

24 World Bank, "Seychelles launches World's First Sovereign Blue Bond", Press Release, October 29, 2018.

25 Convergence, *The State of Blended Finance 2018*, Policy Research Report (Toronto: Convergence, 2018).

Blended finance has been identified as the main means to bridging the funding gap

Debt swaps and blue bonds

Funding for EbA for marine and coastal ecosystems has often been in the form of blue bonds or debt-for-nature swaps/conversions. These are 'debt-instruments issued by governments, development banks or others to raise the funds from investors to finance marine and ocean-based projects that have positive environmental, economic and climate benefits'.²⁶

BOX 4 CASE STUDY 1: SEYCHELLES' BLENDED FINANCE SOLUTIONS

Seychelles is a SIDS located in the WIO. It boasts an exclusive economic zone (EEZ) of 1.4 million km². The main pillars of its economy are tourism and fisheries. In 2008, Seychelles was hard hit by the global recession. Through a macroeconomic reform programme, it began a series of structural adjustments and investigative mechanisms to address its three main priorities. These were: addressing its high external debt, combatting climate change and benefiting from its expanse of ocean through the blue economy. EbA for marine and coastal ecosystems was an ideal opportunity to address all three. In 2012 at Rio+20, the Seychelles government announced its intention to protect 30% of its EEZ. After four years of negotiations, it concluded a \$21.6 million debt-for-nature swap.

The debt-for-nature swap is an example of blended finance for EbA whereby, through The Nature Conservancy's (TNC) investment arm, NatureVest, TNC mobilised \$15.2 million in loans and \$5 million in grants to enable the Seychelles government to buy back \$21.6 million of its sovereign debt from its external creditors (eg, Belgium, the UK, Italy and France). This is an example of blended finance, whereby public funds (ie, the public debt) is leveraged to attract private finance (ie, the funds mobilised by NatureVest). The government of Seychelles was able to benefit from this improved fiscal space and a grant from TNC to support the marine spatial planning process.

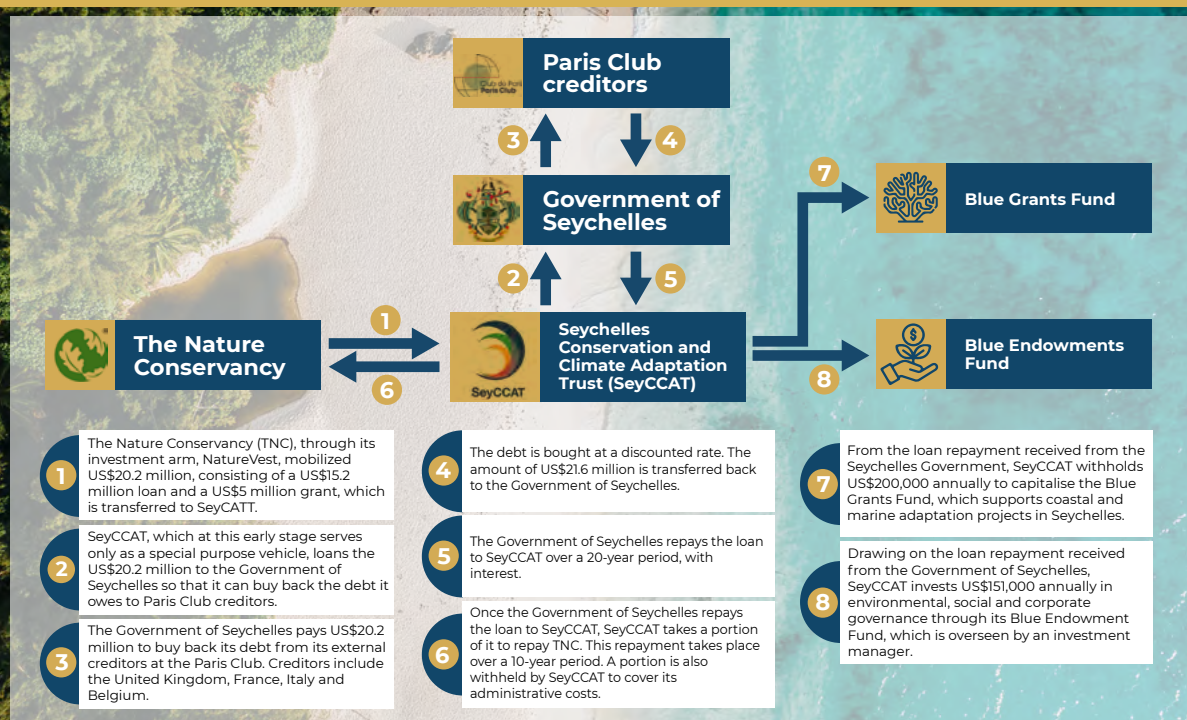
26 Benjamin S Thompson, "Blue Bonds for Marine Conservation and a Sustainable Ocean Economy: Status, Trends, and Insights from Green Bonds", *Marine Policy* 144 (October 2022).

