

Funding Proposal

FP122: Blue Action Fund (BAF): GCF Ecosystem Based Adaptation Programme in the Western Indian Ocean

Madagascar, Mozambique, Tanzania, South Africa | Kreditanstalt für Wiederaufbau (KfW) |
Decision B.24/09

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**GREEN
CLIMATE
FUND**

Funding Proposal

Project/Programme title:	Blue Action Fund (BAF): GCF Ecosystem Based Adaptation Programme in the Western Indian Ocean (Madagascar, Mozambique, Tanzania, South Africa)
Country(ies):	Countries in the Western Indian Ocean (Madagascar, Mozambique, Tanzania, South Africa)
Accredited Entity:	Kreditanstalt für Wiederaufbau
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Contents

Section A	PROJECT / PROGRAMME SUMMARY
Section B	PROJECT / PROGRAMME INFORMATION
Section C	FINANCING INFORMATION
Section D	EXPECTED PERFORMANCE AGAINST INVESTMENT CRITERIA
Section E	LOGICAL FRAMEWORK
Section F	RISK ASSESSMENT AND MANAGEMENT
Section G	GCF POLICIES AND STANDARDS
Section H	ANNEXES

Note to Accredited Entities on the use of the funding proposal template

- Accredited Entities should provide summary information in the proposal with cross-reference to annexes such as feasibility studies, gender action plan, term sheet, etc.
- Accredited Entities should ensure that annexes provided are consistent with the details provided in the funding proposal. Updates to the funding proposal and/or annexes must be reflected in all relevant documents.
- The total number of pages for the funding proposal (excluding annexes) **should not exceed 60**. Proposals exceeding the prescribed length will not be assessed within the usual service standard time.
- The recommended font is Arial, size 11.
- Under the [GCF Information Disclosure Policy](#), project and programme funding proposals will be disclosed on the GCF website, simultaneous with the submission to the Board, subject to the redaction of any information that may not be disclosed pursuant to the IDP. Accredited Entities are asked to fill out information on disclosure in section G.4.

Please submit the completed proposal to:

fundingproposal@gcfund.org

Please use the following name convention for the file name:

“FP-KfW-Countries of the Western Indian Ocean 2019/07/31-V.2.0”

A. PROJECT/PROGRAMME SUMMARY			
A.1. Project or Programme	Programme	A.2. Public or private sector	Public
A.3. Request for Proposals (RFP)	Not applicable		
A.4. Result area(s)	<p><u>Mitigation:</u> Reduced emissions from:</p> <input type="checkbox"/> Energy access and power generation: <input type="checkbox"/> Low-emission transport: <input type="checkbox"/> Buildings, cities, industries and appliances: <input type="checkbox"/> Forestry and land use: <p><u>Adaptation:</u> Increased resilience of:</p> <input checked="" type="checkbox"/> Most vulnerable people, communities and regions: <input checked="" type="checkbox"/> Health and well-being, and food and water security: <input checked="" type="checkbox"/> Infrastructure and built environment: <input checked="" type="checkbox"/> Ecosystem and ecosystem services:		<p>GCF contribution:</p> Enter number% Enter number% Enter number% Enter number%
A.5. Expected mitigation impact	<i>Not applicable</i>	A.6. Expected adaptation impact	<p>200.000</p> <p>5 – 10 % of the population of the project areas (indicative)</p>
A.7. Total financing (GCF + co-finance)	55 million Euros (+ mandatory NGO contributions of 25% of direct costs of sub-projects; for information only)	A.9. Project size	Medium (Upto USD 250 million)
A.8. Total GCF funding requested	30 million Euros		
A.10. Financial instrument(s) requested for the GCF funding	<input checked="" type="checkbox"/> Grant 30 million Euros <input type="checkbox"/> Loan Enter number <input type="checkbox"/> Guarantee Enter number	<input type="checkbox"/> Equity Enter number <input type="checkbox"/> Results-based payment Enter number	
A.11. Implementation period	7 years	A.12. Total lifespan	25 years
A.13. Expected date of AE internal approval		A.14. ESS category	<p>Refer to the AE's safeguard policy and GCF ESS Standards to assess your FP category.</p> <p>I-2</p>
A.15. Has this FP been submitted as a CN before?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	A.16. Has Readiness or PPF support been used to prepare this FP?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

A.17. Is this FP included in the entity work programme?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	A.18. Is this FP included in the country programme?	Yes <input type="checkbox"/> No <input type="checkbox"/> Not applicable
A.19. Complementarity and coherence	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
A.20. Executing Entity information	Blue Action Fund, foundation registered in Germany, according to German law for foundations.		
A.21. Executive summary (max. 750 words, approximately 1.5 pages)			
<p>Oceans and their coastal regions are most severely exposed to the impacts of climate change. Around 50% of the world's population lives in coastal areas and is dependent on healthy oceans and intact marine and coastal ecosystems, particularly in developing countries. Mangrove forests and coral reefs protect coastal areas against the effects of climate change, such as enhanced storm surges, cyclones and coastal erosion. They also serve as spawning grounds for fish, which are an essential source of protein and income for the local population. In addition, mangroves, seagrass and coral reefs absorb and store huge amounts of CO₂ and their protection and restoration contributes to climate mitigation.</p> <p>This GCF Funded Activity (hereafter referred to as the "Programme" or "GCF Programme") will be established as a special funding window under the Blue Action Fund (BAF). It concentrates on the promotion of Ecosystem-based Adaptation approaches (EbA) in one of the most vulnerable regions affected by sea level rise, enhanced storm intensity, recurrent storm surges and coastal erosion: the Mozambique Channel / West Indian Ocean (WIO). Country selection (Madagascar, Mozambique, Tanzania and South Africa) is guided by criteria such as vulnerability to climate effects, urgent need for implementation of climate adaptation measures, and the relevance to coastal populations of ecosystem services from coastal, marine and freshwater ecosystems. Special attention is given to the alignment between the Programme approach and national priorities as well as existing strategies and policy frameworks.</p> <p>The Programme's objective is to enhance, through a coastal zone management based on the conservation and sustainable use of coastal ecosystems, ecosystem services that contribute to reducing climate change-related risks for vulnerable coastal communities. The outcome will increase the resilience of vulnerable coastal populations to climate change.</p> <p>The Blue Action Fund (BAF) is an independent non-profit foundation and currently the only global institution exclusively funding local level initiatives in the marine/coastal conservation and sustainable fisheries sectors. It funds NGOs to strengthen the resilience of coastal populations against climate change.</p> <p>The Programme approach is to use the structure, specific know-how and execution capacities of the BAF in order to fund NGOs with suitable and promising sub-projects, based on EbA to climate change in the Programme region, and with considerable engagement of stakeholders (local population and national authorities) during sub-project preparation and implementation.</p> <p>The BAF will launch one or two specific calls for proposals to be financed with GCF funding as within the scope of the Programme. These calls will be aligned with GCF result areas and have a specific focus on EbA and related requirements. Sub-projects will be selected by application of specific adaptation and EbA-related criteria (e.g. quality of climate rationale, coherence with national and/or regional adaptation plans; see section B.3. for complete list). In addition, general BAF selection criteria will be applied as specified in the Grant Procedures Manual (Annex 22). Every single sub-project will have to demonstrate the location-specific adaptation impact of the intervention. Targeted key achievements of implemented sub-projects are:</p> <ul style="list-style-type: none"> • Vulnerable coastal populations will be able to reduce or avoid negative impacts of climate change through a stabilized provision of ecosystem services; • Important marine and coastal ecosystems will be protected and sustainably managed to ensure adaptation-relevant ecosystem services for vulnerable coastal communities; • Enhanced knowledge, expertise and capacity of relevant national agencies in using Ecosystem-based Adaptation (EbA) approaches for a climate-resilient coastal zone management. <p>Total costs of the GCF Funded Activity will amount to EUR 55 million, comprised of EUR 30 million applied for from the GCF, and EUR 25 million in co-financing contributions by the German Government. In addition, mandatory</p>			

contributions of at least 25% of the costs of the respective sub-projects must be committed by the supported NGOs (precondition for approval of project proposals, equaling EUR 12.5 million; see Annex 4 for details).

In addition to these contributions for the EbA focused GCF Funded Activity in the West Indian Ocean, there are additional contributions to the global BAF portfolio (no dedicated focus on EbA; also beyond West Indian Ocean) which currently stand at EUR 68.1 million from the Governments of Germany (EUR 55.1 million), Sweden (EUR 8.0 million), and France (EUR 5 million), plus mandatory 25% contributions from implementing NGOs to direct costs for sub-projects. While these contributions are not formally part of the GCF-Programme, there will be considerable synergy effects with the GCF Funded Activity and substantial additional adaptation results.

The GCF Programme focus is on Climate Change Adaptation through EbA. GCF-funded BAF calls will specifically focus on the EbA approaches to strengthen the resilience of vulnerable coastal populations to climate change effects, such as floods, cyclones and heavy rainfalls. The GCF result areas addressed by the proposed Programme are to:

- Increase the resilience and enhance the livelihood of the most vulnerable people, communities and regions;
- Increase the health and well-being and food security;
- Advance the infrastructure and built environment, and
- Improve and secure ecosystem services of increasingly threatened coastal ecosystems.

In addition, significant co-benefits for Climate Change Mitigation are to be expected, particularly related to the protection of highly relevant carbon stocks, such as mangroves, coral reefs, coastal marshes and seagrass beds, and their carbon sequestration potential (e.g. mangroves store around 1000 t of carbon per hectare in biomass and soil).

B. PROJECT/PROGRAMME INFORMATION

B.1. Climate rationale and context (max. 1000 words, approximately 2 pages)

Coastal regions of the Mozambique Channel / West Indian Ocean (WIO) are facing severe impacts from extreme weather events, particularly recurrent cyclones and their subsequent storm surges, flooding and coastal erosion, which lead to the loss of lives, valuable land and infrastructure. These damages are not only the consequence of extreme weather situations, which most likely are already enhanced by climate change, but of the large number of people living in coastal regions (in Madagascar 66 % of the population, in Mozambique 60 %) and their high vulnerability. Particularly Madagascar (ranked 169th out of 181 countries in the Notre Dame-Gain-Index, which reflects countries' climate vulnerability and readiness), Mozambique (159th) and Tanzania (149th) are considered to be amongst the most vulnerable countries for negative impacts of climate change. As sea levels in the region are projected to rise (0.4 to 1.0 m until 2090, high confidence) and storm intensities are expected to increase (mainly due to increasing water temperature), damages are likely to increase considerably in the years to come.

Some coastal ecosystems, such as coral reefs, mangroves and sea grass beds, reduce the force of wave action on the coast and subsequent damages to coastal populations (Ecosystem-based Adaptation - EbA). In addition to their relevance for climate change adaptation, these ecosystems play a vital role for the livelihoods of coastal populations in the region. Mangroves are an important source of firewood and timber; mangroves, coral reefs and seagrass beds are important spawning and breeding grounds for fish, supporting the livelihoods of a large number of fishermen. In addition, coral reefs are increasingly important for the tourism sector. Last but not least, mangroves, coral reefs, sea grass beds and coastal wetlands are highly relevant carbon sinks, urgently needed for climate change mitigation.

In the WIO region, these adaptation-relevant ecosystems are still quite abundant, but rapidly degrading and diminishing in size. On the one hand, this is due to increased population pressure and unsustainable use of these ecosystems. On the other hand, climate change is contributing to this degradation. Increasing sea water temperatures and acidity are severely damaging coral reefs, and extreme storm events are physically damaging or even destroying coral reefs, mangroves and sea grass beds.

The Programme aims to protect and restore adaptation-relevant coastal ecosystems, thus ensuring and enhancing their capacity to reduce climate change related negative impacts, particularly related to storm surges and coastal erosion. In order to minimize the pressure on these ecosystems and to ensure the sustainability of the interventions, management options will be developed, taking the interests and needs of relevant stakeholders into account.

The intervention not only focusses on individual EbA measures, but also intends to make EbA an integral part of the coastal management strategies of the participating countries, taking the most effective and cost-efficient combination of green and grey adaptation measures into account. This transformative approach goes beyond single projects and constitutes a strategic intervention on a large-scale regional level.

Without the proposed interventions, it is very likely that damages from storm surges and coastal erosion will increase significantly, as the above-mentioned ecosystems are degrading rapidly. Alternative measures, such as the construction of grey infrastructure (sea walls, etc.) would be far more expensive than the EbA interventions, and would not directly support the livelihoods of the vulnerable coastal population. Therefore, we consider the full integration of EbA measures into the coastal zone management strategies of the partner countries to be by far the most cost-efficient and socially acceptable approach to reduce climate-related physical risks for coastal populations.

The Programme focuses on Madagascar, Mozambique, Tanzania and South Africa, because these countries have a particular need for adaptation measures given the respective ranks in the ND-Gain-Index. At the same time, they have a huge potential for EbA measures and still have large adaptation-relevant ecosystems which are rapidly degrading and diminishing in size. The threats to these ecosystems must be addressed by targeted interventions.

1. The Selection of the Programme Region

This Programme concentrates on one of the most vulnerable regions affected by adverse effects of climate change, such as sea level rise, enhanced storm intensity, recurrent storm surges and coastal erosion. The Programme region is one of the world's most significant marine and terrestrial biodiversity areas and a biological gene pool for coastal south-eastern and East Africa. Its biological and conservation values are of global importance, and this includes the value of the inland coasts of lakes as well as the marine coast. At the same time, the coastal population, including the coasts of the Central Africa Lakes, is highly vulnerable to climate change. The selection of the countries for the GCF-funded Programme is based on the vulnerability of their coastal population to climate change and their specific potential for **ecosystem-based adaptation (EbA) concepts** (e.g. importance of mangroves and coral reef area, and coastline/land area ratio). For this purpose, an internationally widely accepted approach - the University of Notre Dame Global Adaptation Index (GAIN) - has been used (see Annex 8 for more details). GAIN summarizes a country's

vulnerability to climate change and other global challenges in comparison to its readiness to improve resilience. According to this tool, the targeted countries (excepting South Africa) are among the world's top 25% most vulnerable and least-prepared countries. In addition to a high rank on the GAIN index, key selection criteria included a clear commitment to climate change adaptation policies, the countries' ownership of and a commitment to international conventions, and a potential portfolio of concrete, EbA-based sub-projects. Using these criteria, **Madagascar, Mozambique and Tanzania** have been chosen for the GCF-supported Programme. **South Africa** will also be considered, especially because there is a significant opportunity for transboundary projects with Mozambique (see Map in Annex 5). In addition, all sub-projects are expected to be in line with the respective national strategies and priorities. Therefore, satisfactory evidence on the endorsement of the respective country is required for all sub-projects.

2. The Political and Institutional Context for Climate Change in the Programme Region

The proposed GCF funding for the Programme aims to address the accelerating degradation of the world's oceans and coastal areas through the sustainable management and use of the marine and coastal environments. This is in line with an increasing focus on ocean issues in international and national priorities as well as the climate change and adaptation policies of the selected countries. In this context, the EbA-focused measures in the coastal areas will be supported in principle by the participating countries: The Programme measures will complement already planned or implemented measures in the countries and will contribute to the achievement of national climate change adaptation strategies, including Nationally Determined Contributions (NDCs) and National Adaptation Plans (NAPs).

2.1 International Context and Priorities

Rising concerns about deteriorating living conditions of coastal populations due to climate change and the degradation of ocean and coastal ecosystems have led the international community to focus increasingly on these habitats. Recognizing the importance of coasts and oceans for sustainable human development, the international community has committed itself through Sustainable Development Goal (SDG) 14 to "conserve and sustainably use the oceans, seas and marine resources". In addition, EbA concepts in coastal regions are recognized as contributing significantly to SDG 13 ("Take urgent action to combat climate change and its impacts"), especially addressing Indicator 13.1 ("Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries"), as well as SDG 15 ("Protect, restore and promote sustainable use of terrestrial ecosystems ... and halt biodiversity loss"). Consequently, the international climate policy debate focuses increasingly on the impact of climate change on the livelihoods of coastal populations and the marine environment. In this context, the Ocean Action Day at COP 23¹ set short-term and medium-term priorities in order to enhance the role that the oceans play in climate change mitigation and adaptation:

- Support countries in the development and implementation of nature-based adaptation and mitigation actions addressing coastal and oceans-related matters, with a focus on SIDS (Small Islands Developing States), low-lying areas and developing countries;
- Support mainstreaming ecosystem-based management in coastal and marine natural resources policies as part of countries' climate action plans and revise existing Nationally Determined Contributions (NDCs) accordingly;
- Develop investment plans for a climate-resilient blue economy, with emphasis on low-carbon solutions and ensuring economic benefits to developing countries and SIDS; and
- Promote the sustainable and effective use of marine resources by promoting 'blue economies' in SIDS and developing countries.

COP 25 in Chile 2019 is intended to focus attention on the oceans, and the proposed Programme would thus ideally be able to support the implementation of the international climate change agenda.

The international community committed itself through Aichi Target 11 of the Convention on Biological Diversity (CBD) to conserve and sustainably use at least 10% of coastal marine ecosystems by 2020. In addition, the recent global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) stresses the fundamental importance of expanding, connecting and effectively managing marine protected area networks, and promoting the conservation and/or restoration of marine ecosystems to achieve the transformative change needed to conserve and sustainably use nature and achieve sustainability. Lastly, international political initiatives on the reforestation of coastal forests, such as the Global Mangrove Alliance (GMA), which targets increasing mangrove coverage by 20% above current extent by 2030, will have significant impacts on the mitigation of Greenhouse Gas (GHG) emissions. In addition, the recently published IPBES report on the state of biodiversity in Africa (2018) focused on the high importance of biodiversity along the Southern African coastline, as well as that of its freshwater coasts.

¹ Marrakech Partnership, Oceans' Action Day at COP 23 Report November 2017.

All targeted countries have signed **the Nairobi Convention**, which entered into force in 1996 as part of UN Environment's Regional Seas Programme. The Convention is a partnership between governments, civil society and the private sector, working towards a prosperous **Western Indian Ocean (WIO)** Region with healthy lakes, coasts and oceans. It provides a mechanism for regional cooperation, coordination and collaborative actions. Article 10 of the Convention refers to Specially Protected Areas and the necessity for the Contracting Parties to establish protected areas, such as marine parks and reserves. Furthermore, all countries signed and ratified the following conventions and protocols:

- United Nations Framework Convention on Climate (UNFCCC),
- Montreal Protocol, and
- Convention on Biological Diversity.

With its mission and funding criteria, BAF directly addresses these international priorities, and therefore contributes to the achievement of the respective goals on a global scale. With its funding resources, GCF would directly support the countries in the Programme region in their pursuit of climate change and adaptation policies and contribute to the achievement of the objectives of international climate change policies and conventions.

2.2 National Climate Change Policies and Priorities, and National Adaptation Strategies

All WIO countries have a strong focus on and commitment to coastal and/or marine conservation within their national strategies, including their Nationally Determined Contributions (NDCs), and Climate Strategies and Action Plans. Additionally, they all show engagement with programmes focusing on climate change adaptation and management of coastal ecosystems - freshwater as well as oceanic. All Programme countries are part of the World Bank's Pilot Program for Climate Resilience (PPCR). The measures of the proposed GCF-Programme will complement the efforts already in place and supported by other donors.

Given its significant role in climate adaptation, its wide biodiversity, and its support of sustainable livelihoods, the references to 'marine' in the proposal include freshwater of regional importance, namely the Central African Lakes.

a) Madagascar

The Republic of Madagascar ratified the UNFCCC and became a Party in 1998. Madagascar spends a substantial amount of its annual budget on social services and infrastructure in response to the adverse effects of climate change. Between 2010 and 2015, losses and damages associated with floods and cyclone events are estimated at about 470-940 million USD per year (INDC; 2016, p.9). To cope with climate change risks and adapt climate-sensitive sectors and regions, Madagascar has set up an ambitious policy framework (National Adaptation Programme of Action [NAPA] - 2006; National Climate Change Policy – 2010; intended NDC 2015; turned into NDC – 2016), and three National Communications (NCs) to the UNFCCC.

The National Climate Change Policy, the NDC and the NCs are still based on the actions of the NAPA related to EbA in coastal and marine areas formulated in 2006:

- Reinforcement of natural protection and reduction of the vulnerability of coastal, inshore and marine areas affected by coastal erosion and receding shorelines;
- Application of Resilient Agriculture Integrated Models in major agricultural centres, cash crop zones, extensive livestock farming areas, priority areas for fisheries, and mangroves, as well as drought hotspots;
- Restoration of natural habitats (forests and mangroves: 45,000 ha; lakes, streams, etc.);
- Identification and sustainable management of climate refuge areas inside and outside protected areas;
- Early warning systems that monitor for cyclones, floods and drought, and public health surveillance.

In Madagascar's Third National Communication to UNFCCC (from Oct 2017), the protection of coastal areas through EbA measures is considered an effective way of reducing negative impacts of climate change and, at the same time, improving the livelihoods of poor coastal populations.

The destruction of coastal ecosystems, such as mangroves, also affects Madagascar's GHG emissions. According to its Intended Nationally Determined Contribution (INDC; 2016), Madagascar aims to increase absorption in the Land Use, Land-Use Change and Forestry (LULUCF) sector up to 61 MtCO₂ by 2030 (equal to an expected increase of 32%² in GHG absorption, compared to the business-as-usual scenario). However, as mangroves currently represent only 2% of the forest cover in Madagascar, the absorption of GHG through better conservation of mangroves is only a co-benefit.

² This increase in absorption of 61 MtCO₂ in 2030 in the LULUCF sector is in addition to the envisaged reduction of approximately 30 MtCO₂ of its emissions of GHG in all other sectors.

b) Mozambique

Mozambique ratified the UNFCCC in 1994 and became a Party in August 1995. In its NAPA (2007), Mozambique defines the coastal zones as a priority sector. Accompanying actions proposed include strengthening the capacity of agricultural producers in order to cope with climate change, the restoration of forest, the rehabilitation of dunes and mangroves, and actions to sensitize and disseminate good practices in coastal communities, as well as improvements in local fisheries.

In 2012, Mozambique launched its National Climate Change Adaptation and Mitigation Strategy (NCCAMS; 2012). The key objectives focus on making Mozambique resilient to the impacts of climate change, whereby coastal erosion, habitat destruction of mangroves, seagrass beds and reefs, biodiversity loss, and depletion of fish stocks are all major perceived risks. The strategy presents actions for coastal and marine ecosystems, such as:

- Establishing sustainable management of coastal ecosystems, and introducing regeneration and protection programmes for the mangroves, algae and seaweeds associated with potential carbon capture and storage;
- Increasing the resilience of fisheries, e.g. regenerating mangroves and implementing protective measures for algae and seagrass, corals and other zones used by fish for spawning and feeding, and improving the quality of information availability and skills for small-scale fisheries;
- Increasing people's adaptive capacity through innovative community-based adaptation approaches; and
- Assessing the climate risk to areas of touristic interest; building the resilience of the sector and the conservation of ecosystems; conserving coastal areas and improving protection practices.

The National Environmental Management Programme established integrated coastal zone management, based on coordination between relevant stakeholders, including communities. The main issues are: (i) fisheries, (ii) coastal and marine ecosystem management, (iii) coastal and marine protection, (iv) marine parks, and (v) tourism.

These climate change policies and strategies highlight the priority given by Mozambique to adaptation measures in coastal regions. Approaches are in line with the EbA concept of the proposed Programme, specifically regarding the ecosystem services of mangroves, seagrass and coral reefs as well as cooperation between relevant stakeholders. The severely destructive cyclones (see C.2.1) in 2019 also highlighted the importance of adaptation measures in coastal regions for the Government of Mozambique.

In addition, the destruction of coastal ecosystems such as mangroves affects Mozambique's GHG emissions. According to its INDC (2015), Mozambique aims to reduce its emissions by a total of about 76.5 MtCO₂eq in the period from 2020 to 2030, with 23.0 MtCO₂eq by 2024. Reductions would come from the sectors of energy, land use, land use change, and forestry, including mangroves.

c) Tanzania

The United Republic of Tanzania ratified the UNFCCC in 1996. According to its NAPA (2007), Tanzania is already implementing marine and coastal environment management programmes, including mangrove reforestation and the conservation of coastal resources, creating and maintaining various marine reserves. Additional measures include:

- Enhancing conservation and fishery resource management;
- Reduction of non-climate stress and monitoring, e.g. elimination of destructive fishing practices and overfishing, reduction of pollution and damaging extraction, proper management of salt production and seaweed farming, and coastal ecosystem monitoring;
- Restoration of degraded habitats e.g., beach nourishment, vetiver grass planting, mangrove replanting, and stimulation of coral reefs growth;
- Establishment of marine protected areas;
- Promoting livelihood diversification for coastal communities.

The NAPA also highlights the importance of inland waters such as Lake Victoria, which are also highly affected by climate change: "The extreme drop of water levels of Lake Victoria, Lake Tanganyika and Lake Jipe in recent years and the dramatic recession of 7 km of Lake Rukwa in about 50 years, are associated, at least in part, with climate change, and are threatening economic and social activities" (NAPA; 2007, p.V).

The Second National Communication to UNFCCC (2014) highlights: "The management of coastal and marine resources is key for minimizing impacts caused by climate change and also safeguard the tourism sector and life of coastal communities". Tanzania signing the CBD is of global importance, as the wildlife of Tanzania is one of the richest and most diversified in Africa. The country has a diverse spectrum of fauna and flora including a wide variety of endemic species and sub-species, among them fish, with many endemic in Lakes Victoria, Tanganyika and Nyasa and other small lakes and rivers.

In addition, the destruction of coastal ecosystems such as mangroves impacts Tanzania's GHG emissions. Its INDC to the UNFCCC indicates that total national GHG emissions were 76,766.5 Gg CO_{2eq} (base year 2000). Tanzania will reduce GHG emissions by between 10 and 20% by 2030, relative to the business-as-usual scenario of 138-153 Mt CO_{2eq}. As Tanzania has 48.1 million ha of forested land with a current estimated total of 9.032 trillion tons of carbon stock, forests contribute significantly to the country's carbon balance. However, as mangroves only cover 98,028 ha, the absorption of GHG through better conservation of mangroves represents a co-benefit.

d) South Africa

South Africa ratified the UNFCCC in August 1997. Its INDC (2015), National Development Plan (2012) and National Climate Change Response White Paper (Dept. of Environmental Affairs; 2011) together provide the strategy for South Africa's transition to a lower carbon and climate-resilient society.

In South Africa, changes are being observed in the marine and coastal environment and have already had significant impacts on the fisheries sector and on the local economy. Therefore, the National Climate Change Adaptation Strategy (DEA; 2016; draft) includes EbA, community-based adaptation, conservation agriculture, and climate-smart agriculture (including fisheries). With the concept of EbA, "biodiversity and ecosystem services shall be used as part of an overall adaptation strategy to help people adapt to the effects of climate change". The strategy includes coastal management guidelines on climate adaptation resilience actions for municipalities, as well as investment in disaster risk reduction, including restoration/rehabilitation of coastal ecosystems.

EbA in fisheries management is designed to build greater resilience in the fisheries sector, assisting the recovery of impacted resources and whole ecosystems. Priorities are to enforce action against illegal harvesting of coastal and offshore fishery resources, to increase the resilience of natural fish populations to climate change, and to introduce decision-making guidelines for municipal planning around coastal measures, especially within 200 metres of the coastline to ensure nursery habitats essential for prawns and estuarine fish are maintained and coastal ecosystems are protected to buffer against impacts of storm surges (NAP; 2016).

The destruction of coastal ecosystems such as mangroves does not seriously affect South Africa's GHG emissions, as its mangrove area is only marginal (1,742 ha).

Conclusion:

The importance of themes related to climate change risks for coastal and marine areas, a highly vulnerable population, the loss of marine and coastal ecosystem services, and the need for urgent adaptation measures in coastal and marine areas, is recognized in the selected countries in numerous national policies and strategies, including climate adaptation plans. Protection of coastal and marine ecosystems combined with the strengthening of the resilience of the population affected by adverse climate change effects are important elements. Increasing priority is given to these in the national climate change adaptation strategies. There is therefore a high commitment from the countries to introducing adaptation measures, including measures related to EbA in coastal and marine ecosystems. The countries, however, often lack the financial and technical resources for the actual implementation of their adaptation strategies and planned measures, including expertise on EbA concepts. This issue can be addressed by the proposed Programme.

3. Baselines for climate vulnerabilities and impact on the Programme Region:

Coasts and the oceans are recognized as the ecosystems that are most severely exposed to the impacts of climate change. Since the 1970s, more than 93% of the temperature increase due to the greenhouse effect and other human activities has been absorbed by the oceans, and data show a sustained and accelerating upward trend in ocean warming. In addition, it is projected that sea levels will rise significantly in the future, and that there will be an increase in extreme weather events, particularly high-intensity tropical storms. Due to increased releases of CO₂ from human activities, ocean acidification has increased by ~26% since pre-industrial times, and will decrease to an average pH of 7.8 – 7.9 (currently 8.1) by the end of the century, posing risks to many marine species. At current rates of temperature rise, oceans will become too warm for coral reefs by 2050, resulting in the loss of the world's most biologically diverse marine ecosystem. In addition, the deforestation of mangrove forests significantly changes the ecology of coastal ecosystems: over the last 100 years, the global mangrove area has lost 32 million ha, while the current rate of mangrove loss is approximately 150,000 ha or 1% per annum (FAO – Food and Agriculture Organization)³. Inland waters such as freshwater lakes are also highly affected by climate change.

Populations living in coastal regions are among those populations affected most strongly by climate change globally. Around 40% of the global population lives within 100 km of the ocean. Coastal floods, cyclones, sea-level rise, and salt-water intrusion in coastal aquifers all have devastating effects on local communities and their livelihoods. The disappearance of natural coastal barriers against floods and storms has severe economic, social and health

³Mangrove Action Project 2018 (mangroveactionproject.org/mangrove-loss/)

consequences. Furthermore, continued loss and degradation of mangrove forests and coral reefs increases vulnerability to coastal flooding, and therefore endangers human safety and shoreline development. In addition to the tourism sector, important industries are also often located in coastal regions and thus directly threatened by floods and sea-level rise. Poorer populations along marine and freshwater coasts in developing countries are especially affected, as poorer populations are dependent on agriculture, aquaculture and fisheries for sustaining their livelihood. In addition, due to a low income and lack of insurance, they are often not able to protect themselves against climate risks, and are therefore especially vulnerable to the impacts of climate change.

This also applies to the population of the coastal regions in the Programme region, where people suffer from increasing extreme weather events, cyclones, rising sea levels and the destruction of valuable ecosystems. The targeted countries in the WIO region include almost 50 million people living in coastal areas. In addition, Mozambique and Tanzania have a significant coastline along the Central African Lakes. The following sections provide baseline data on climate change and vulnerabilities of the people living at the WIO coasts and lakes.

a) Madagascar

Madagascar is the fourth largest island in the world, with an area of 592,800 km², and has a wealth of natural resources and biodiversity. The total population of Madagascar is 26.9 million in 2019 (www.worldpopulationreview.com, accessed 07.06.2019). The country's development potential stems from its natural resources (biodiversity, marine resources, arable land, and mineral ores).⁴

Madagascar is among the top ten countries in the world for important and extensive coastal zones (4,828 km coastline), and is one of the countries most vulnerable to extreme weather events (ranked eighth in the global Climate Risk Index and fourth amongst all African countries). Climate change impacts are: (1) extended drought periods; (2) increased volatility of rainfall patterns; (3) intensification of cyclones; (4) more frequent cyclones and floods in the coastal regions. All of the above-mentioned impacts would seriously hinder the country's economic development and its achievement of sustainable development goals, especially given the country's low level of human development and adaptive capacity. With two-thirds of its population living in coastal areas, the majority of its people are exposed to the effects of rising sea levels and tropical cyclones, which already occur three to four times a year, affecting 250,000 people and causing about 50 million USD in damages annually (UNDP; 2019). Some observed impacts are:

- Average sea-level rise of 7 to 8 mm/year, leading to coastal erosion and receding shorelines;
- Medium to high number of direct fatalities associated with cyclone events;
- Mangrove forest destruction due to floods, and destruction of coral reefs, habitats, and associated species;
- Destruction of agriculture crops and fields due to heavy rains, floods, and stormy winds; and
- Water stress (irregular rainfall patterns; drought and deficit in some areas).

b) Mozambique

Mozambique has 13,000 km² of coastal area, with a shoreline stretching 2,700 km, and an estimated population of 31.3 million in 2019 (www.worldpopulationreview.com; accessed on 07.06.2019). The National Statistics Institute indicates that by 2030, the country will have about 36 million inhabitants.⁵ Sixty percent of the population lives in coastal areas.⁶

Mozambique is highly vulnerable to climate change due to its geographic location, high temperatures, aridness, infertile soils, many endemic diseases, and a high dependence of the population on natural resources that also depend on precipitation (NAPA; 2007). Its coastline is the third longest in Africa and is characterized by a diversity of physical features such as sandy beaches, sand dunes, coral reefs, estuarine systems, bays, mangroves and seagrass beds.

Climate change adds additional stress to the development context in Mozambique and threatens to undermine advancements made to date. The mean annual temperature has increased by an average of 0.13°C per decade from 1960 to 2006, while the mean annual rainfall has decreased by an average rate of 2.5 mm per decade. Since the 1950s, the occurrence of extreme weather events, including drought, heavy rainfall events, hurricanes, and cyclones, has increased. Some of the tropical cyclones and depressions formed in the Indian Ocean cross the Mozambique Channel and affect the coastal zone. The number of cyclones destroying the coasts has increased significantly, as demonstrated in Figure 1 below (INDC; Mozambique; 2015). The latest cyclones in 2019 were disastrous. Tropical Cyclone Idai is reported to have been the strongest cyclone in Mozambique since 2008, according to the death toll, and was one of the three cyclones with the most victims since the begin of weather records in the Southern hemisphere (Masters; 2019).

⁴ PPCR, Worldbank, 2017.

⁵ National Climate Change Adaptation and Mitigation Strategy (INDC; Nov. 2012).

⁶ Mozambique Country Climate Risk Assessment Report, Irish Aid, 2018.

Future projections indicate that mean annual temperatures in Mozambique are likely to rise by 1.0-2.8°C by the 2060s. The proportion of rainfall that falls in heavy events will also increase. With these projections, droughts and floods are likely to become more frequent, and cyclones more intense. Sea-level rise in the region is projected to range from 0.18-0.59 m by the 2090s.

Agriculture, livestock and fisheries are the most important sectors of the economy, representing 80% of the labour force (INC Report; 2003). Due to a lack of effective adaptation mechanisms, a cumulative number of people could be forced to migrate away from the coast. The cost of disaster response is already high, and an economic analysis of climate change in Mozambique reveals that climate change may cause the GDP to fall 4-14%, with significant declines in national welfare by 2050 (INDC; 2015). These estimations should be adapted since Cyclone Idai is reported to be the costliest tropical cyclone in the South-West Indian Ocean (≥ 2 billion USD, Wood; 2019).

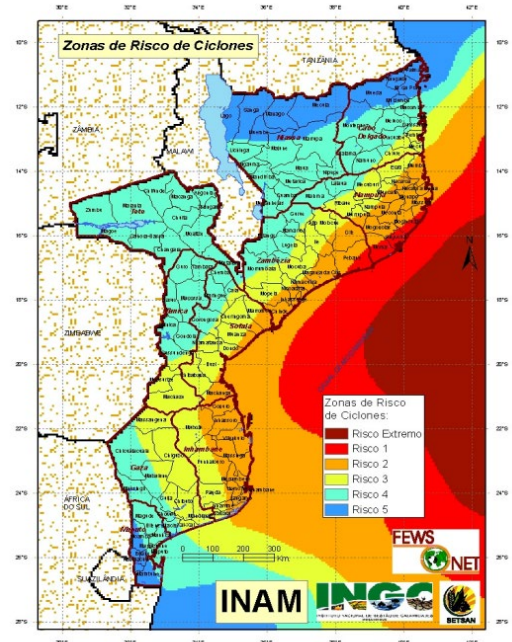
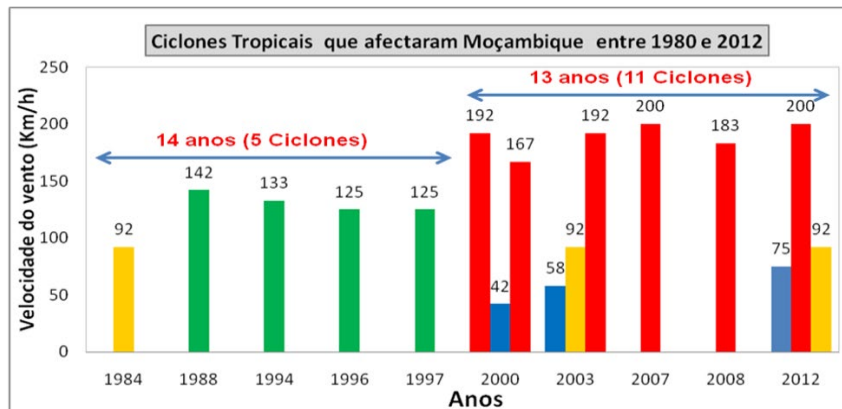


Figure 1 (left):
Map of Cyclone-Prone Areas (Irish Aid; 2018)
Figure 2 (right):
Increase in the number of cyclones (INDC; Mozambique; 2015). Note: the tendency follows on beyond 2013 - 2019 with 3 cyclones alone in 2018 and 2019.

c) Tanzania

Tanzania has a total area of 945,087 km² and its coastline is 1,424 km in length. In addition, the three largest lakes (Victoria, Nyasa, Tanganyika) have a coastline of around 3,300 km; all lakes in the country cover 6% of the total national area. The country has a population of about 60.8 million people (; accessed 07.06.2019). The adverse impacts of climate change are already taking a toll on the livelihoods of people and on the economy. The effects of frequent and severe droughts in many parts of the country are being felt, with their associated consequences on food production and water scarcity, among others. The coast is characterized by a wide diversity of biotopes and species, and the population utilizes a variety of its coastal and marine resources. Its highly productive ecosystems play a substantial role in the economic and social development of the country. One-quarter of the population lives in coastal regions and depends on the income from these sectors.⁷

The average annual temperature in Tanzania has increased by 1.0°C since 1960 and is projected to increase by 1.0°C to 2.7°C by the 2060s (Climate Action Report, Irish Aid; 2016). There will also be an increase in rainfall in some parts, while other areas will experience decreased rainfall. Rainfall in some parts will increase (both short and long rain seasons), especially those areas getting bimodal rainfall, including in particular the Lake Victoria basin (e.g. Bukoba, Kagera) and Northern parts of the coastal belt as outlined in the Disaster Vulnerability Assessment Report for Tanzania

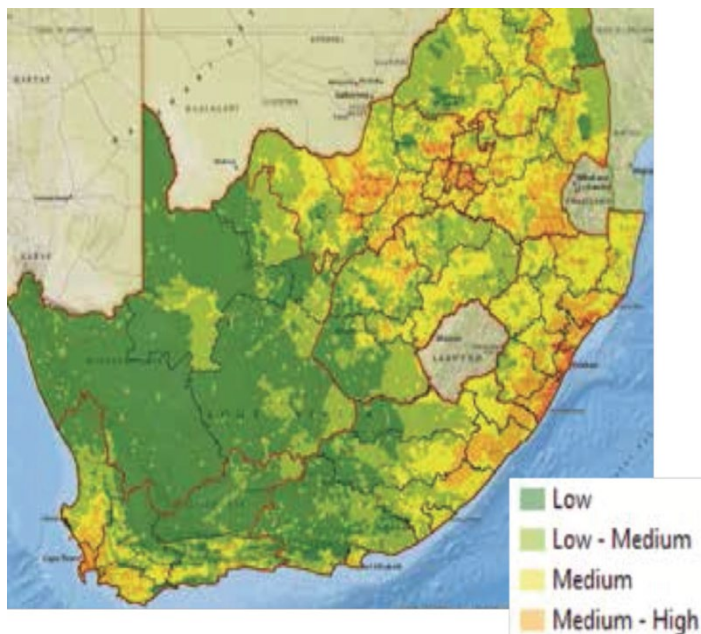
⁷ Tanzania, State of the Coast, USAID, 2001.