Sovereign blue bonds

In 2018 the Seychelles government issued a \$15 million sovereign blue bond where the proceeds would be administered as grants and loans to finance sustainable fisheries' projects. The Seychelles' Conservation and Climate Adaptation Trust (SeyCCAT) manages \$3 million as grants through the Blue Grants Fund (BGF); and the Development Bank of Seychelles manages \$12 million as loans through a revolving loan facility, the Blue Investment Fund. This is an example of blended finance whereby the bond is issued by a government and investors are private impact investors: Calvert Impact Capital, Nuveen and Prudential. Furthermore, the interest costs were reduced from almost 7% to less than 3% by putting risk reduction mechanisms in place, such as a partial guarantee by the World Bank and a concessional loan to support repayment from the Global Environment Facility. Although, not specifically for EbA, this financial instrument has allocated \$1.5 million to support sustainable-use marine protected areas and contribute to the recovery of fish stocks, which are integral to EbA action.

Together, the proceeds of the debt-for-nature swap and sovereign blue bonds offer eligible groups in Seychelles an annual \$700,000 envelope for grants and \$12 million in loans.

Seychelles Debt-For-Nature Swap



www.mattgriffiths.com

The creation of SeyCCAT: To facilitate such blended finance deals, an independent financially autonomous trust fund assists with the execution of the deal. This trust fund, SeyCCAT, was established by the Seychellois parliament. The repayment of the debt is used towards the administration of SeyCCAT and SeyCCAT's BGF – a grants facility that annually disburses \$700,000 to marine conservation and climate adaptation projects. This financing will be available for a 20-year period, thereby providing a long-term sustainable source of financing. SeyCCAT, a financing mechanism, disburses grants to support EbA by local communities, for example the Terrestrial Restoration Action Society Seychelles' mangroves restoration project at Pasquiere on Praslin. Since its inception, SeyCCAT has attracted more financing to EbA, such as a significant philanthropic donation from Pew Charitable Trusts, to undertake mapping of seagrass meadows, integrate blue carbon into its international climate policy, and, most recently, secure the position of convening agent for Seychelles for the Global Fund on Coral Reefs. SeyCCAT's trust fund has proven to be a critical part of the financing ecosystem used to mobilise funding for Seychelles' EbA. However, it is important to appreciate that the governance of the trust fund has been pivotal to SeyCCAT's success in attracting more finance.

Source: www.seyccat.org

Blue carbon financing and blue carbon markets

Blue carbon is another area of growing interest in both scholarly literature and practice. Although the name 'blue carbon' comes from the fact that these marine and coastal ecosystems are absorbing carbon from the atmosphere, they are performing additional ecosystem services, such as acting as nurseries for fish species and habitats for food for fish, and encouraging biodiversity.²⁷ In this instance, the mitigation and adaptation dichotomy is not clear-cut because of the co-benefits that ecosystems provide. The majority of countries that have added blue carbon to their nationally determined contributions (NDCs) include it as an adaptation action and hence, as EbA. Six (Angola, Seychelles, DRC, Madagascar, Mozambique and Namibia) of the 16 SADC countries included EbA through blue carbon as an adaptation action.

Six (Angola, Seychelles, DRC, Madagascar, Mozambique and Namibia) of the 16 SADC countries included EbA through blue carbon as an adaptation action

²⁷ Lindsay Wylie, Ariana E Sutton-Grier and Amber Moore, "Keys to Successful Blue Carbon Projects: Lessons Learned from Global Case Studies", *Marine Policy* 65 (March 2016): 76–84.