(NAPA; 2007, p.16). A sea-level rise brings the risk of land losses, coastal erosion, damage to coastal structure and properties and loss of coastal and marine habitats, saline intrusion in freshwater bodies, inundation of low-lying coastal areas, and coral bleaching. Estuarine and lagoon fisheries are the basis for livelihoods in many communities. The mangroves, in addition to providing physical protection against erosion, are used as firewood, for building poles, boat building and fish smoking (NAPA; 2017). The climate-related changes will lead to increased vulnerability of the communities, affecting sectors of the economy such as agriculture, water, energy, health, and forestry, and leading to a reduced provision of ecosystem services.

d) South Africa

The land area of the country is 1,219,602 km² And its coastline is 3,000 km long. The total population in 2019 was approximately 58 million (<http://worldpopulationreview.com>; accessed 07.06.2019).

Mean annual temperatures have increased by at least 1.5°C above the observed global average of 0.65°C since the 1930s. Regarding rainfall, there is a tendency towards a decrease in the number of rain days and there has been an increase in the intensity of rainfall events and increased dry spell durations (IPCC, 2007; TNC Report, 2018). A key feature of the projected climate change future of South Africa is that temperatures are forecasted to increase drastically under a low mitigation scenario. Ecosystems are negatively impacted by existing pressures, such as land use change and degradation, and climate change is also exacerbating these pressures (TNC; 2018). The levels of vulnerability across the country are detailed in Figure 3, which shows that the entire eastern coast is prone to a 'Medium - High' vulnerability level, which is the highest level of vulnerability.



*Figure 3:
Level of vulnerability to climate change in South Africa (Source: South Africa's Third National Communication, UNFCCC; Department of Environmental Affairs, March 2018, p.49).*

The coastline is generally exposed to moderate to strong wave action. Natural buffers against storm surges and rising seas have been degraded along parts of the coastline. With climate change expected to increase the frequency and intensity of storms, the coastline will become increasingly vulnerable to storm surges, coastal erosion, sea-level rise and extreme weather events (White Paper; 2011). Loss of biodiversity and ecosystem services will affect all sectors, particularly agriculture, tourism, and subsistence livelihoods. All coastal fisheries are susceptible to increased sea storminess, especially small-scale artisanal fisheries. Apart from commercial fisheries, subsistence fishing is important for the livelihoods of coastal communities as they attempt to meet their basic needs.⁸

4. Baseline for ecosystem services from mangroves, coral reefs and seagrass in the Programme countries

The biological and conservation values of the Programme area are of global importance.⁹ The provision of the coastal population with services from marine and coastal ecosystems in the countries of the WIO in the Programme region is increasingly endangered, as many coastal communities are facing growing economic hardship from the degradation of

⁸ NAPA, Draft, 2016; Strategic Framework and Overarching Implementation Plan for EbA.

⁹ Assessment of Ecologically or Biologically Significant Marine Areas - EBSAs 2012, IPBES 2018.

their resource base due to growing pressure from infrastructure development, population growth and climate change. Coral reefs and mangroves are in decline due to the combined impacts of local use and global threats. Important fish stocks are under threat from overfishing and inadequate management. Unsustainable human activities are enhancing the negative effects of climate change on coastal zones and their populations.

Fisheries traditionally provide the global population with food, as fish is an important source of animal protein, vitamins, minerals and fatty acids. Aquaculture is a growing sector that currently provides almost half of the fish products consumed by humans. Both sectors are a vital source of food security and livelihoods, particularly for poor coastal communities who depend upon the ecosystem services of marine and coastal resources, as they often live far from social services and markets and are hampered by local resource degradation.

Coral reefs provide food and shelter to fish. Mangroves, coral reefs and seagrass serve as nursery grounds for young commercial fish and are home to hundreds of species, therefore providing important ecosystem services for fish stock. All three ecosystems are crucial for the livelihood of coastal communities, especially for regions outside cities, where subsistence fishery and agriculture are often the sole income source.

The following sections provide baseline information about mangroves, coral reefs and seagrass in the countries of the WIO Programme region.

Mangroves

Mangrove forests are one of the Earth's most climate-resilient, productive and biodiverse ecosystems. Mangroves are salt-tolerant plants and the forests create one of the most species-rich habitats worldwide. Their high nutrition supply and the protective character of their root system makes mangroves an important spawning ground for fish and crustaceans. Through the exchange of nutrients and the migration of species, mangroves are strongly intertwined with other coastal and marine ecosystems such as coral reefs and seagrass beds.

Intact mangrove ecosystems have remarkable **climate change adaptation as well as mitigation capacities**. Mangroves are ecologically and economically highly important forests, and provide a wide range of ecosystem services. Mangrove resources are used directly by processing mangrove wood to charcoal, while a large share of the global fishery depends directly or indirectly on food chains in mangrove forests. Mangroves provide coastal protection and play a crucial role in disaster risk reduction by sheltering and buffering coasts from possible hazards. By reducing wave height by 13–66% per 100 m and storm surge water depth by 5–50 cm per km, mangroves can significantly reduce the impacts of flooding in coastal areas. They absorb and scatter wave energy and their stems, and also slow down water flow and waves, which makes them a natural barrier against floods or cyclones.

In addition, these trees play a vital role in the sequestration of blue carbon. The carbon storage capacity of mangrove forests is 3 to 5 times higher than that of terrestrial forests. The destruction of mangrove forests is responsible for about 10% of global emissions caused by deforestation – 240 million tons of CO₂ per year.¹⁰ Soil organic carbon is by far the biggest carbon pool for coastal habitats. In the first metre of sediment alone, soil organic carbon averages nearly 1,800 t CO₂eq/ha for oceanic mangroves.¹¹

The unsustainable use of and increasing economic development pressure on mangroves has led to an alarming loss of mangrove cover. Main causes are the logging of mangroves for timber and charcoal production and the extension of usable areas for settlements, agriculture and aquaculture (Global Mangrove Alliance).

Mozambique harbours the largest mangrove area in the Programme region, and the second longest extension of mangroves in Africa.¹² It ranks 19th amongst countries globally in terms of mangrove coverage. Mangroves occur in many places along the coast - in sheltered shorelines, bays, lagoons and river estuaries. The total mangrove area size has shrunk over the past three decades and a nationwide decrease from 408,000 ha in 1972 to 357,000 ha was noted in 2004.^{13 14}

Agricultural (landside) encroachment with slash-and-burn practices, urban development and infrastructure projects, and woodcutting – including both legal, but unmanaged, and illegal – for construction, firewood, and charcoal production have been responsible for most of the mangrove degradation in the past. The threats to mangroves and other coastal ecosystems are expected to worsen with increased coastal economic development, exacerbated by the effects of climate change.

¹⁰ Herr, D., T. Agardy, D. Benzaken, F. Hicks, J. Howard, E. Landis, A. Soles and T. Vegh (2015). Coastal “blue” carbon. A revised guide to supporting coastal wetland programs and projects using climate finance and other financial mechanisms. Gland, Switzerland: IUCN, p.10.

¹¹ Green Payments for Blue Carbon, Nicholas Institute, 2011.

¹² <https://www.biodiversityfinance.net/mozambique>

¹³ Fifth National Report on the Implementation of Convention on Biological Diversity (2015).

¹⁴ Data on Mangrove Coverage differ between sources. Source here: <https://qma-panda.opendata.arcgis.com> (6.6.2019).

The economic and biodiversity value, ecosystem services and potential for climate mitigation and adaptation of the mangrove forests, as well as the threats mangroves are exposed to and the trend of decline of coverage, also apply to the other countries of the Programme region.

In **Tanzania**, all mangrove forests are gazetted as forest reserves and occupy about 0.3% of the forest cover in the country. Available information indicates that Tanzania has lost about 44,000 ha of mangroves over the last 30 years (1980-2010) (or equivalent to about 28.9% of the 1980 area coverage). Apart from a decrease in the area coverage of mangroves, there has been a considerable decrease in the density, height and canopy cover of the mangroves within the forests.¹⁵

In **Madagascar**, mangrove forests are found mainly on the west coast, and originally occupied 25% of the 4,000 km coastline of Madagascar (Giri/Mulhausen; 2008). Madagascar mangroves are included in the WWF's Global 200 list of most outstanding ecoregions. More than 20% of mangroves have been deforested since 1990 due to reasons ranging from increased extraction for charcoal and timber and conversion, to small to large-scale agriculture and aquaculture.¹⁶ The main factors responsible for this increase include conversion to agriculture (35%), logging (16%), conversion to aquaculture (3%), and urban development (1%).

According to the Global Mangrove Alliance Data Portal, mangrove forest cover in the four countries is as follows:¹⁷

Country	Area (ha)
Mozambique	294,105
Madagascar	236,412
Tanzania	98,028
South Africa	1,742
TOTAL	630,287

Coral reefs¹⁸

Coral reefs support the highest marine biodiversity in the world and provide valuable ecosystem services. The ecological value of coral reefs is crucial for ecosystem health and for climate change adaptation. Despite covering less than 0.1% (284,300 km²) of the ocean floor, reefs host more than one-quarter of all marine fish species. Coral reefs function as a spawning and nursery ground and are crucial to the thriving of economically important fish populations. While coral reefs give shelter and provide food, they also filter water, by feeding off particulate matter suspended in the water column, and therefore provide high water quality. In addition, coral reefs break the intensity of waves and protect the land from storm surges.

Because of ocean warming and acidification, reefs around the world have suffered from mass coral bleaching events over recent years (IUCN.org). At current rates of temperature rise, oceans will become too warm for coral reefs by 2050. Changes in storm patterns are leading to more destructive and more frequent storms that can also cause the loss of coral reefs. Human-induced changes to marine biodiversity and coastal habitat further exacerbate the impact of ocean warming and acidification.

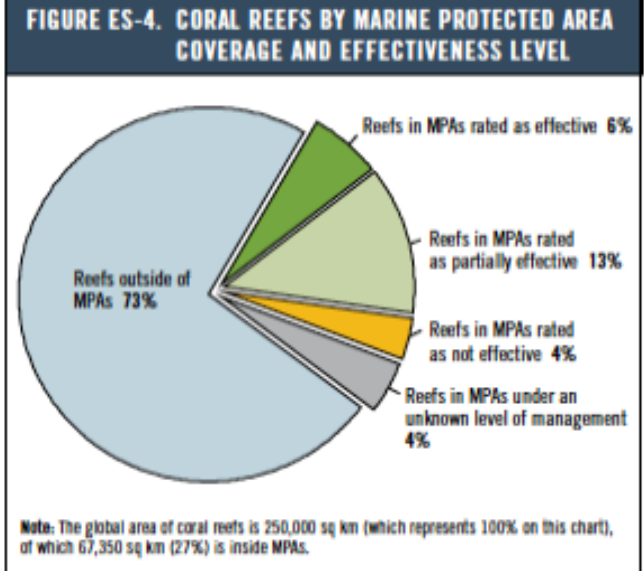
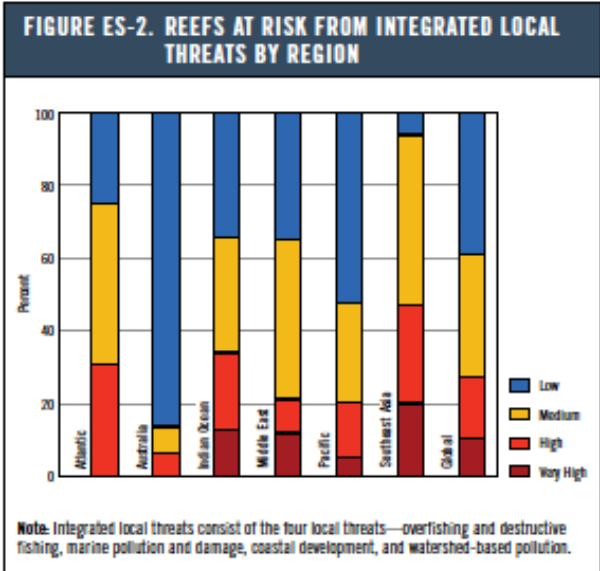
The WIO contains 16% of the world's coral reefs, and the region is thought to host the second peak of coral reef biodiversity globally. Coral reef ecosystems underpin the economies of the countries in the region, particularly the fishery and tourism sectors, and provide livelihood opportunities and income for local communities. Figure 4 demonstrates the threat level for coral reefs in each world region.

¹⁵ 5th NATIONAL REPORT TO THE CONFERENCE OF PARTIES TO THE CONVENTION ON BIOLOGICAL DIVERSITY, 2015.

¹⁶ Ecological Variability and Carbon Stock Estimates of Mangrove Ecosystems in Northwestern Madagascar. Trevor G. Jones 1,2,* , Harifidy Rakoto Ratsimba 3, Lalao Ravaoarinosihoarana 1, Garth Cripps 1 and Adia Bey.

¹⁷ Global Mangrove Alliance Data Portal - <https://gma-panda.opendata.arcgis.com> (based on "Status and distribution of mangrove forests of the world using earth observation satellite data", Giri et. al, 2011 [data base: 2000]).

¹⁸ Main contents taken from: Burke/ Reytar/ Spalding/ Perry; Reefs at Risk Revisited; World Resources Institute; 2011.



Figures 4 & 5: Threat level for coral reefs (Burke/ Reytar/ Spalding/ Perry; Reefs at Risk Revisited; WRI 2011). In the Indian Ocean, approximately 35% of reefs are under a “Very High” and “High” threat (higher than global average). Figure 5 shows that on a global scale, only 27% of coral reefs are within marine protected areas (MPAs) and only 6% within MPAs are rated as effective. The overall effective protection level for coral reefs is therefore extremely low (see also Section 2.4, below, on the status of MPAs in the Programme region). The following map (Figure 6) demonstrates that Madagascar, Tanzania and Mozambique are countries with coral reefs categorized as having high and very high threat levels.

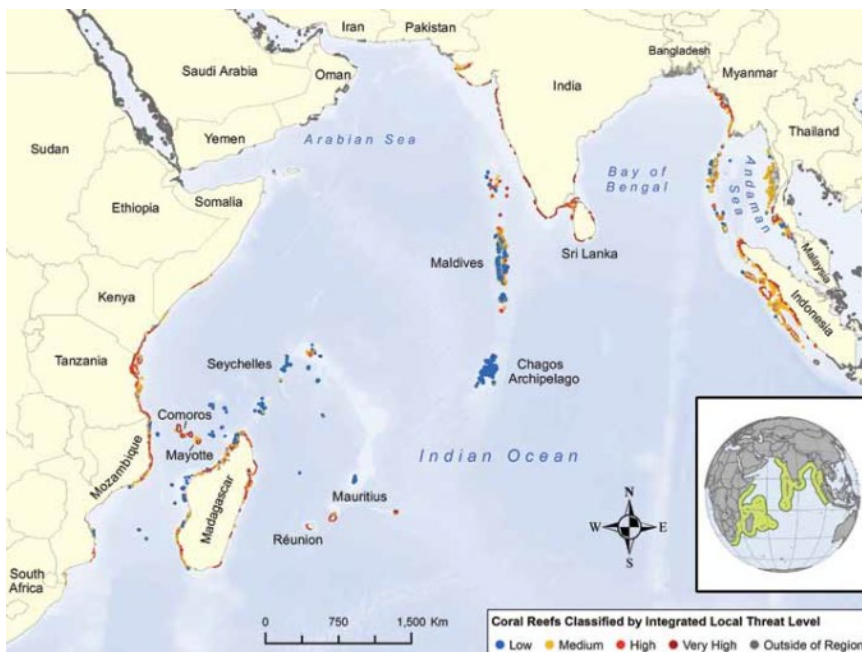


Figure 6: Threat Level of coral reefs (Source: Burke et al; Reefs at Risk Revisited; World Resources Institute; 2011).

Regarding the baseline for coral reef cover, data from the Global Coral Reef Monitoring Network (GCRMN) is being used, which is based on a dense and widespread net of monitoring stations in the WIO (see Annex 5).¹⁹ Across the WIO region (mainly Kenya, Madagascar, Mozambique, Tanzania and South Africa), coral cover declined by about 25% during pre-1998 and 1999-2015 time periods. Ongoing climate change is already inducing more frequent major coral

¹⁹ Source: Western Indian Ocean Coral Reef status, 2017; Global Coral Reef Monitoring Network (GCRMN).

bleaching and disease events, and acidification will increasingly undermine the ability of corals to resist other threats. According to data from the GCRMN (2017), the situation in the Programme countries is as follows:

Madagascar: The country's coastline shelters one of the most important coral reef areas in the WIO, with a surface area estimated at 2,330 km². The monitoring of the state of coral reefs shows a decline in coral cover for the whole country and only 60% of the known coral cover of Madagascar remains when compared to the 1998 levels. The degradation of reefs is exacerbated by global warming, which causes coral bleaching. Mortality due to severe coral bleaching caused noticeable declines in coral in 1998 and 2004, and most recently in 2016.

Mozambique: The country has an area of 1,890 km² of coral reefs (Fifth report on the implementation of the CBD; 2014). Coral cover has declined profusely across the country, from a mean of 30-60% in 1999 to about 20-30% in 2016, under pressure from mass bleaching events, flooding from terrestrial runoff from cyclones and heavy fishing. Due to very little continuity in monitoring over the full time period, only broad patterns can be inferred. With climate change, local climatic anomalies could become stronger, more frequent and less predictable, with implication for coral reefs as well.

Tanzania: With a total area of 3,580 km², Tanzania has the greatest reef area among the countries of the region (Spalding et al.; 2001). The coral reef health has fallen slightly over the last 30 years. Coral cover had been stable at around 35 to 45% until 2015. An increase in the coastal population and a poor economy, as well as unplanned coastal tourism and coastal development have all been implicated in coral reef degradation. Fishing is a very important activity and a vital source of food, employment, recreation and economic well-being for the coastal population (NAPA; 2017). Coral reefs support 70% of artisanal fish production and are the main driver for coastal tourism. However, destructive fishing is a major pressure on Tanzanian reefs, specifically dynamite fishing, dragnets and ring nets.

South Africa: South Africa has a relatively small area (40 km²) of coral reefs, located in the extreme North-Eastern part of the coast (WIO), but its corals are rich in diversity. Coral bleaching has occurred, including in the 2016 global bleaching event, but with no recorded mortality of corals. Since the reefs' discovery in 1970, there has been a good history of sound conservation management, as their biodiversity value and tourism potential were realised early on. In general, the reefs and the MPA are well managed.

According to estimates from the GCRMN (see above; for Mozambique: 5th Report to CBN), the coral reef area of the Programme region is as follows:

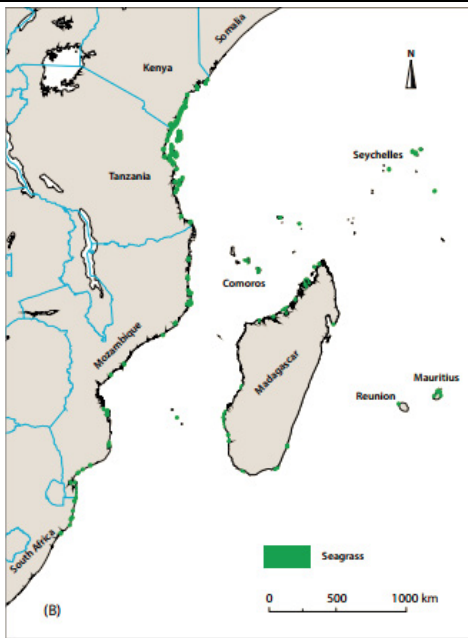
Country	Area
Mozambique	1,890 km ²
Madagascar	2,330 km ²
Tanzania	3,580 km ²
South Africa	40 km ²
TOTAL	7,840 km ²

Seagrass

Seagrass beds are one of the few habitats that provide multiple benefits to the environment, and are therefore one of the most valuable ecosystems on Earth. Seagrass provides huge ecosystem services, absorbing and storing huge amounts of carbon, reducing coastal erosion, serving as nursery grounds for young commercial fish, and is home to hundreds of species (Brochure: UK "National Marine Aquarium/NMA"; 2019).

Soil organic carbon is by far the biggest carbon pool for the focal coastal habitats. In the first metre of sediment alone, soil organic carbon averages 500 t CO₂eq/ha for seagrasses. In relative terms, about 95% to 99% of total carbon stocks of salt marshes and seagrasses are stored in the soils beneath them.²⁰

²⁰Green Payments for Blue Carbon", Nicholas Institute, 2011.



Mozambique is estimated to have a total of 43,900 ha of seagrass meadows. The total known historical loss of seagrass in Mozambique is estimated at 2,755 ha.²¹

The seagrass in southeast **South Africa** grows in 17 estuaries. Individual beds are small - generally only a few hectares - and the total area covered by seagrass is about 7 km².

Regarding **Madagascar, Tanzania** and Kenya, some information exists on seagrass species,²² but data on **coverage** by seagrass beds is not available. However, literature refers to indications of declining trends in coverage area. Globally, since the 1920's 90% of seagrass meadows has been lost and IUCN estimates that seagrass coverage is declining at an average of 7% annually. Seagrass beds have been negatively affected by the dredging of channels, shipping and other coastal activities. They are under imminent threat of erosion, sedimentation and nutrient-loading pollution from onshore activities, pollution from untreated sewage discharge and destructive fishing practices.

Figure 7: Seagrass distribution in the WIO
(Source: <http://data.unep-wcmc.org>)

Status of conservation of coastal ecosystems

The countries targeted by the Programme represent **about 6,300 km² of mangrove, 7,840 km² of coral reef area** and significant areas of seagrass, providing direct ecosystem services to millions of coastal community members.

In order to cope with the likely reduced health of coastal and marine ecosystems in the future, the scaling up of coastal management efforts needs to be sufficient to meet the extent of well-managed areas envisaged in SDG 14 and Aichi Target 11 ("by 2020, at least 10% of coastal and marine areas are protected"). The table in Figure 8 summarizes the area under management in MPAs and Locally Managed Marine Areas (LMMA) in the Programme countries. The table also indicates the gap to achieving Aichi Target 11.

Country	Current status of MPAs	Aichi gap	Implementation priorities
Kenya	<ul style="list-style-type: none"> 6 national protected areas and 24 LMMAs cover 1.03% of EEZ 	-9%	<ul style="list-style-type: none"> National planning for network of MPAs and LMMAs
Madagascar	<ul style="list-style-type: none"> 28 MPAs and >70 LMMAs cover 1.31% of EEZ Promise of Sydney specifies # for expansion (3 times), but not size of LMMA target 	-8.7%	<ul style="list-style-type: none"> Complete current MSP process identifying priority sites for MPA and LMMA designation Turn the Promise of Sydney LMMA commitment and distinction between terrestrial and marine PAs into specific area target for marine areas.
Mozambique	<ul style="list-style-type: none"> 5 MPAs cover 2.54% of EEZ 	-7.5%	<ul style="list-style-type: none"> Implementation of the new large MPAs (Primeiras & Segundas) Identification of LMMAs through fishery legislation in support of fishery cooperatives National planning for network of MPAs and LMMAs Capacity building

²¹National Blue Carbon Policy Assessment Mozambique; WWF; IUCN; 2016.

²² Green E.P and Short F.t 120031 World Atlas of Seagrasses. Prepared by the UIMEP World Conservation Monitoring Centre. University of California Press, Berkeley, USA.

South Africa ⁷	<ul style="list-style-type: none"> Nationally, 24 MPAs cover 0.67% of mainland EEZ. The Prince Edward Island MPA declared in 2013 increased the national MPA coverage by an additional 180,000km². In KwaZulu-Natal province (in the WIO), 4 MPAs cover 0.67% of EEZ, or 2153 km². MPA planning and zoning process very advanced under Operation Phakisa. Committed to 5% of EEZ in MPAs under this plan 	WIO only: -9.3 % Will be -5% after national target met	<ul style="list-style-type: none"> Confirmation and implementation of current MPA zoning plan Assessment of next steps to meet Aichi Target 11 and SDG 14 goals
Tanzania	<ul style="list-style-type: none"> Currently 7 MPAs, 13 LMMAs covering 2.92% of EEZ 	-7.1 %	<ul style="list-style-type: none"> National planning for network of MPAs and LMMAs

Figure 8: Current status of MPAs and LMMAs in the Programme region (incl. Kenya for information) (2015) ²³

Conclusion: High importance of EbA to reduce vulnerability of coastal communities in the WIO

Climate change-related risks pose a great threat to marine flora and fauna, and therefore to their services for the livelihoods of coastal communities. In turn, the protection of these livelihoods is strongly linked to coastal and marine ecosystems and their preservation. Without mangroves and coral reefs, coastlines are more exposed to erosion and destruction of infrastructure following storm surges and sea-level rise. Dead coral reefs have a direct negative impact on income opportunities from tourism. Mangroves, coral reefs and seagrass beds are important, as spawning and breeding habitat for fish and therefore as a source of income and protein.

If the present trend of climate change persists, it is expected that in years to come, vulnerability of coastal communities due to climate change events will continue to increase due to the decrease in available ecosystem services. As income and subsistence of coastal communities are mainly based on the services from coastal and marine ecosystems, the livelihood of the coastal population, its health and well-being, will be increasingly at risk.

While strategies and objectives for climate adaptation in marine and coastal ecosystems already exist in all countries targeted by the proposed Programme, and the countries show commitment to and ownership of related adaptation measures, their implementation still lags behind. Transfer of those strategies into concrete action is urgently required to improve the climate resilience of coastal communities, but the countries face considerable institutional, financial and technical barriers regarding adaptation measures. Climate adaptation actions are urgently needed in the Programme region, as climate change related risks seem to grow in intensity. The cyclones, heavy rainfalls and floods in Mozambique in 2019 and their disastrous consequences for the population demonstrate the negative impacts these extreme weather events cause.

B.2. Theory of change (max. 1000 words, approximately 2 pages plus diagram)

Description of the Theory of Change

The proposed Programme supports a more sustainable development pathway towards more climate resilience for vulnerable coastal communities as its long-term vision for improved coastal protection, more effective use of marine biodiversity and a diversification of livelihoods (see “Paradigm Shift”, section D.2.). This can be achieved through strategic investments into EbA approaches, especially focusing on ecosystem services for coastal and marine-based communities. These investments include the measures described in section B.3. By using the funds of the GCF-Programme, stakeholders (NGOs, public institutions, research organizations, private sector, and coastal communities) collaborate across sectors at a local and sub-national level. Stakeholders will identify and implement viable sub-projects to reduce anthropogenic stressors, contribute to the rehabilitation, protection and sustainable management of mangrove and coral reefs, and generate meaningful management information that informs policy and strategic decision makers.

The Programme concept is specifically tailored by the BAF to address the identified local barriers (see below) for a higher resilience of vulnerable coastal populations with respect to climate change. It is focused on (1) EbA measures implemented on the ground with strong participation of local stakeholders, also promoting the roles of women in sub-

²³ Coral reef status report for the Western Indian Ocean (2017); from Obura et al., 2017, with data derived from the World Database on Protected Areas.

project planning and implementation, (2) expertise from international NGOs that are well-experienced in climate change adaptation projects and “state of the art”-EbA approaches in coastal and marine ecosystems, (3) the use of the BAF grant-funding mechanism in order to catalyze impacts beyond a one-off project investment.

Successful EbA approaches will be disseminated through the BAF within the region, which brings them to scale. Best practices and innovative EbA concepts will be spread further to other regions and developing countries with similar climate change adaptation needs. The demand driven and open character of the Programme, using the well-established grant-funding mechanism of BAF and the international network of NGOs and their experiences, brings a significant value added to the GCF funds for Climate Adaptation.

The proposed Programme aims to increase the climate resilience of coastal populations in the WIO region using EbA services, particularly addressing risks related to storm surges and coastal erosion. This is done at two levels: (a) Through the participatory implementation of local, strategic EbA sub-projects with experienced implementing partners and (b) by providing key national stakeholders with the necessary skills and tools needed to integrate EbA approaches into their national / regional strategies for climate-resilient coastal zone management. Significant co-benefits will be obtained with regard to climate change mitigation, biodiversity conservation and income generation.

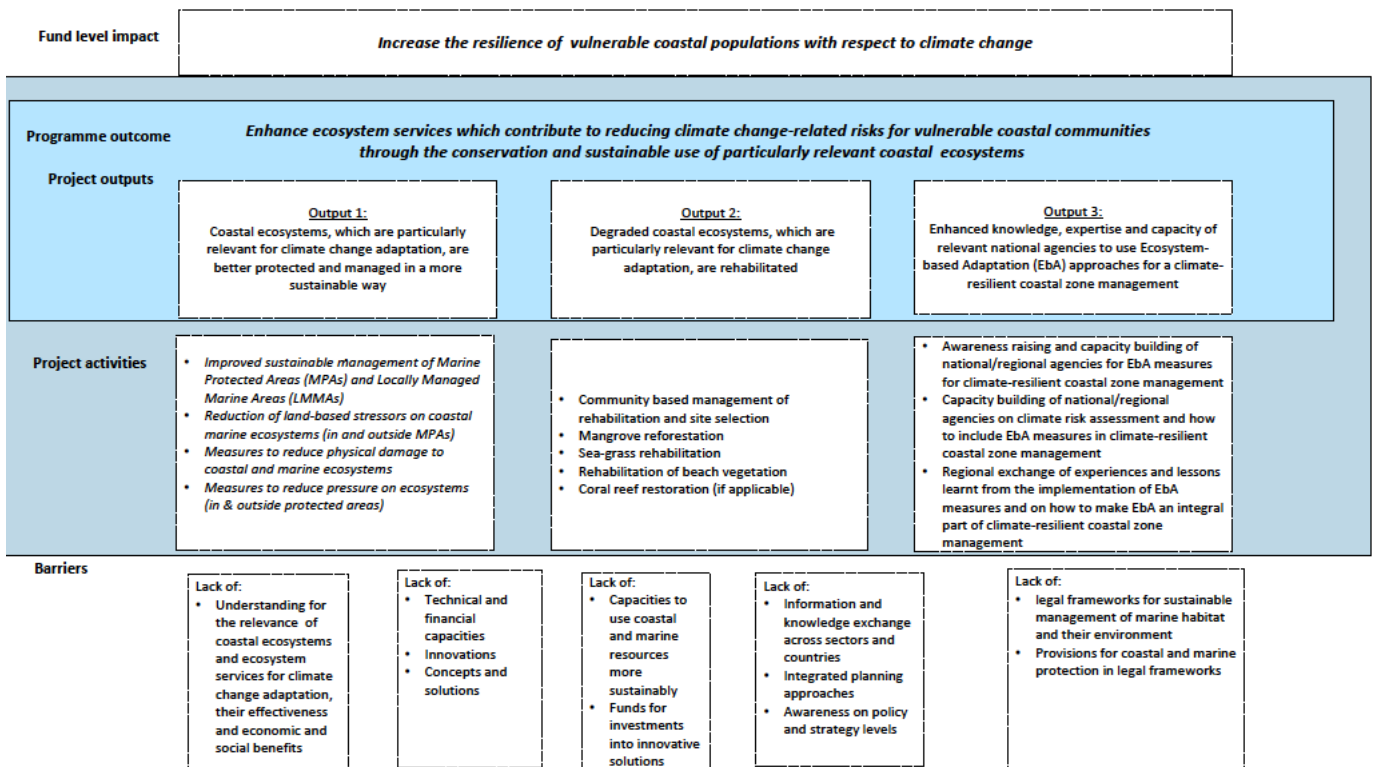
Local EbA sub-projects will be based on a sound climate risk assessment and will focus on the protection, the improved management and the restoration of ecosystems, which are particularly relevant for reducing climate-related risks, such as mangroves, coral reefs and sea grass beds. In order to make the interventions sustainable, key local stakeholders will be involved in the planning, implementation and evaluation of the measures, which will put particular emphasis on improving the livelihoods of the local vulnerable population.

These concrete local practical experiences will be the entry point for raising awareness and developing capacities amongst key national / regional stakeholders to integrate EbA approaches in national / regional strategies for climate-resilient coastal zone management. The Programme will provide important tools and methodologies needed for this mainstreaming process. Finally, a regional exchange of experiences and best practices will enhance mutual learning on how to best use EbA approaches in coastal zones of the WIO region.

The well-established grant funding mechanism of the BAF will provide opportunities for future implementation of EbA measures in the region, thus scaling-up the outcomes of the Programme.

DIAGRAM: Theory of Change

Annex 1: Theory of change



Main barriers / root causes that must be addressed

As climate change effects in the Programme region are increasing in extent and frequency, climate adaptation measures regarding coastal and marine ecosystems are urgently required. However, effective climate change adaptation policies are hampered by financial gaps as well as weak institutional capacities and insufficient expertise at the national and local levels. Although climate change adaptation is part of the development strategies of all selected countries, weak and fragmented institutional structures restrain an effective implementation of national strategies. In addition, low economic growth rates and high public debts limit the funding for public investment in climate change adaptation.

Most of the countries in the developing world are not geared to respond adequately to the challenge of climate change and the destruction of coastal ecosystems such as coral reefs, mangroves and seagrass. These main barriers apply to the selected Programme region in the WIO and require urgent attention. Barriers include:

- The relevance of coastal ecosystems and ecosystem services for climate change adaptation: their effectiveness and economic and social benefits are still not well understood, and consequently, often not adequately reflected in existing management plans of coastal and marine protected areas in the targeted Programme countries.
- Programme countries lack technical and financial capacities to integrate aspects of sustainable use of fishing grounds, as well as coral reef and mangrove protection into planning and development concepts, and to implement coastal development measures.
- Technical and financial capacities on the ground are lacking in Programme countries to identify solutions, adjust to local conditions and scale up measures. This particularly concerns the management of MPAs, locally managed areas for fish stock rehabilitation, measures to rehabilitate corals and mangroves, as well as measures for sustainable aquaculture and small-scale fisheries in the WIO region.
- Although there are technical innovations and concepts available around the globe for the sustainable management, protection and rehabilitation of coral reefs, mangroves and fish stocks, the dissemination of concepts and experiences in the Programme countries is difficult.
- Insufficient capacities for spatial and integrated planning approaches and cross-sector as well as cross-country collaboration lead to a lack of coordination in the WIO region. Thereby, the critical mass of investments and measures that would make a difference along coastlines cannot be achieved.
- Mainstreaming ecosystem-based approaches represents additional costs and an investment risk. Especially in the least developed countries of the WIO region – just as in other LDCs –, it is crucial to support the EbA approaches with appropriate financial instruments.
- The knowledge, information and data to understand and deal with the complexities of EbA approaches across sectors and countries, as well as the management of marine habitats and the scaling up of climate-smart technologies, is scarce in the Programme countries.
- Ecosystem connectivity is crucial for enhanced resilience of coral reefs and mangroves. However, the institutional set-up for the management of protected areas is often fragmented within and in-between countries of the WIO region.
- At the local level, communities in the targeted countries have ample knowledge of their resources. However, they lack the capacity and access to finance, technology and markets that would enable them to use their resources in a climate-smart way.
- The fish value chain is complex, often informal, and requires the collaboration of local communities with the private sector and regulatory authorities. Globally, more than 30% of the catch from small-scale fisheries is lost due to inefficient and unhygienic handling of fish after the harvest. Data for the WIO region is missing, but it can be expected that a similar scale of fish is lost post-harvest. A lack of knowledge, difficult market access, and a lack of funding for climate-smart, cold-chain technology represent barriers to the reduction of post-harvest losses and more sustainable fisheries.

In different scales, these barriers are relevant for all selected countries of the proposed Programme region. To overcome the barriers, the GCF-funded Programme would provide financial means and technical support for the implementation of local and sub-regional adaptation measures. The Programme is centred on an ecosystem-based

approach to climate change adaptation and involves a wide range of ecosystem management measures to increase resilience and reduce the vulnerability of people and the vulnerability of the environment to climate change.²⁴

To ensure sufficient implementation capacities, the measures will be implemented by capable and experienced international and local NGOs, in close coordination with local communities and the responsible local and national governmental institutions. NGOs will specify how the identified barriers will be addressed by the proposed project measures in every sub-project proposal. The eligibility criteria in the GCF-specific calls for proposals will explicitly refer to the six GCF Investment Criteria and NGOs will explain how these criteria will be fulfilled.

Knowledge transfer between key stakeholders, as well as capacity building on the ground will help to strengthen technical and financial capacities and the understanding of EbA approaches at a local level.

Programme objectives against baseline: Against the baseline scenario of increasing community vulnerability due to increasingly threatened ecosystems in the Programme region and potential risk elevation due to climate change, the outcome will be: To enhance ecosystem services that contribute to reducing climate change-related risks for vulnerable coastal communities **through the conservation and sustainable use of particularly relevant coastal ecosystems**. The outcome contributes to increasing the resilience of vulnerable coastal populations with respect to climate change (Programme impact).

B.3. Project/Programme description (max. 2000 words, approximately 4 pages)

The Programme builds on a comprehensive Ecosystem-based Adaptation (EbA) approach involving the conservation, sustainable management and restoration of marine and coastal ecosystems that can help people adapt to the impacts of climate change. EbA is a nature-based solution that harnesses biodiversity and ecosystem services to reduce vulnerability and build resilience to climate change. Successful EbA approaches will be disseminated through BAF within the region and bring them to scale. In addition, through the global action of BAF, best practices and innovative EbA concepts will be spread further to other regions and developing countries with similar climate change adaptation needs.

The proposed Programme responds to the challenges, vulnerabilities and barriers described in section B.2., specifically addressing the following ecosystem services, which are relevant for climate change adaptation:

- Mangroves, coral reefs, seagrass beds, and shore and beach vegetation protect the shoreline from increasing coastal **erosion** (and subsequent damages to infrastructure, loss of agricultural land, etc.);
- Mangroves, coral reefs and seagrass beds reduce the impacts of **storm surges** on people and coastal infrastructure by dissipating wave energy;
- Coral reefs (which are seriously affected by increasing sea water temperature and acidity) are an important asset for **tourism**, particularly diving tourism;
- Coral reefs and mangroves are important spawning and breeding grounds for fish, therefore the **livelihood basis** for many poor fishers.

In order to arrive at the expected outcome, the following three outputs are planned:

- Coastal ecosystems in the Programme region, which are particularly relevant for climate change adaptation, are better protected and managed in a more sustainable way (Output 1);
- Degraded coastal ecosystems in the Programme region, which are particularly relevant for climate change adaptation, are rehabilitated (Output 2);
- Enhanced knowledge, expertise and capacity of relevant national agencies to use Ecosystem-based Adaptation (EbA) approaches for a climate-resilient coastal zone management (Output 3).

For the GCF Programme, BAF will use its grant making mechanism (see B.4) and will launch a specific open calls for proposals, with the regional focus on the target countries of the WIO Programme region. The thematic focus is Climate Change Adaptation through EbA measures. For this purpose, the following specific selection criteria for the proposed GCF-Programme (EbA window of the BAF) are applied:

- Evidence that the project primarily addresses climate-related impacts and not only development-related impacts (climate rationale);
- Evidence that the project is in line with national and/or regional climate change adaptation plans, particularly NDCs and NAPs.