In the context of EbA, there have been both market and non-market approaches to raising funds to support the protection and restoration of blue carbon ecosystems. Financing for blue carbon activities is not limited to one source and can come from national planning, carbon offset schemes (both voluntary and compliance offsets), CSR projects, pilot programmes, payments for verified emission reductions and other finance, such as insurance and bonds.²⁸ Such initiatives have been seen in the context of forests, for example, reducing emissions from deforestation and forests degradation (REDD+) programmes under the UNFCCC, but private financing has been the main source of funds for REDD+ projects.²⁹ The continuing scepticism as to whether blue carbon is ready for the market has resulted in funding being made available only to small pilot projects.³⁰

The continuing scepticism as to whether blue carbon is ready for the market has resulted in funding being made available only to small pilot projects

The most notable blue carbon project that has generated revenue is the Mikoko Pamoja project in Kenya.

BOX 5 CASE STUDY 2: THE MIKOKO PAMOJA

The Mikoko Pamoja is a mangrove and restoration project in Kenya. It includes 117ha of nationally owned mangroves. The ecosystem services provided by the mangroves include shoreline protection, protection of habitat biodiversity and support of local livelihoods.

This small-scale community-led project is financed through a payment-for-ecosystem-services agreement between the communities of Gazi Bay and Plan Vivo, which manage the voluntary carbon credits – approximately 2 215 credits annually. The price of each carbon credit is between \$6.50 and \$10.00. These credits can be bought by public or private entities. The revenue generated from the sale of the credit, \$12,500 annually, has been channelled to community development projects, such as the generation of alternative livelihoods from beekeeping and ecotourism. Women have been the primary beneficiaries of the project.

28 David Gordon et al., *Financing Options for Blue Carbon: Opportunities and Lessons from the REDD+ Experience*, Report NI R 11-11 (Durham, NC: Nicholas Institute for Environmental Policy Solutions, Duke University, 2011); Ullman, Bilbao-Bastida and Grimsditch, "Including Blue Carbon".

29 Sebastian Thomas, "Blue Carbon: Knowledge Gaps, Critical Issues, and Novel Approaches", *Ecological Economics* 107 (November 2014): 22–38.

30 Thomas, "Blue Carbon".

This project has served as a model for other bays nearby. However, the scale of the project is still small and it has struggled to obtain buyers. Nevertheless, it has gained international attention and has enabled the East African Forum for Payment for Ecosystem Services networking body to promote similar projects in other East African countries.

Source: Lindsay Wylie, Ariana E Sutton-Grier and Amber Moore, "Keys to Successful Blue Carbon Projects: Lessons Learned from Global Case Studies", *Marine Policy* 65 (March 2016): 76–84

Scale and replicability

Examples of blended finance are few and still small in scale. It was only in 2021, six years after the first debt-for-nature swap for ocean conservation, that a debt-for-nature swap was replicated and scaled up. In 2021, Belize launched a \$363 million 'super blue bond' and in 2022 Barbados concluded a \$50 million debt-for-nature swap. The lack of replication of such blended finance deals has raised concerns as to their replicability and whether they are only viable in specific contexts.

Examples of blended finance are few and still small in scale. The lack of replication of such blended finance deals has raised concerns as to their replicability and whether they are only viable in specific contexts

There are several critics of such deals, but limited attempts have been made to document the reasons for their slow replication. Pursuing blended finance is often not the preferred option for countries. There may be many reasons to secure a blended finance deal. Researchers have not examined this in any depth, so it can only be assumed that it is linked to high-priority issues such as external debt management. That said, when examining trends for the replication of blue bonds, they appear to be most popular during times of economic slumps, such as the global financial recession in 2008, the ongoing COVID-19 pandemic, and the current political instability in Eastern Europe. Furthermore, based on Seychelles' experience alone, they may take many years to come to fruition, which may, inter alia, be aggravated by waning levels of interest and commitment, or changes in government. Experience of blended financial funding in Seychelles shows that, when technical questions arise (such as the acceptable blue-bond size commensurate to policy commitments), discussions often lead to divergent views. Despite being advanced at

the highest political level,³¹ these divergent views can further delay decisions. Academics criticise such deals as opting for easy impact measures rather than meaningful measurements.³²

Thus far, blended finance examples have been spread across a wide range of objectives, but predominantly involve marine protection and sustainable fisheries. Such models can be replicated with different objectives. The main challenge that ensues is that blended finance usually contains a loan repayment component because of the private capital involved. Therefore, it is important that funded activities can generate a financial return in order to sustain loan repayments.