²⁴ Resilience of ecosystems is understood as the capacity of a system to recover from stress and disturbance while retaining its essential functions, structure, feedbacks and identity; IUCN, <https://www.iucn.org/commissions/commission-ecosystem-management/our-work/cems-thematic-groups/resilience>.

- Contribution of the project to awareness raising and capacity building of national / regional agencies on the relevance and options of using EbA measures for climate-resilient coastal zone management;
- Contribution of the project to capacity building of national / regional agencies on climate risk assessment and how to include EbA measures in climate-resilient coastal zone management;
- Contribution to a regional exchange of experiences and lessons learnt from the implementation of EbA measures and on how to make EbA an integral part of climate-resilient coastal zone management.
- Contribution of the project to climate change mitigation (providing mechanisms for mitigation and estimates on expected GHG reduction as supplementary criterion).

Each proposal will clearly explain its contribution to the GCF objectives and six investment criteria for climate change adaptation. For more details, reference is made to the draft appraisal matrix for proposals in Annex 23. With the GCF contribution, the BAF could transform its current conservation-oriented portfolio into a clearly climate change-focused initiative for marine and coastal ecosystems, implemented by civil society organizations and local stakeholders. The call for proposals for the GCF-funded Programme will be designed to focus sub-projects on climate adaptation through EbA.

The call for proposals for the sub-projects are designed in a gender-sensitive way. Sub-project proponents will provide stakeholder analysis with special reference to women. The concepts of sub-projects shall demonstrate how women will be involved in planning and implementation and how they will benefit from project results. In addition, proponents are invited to design women-specific measures, where women are the main stakeholders and mainly benefit from the results.

Once a sub-project has been approved for funding, BAF will enter into an Implementation Agreement with the respective NGO. The log-frame, budget and implementation plan will be binding elements of the agreement. Upon signing of the Agreement, the NGOs will prepare a disbursement request for actual implementation. BAF will check the requests against the agreed budget and implementation plan and, if approved, disburse the requested funds to a special account opened for the purposes of the sub-project or to a separate and internally tracked and traceable bookkeeping entry in NGO's financial management system, opened or created and used solely for these funds. The agreed budget and implementation plan will also serve as the reference for progress reporting of the NGO and implementation monitoring of the BAF.

Proposals are required to cover measures from the three components presented below. The type of measures that should be implemented under an approved sub-project are defined in the signed Agreement (see above). Changes to the agreed concept / implementation plan of sub-projects are subject to prior written agreements between the BAF and the respective NGO. :

Component 1:

Funding window for protection and sustainable management of coastal resources relevant for EbA (mangroves, coral reefs seagrass)

BAF will on-grant funds for the implementation of this component on the basis of the agreed project implementation plans and budgets of the approved sub-projects (see above). The eligible grant-funding recipients (NGOs) will carry out the actual implementation of agreed measures. Measures financed under this component may comprise the identification, planning, financing and implementation of coastal management and protection measures such as:

I. *Improved management of marine, coastal and freshwater protected areas and Locally Managed Marine Areas and Management of Coastal Ecosystems (coral reefs, mangroves and seagrass)*

The development, establishment and improvement of management of marine protected area (MPA) networks and Locally Managed Marine Areas (LMMAs) with a substantial proportion of sizeable and well-placed no-take zones within MPAs will lead to tangible benefits for vulnerable local communities, notably through the spill-over effects (dispersal of adult fish) and reserve effects (dispersal of eggs). The same holds true for freshwater protected areas. Protecting especially herbivorous fish can particularly contribute to improving the ecological resilience of coral reefs. Support measures to local communities managing protected areas may include:

- infrastructure (offices, visitor centres, IT),
- boats and other equipment for guards,
- defining area boundaries through demarcation (buoys),

- (iv) introduction of participatory co-management, the update of management plans to make sites more resilient to climate change impacts, and further enforcement of implementation of measures outlined in management plans;
- (v) more local value addition through reduction of post-harvest losses (up to 40% globally) and improved processing.

Healthy mangroves, coral reefs, seagrass beds and shore vegetation provide the above-mentioned services relevant for climate change adaptation. Effectively managed MPAs allow for the protection and restoration of key habitats and the replenishment of fish stocks. These effects increase ecosystem service provision, e.g. by providing opportunities for nutrition and subsistence income, recreation and tourism, coastal protection and carbon sequestration. Protected marine areas and sustainable artisanal fisheries have a huge potential for positive effects on the livelihood of coastal communities. Integration of the local communities and other relevant stakeholders in planning and implementation of measures as well as management of protected areas is crucial for success and for the sustainability of results and therefore a condition for proposed sub-projects. The measures will be implemented in cooperation with local communities and MPA Administrations.

II. Measures to reduce physical damage to coastal and marine ecosystems, e.g.:

- (i) Mooring-buoys for minimizing damage of coral reefs by anchors,
- (ii) Demarcation and signalling of relevant ecosystems,
- (iii) Installation of breakwaters to protect parts of reefs from wave action, and
- (iv) Boardwalks for the protection of beach vegetation.

These physical and visual measures can protect ecosystems from human and natural damage and allows them to use their own potential for natural rehabilitation. Measures will be implemented in cooperation with local communities and local governments.

III. Measures to reduce pressure and land-based stressors on coastal marine ecosystems:

Coral reefs, mangroves, seagrass beds and beach vegetation are threatened by unsustainable land use patterns in aquaculture, rice farming and fishing, deforestation, drainage, sedimentation and excessive nutrient influx. Unplanned and unregulated shrimp farming is one of the main causes of mangrove deforestation, as well as unplanned logging e.g. for consumptive uses. As these practices are often carried out by the local communities, alternatives have to be identified and implemented in cooperation with the local stakeholders. Promoted measures will be implemented within as well as outside protected areas and will reduce pressures on coastal ecosystems, through e.g.:

- (I) Promotion of alternative fuel wood sources where mangroves are used;
- (II) Promotion of participatory land use planning for improved protection of coastal ecosystems from damaging human impacts (to minimize negative impacts of land use on e.g. mangroves);
- (III) Enhancing the production of fish through the promotion of sustainable fisheries management, as well as aquaculture. Such approaches include co-management approaches with local communities, promotion of Integrated Multi-Trophic Aquaculture (IMTA), pond-based Integrated Agriculture-Aquaculture as well as seaweed farming; and
- (IV) Reduction of sedimentation from land-based erosion (e.g. reforestation, slope stabilization).

The measures of **Component 1** contribute to the protection and conservation of the coastal and marine ecosystems through improved and more effective management of protected areas, physical protection and signalling of relevant areas and their borders, and reduction of erosion, as well as the creation of sustainable production and income alternatives for local communities. Experiences from other BAF-financed sub-projects in the region will be incorporated (see map in Annex 16).

Component 2:

Funding window for rehabilitation of degraded coastal ecosystems relevant for EbA

As for Component 1, BAF will on-grant funds for the implementation of this component on the basis of the agreed project implementation plans and budgets of the approved sub-projects, while actual implementation will be carried

out by the eligible NGOs. Eligible measures comprise restoration of ecosystems, complementing measures under Component 1, such as

- (I) Mangrove reforestation,
- (II) Seagrass rehabilitation,
- (III) Rehabilitation of beach vegetation, and
- (IV) Coral reef restoration where applicable, e. g. with more temperature-resilient species.

Successful approaches to mangrove rehabilitation mostly include community-based management of the selection of suitable sites and rehabilitation measures, as well as a combination of physical and biological measures to control site conditions. This includes careful fact-finding on the ecologically and socio-economically favourable site selection, alongside comprehensive planning of modalities for nursery management and seedling production, transplanting and maintenance. The challenges of coral reef rehabilitation include proper site management and avoidance of stressors that cause coral reef damage. Coral reef rehabilitation includes re-stabilization of damaged reefs and corals, as well as propagation and transplantation of corals to new sites. Coral transplantation is one option available to rehabilitate coral reefs, however, it is more expensive. Active rehabilitation of degraded coral reef is likely to require tens of thousands of coral transplants per hectare. Simple *in situ* coral nurseries can be constructed from readily available and inexpensive materials, and with some guidance, operated by NGOs or local communities. Good site selection is crucial to the success of a coral nursery. Passive restoration via good management of reef resources is an option and should be considered as an alternative. Seagrass rehabilitation involves germination and cultivation of seagrass and its transplantation to sites with suitable conditions.

In all cases, effective and sustainable management structures must be put in place before active restoration occurs.

Component 3: Support for knowledge exchange and capacity building regarding appropriate and feasible EbA approaches

All projects supported by the Blue Action fund are expected to also contribute to and support the knowledge exchange and capacity building regarding appropriate and feasible EbA approaches. In fact, knowledge exchange related to changes in habitats and ecosystems, as well as best practices and lessons learned, are key for enhancing EbA. This knowledge can only be obtained through regular, standardized observation of defined aspects of habitat and ecosystems, as well as practical on-the-ground experience and its evaluation. The existing expertise, research, practical experiences and evaluation within renowned international NGOs will be crucial for this component. Eligible measures include

- (I) Awareness raising and capacity building of national / regional agencies on the relevance and options of using EbA measures for climate-resilient coastal zone management
- (II) Capacity building of national / regional agencies on climate risk assessment and how to include EbA measures in climate-resilient coastal zone management (instruments, methodologies, incentive schemes, etc.)
- (III) Regional exchange of experiences and lessons learnt from the implementation of EbA measures and on how to make EbA an integral part of climate-resilient coastal zone management.

BAF will on-grant funds for these measures based on the agreed project implementation plans and budgets of the approved sub-projects, while the eligible NGOs will carry out their actual implementation.

At sub-project level, technology transfer and dissemination of lessons learned is ensured in various ways, depending on the focus of the sub-project.

1. Cooperation and exchange between NGOs working in the same region or on similar issues is encouraged through consortia. In addition, the sharing of expertise beyond the projects is supported through workshops, conferences and trainings.
2. Sub-projects also include communication budgets to ensure sufficient media coverage and other PR work (such as websites and social media) to inform and disseminate knowledge on project outcomes.
3. At programme level, meta analyses are carried out in order to draw conclusions at subordinate levels. This proves to be especially useful for overarching processes or strategies.
4. Relevant events at the international level provide the opportunity to disseminate insights and lessons learned among a larger audience, also across different sectors.
5. Technology transfer can take place through opportunities to fund capital expenditures, e.g. on solar panels, patrolling equipment, or equipment to reduce post-harvest losses. In this case, it is pivotal to ensure dissemination of knowledge on the technology is disseminated as well.

Appraisal, Evaluation, Lessons Learned: In addition, high-level expert services for the appraisal, monitoring and evaluation of sub-projects, including identification of best practices and dissemination of lessons learnt will be part of the Component.

This measure will be directly contracted and financed by BAF.

Gender strengthening: All capacity building measures will be gender sensitive. In addition, NGOs will be requested by the call of proposals to include in their proposals measures to enhance the role of women in EbA and/or to improve income opportunities for women and/or other means to promote the participation of women in planning, implementation and sharing of project benefits. The financing volume for this gender specific measures depends on the proposals, and the BAF will report on this in its mid-term review. Based on the approved proposals, the BAF will provide financing to eligible NGOs for the implementation of such measures.

A highly qualified consultant with specific social and gender related expertise in development and climate finance will be engaged to propose concrete gender strengthening criteria and measures to be included in calls for proposals, evaluation criteria, reporting, monitoring and evaluation. The consultant will develop a *Guide to Gender Mainstreaming* prior to the launch of calls for funding applications, which will support further gender assessment and analysis, as well as the development of project-specific gender action plans. The BAF will be directly in charge of selection and the contracting of the consultant and ensure the quality of his/her outputs.

Further Information on the definition of eligible and non-eligible measures and eligibility requirements for funding proposals can be found in the BAF Grant Procedures Manual (see Annex 22; therein: Chapter 2 and Annex 2). Submitted proposals will include selected measures from all three components. In Annex 24 the log frame (Annex 24.a) and implementation plan (Annex 24.b) of a theoretical model sub-project is presented. Main emphasis of field measures is on improved management of protected areas and on rehabilitation and sustainable management of mangrove forests, a very likely combination for the Programme area.

All described measures and activities enhance the conservation and sustainable use of coastal ecosystems, address the root causes for vulnerability, and support the resilience of ecosystem services, all which contribute to reducing climate change-related risks for vulnerable coastal population. The exact set of sub-projects and measures will be defined during the calls for proposals.

B.4. Implementation arrangements (max. 1500 words, approximately 3 pages plus diagrams)

The Blue Action Fund is the Programme Executing Entity and selects NGOs as project implementers according to a specific selection mechanism and criteria. The KfW, as Accredited Entity has developed the funding proposal, supervises and monitors the implementation of the funded measures, and reports regularly to the GCF. The KfW also evaluates the outcomes of the Programme in accordance with the AMA (details below).

Blue Action Fund (Programme Executing Entity)

The BAF was established in 2016 by the German Federal Ministry for Economic Cooperation and Development (BMZ) and the KfW Development Bank (KfW). The BAF conducts its business based on rules applicable to it as a German foundation that receives funding mainly from different public sources. In June 2017, the Swedish Ministry for Foreign Affairs joined as a donor. The Agence Française de Développement (AFD) became a donor in October 2018. Further funding from other donors is envisaged. Main governing documents are the foundation's charter, by-laws, investment policy, the Grant Procedures Manual and the Environmental and Social Management System (ESMS), which are available on the BAF's website (<https://www.blueactionfund.org/documents-and-publications/>). The BAF communicates with utmost transparency, in particular in relation to governance, governing documents, grants and measures, studies and research, and financial information, as well as its auditor's reports.

In 2016, the BAF began with 24 million EUR in capital from the German BMZ. In 2017, the BAF doubled its assets thanks to the funding contributions of Sweden (5.2 million EUR) and additional funding from the BMZ (20 million EUR), and also further increased its assets in 2018 thanks to additional contributions from Sweden (3 million EUR), the BMZ (11.1 million EUR) and the AFD (2.5 million EUR). Total contributions in 2019 amounted to approximately 68.1 million EUR (including an additional 2.5 million EUR from AFD).

The governance structure of the BAF respects the basic principles of good governance, particularly in regard to the rules laid out in the Public Corporate Governance Codex and the "Guiding Principles of Good Practice for Foundations" issued by the *Bundesverband Deutscher Stiftungen (Association of German Foundations)*. In order to comply with

these rules, the BAF is structured as a two-tier board model with a Management Board (MB) that conducts day-to-day business and a Supervisory Board (SB) that oversees all activities and provides strategic guidance. While the SB approves funding decisions and determines the strategic directions of the BAF portfolio, the MB, through its Executive Director, is responsible for the general representation and administration of BAF, the implementation of its grant-making mechanism, and the day-to-day management of the foundation.

The BAF is operated in accordance with the procedures and standards of the KfW, which have been assessed and approved by the European Union in its six-pillar assessment. The SB of the BAF is currently comprised of three members: the BMZ, Sweden, and KfW. The French AFD and IUCN have been invited as observers. The members of the MB and SB are highly experienced professionals in their relevant fields of action, with development financing, as well as environmental and climate financing backgrounds.

The Supervisory Board conferred sole power of attorney on the Managing Executive Director. The Management Board acts as Trustee of the BAF and represents the Foundation in court and out of court action by at least two of its members.

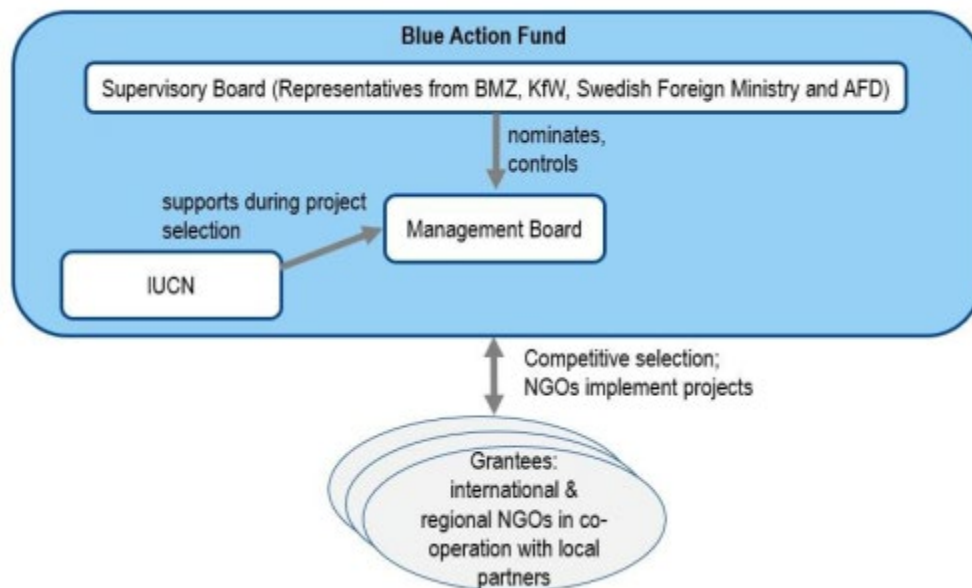


Figure 9: Blue Action Fund organizational structure

The BAF's mission is to provide grants to NGOs working in official development assistance (ODA) countries in order to conserve marine biodiversity and improve the lives of the local population, to contribute to the 2030 Agenda, and also to support climate change mitigation and adaptation. Its working assumption is that NGOs are key drivers of change and innovative approaches, have the necessary expertise, are present in the regions for the long term, have working experience with national and local stakeholders, and can bring additional technical and financial resources to the sub-projects.

The BAF provides individual grants to selected sub-projects in MPAs and their buffer zones, focusing on the most sensitive coastal waters of Africa, Latin America and Asia/Pacific. The goal is to contribute to reducing the dramatic loss of marine biodiversity and to advance local development, stabilize incomes in coastal communities or enhance coastal protection. The BAF supports sub-projects that contribute to SDG 14 and Aichi target 11 (see B.1.2.), support marine conservation and sustainable livelihood of the population, are embedded in regional policies and contribute to their implementation, and are endorsed by national governments.

The BAF concentrates on sub-projects that result in measurable outcomes, including:

- Newly established or better managed MPAs of regional importance or networks of MPAs;
- Conservation of biodiversity and recovery of fish stocks; and
- Enhanced livelihood conditions and food security.

These are the main eligibility criteria for sub-projects funded under the BAF. With the GCF contribution, the BAF could transform its current conservation-oriented portfolio into a clearly climate change-focused initiative for marine and coastal ecosystems, implemented by civil society organizations and local stakeholders. The call for proposals for the GCF-funded Programme will be designed to focus on sub-projects related to climate adaptation through EbA (see B.3.).

In order to reduce the share of management costs, the BAF is constantly aiming to increase its working efficiency. It estimates to achieve an efficiency ratio (administrative expenses / total expenses) of less than 5% by full operation in the long-term, which would be well below international standards for nature conservation foundations. Currently, the BAF's Project Management Costs for implementing the new GCF contribution will not exceed 5%.

The BAF successfully established the funding mechanism. Within its first year, it began to implement projects from one closed and two open calls for proposals, and is currently selecting proposals for a third call. Currently, out of more than 90 concept notes, seven sub-projects have begun implementation and 18 sub-projects are in the pipeline. Since the start of the BAF in early 2018, 20.2 EUR Million was committed to sub-projects, and 5.7 EUR Mill. (28%) disbursed. Up to two additional calls are planned for a GCF-funded Programme in 2019/2020.

KfW Development Bank

The Accredited Entity, KfW Development Bank, is in charge of developing and submitting the funding proposal to GCF. In the case that the proposal is successful and subject to satisfactory FAA documentation, the KfW will negotiate a Financing Agreement with the BAF, supplemented by so-called Separate Agreements, in which technical and procedural details for the Programme are agreed upon. The KfW will be responsible for ensuring that the GCF funds are disbursed and utilized in accordance with the terms of the applicable documentation, while also observing the implementation schedule of the Programme. In addition to regular monitoring by KfW, and to ensure the quality of implementation, independent evaluation reports will be commissioned at regular intervals. This includes mid-term reviews of the BAF-funded sub-projects and final evaluations at the end of project implementation for all sub-projects (costs included in the operational costs of the Programme).

International Union for Conservation of Nature and Natural Resources (IUCN)

The IUCN is working as a partner to the BAF. It supports the sub-project appraisal process, provides strategic advice for the further development of, or changes to, the strategic direction of the BAF's funding and open calls for proposals (it usually attends SB Meetings as an observer), and leads the external monitoring and evaluation of sub-projects. This input of technical expertise will also be provided in the case of the GCF-funded Programme. The IUCN has essential knowledge, access to networks of researchers on marine and coastal ecosystems, and significant capacities for targeted communication and knowledge exchange and can therefore bring a significant added value to the Programme.

Sub-project implementers: international and regional / local NGOs

International or regional NGOs are invited to respond to the calls for proposals. Once selected, they take on responsibility for implementing the sub-project in accordance with the requirements of the Programme. The NGOs are to act as partners for the implementation of the Programme on a sub-project level, and are thus responsible and accountable towards the BAF for the proper delivery of funds and/or services, the financial and administrative management of the sub-projects, reporting to BAF, and monitoring at sub-project level. Only NGOs with a proven record in the implementation of projects in coastal and marine ecosystems and the participation of local and national stakeholders will be accepted (see next item – BAF funding mechanism).

The BAF will implement the GCF funded Programme: The KfW will monitor the BAF's performance as Executing Entity in line with its rules, policies and procedures. The BAF will conclude grant agreements with NGOs implementing the sub-projects, according to the following procedure:

BAF's funding mechanism: Selection process for sub-projects financed through the Programme

The already well-established and proven funding mechanism of the BAF is based on an open call for proposals. For implementing the GCF-funded Programme, specific thematic calls for proposals will be launched for participating countries in the Programme region, focusing on EbA concepts. The calls will be announced internationally and will refer to the BAF Grant Procedures Manual and BAF's eligibility criteria (see Annex 22). Respective minimum thresholds/benchmarks for expected impacts will be expected from the sub-project concepts, i.e. a minimum of 5,000 direct beneficiaries and a minimum of 100,000 ha protected area (see D.1.). Furthermore, specific quality criteria related to the EbA approach will be applied (notably (i) quality of the climate rationale and (ii) coherence with national and/or regional adaptation plans (see whole list of EbA-specific selection criteria above, section B.3).

Eligible sub-project proponents will be international and national NGOs with a proven track record in the thematic area of ecosystems and ecosystem services in coastal and marine areas and that have regional long-term experience in working with countries in the WIO region. NGOs must also demonstrate sufficient implementation and absorption capacity, implementation experience in sub-projects with local communities and authorities, as well as a demonstration of necessary safeguards, especially with regard to Environmental and Social Safeguard Requirements. They must also

demonstrate a sufficient financial strength and fund at least 25% of the total project costs (“match funding”). The BAF funding mechanism is demonstrated in the following graphic:

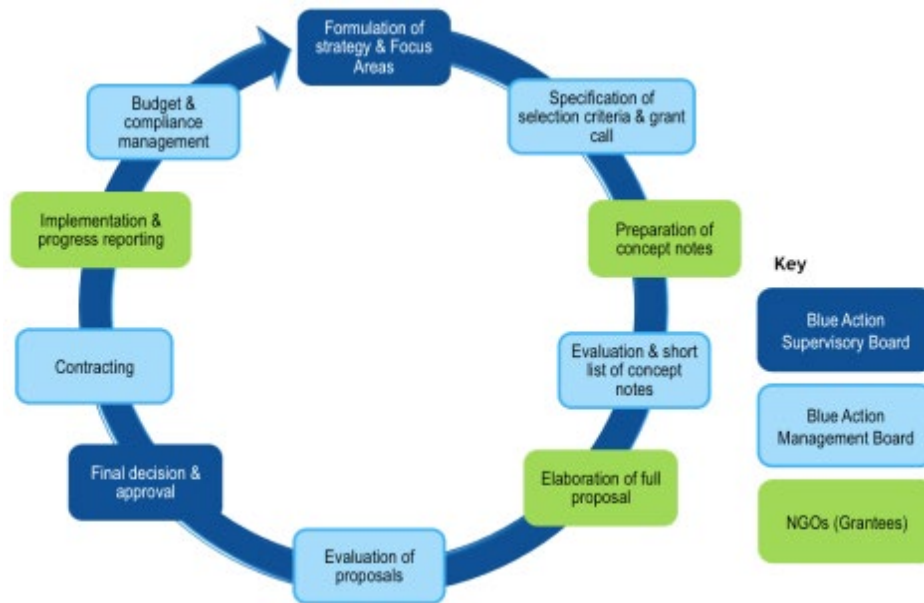


Figure 10: BAF funding mechanism (see BAF’s Grant Procedures Manual, Annex 4)

After a call for proposals for the GCF Programme, NGOs can submit Concept Notes using the Concept Note Template from the BAF, adapted to specific GCF requirements. Concept Notes and applicant organizations are evaluated by the MB with the technical support of IUCN. Proposed sub-projects are screened for basic eligibility, and subsequently evaluated. The evaluation includes the assessment of the Theory of Change, underlying assumptions and expected outcomes. The Theory of Change must demonstrate how measures intend to achieve outcomes and impacts, and their contribution to the objectives of the GCF-funded Programme. In addition, the capacities of the proponents to deliver the sub-project’s results are being analyzed. Regarding the GCF Programme, the specific EbA approach will be analyzed.

Ultimately, the MB prepares a shortlist of Concept Notes for approval by the SB. Upon the SB’s decision about which projects to pursue, the MB invites the proponents to present their Full Proposals, using the BAF template. BAF can offer NGOs the option to request special funds for sub-project preparation from BAF.

With the Full Proposal, the NGOs must submit an environmental and social safeguards report. The project must also have the **endorsement of the authorized body of the country, with a signed letter of consent**. The concepts proposed will be derived from a broad range of stakeholder consultations with national and international key experts from the marine and fisheries realm, and therefore in close cooperation with relevant national governmental authorities, as well as the local population, in order to adapt to the needs of the vulnerable target coastal communities. This is to ensure that the project measures are in line with national and local priorities and existing adaptation strategies, as well as to ensure ownership of the country and/or local authority right from the beginning. The cooperation between NGOs and local stakeholders and the contribution of different stakeholders will be outlined in the proposal.

The Full Proposals will be evaluated by the MB, again with support from the IUCN. The evaluation includes the enhanced assessment of the partner and governance structure of the project, as well as the assessment of the EbA-focused sub-project concept, the sub-project logframe, its contribution to the Results Matrix of the BAF, the mechanisms to reach the promised impacts, and the suitability of the proposed budget. For the GCF-funded Programme, special attention will be given to the logical framework and the contribution of the sub-projects to climate adaptation and increased ecosystems services for vulnerable people and communities. The MB agrees which project proposals to recommend for funding and presents them to the SB. The SB makes the final funding decision.

Project implementation and monitoring

BAF supervises and provides support to the NGOs. Within the BAF, a designated staff member coordinates the work and is the main point of contact for the NGOs. At the beginning of the project, NGOs are required to submit a detailed sub-project work plan. Every six months, the sub-project work plan is updated to reflect actions and deliverables achieved, and important changes. The work plan and its updated versions will be the basis for funding requests.

Procurement of goods, works and related services within the sub-projects must be based on strict ethical principles and best international procurement practices for NGOs, and shall conform to BAF's procurement policy. The BAF policy for procurement of Goods and Services is in accordance with KfW procurement guidelines (see G.3. and Annex 10 and 19).

Monitoring of the grant measures is considered essential for an effective funding mechanism. NGOs have the main responsibility for setting up a progress and impact monitoring system at sub-project level. BAF's monitoring, internal evaluation and reporting will mainly be done through bi-annual funding advance requests, the annual reports and on-the-ground monitoring / project progress review visits. These monitoring visits are partly executed jointly with KfW. In addition, the IUCN will conduct mid-term and final review missions. The BAF also contributes to monitoring implementation of sub-projects at field level and ensures, in close collaboration with National Designated Authorities (NDAs) and relevant local authorities, that GCF performance indicators and eligibility criteria are met. Each project requires Mid-term and Final Financial Audits, as well as Technical Reviews (Project Audits). Internationally renowned auditors will conduct the Financial Audits (Monitoring of Programme Level, section E.7.).

Implementation of sub-projects is coordinated by the respective NGOs at an operational level. NGOs will work through their established cross-sectoral networks, ensure that relevant financial and technical capacities will be available, and engage with stakeholders on grass-root and sub-national levels.

In close consultation with the relevant national authorities and vulnerable communities, NGOs will facilitate the access to approaches and technologies available at international scale and adapt them to local circumstances by using their experience from implemented pilot projects. Through coordination and knowledge exchange, supported by the BAF, stakeholders will share experiences across regions and come up with viable solutions for the scaling up and dissemination of successfully tested pilots.

The BAF's unique strength of implementation is the direct, fast, non-bureaucratic financing of EbA measures, implemented by civil society organizations with great expertise in maritime and coastal conservation, in co-operation with target populations. The BAF team has extensive experience working with NGOs in development cooperation, even in countries with low implementation capacities. The BAF will coordinate with all relevant stakeholders across countries and sectors in order to foster experience exchange, knowledge transfer and dissemination of successfully tested approaches and technologies.

B.5. Justification for GCF funding request (max. 1000 words, approximately 2 pages)

The GCF was created in response to developing countries' concerns that they would be the most affected by climate change and the least capable of financing the cost of adaptation. This is particularly the case with the countries of the Programme region. The countries are (with the exception of South Africa) least developed countries (LDCs), and the populations of the coastal regions are already observing the impact that climate change has on their daily lives and on the services from ecosystems on which they depend. Despite the respective governments' efforts to put in place the necessary policies and strategies for climate adaptation, it is a big challenge to translate these plans into the necessary actions. GCF involvement in the BAF will complement the ongoing efforts in these countries and enable the respective governments, local authorities and communities to address these challenges and implement concrete actions to increase the resilience of affected communities and ecosystems.

Financial needs for securing ecosystem services for vulnerable target populations in coastal and marine regions prone to significant climate change risks are in principle high, and far exceed the available funding, and this holds true for the proposed Programme region.

Regarding the cost of climate change risks, a mainstream approach used by global reinsurers (Swiss RE and others) quantifies total costs by annual expected losses resulting from calculated climate risks. These are comprised of risks due to existing climate patterns plus an additional risk resulting from climate change. Using this methodology, national and local economies studied (11 cases worldwide) are projected to lose between 1 and 20% of GDP (or between 47 million and 26 billion USD) annually as a result of existing climate patterns (with current development continuing until 2030). Climate change could worsen this picture significantly: an extreme climate change scenario would lead to annual losses from flood, drought, salt water intrusion in coastal aquifers, heatwaves, and tropical storms of between 77 million and 33 billion USD. Available prevention and mitigation measures can address a large part of the identified climate risks. Climate adaptation measures in the 11 studied cases can avert between 15 and 80% of the total climate risk, according to Swiss Re.²⁵ Up to 65% of future climate losses can be averted using cost-effective adaptation measures.

²⁵ Swiss Re, 2014. Economics of Climate Adaptation – Shaping climate-resilient development: http://www.swissre.com/library/A_global_overview_of_case_studies_infrastructure.html. Cases included US Gulf Coast, New York, Florida, Jamaica, Guyana, Hull (UK), China, India, Tanzania, Mali and Samoa.

For the public sector of the countries targeted by the proposed Programme, the only financing alternatives would be to secure funding for the planned measures from extremely tight government budgets or other donors. In practice, the governments are unable to provide the financial means needed and often lack the necessary technical capacities for funding and implementing projects at scale and in a time- and cost-efficient way. The Programme countries (apart from South Africa) are considered high-risk for private investment. Most communities are not able to access private funds and the identified necessary adaptation measures do not generate revenues and returns on investment. Therefore, the proposed measures are not attractive for private financing. With the GCF-funded Programme, the BAF will be able to address specifically the financial needs of countries and communities that are particularly vulnerable to the effects of climate change in the WIO. Envisaged GCF funding is required to establish a specific EbA funding window under the BAF, with EbA as the main approach to be pursued. Currently, there are not sufficient alternative funding sources for a Programme of a similar size linking sustainable, climate-smart developments in small-scale fisheries and aquaculture with ecosystem-based approaches to the management of critical coastal habitats. Considering the huge financial gap for projects improving coastal and marine conservation and relevant EbA approaches, the scope of needed funds is so significant that substantial funding from the GCF is necessary to leverage public funds from Germany, Sweden, France and other potential donors as well as private funds provided by NGOs.

Therefore, the GCF, as the central entity of International Climate Finance, is in a unique position to provide financing for the successful implementation of the Programme. By providing and leveraging necessary amounts of funding from international climate finance sources to the Programme, the Programme is expected to:

- Strengthen ownership and country drivenness through the support of national policies and cooperation with the responsible authorities;
- Promote cross-sectoral broad approaches that promote a long-lasting paradigm shift towards a climate-resilient development path for the countries of the Programme region; and
- Promote a sustainable development benefit, which is expected from the EbA measures and activities.

GCF funding will ensure that people in one of the most vulnerable regions significantly improve their resilience to manmade climate-related shocks and climate-induced diminishing of ecosystem services. It will furthermore ensure that lessons learned from the Programme are replicated throughout the region, and, using the BAF network of international NGOs and think tanks, even beyond the region on a global scale.

B.6. Exit strategy and sustainability (max. 500 words, approximately 1 page)

Sustainability of sub-projects funded by the BAF has been an over-riding consideration during its design stage, especially for the definition of eligibility criteria. Throughout the entire BAF grant financing mechanism, long-term sustainability of sub-projects is one of the main points to be evaluated and is key to the approval of a sub-project.

For this purpose, applicants must provide details on the exit strategy of their proposed project, i.e. how the sustainable operations of all assets created and processes initiated by/under the project will be ensured upon completion of the project; detailing how and by whom the project measures will be continued after the end of the project, and also how they will be funded. Regarding MPA management, the applicant must ensure that potential funding gaps for effective MPA management will be closed in order to ensure financing of operation and maintenance (O&M). For all sub-projects and measures, budgets for O&M, as well as the sustainability of the participating institutions must be ensured. The question of how local capacity is built in the context of the project is an important aspect of the methodology of sub-projects to be funded under the proposed GCF Programme.

Most of the measures eligible for funding are specifically targeted to increase the sustainability of the EbA, such as improved management of MPAs and LMMAs (see Output 1), which leads to tangible benefits for the vulnerable local communities through improvement of fish resources and more value added through a reduction in post-harvest losses as well as through improved processing. These benefits contribute to the creation of an enabling environment enhancing the willingness of the local communities to continue the sustainable management of the coastal and marine areas and EbA concepts.

In addition, **knowledge exchange**, as well as **best practices and lessons learned** about successful EbA and capacity building for local partners and communities to implement EbA through their own capacities in the future (Output 3) will be included in the sub-project concepts. This output will support a consistent knowledge exchange at regional level, with the greater goal of supporting the diffusion and use of experiences and lessons learned from implementation practice of the supported NGO sub-projects. This diffusion will be supported e.g. by periodical regional workshops, as well as capacity building for partners to overcome the capacity barriers for EbA. This knowledge exchange, which

integrates the exchange between different local communities and their experiences with the EbA concepts, generally finds broad acceptance and is a proven and rich instrument to support continuity and dissemination of best practices.

The active **participation of the benefiting communities** in the design of project measures as well as the Programme's strategy to demand tangible beneficiary contributions (in cash or in kind) within their financial means will enhance the beneficiaries' ownership, sense of responsibility and capacities for the sustainable use and maintenance of the funded investments. Therefore, a plan for the roles and responsibilities of O&M and user right management is required as part of the project concepts.

Private sector involvement will be welcome, as the concepts of the sub-projects require a strategy to ensure the sustainability of the sub-project interventions. Depending on the project concept, possible options for tourism and support for small-scale private enterprises will be explored if applicable. As an option, the involvement of the private sector (such as private fisheries, processing of marine products, tourism) can be integrated into the calls for sub-projects.

On the national levels, the integration of the local adaptation measures into the **national adaptation strategies and adaptation action plans** will enhance the support of the local initiatives. The supported sub-projects will not be one-off/ad hoc projects, as their integration into the national policies and strategies must be clearly demonstrated in the respective proposals, through support letters by the respective authorities, and a clear explanation of how the project concepts are embedded into the national framework. In addition, NGOs must demonstrate in their proposals if and how the sub-project interventions will influence local land use policies and strategies as well as local investment planning and planning for MPAs and coastal management. Through close coordination between sub-projects and national authorities, best practices and lessons learned from management of MPAs, LMMAs, and freshwater protect areas, EbA, rehabilitation of coastal ecosystems and sustainable fishery concepts will be fed back into national policy development and can be integrated into future national adaptation action plans and thereby encourage replication.

Regarding implementation of the sub-projects and **monitoring of sustainability aspects**, starting with the last year of the investment phase the beneficiaries typically have to cover 100% of the O&M costs of the investment. To ensure proper operation of investments, the project will continue to provide management and technical support during the first year of operation (one-year consolidation phase). This phase also serves to start preparations for handing over O&M to user groups and MPA management authorities as well as public and private sector entities in charge of its management.

The BAF will monitor sub-project implementation during project funding in line with its Operational and Grant Procedures Manuals. With the planned approach of the proposed GCF Programme, in combination with the BAF Grant Procedures and eligibility and evaluation criteria, financial and economic sustainability will be ensured through a rigorous selection procedure during grant-making and through capacity support to proponents for the elaboration of business plans, budgets and bankable documents. Non-objections for investment measures are only given based on a proof of concept for the technical and financial feasibility.

C. FINANCING INFORMATION							
C.1. Total financing							
(a) Requested GCF funding (i + ii + iii + iv + v + vi + vii)		Total amount			Currency		
		30			million euro (€)		
GCF financial instrument		Amount	Tenor	Grace period	Pricing		
(i)	Senior loans	Enter amount	Enter years	Enter years	Enter %		
(ii)	Subordinated loans	Enter amount	Enter years	Enter years	Enter %		
(iii)	Equity	Enter amount	Enter years		Enter % equity return		
(iv)	Guarantees	Enter amount					
(v)	Reimbursable grants	Enter amount					
(vi)	Grants	30					
(vii)	Result-based payments	Enter amount					
(b) Co-financing information		Total amount			Currency		
		25			million euro (€)		
Name of institution		Financial instrument	Amount	Currency	Tenor & grace	Pricing	Seniority
Germany (BMZ via KfW)		Grant	25	million euro (€)	Enter years Enter years	Enter%	Options
		Options	Enter amount	Options	Enter years Enter years	Enter%	Options
Click here to enter text.		Options	Enter amount	Options	Enter years Enter years	Enter%	Options
Click here to enter text.		Options	Enter amount	Options	Enter years Enter years	Enter%	Options
(c) Total financing (c) = (a)+(b) (not including NGO contribution)		Amount			Currency		
		55			million euro (€)		
(d) Other financing arrangements and contributions (max. 250 words, approximately 0.5 page)		<p>The GCF Programme will be embedded into the overall BAF-portfolio. Current contributions to the BAF amount to EUR 68.1 million with contributions by the governments of Germany (EUR 55.1 million), France (5 million EUR) and Sweden (EUR 8 million). Hence, the EUR 55 million GCF Programme will increase the total BAF volume to an overall amount of EUR 123.1 million, excluding the additional mandatory 25% contributions to the costs of sub-projects by supported NGOs.</p>					
		<p>Contributions by NGOs are a requirement of the calls for proposals, as documented in the BAF Grant Procedures Manual; a NGO's minimum contribution is 25% of total sub-project cost, either in kind or as direct co-financing. Through matching funding for already committed donor funds for BAF sub-projects, NGOs are expected to contribute approximately 15.0 million EUR to the current BAF-Portfolio. The GCF Programme would leverage additional NGO contributions to the amount of EUR 12.5 million (refer to Annex 4), thereby increasing the total contributions by NGOs under the entire BAF to EUR 27.5 million.</p>					
		<p>Commitment letters from NGOs cannot be provided at this stage, as the sub-projects are still to be selected. However, without 25% NGO contributions to the overall costs, sub-projects would not be eligible for approval.</p>					
		<p>NGO contributions provided through input of human resources, office structures and technical input, but also as financial contributions, through donation as well as from other donor contributions. These donations and donor contributions to the NGOs foster the financial sustainability of the partners and the overall sustainability of the sub-projects beyond the timeframe of the execution of BAF funds.</p>					

	<p>In kind contributions are expected from local communities, from local administrations as well as from the population participating in the sub-projects. Local administrations participate actively in the planning and implementation of protection measures and the sustainable management of coastal resources. Depending on the specific sub-project measures, they provide working time and infrastructure (for workshops; trainings etc., consultation process with the local population); The local population provides labour inputs for protection measures, rehabilitation of ecosystems and management of locally managed protection areas (e.g. mangrove restoration is more suited to in-kind contributions from local populations than coral reef restoration, which is difficult to execute).</p> <p>Regarding disbursement, usually the disposition fund procedure applies at the BAF level. This implies advance payments from the BAF to the NGOs based on 4 – 6 months forecasts of expenditures. To allow the BAF to fund these payments, it is proposed that GCF will disburse funds to the KfW in two tranches (call by call) to the tune of 15 million EUR each. The funds will be on-channelled to the BAF accordingly.</p>
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C.2. Financing by component

The following financing table by component includes GCF funding (30 million EUR) and commitments from the BMZ via the AE (KfW) in the amount of 25 million EUR. Total Programme Cost amount to 55 million EUR. NGOs contributions amount to a total of 12.5 million EUR are reported in the last column to the right for information purposes only. (see also Annex 4).