It is important that funded activities can generate a financial return in order to sustain loan repayments

In terms of blue carbon financing and blue carbon markets, 'we still lack sufficient flow of projects that deliver reliably both quantified blue carbon and nature-positive outcomes', according to Torsten Thiele, chair of the Blue Carbon Accelerator Fund (BCAF) evaluation committee.³³

Such projects are still seen as small scale and are few and far between as applicants struggle to generate concrete proposals, especially at the investigation and feasibility stages. The lack of certainty and clarity in project proposals discourages funders from providing funding. The BCAF provides funding to address these significant constraints with the aim of getting the projects to bankability.

Public sources remain the main contributor of funding

Finally, although scale is aspired to in order to bridge the funding gap, this has not been fulfilled³⁴ and public sources remain the main contributor of funding.³⁵

31 Belinda Bramley, Angelique Pouponneau and Upeksha Hettiarachchi, "Nurturing Resilience and Quality of Life: A Blue Economy Approach", in *Quality of Life*, eds. Shruti Tripathi, Rashmi Rai and Ingrid van Rompay-Bartels (Boca Raton: CRC Press, 2021).

32 Thompson, "Blue Bonds for Marine Conservation".

33 Torsten Thiele (Chair of the BCAF evaluation committee), Interview by Angelique Pouponneau, October 2022.

34 Hyojin Kim and Hannah Jun, "Can Blended Finance Be a Game Changer in Sustainable Development?: An Empirical Investigation of the 'Lucas Paradox'", *Sustainability* 14, no. 4 (2022).

35 OECD, "Trends of ODA".

Sustainable financing for EbA

The options discussed above all presume that a country must first access external funding, but they do not address what happens once these funding agreements come to completion and create a 'dollar-chasing' culture. It is important to move away from such set-ups and look to long-term sustainable financing for EbAs. At present, blended financing instruments provide some opportunity for sustainable financing. For example, the debt-for-nature swap is a 20-year agreement, which means that funding will be available for the entire period. For country and ecosystem timescales this is still insufficient; hence, there is a need for greater effort to move towards financial instruments that will generate long-term and sustainable financing, including using funds to develop such solutions. An example may be the model provided by the blue carbon project, ie, that revenue will continue to be generated as long as an ecosystem service is provided. ('Livelihood Opportunities Through Scaling Marine and Coastal EbA', by Penelope Price and Thérèse Boulle, a paper developed under this project, provides further insight into generating community livelihoods as an avenue for ensuring sustainable long-term financing. Please see www.saiia.co.za for more.)

It is important to move away from such set-ups and look to long-term sustainable financing for EbAs

RECOMMENDATIONS

EbA has been identified as a critical way of adapting in order to mitigate the adverse effects of climate change. However, adaptation finance is limited. It is suggested that SADC countries consider the following recommendations for the financing of EbA.

- **Inclusion of EbA of marine and coastal ecosystems in the NDCs:** Most SADC countries have not included EbA of marine and coastal ecosystems in their current NDCs. The inclusion of EbA of marine and coastal ecosystems in the NDCs is critical to their long-term national climate plans. The NDC is usually used as a basis for funders to understand the priorities of a country and is required as justification for requesting funds for EbA projects from the GCF.
- **Creation of policy and legal frameworks to enable EbA:** While most countries are likely to have established environmental protection laws, it is important that policy and legislation keep up with new innovations, such as other effective area-based conservation areas like locally managed marine areas, and blue carbon and climate marine refuges that often face regulatory constraints. The policy should

also focus on issues of land ownership and tenure, and equitable benefit sharing. (See 'Strengthening Marine and Coastal EbA in Climate Policies in Southern Africa', by Jessica Thorn, at www.saiia.co.za.)

- **Creation of institutions to enable EbA financing:** The creation of an independent trust fund is useful for the administration and management of funds from different sources and, in some instances, is required for funds to be disbursed.
- **Improvement of access to multilateral funding:** Improving access to multilateral funding should be a priority and usually can be provided through guidance to the GCFs through decisions of the UNFCCC COP and getting representatives of SADC countries onto the boards of these funding bodies. Examples of ways to improve access to multilateral funding include simplifying the accreditation of directly accredited entities and further improving the SAP. Furthermore, administering and implementing these multilateral funds requires significant capacity. Therefore, when drawing up applications, a percentage of the funds requested should be allocated to the cost of administering and implementing the projects.
- **Removal of barriers to bilateral funding:** Further advocacy is required to remove barriers to bilateral funding, particularly for vulnerable countries.
- **Private sector investors investing in EbA:** It may be necessary to impose conditions on or incentivise private sector investors to invest in EbA for climate action. Governments may use tools such as taxes to encourage certain behaviours by private sector businesses. For bigger investors, such as MNCs, this could be achieved by including a provision in their agreement that corporate social responsibility be channelled to such action. Alternatively, it could be included as a condition for approval in the development plans of the investment itself. On a smaller scale, there are other opportunities for the private sector to support small-scale fishers through fisher- and community-driven initiatives such as South Africa's ABALOBI and the Seychelles equivalent, LANSIV.
- **Funding from multiple sources:** The long-term sustainability and success of EbA requires funding from multiple sources to reduce the risk of on-off funding linked to project cycles.
- **Long-term sustainability of EbA:** The long-term sustainability and success of EbA requires local community engagement from the inception. In the case of EbA action concerning marine protection, critics have argued that marine protection has led to local communities being dispossessed of their natural resources, resulting in greater inequality. Others point to the need to include local stakeholders and create transparent decision-making processes in EbA as a means of overcoming this challenge.^a This may further present opportunities for the development of other effective area-based conservation measures, including locally managed marine areas.

- **Sharing of knowledge on EbA among SADC countries:** It is evident that countries in the SADC region have had many successes in financing EbA action. The knowledge gained from these successes can be shared among SADC countries, and personnel themselves could work in neighbouring countries on an exchange basis to enhance learning and improve access to funds.
- **Lack of research into financing opportunities for EbA:** There is a dearth of literature and practitioners exploring financing opportunities for EbA. ^b Greater investments should be made in exploring financing options for EbA through research, pilot programmes and feasibility studies to generate options that are replicable and scalable.
- **Continuing momentum:** Finally, it is critical that there is continued momentum of the ocean-climate nexus. ^c This can be done by participating in the annual Ocean and Climate Change Dialogues within the UNFCCC and creating greater synergies in different forums.

a Gerald G. Singh et al., "A Rapid Assessment of Co-Benefits and Trade-Offs among Sustainable Development Goals", *Marine Policy* 93 (2018): 223–31.

b Melissa Bos, Robert Pressey and Natalie Stoeckl, "Marine Conservation Finance: The Need for and Scope of an Emerging Field", *Ocean & Coastal Management* 114 (September 2015): 116–28.

c Despina F Johansen and Rolf A Vestvik, "The Cost of Saving Our Ocean: Estimating the Funding Gap of Sustainable Development Goal 14", *Marine Policy* 112 (2020).

Conclusion

In conclusion, the starting point for EbA action is understanding what exists, its value and what measures are required to protect or rehabilitate the marine and coastal ecosystems, along with the concomitant costs. However, there are several challenges to fully embracing EbA: firstly, attempting to understand what exists in terms of marine and coastal ecosystems, and secondly, the high costs of the conservation and restoration of marine and coastal ecosystems. To date, none of the SADC countries has undertaken a comprehensive costing of the EbA of their coastal and marine ecosystem actions. In the absence of costing, it is difficult to ascertain the scale of finance required. This, exacerbated by the multitude of available financing opportunities for EbA, complicates the coordination of financing.

In the absence of costing, it is difficult to ascertain the scale of finance required

As shown in the review of the available sources of funding, there are opportunities for EbA financing, but not on the scale that is required to maximise the potential and use of EbA. Therefore, further case studies to show scalability and replicability are required.