Currency: million EUR

Component	Output	Indicative cost million euro (€)	GCF financing		Co-financing BMZ via KfW (AE)		Other Contributions from NGOs
			Amount million euro (€)	Financial Instrument	Amount million euro (€)	Financial Instrument	Grants million euro (€)
Component 1: Funding window for protection and sustainable management of coastal resources relevant for EbA (mangroves, coral reefs, seagrass)	Protection and sustainable management of coastal resources relevant for EbA (mangroves, coral reefs seagrass)	30.0	16,0	Grants	14.0	Grants	7.5
Component 2: Funding window for rehabilitation of degraded coastal ecosystems relevant for EbA	Rehabilitation of degraded coastal ecosystems relevant for EbA	14.0	8.0	Grants	6.0	Grants	3.5
Component 3: Support to knowledge exchange and capacity building regarding appropriate and feasible EbA approaches*	Knowledge exchange and capacity building regarding appropriate and feasible EbA approaches	7.5	4.5	Grants	3.0	Grants	1.5
Programme Management	Click here to enter text.	3.5	1.5	Grants	2.0	Grants	

Cost (GCF: limited to 5% of GCF funding)							
Indicative total cost (EUR)	55.0	30.0	25.0				12.5

The Programme will fund three components, which are described in detail in section B.3. The components are based on an EbA approach and mainly comprise the protection, sustainable management and rehabilitation of coastal ecosystems (mangroves, coral reefs, and seagrass), related knowledge exchange, and capacity building. The total cost is indicatively split across the different components as follows:

The final distribution of the funds for the three components depends on the sub-projects selected in line with the criteria of specific calls for the Programme. Therefore, the distribution of Programme funds to the three components is indicative at the current stage of preparation. During monitoring and reporting to the GCF, the BAF will update and specify the cost structure further. However, the idea is to balance the budget between the components; hence deviations between the budget lines as presented above are not expected to exceed +/- 10%.

The funding allocation by country is a very rough estimate as an indication, made on the basis of potential for EbA sub-projects and ongoing measures of NGOs; the numbers will be reviewed on the basis of the final selection of sub-projects, their location and funding volume (see Annex 17). The following table mirrors an indicative estimation of a possible allocation of the project budget to the four countries (GCF-Funding (EUR 30 Mio) plus co-funding (EUR 25 million) minus a total of EUR 5 million for BAF management costs and cross-cutting measures at Programme level which cannot be directly attributed to individual countries (budget line 3.4):

	Total Costs	GCF Contribution
Madagascar	11.8 million	6.49 million
Mozambique	14.7 million	8.12 million
South Africa	14.7 million	8.12 million
Tanzania	8.8 million	4.87 million
Total costs of sub-projects	50.0 million	27,6 million

C.3 Capacity building and technology development/transfer (max. 250 words, approximately 0.5 page)

C.3.1 Does GCF funding finance capacity building activities?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
C.3.2. Does GCF funding finance technology development/transfer?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Capacity building and transfer of best practices regarding EbA measures form a crucial part of the Programme and are included as component 3.

Capacity Building is carried out as an integral component of sub-projects, and is therefore mainly implemented by the grantees (internationally recognized NGOs with regional and local partners). Normally, CB is organized in the following ways:

- a. in-country tailor-made training courses (in-service training) that address individuals or groups on specific topics;
- b. on-the-job training through twinning arrangements (among the NGOs and with government partners) to provide institutional learning and sharing of best practices. In the past, some NGOs included capacity building action plans of their partners as one element of their overall project;
- c. Co-operation between larger international NGOs, providing expertise in knowledge transfer and management, and other NGOs, possibly acting at a regional / local level, in order to make sure that the required expertise is provided.

Measures regarding capacity building will allow national and local partners to overcome existing capacity barriers to EbA and to implement EbA on the local level through their own capacities in future. Moreover, the BAF requests cooperation among different sectors namely, environmental and social organisations, which supports work across sectors and fields and encourages further co-operation Also, national authorities will benefit from capacity building activities and knowledge exchange The integration of relevant government agencies in activities of component 3 will assure that best practices for EbA concepts will be shared on a higher governmental level and can be considered in national climate adaptation strategies and action plans.

The exchange of experiences and lessons learned from implementation practice by NGOs and similar local initiatives at international, national and regional level, e.g. periodical regional workshops, exchange visits, will foster the transfer of EbA concepts and technologies (e.g. regarding rehabilitation/restoration of mangroves and coral reefs). This will be

ensured by international NGOs, which are integrated in international research networks where suitable techniques are being discussed. Best practices resulting of the Programme can provide very valuable inputs and can be disseminated on a regional and global scale.

In general, trainings are guided by the following cycle: 1) pre-studies to identify most prevalent training needs among the respective target groups; 2) training schedules are tailored to the needs of specific target groups with a view to provide support to and increase resilience of especially vulnerable groups. 3) local trainings either implemented by staff of the project or qualified consultants. 4) evaluation of training impact. Gender-specific needs are considered in all aspects of the design of the trainings.

Capacity building, as part of Component 3, will also include specific measures in order to enhance the role of women in the funded sub-projects (see Component 3)

The estimated GCF funding amount for capacity building is 1.5 million EUR.

D. EXPECTED PERFORMANCE AGAINST INVESTMENT CRITERIA

D.1. Impact potential (max. 500 words, approximately 1 page)

Climate Change Adaptation impacts:

The Programme will deliver significant impacts regarding climate change adaptation, thereby reducing the vulnerability of the coastal populations in the Programme region to climate change. GCF-funded BAF calls will specifically focus on the proposed EbA approaches, which aim to strengthen the resilience of vulnerable coastal populations to climate change effects, such as floods, cyclones and heavy rainfalls. With the given approach, the result areas addressed by the proposed Programme are:

- Increase the resilience and enhance the livelihood of the most vulnerable people, communities and regions;
- Increase health and well-being and food security; and
- Improve and secure ecosystem services from increasingly threatened coastal ecosystems.

Key achievements of the proposed GCF Programme implemented through BAF will be:

- Vulnerable coastal populations will be able to reduce or avoid negative impacts of climate change through a stabilized provision of ecosystem services. Mangroves, salt marshes, coral reefs, seagrass beds and beach vegetation are providing crucial services for EbA to climate change.
- Ecosystem services include coastal protection against floods and soil erosion, and against potential weather hazards, maintaining water quality through nutrient cycling. In addition, mangrove forests ensuring breeding and feeding habitats for fish stocks are a source of fodder, food, fuel, fibre, timber and medicines. Coral reefs host more than one-quarter of all marine fish species, while filtering water and providing high water quality.
- Important marine and coastal areas will be protected and better managed, e.g. by supporting the adaptation of MPA management plans to climate change and by improving implementation of respective adaptation and conservation measures with a view to maintaining ecosystem services for vulnerable coastal communities.
- Development of value chains for sustainable use of coastal/maritime resources to enhance resilience of the livelihoods of poor coastal populations, e.g. through supporting sustainable integrated aquaculture, seaweed farming and other measures.

The range of direct beneficiaries of ongoing sub-projects with a funding amount of EUR 2-4 million is between 5,000 and 52,000 people, with an average of about 20,000. For the GCF Programme a minimum threshold of 5,000 is proposed. Assuming the implementation of approximately 17 sub-projects with an average funding volume of close to EUR 3 million, that would result in a minimum of 85,000 direct beneficiaries. However, if the average number of beneficiaries turns out to be similar as for the existing BAF portfolio a total number of 340,000 direct beneficiaries can be expected. 50% of the direct beneficiaries are expected to be women.

Relative to the total population of the respective sub-project regions, the direct beneficiaries of the sub-projects will usually cover 5-10% of the total sub-project area population, depending on sub-project area size and project circumstances (equal to approx. 0.4 % of the total coastal population of the four countries). Indirect beneficiaries comprise the total coastal population dependent on ecosystem services in the project areas, which differs significantly between the sub-projects. These indirect beneficiaries will benefit from improved or secured ecosystem services. The

exact number of direct and indirect beneficiaries will be known after selection of sub-projects and be reported in annual progress reports to the GCF.

The percentage of coastal population in the selected countries is reported in the national documentation to be between 25% and 66% of total population. According to this percentage, we assume a total population living in coastal areas of the Programme region of around 50 million people. The total number of direct and indirect beneficiaries in absolute terms and relative to the total coastal population of the project areas can only be specified after selection of the specific NGO proposals. The specific climate change impacts and direct and indirect beneficiaries will be clearly described and substantiated in every NGO proposal to the BAF. At this stage, therefore, only rough estimates based on similar projects in the region are possible. The BAF will report within the regular progress monitoring as well as with final impact monitoring on the indicator for the Programme.

The selected countries represent four out of the ten contracting parties to the Nairobi Convention for the Protection, Management and Development of the Marine and Coastal Environment of the WIO Region. Priorities for the programme of work for the Nairobi Convention include integrated ecosystem-based management of marine and coastal ecosystems as well as adaptation to climate change to reduce vulnerability and build resilience²⁶. The region's significance with respect to conservation is especially notable for the Mozambique Channel, which has the highest diversity of corals in the Central, Northern and Western Indian Ocean.²⁷

Climate Change Mitigation impacts:

The EbA focus of the GCF-funded BAF sub-projects implies the selection of coastal and marine conservation sub-projects with high potential for carbon sequestration. While the Programme focus is on EbA, impacts on climate change mitigation may arise as significant co-benefits. They will include:

- The sequestration rate of important carbon sinks such as mangroves and seagrass beds is estimated as two to four times higher than that of tropical forests. The global annual blue carbon sequestration rate is about 53 million tons, of which 30% is generated by mangroves.²⁸ Mangroves store, although this varies with geomorphology and coastal conditions, around 1023 t of blue carbon per ha in their biomass and in the soil. Even though the total land area of mangroves, coastal marshes, and seagrasses is small compared to land in agriculture or forests, the carbon beneath these habitats is substantial.
- The savings of GHG emissions through improvements in subsistence fisheries of coastal communities e.g. support for methods for reducing “post-catch losses” through energy-efficient cooling chains.

As with the adaptation impact, the mitigation impact of every single project (in tCO₂eq) will be estimated after selection of the specific NGO proposals, and communicated to GCF within the regular reporting activities.

D.2. Paradigm shift potential (max. 500 words, approximately 1 page)

Potential for scaling up and replication

The GCF-funded Programme through the BAF would – as a first step – shift the paradigm to sustainable practices regarding coastal and marine ecosystems in the geographic extent of the financed sub-projects. Additionally, the Programme already includes, as one of its three outputs, the exchange of experiences and lessons learned from the implementation practice of NGOs and communities, which will facilitate upscaling of successful concepts and techniques throughout the entire region. With the proposed regional concentration of the envisaged GCF-funded BAF call, synergies will be generated by coordinating the sub-projects to systematically cover the Programme region. The focus of the Programme on four countries in the WIO with similar marine and coastal ecosystems and climate adaptation needs as well as similar socioeconomic structures will make replication of experiences and best practices more realistic and feasible within the region.

In addition, through its global scope of action and its collaboration with international NGOs, the BAF is demonstrating a proven record of accomplishment in project implementation in the marine and coastal realm, including good partnership and collaboration with national governments, regional platforms and international research organizations. This asset facilitates replicability even on a global scale by linking local initiatives to international NGOs and governmental and transboundary organizations. It thus promotes coordination across sectors, countries and regions and catalyzes a shift of the development pathways of participating countries towards increased climate resilience in coastal zones and lower carbon emissions on a broader geographic scale.

²⁶ P. 2 of Progress report of the Executive Director of the ninth COP, 30 and 31 August 2018: http://wedocs.unep.org/bitstream/handle/20.500.11822/25770/CP9.4_Report_Executive_Director_EN.pdf?sequence=3&isAllowed=y

²⁷ <https://phys.org/news/2012-09-species-mozambique-channel-home-diverse.html>

²⁸ Blue Climate Solutions, 2014.

As the BAF is designed to fund replication and scaling up of successfully tested initiatives, it will use lessons learned from the tested EbA approaches to generate and disseminate knowledge.

The GCF-funded Programme, with the use of the BAF grant-funding mechanism, can catalyze impacts beyond a one-off project investment by:

- Developing a high quality project pipeline and aggregating small-scale budgets to larger requests for funding, thereby significantly reducing transaction costs for global funding mechanisms;
- Complementing multilateral projects by funding initiatives from local and regional civil society organizations, which are mainly small-scale initiatives without sufficient structures to achieve funding and which would otherwise not be reached; and
- Significantly leveraging funding from bilateral, multilateral and civil society development partners.

In summary, all of the proposed measures are EbA-related. Although these will often be innovative within the specific project area, most are not, in principle, new. The main innovation leading to the paradigm shift is the grant funding mechanism itself, which allows the addressing and bundling of on-the-ground measures by local NGOs through the BAF as a global financial mechanism. Using a programmatic approach with an open call for proposals, the proposed Programme brings the intervention to scale, while at the same time drawing upon the experiences of highly capable, international and national implementing partners. NGOs supporting exchanges of lessons learned between project stakeholders allow the upscaling of innovative project approaches. Project proponents who demonstrated synergies with their own interventions or those from other stakeholders will be preferentially considered during sub-project selection.

Potential for knowledge and learning

The GCF-funded Programme would shift the paradigm towards climate-focused marine and coastal conservation projects creating awareness of the benefits of EbA approaches on national and local levels. The BAF concept of partnership with NGOs helps to identify the potential for EbA within marine and coastal conservation projects as well as the implementation of expedient measures (with co-benefits for mitigation). Furthermore, it builds on the knowledge and experience of international NGOs in EbA approaches in the region, working with the relevant stakeholders on different levels.

Therefore, the BAF provides an outstanding community of practice, with a global network to exchange knowledge, innovative concepts and experiences across priority marine regions for EbA of mangroves, reefs and seagrass and sustainable approaches for coastal planning and management. In addition, the BAF collaborates with the IUCN as a technical advisor that can strengthen the envisaged paradigm shift by taking up and disseminating the lessons learned from the GCF-funded Programme. Adequate capacity building (see Outcome 3) will allow the partners to foster and implement EbA approaches through their own capacities and resources. With this approach, the awareness and knowledge of the design, implementation and maintenance of EbA measures at the community level can be enhanced significantly. Monitoring and evaluation of the different project approaches by the BAF and the IUCN will assure the documentation of experiences and best practices, which will be integrated into the capacity building for all stakeholders.

Contribution to the creation of an enabling environment

The Programme is directed at the creation of an enabling environment for EbA approaches in marine and coastal ecosystems that will be sustained after Programme implementation by the local communities and national authorities.

At the local level, the increasing vulnerability of coastal communities to climate change will be reduced through adequate management of conservation areas (MPAs and LMMAs), and the conservation and restoration of marine and coastal ecosystems. Public participation and local community involvement is an essential factor in contributing to the success of MPAs. Stakeholders will be involved right from the beginning of the sub-project planning process, which is an important part of creating the expected benefits from EbA sub-projects. Enhancing existing national resource-based livelihoods, e.g. sustainable fisheries practices, with value added to harvests as well as diversification of livelihoods, may reduce pressure on natural resources. Improvement of the well-being and food security of the local (vulnerable) communities creates conducive conditions for the sustained participation of the local actors in resilient development.

The Programme will also create an enabling environment on the national scale of the participating countries through knowledge transfer about successful EbA approaches to governmental institutions and integration of best practices in the planning process for national adaptation policies. In this way, the experiences of the funded sub-projects will not be limited to a small scale, but reflected in national strategies for risk-prone areas.

Contribution to regulatory framework and policies

At the national level, all countries of the Programme region have strategic adaptation plans and policies in place. Various efforts have been conducted at the national and subnational levels on climate change impacts and adaptation strategies (e.g. the World Bank supported PPCR).

Since those plans will need to be updated regularly to improve the resilience of coastal populations to climate risks, the results and lessons learned, which will be systematized and disseminated within the GCF-funded Programme, will contribute to the national planning and effective implementation of adaptation measures, including EbA approaches in marine and coastal ecosystems. Therefore, the Programme focused on EbA has the potential to place mainstream climate change adaptation into policies and strategies for marine and coastal areas on a national, regional and global scale.

With this potential for a paradigm shift outlined above, the Programme contributes to a development pathway of the participating countries towards an increased climate resilience in coastal zones which is consistent with the national climate change adaptation strategies and action plans.

D.3. Sustainable development (max. 500 words, approximately 1 page)

SDG 1. End poverty in all its forms everywhere

The Programme increases the resilience of the population in coastal areas to extreme climate and natural hazards through improvement and conservation of services from coastal ecosystems. Negative impacts of climate change, such as cyclones, floods and coastal erosion, mostly affect the poor population, who do not have the (financial) means to deal with weather shocks and are prone to losing their living and income base (fishery, agriculture, tourism) from such events. Without protection through insurance, the poor are the group most vulnerable to the effects of climate change. The Programme strengthens the risk-reducing capacity of the poor. Fisheries management enhances productivity and stabilizes the income of fishers, leading to improved livelihoods and food security.

SDG 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture

About 95% of the world's 50 million fishers live in developing countries. Fish is essential to the diet of many populations. It accounts for about 50% of the protein consumed in many least-developed countries. This applies also to the coastal populations of the Programme region, which depend on fish as their main source of protein and therefore as key to their food security and nutrition. The GCF-funded Programme would increase the productive capacity and climate resilience of subsistence fisheries in a region where the population is vulnerable to climate change events through a better provision of ecosystem services.

SDG 5. Achieve gender equality and empower all women and girls

During the project selection process, the BAF will ensure that both men and women benefit from sustainable and climate-smart livelihood options in fisheries, aquaculture, tourism, ecosystem restoration and sustainable management of coastal and marine resources. Women represent the majority of the workforce in fish processing and marketing operations related to marine fisheries and marine aquaculture. All submitted project proposals will be scrutinized regarding gender-sensitivity in the general project concept. Proposed measures will be gender-sensitive and promote the participation of women in decision-making processes within the framework of the Programme. Specific measures to enhance the role and opportunities of women in the scope of sub-projects will be included in Component 3, including a Guide to Gender Mainstreaming (see B.2., Component 3 and G.2. Gender Assessment).