ANNEXURE 1 GCF-FUNDED EbA PROJECTS

Project	\$ amount allocated	State(s)	Partners	Brief description
<u>FP 122: Blue Action Fund (BAF) GCF Ecosystem Based Adaptation Programme in the Western Indian Ocean</u>	59.8 million (GCF 32.6 million)	<u>United Republic of Tanzania</u> <u>Madagascar</u> <u>South Africa</u> <u>Mozambique</u>	Kreditanstalt für Wiederaufbau	This programme supports effective climate action by harnessing the potential of ecological connectivity by pooling adaptation projects supporting climate-resilient coastal zone management.
<u>FP 135: Ecosystem-based Adaptation in the Indian Ocean - EbA IO</u>	49.2 million (GCF 38 million)	<u>Comoros</u> <u>Madagascar</u> <u>Mauritius</u> <u>Seychelles</u>	Agence Française de Développement	This programme seeks to support EbA activities in SIDS and LDCs, through the empowerment of civil society and by creating opportunities for these countries to learn from each other.
<u>FP152 : Global Sub-national Climate Fund Global (SnCF Global)</u>	750 million (GCF 150 million)	<u>Côte d'Ivoire</u> <u>Gabon</u> <u>Kenya</u> <u>Rwanda</u> <u>South Africa</u> <u>Indonesia</u> <u>Chile</u> <u>Guatemala</u> <u>Mexico</u> <u>Uruguay</u> <u>Morocco</u> <u>Tunisia</u> <u>Burkina Faso</u> <u>Brazil</u> <u>Dominican Republic</u> <u>Cambodia</u> <u>Fiji</u> <u>Cameroon</u> <u>Mozambique</u> <u>Nigeria</u> <u>Togo</u> <u>Uganda</u> <u>Haiti</u> <u>Honduras</u> <u>Panama</u> <u>Mauritania</u> <u>Albania</u> <u>Montenegro</u>	Pegasus Capital Advisors	The objective of the Global Subnational Climate Fund (SnCF GLOBAL) is to catalyse long-term climate investment at the sub-national level for mitigation and adaptation solutions by leveraging the fund to attract private capital. This supports blended finance opportunities in climate action.

		<u>Costa Rica</u> <u>Ecuador</u> <u>El Salvador</u> <u>Dominica</u> <u>Jamaica</u> <u>North Macedonia</u> <u>Myanmar</u> <u>Guinea</u> <u>Mali</u> <u>Bahamas</u> <u>Democratic Republic of the Congo</u> <u>Senegal</u> <u>Jordan</u> <u>Lebanon</u>		
<u>FP180 Global Fund for Coral Reefs Investment Window</u>	500 million (GCF 125 Equity)	<u>Philippines</u> <u>Sri Lanka</u> <u>Fiji</u> <u>Bahamas</u> <u>Belize</u> <u>Brazil</u> <u>Comoros</u> <u>Mexico</u> <u>Ecuador</u> <u>Seychelles</u> <u>Colombia</u> <u>Mozambique</u> <u>Jordan</u> <u>Jamaica</u> <u>Guatemala</u> <u>Panama</u> <u>Indonesia</u>	Pegasus Capital Advisors	This project aims to support a blended finance approach to the blue economy with the focus on coral reef protection and restoration. This fund encourages private sector investments focused on coral reef climate action.
TOTAL	1.359 billion (GCF 345 million)			

Source: Green Climate Fund, <https://www.greenclimate.fund/>

**ANNEXURE 2 AF-FUNDED OCEAN PROJECTS
(MOSTLY IDENTIFIED UNDER COASTAL ZONE MANAGEMENT)**

Project	\$ amount allocated	State(s)	Partners	Brief description
<u>Enhancing Climate Change Resilience of Coastal Communities of Zanzibar (Coastal Management)</u>	1 million	Tanzania, United Republic of	<ul style="list-style-type: none"> National Environment Management Council Department of Environment, Second Vice President's Office, Zanzibar 	This project seeks to empower and prepare small-scale farmers for climate-resilient livelihoods with a focus on water harvesting infrastructure and water conservation, while diversifying their livelihoods.
<u>Restoring marine ecosystem services by rehabilitating coral reefs to meet a changing climate future (Mauritius, Seychelles)</u>	10 million	Mauritius and Seychelles	UNDP	A project aiming to restore coral reefs with the objective of building climate resilience through food security and disaster risk reduction.
<u>Climate Change Adaptation Programme in the Coastal Zone of Mauritius (completed)</u>	9,119,240	Mauritius	UNDP	This project aims to combat beach erosion and flood risk by increasing the planting of mangroves along the coast and monitoring the link between coastal processes and climate change risks.

Source: Adaptation Fund, <https://www.adaptation-fund.org/>

Author

Angelique Pouponneau

is a Seychellois lawyer holding an LLM in Environmental Law. She is pursuing a PhD on the nexus of blue economy, finance and regulatory frameworks. She is a policy and strategy advisor on climate change and the blue economy and was CEO of the Seychelles' Conservation and Climate Adaptation Trust. In 2021 she was recognised as one of the 100 most influential Africans.

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Cover image

Aerial view of main road of Mahe Island on the sea – Seychelles (PJPhoto69 via Getty Images)

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Jan Smuts House, East Campus, University of the Witwatersrand
PO Box 31596, Braamfontein 2017, Johannesburg, South Africa
Tel +27 (0)11 339-2021 · Fax +27 (0)11 339-2154
www.saiia.org.za · info@saiia.org.za