SDG 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

The target population of the EbA measures will profit from an increased and/or secured provision of ecosystem services, e.g. income gains for fishers or employees in fish processing and the tourism sector. Small-scale fisheries in Africa employ over 95% of fishers and provide more than 90% of the fish consumed across the continent. As an example, in Mozambique, the fishery sector represented 8% of the country's gross domestic product in 2018.²⁹ The planned measures will directly contribute to the recovery and sustainability of fish stocks. Mangroves, coral reefs and seagrass beds are the most important coastal ecosystems for fish, as they serve as spawning and breeding grounds.

Many of these coastal areas are inhabited by impoverished and highly vulnerable communities, which will be specifically targeted by the Programme. As a result of the adaptation measures, the resilience against climate change risks of these groups, including the risk of losing employment and main income sources, is expected to increase.

SDG 13. Take urgent action to combat climate change and its impacts by regulating emissions and promoting developments in renewable energy

²⁹ Club of Mozambique, 30.01.2019; <https://clubofmozambique.com/news/mozambique-artisanal-fisheries-sector-posts-6-2m-in-revenue/>

The Programme's climate adaptation measures target the most vulnerable and poor in least developed countries, addressing especially Indicator 13.1 "Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries" (see section "Impact Potential").

SDG 14. Protection and sustainable use of oceans, seas and marine resources

The focus of the GCF-funded Programme is EbA in coastal and marine areas. Ecosystems and their services will be used in order to reduce climate change-related risks for vulnerable coastal populations. Coral reefs, seagrass and mangroves offer an effective protection against erosion in coastal regions as they reduce the energy of waves. They are also an important attraction for tourism and serve as breeding and feeding grounds for fish stocks. The proposed measures improve the sustainable management of MPAs and LMMAs as well as of broader coastal management, and reduce pressures on marine and coastal ecosystems within and outside of protected areas.

The selected countries are contracting parties of the Nairobi Convention for the Protection, Management and Development of the Marine and Coastal Environment of the WIO Region. Priorities for the programme of work for the Convention include ecosystem-based management of marine and coastal ecosystems as well as adaptation to climate change to reduce vulnerability and build resilience.³⁰

SDG 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Coastal ecosystems build the interface between marine and terrestrial living, and therefore are closely interconnected to near-shore terrestrial ecosystems. This means that changes to or destruction of marine habitats also affect coastal ecosystems (changes in nutrients, sediments, mangroves needing freshwater), lead to loss of mangroves and seagrasses, which in turn leads to sedimentation of coral reefs. A loss of coral reefs leads to decreased storm buffering and therefore to erosion, which in turn negatively affects terrestrial habitats. Mangrove forests support one of the highest biodiversity values in the world. With its focus on the protection and sustainable management of coastal and near-shore marine ecosystems through EbA-based measures, the Programme directly contributes to the conservation of terrestrial ecosystems and the halting of biodiversity losses.

D.4. Needs of recipient (max. 500 words, approximately 1 page)

The selection of the countries to be supported by this GCF-funded Programme was guided by criteria including the vulnerability of the country and the beneficiary groups to climate change. As outlined in the baseline (see B.1.), the four countries and their coastal population are highly susceptible to adverse effects of climate change, and demonstrate at the same time immense financial and technical difficulties in coping with these effects.

Selection criteria include:

- (i) The country's vulnerability to adverse effects of climate change (measured by internationally accepted indicators like the University of Notre Dame Global Adaptation Index (GAIN);
- (ii) The principal need for the implementation of climate change adaptation programmes and measures, confirmed in national strategies and policies; and
- (iii) The relevance of ecosystem services from coastal and marine ecosystems for the socio-economic development and vulnerability of the coastal population of the countries (measured by existence of significant mangroves, coral reefs and other coastal and marine ecosystems).

The countries in the Programme region strongly fulfill these selection criteria. Especially-low-income countries like Madagascar, Tanzania and Mozambique are most threatened by climate change. According to the climate projections for the selected countries, future trends indicate that climate change effects (see B.1.) will increase in the next decades. GAIN summarizes a country's vulnerability to climate change and other global challenges compared to its readiness to improve resilience. According to this tool, Madagascar, Mozambique, Kenya and Tanzania are among the top three most vulnerable and least ready countries in the world. All of these countries outline in their climate change policies, necessary adaptation measures in their coastal regions due to the high vulnerability of the population.

The GCF-funded Programme would enhance the adaptive capacity of the coastal and marine ecosystems of the four selected countries through the proposed EbA approach. The selection criteria for sub-projects funded under a specific GCF-Programme call for proposals will ensure that funded measures will enhance ecosystem services that contribute to reducing climate change-related risks for vulnerable coastal communities.

³⁰ P. 2 of Progress report of the Executive Director of the ninth COP, 30 and 31 August 2018 : http://wedocs.unep.org/bitstream/handle/20.500.11822/25770/CP9.4_Report_Executive_Director_EN.pdf?sequence=3&isAllowed=y

Due to the status of Madagascar, Mozambique and Tanzania as least developed countries, the national budgets of these three targeted countries are extremely limited and not even sufficient to address the basic needs of the countries' populations.

The focus of the sub-projects is the funding of public goods such as conservation and sustainable use of relevant coastal ecosystems in order to strengthen the provision of ecosystem services. Local communities consist of mainly poor populations, which depend highly on ecosystems and their services, and which are strongly affected by climate change events. It is difficult for them to provide their own financial resources for climate adaptation measures. The recent cyclones in Mozambique in 2019 demonstrated how the poor population is affected by climate change effects, in many cases losing the entire basis of their livelihood, when governments do not have the financial resources to assist affected families in rebuilding their existence.

As adaptation needs are growing in these countries, they will not be able to finance EbA measures from public sources; the countries therefore highly depend on external funding for climate adaptation. South Africa has a higher income and national budget, however, due to the importance of the marine and coastal ecosystems that partly cross its state boundaries, the country offers significant opportunities for transboundary projects.

Funds from private sources are not expected as there is no financial benefit for investors. If applicable, and depending on the project context, possible options for tourism and support for small-scale private enterprises will be explored in order to enhance the sustainability of project interventions. Therefore, and as an additional option, the involvement of the private sector (such as private fisheries or eco-tourism) can be integrated into the calls for proposals.

The selected countries do not have technical capacities or knowledge regarding EbA approaches and methodologies for their implementation. Therefore, the sub-projects will incorporate expertise and capacity building for implementing entities on EbA activities and implementation, in participation with local communities as well as local and national governmental authorities.

In summary, due to the development status of the Programme countries, the high proportion of poor population, their tight fiscal situation and their vulnerability to climate change, we recommend to finance the Programme on a grant basis, as neither governments nor the local communities will be able to pay debt service for the needed funds. We deem the proposed financial structure as adequate and reasonable in order to achieve the proposal's objectives, which are promoting EbA approaches in order to reduce the vulnerability of coastal populations and avoid negative impacts of climate change through ecosystem services.

D.5. Country ownership (max. 500 words, approximately 1 page)

The support of the NDAs for the proposed Programme is secured (see below – Role of NDA). Therefore, the Programme is well aligned with, and makes a significant contribution to, national adaptation strategies of the selected countries as set out in key policy and strategic documents (see B.1. for details):

Madagascar: To cope with climate change risks and adapt climate sensitive sectors and regions, Madagascar has set up an ambitious policy framework. The proposed Programme is aligned with the adaptation priorities highlighted in the NDC and the NAPA. The NAPA contains a set of planned activities, related to EbA in coastal and marine areas, which coincide with measures which are eligible for funding within the proposed Programme, such as improved management of sustainable fisheries management, mangrove reforestation, seagrass rehabilitation and rehabilitation of beach vegetation, which fit in the context of the national priorities and strategies and contribute to the achievement of climate adaptation objectives.

Mozambique: Climate adaptation strategies in Mozambique, with its extensive coastline and high vulnerability to climate change-related risks give priority to coastal zones and actions on coastal protection, including forest restoration, rehabilitation of dunes and mangroves, actions to sensitize and disseminate good practices in coastal communities (NAPA; 2007), as well as an integrated coastal zone management approach for fisheries, coastal and marine ecosystem management, coastal and marine protection, marine parks and tourism. The National Climate Change Adaptation and Mitigation Strategy proposes actions to increase the resilience of fisheries, e.g. regeneration and protection programmes for the mangroves, algae and seaweeds associated with potential carbon capture and storage ('blue carbon').

South Africa: The Adaptation Strategy includes measures related specifically to EbA: community-based adaptation, conservation agriculture and climate-smart agriculture (including forestry and fisheries). The EbA concept for fisheries management is designed to build greater resilience in the fisheries sector by securing existing fisheries and biodiversity and assisting the recovery of impacted resources and whole ecosystems. It furthermore includes guidelines for municipality planning around coastal measures to ensure nursery habitats for prawns and fish are maintained and coastal ecosystems are protected to buffer against impacts of storm surges (NAP; 2016).

Tanzania: The coastal and marine environment is the second highest priority for climate adaptation. Tanzania is planning a number of marine and coastal environment management programmes including mangrove reforestation as well as conservation of coastal resources. Additional measures are: elimination of destructive fishing practices and overfishing; reduction of pollution and damaging extraction; proper management of salt production and seaweed farming; coastal ecosystem monitoring; restoration of degraded habitats e.g., beach nourishment, vetiver grass planting, mangrove replanting, stimulation of coral reefs growth; and the establishment of MPAs.

Alignment with existing policies - Conclusion:

All four countries proposed for the GCF Programme have a strong focus on and commitment to coastal and marine conservation within their national strategies, including their NDCs and National Climate Strategies and NAPAs. In addition, the proposed countries (see B.1.) participate in the Nairobi Convention and the World Bank Initiative PPCR.

There is outstanding momentum towards ownership of and attention to the proposed Programme among the stakeholders of the countries participating in the Programme. All four governments are showing the highest interest in and commitment to the GCF-funded Programme, as all of them strongly need financial and technical support for EbA-based measures in coastal and marine ecosystems already envisaged within their National Adaptation Plans.

For the selected Programme countries the GCF Country Work Programmes were not yet available at the time of Programme development. The “GCF Consolidated Country and Entity Work Programme” (Protocol from the Meeting of the GCF Board, February 2018) provides orientation for the elaboration of GCF Country Work Programmes. GCF organized in 2016 a structured dialogue for Africa which allowed countries to articulate their priorities. Coastal infrastructure, coastal ecosystems and policy frameworks for coastal management came out as one of five priorities.

KfW – Accredited Entity

By following its internal rules, policies and procedures, KfW as Accredited Entity ensures the Programme’s compliance with GCF’s standards in line with the Accredited Master Agreement between the GCF and the KfW.

The KfW is Germany’s public Promotional Bank, and with a balance sheet of 485 billion EUR (2018) and an annual funding volume of over 75.5 billion EUR (2018), it is one of the largest development banks in the world. On behalf of the German Government, particularly the Federal Ministry of Economic Cooperation and Development (BMZ), the KfW through its sector Development Bank administers Germany’s official Financial Cooperation in about 70 developing and transition countries worldwide.

The Development Bank sector of the KfW has a long record of financial cooperation with all four countries of the Programme, with a portfolio dating back to 1965. Currently, the KfW has an ongoing portfolio in these countries in the natural resource management, water, health, energy, financial and governance sectors. The interdisciplinary teams from KfW Headquarters as well as from the local KfW offices in the Programme region have profound knowledge and technical expertise regarding the institutional settings and procedures for programmes and projects in the natural resource management sector and maintaining relationships with relevant national partners, which will facilitate smooth implementation.

The KfW provides oversight and backstopping services, as well as technical advice through experienced country desk managers, sector experts and engineers. Sub-projects to be financed under the GCF Programme will be developed by international and local NGOs in cooperation with the local authorities and local stakeholders. The BAF will evaluate, assess and select proposals, applying the well-established and proven management capacity of the KfW.

Blue Action Fund – Executing Entity

Within a very short time, the BAF was fully operational and successfully managed to establish its grant-making mechanism. Within its first year, the BAF implemented two open calls for proposals, and a third call followed in early 2019. The BAF has begun to implement sub-projects resulting from one restricted start-up call as well as from two open calls for proposals, and is currently selecting proposals from a third call. Currently, seven sub-projects are being implemented and eight sub-projects are in the pipeline; up to two additional calls are planned for a GCF-funded Programme in 2019/2020.

The BAF is already working in a highly efficient manner, with a lean management structure and highly qualified staff, yet it is constantly aiming to increase its efficiency. It estimates that by the time it is fully operational it will achieve a ratio of total administrative expenses to total expenses of less than 10% (which is well below international standards for nature conservation foundations); total administrative expenses also include expenses for knowledge exchange, studies and capacity building.

The BAF is very well integrated into the network of international think tanks and research institutes working with marine and coastal ecosystems and their interrelation with climate change and its effects, as well as adaptation needs. This is key to the evaluation of project proposals and their monitoring and evaluation. With technical support from the IUCN, the BAF provides the highest expertise in the field of coastal and marine ecosystem services and EbA concepts.

The BAF supports national and international NGOs. Its approach is not to become a new actor implementing ocean conservation but rather a new financial partner for NGOs that are successfully working in this field – enabling them to redouble their efforts with additional funding and to disseminate experiences, best practices and innovative approaches on a global scale.

National Designated Authority and GCF Focal Points

The Programme has been discussed with the NDAs of the participating countries. The GCF focal points for the four participating countries have received the concept note and been asked for comments, for which purpose they shared the document with relevant sector ministries. The concept notes detailed the national approval processes of the participating countries. As a result of this consultation process, no-objection letters were issued by the participating countries.

The GCF-funded Programme is based on an open approach to sub-project proposals. By definition, the exact project areas and project communities will only be known once a grant sub-project has been selected. Each NGO proposal must include an endorsement letter from the relevant national authority in the respective beneficiary country that documents the embeddedness of the proposed project measures into the country's policies and strategies.

All NGOs require proven competence and a successful track record in the relevant country in implementing projects aligned with national strategies and policies in the coastal and marine sector. They have usually been operating in a given project area for years and therefore have well-established relationships with the targeted coastal communities. Participatory development will be one of their trademarks, and they will demonstrate key competencies that safeguard the concept and ensure implementation of their projects is closely aligned with the needs of local and national stakeholders.

Civil Society Organizations and Stakeholders

To ensure civil society participation, sub-projects will have to provide information on community engagement and how they ensure that relevant institutions, groups and local communities are involved in planning and implementation, as well as detailing what stakeholders will be able to change through successful implementation of the project. The role of local administrations in the implementation of the project must be described. In addition, a stakeholder analysis will characterize the stakeholders and provide information on the number of households/people that will benefit from the project, as well as the extent to which communities depend on coastal and marine resources for their livelihoods. The analysis will explain how the project will impact on their livelihoods and on food security.

D.6. Efficiency and effectiveness (max. 500 words, approximately 1 page)

Rationale for Financial Structure and Grant Funding

With the proposed EUR 30 million from the GCF, the KfW will be able to leverage additional funds amounting to EUR 25 million as co-financing contributions from the German Government / BMZ. Furthermore, NGOs will be required to contribute an additional EUR 12.5 million, either as in-kind or direct co-financing contributions, which will further increase the efficiency of the GCF funds. All proposals for sub-projects have to demonstrate the availability of sufficient resources for operation and maintenance to ensure the sustainability of the sub-projects after financing from the GCF ends.

All sub-projects will focus on ecosystem services, which are otherwise not financed from public sources. Due to insufficient fiscal budgets and the need to cover basic social and economic priorities of the countries, financial resources for climate change adaptation from national budgets are extremely limited and hinder the governments of the Programme countries in implementing adequate EbA approaches. Due to fiscal shortages, partner governments are hardly in a position to take out loans, which would add to their foreign debt burden. Therefore, GCF co-funding of the proposed Programme would make a difference to the selected countries, as they will be able to implement their climate adaptation strategies in vulnerable coastal areas. Grant funding is also justified, as the primary focus of the sub-projects is the funding of public goods such as conservation and sustainable use of relevant coastal ecosystems in order to increase the adaptive capacities of coastal – mostly poor – populations. There is no crowding out of private sector investments, as private capital flow in the proposed EbA measures is not expected. The grants will be carefully tailored regarding efficiency, with a view to facilitating the implementation of a maximum of EbA measures and impacts (see below). NGOs will demonstrate possible additional private sector involvement in their proposals, as the concepts of the sub-projects require a strategy to ensure the sustainability of the project interventions. We therefore deem the proposed financial structure as adequate in order to achieve the proposal's objectives.

The BAF through its grant-making mechanism is a flexible vehicle specialized in financing and managing marine and coastal projects in developing countries. Its funding and operational mechanisms are well established. The foundation will be able to manage projects with budget sizes ranging from 2-5 million EUR in line with GCF performance criteria. Using BAF's grant-making mechanism and the institutional network of NGOs, which already have planning, procurement and implementation systems in place, is a cost-efficient approach for the utilization of GCF funds for climate change adaptation measures.

The BAF, supported by an independent expert group from the IUCN, will critically review the appropriateness of the design of submitted proposals for effective achievement of project objectives. Economic and financial efficiency is one of the key evaluation criteria for selection of project proposals.

The BAF grant mechanism itself, with its lean management structure and its continuous efforts toward keeping administrative cost at a low level, is a cost-efficient funding mechanism for small-scale projects for climate adaptation.

Economic Value of Coastal and Marine Ecosystems

The resources and services of marine and coastal ecosystems are of high economic value. On a global scale, services of coral reefs are estimated at 375 billion USD each year.³¹ Mangroves have been estimated to provide at least 1.6 billion USD per year in ecosystem services worldwide.³² WWF and Boston Consulting Group estimated the WIO region's total ocean/marine asset base conservatively to be at least 333.8 billion USD, derived from direct outputs from the ocean (e.g. fisheries, mangroves, coral reefs and seagrass), services supported by the ocean (e.g. marine tourism) and adjacent benefits associated with the coastlines (e.g. carbon sequestration). The Gross Marine Product (GMP)³³ is the ocean's annual economic value. In the WIO, the total GMP is estimated at 20.8 billion USD (2015). Given that several of the countries of the WIO are among the poorest in the world, the ocean's contribution plays a significant role in alleviating poverty. Of critical importance are the food and livelihood benefits that coastal and marine ecosystems provide but which are not captured in conventional economic analysis. In Africa, small-scale fisheries, which are heavily dependent on intact coastal and marine ecosystems, employ over 95% of fishers, and provide more than 90% of the fish consumed across the continent. As an example, in Mozambique, small-scale fisheries contributed 8% of the country's GDP in 2018.³⁴

Costs and Benefits from Climate Change Adaptation

Compared to traditional infrastructure investments for coastal protection (e.g. construction of protection walls), EbA approaches not only reduce the risks of the effects of climate change, but also reduce the vulnerability of the coastal communities and are therefore highly effective in reducing climate change-related risk. In addition, EbA approaches are more cost efficient than traditional infrastructure measures and have lower maintenance costs (see Annex 3).

Estimations on costs and benefits from Climate Change Adaptation confirm the additional value of EbA measures, as they deliver a set of ecosystem services, which include not only the reduction of risks of climate change but also the improvement of livelihood through income generation and food security as well as benefits derived from climate mitigation. A study for coastal areas in the Caribbean³⁵ compiled a comprehensive inventory of local adaptation measures, many of which span both climate adaptation and economic development. For the cost-benefit analysis, the benefit is calculated as sum of averted loss and any additional revenues. Each adaptation measure is plotted on the adaptation cost curve, ranging from the most cost-efficient on the left of the curve to the least cost-efficient measures on the right. It demonstrates that cost-efficient measures are mostly related to EbA measures (see Figure 11 and Annex 3).

The cases presented in Annex 3 refer to regions that are exposed to coastal flooding and storm surge, which are expected to increase with future climate change. The effects of climate change are very similar to those occurring in the Programme region. The results of the cost-benefit-ratio analysis can therefore be assumed as indicative for the Programme region, too.

³¹ IUCN; Wong et al., 2014

³² <https://oceanconference.un.org/coa/SustainableFisheries>

³³ Obura, D. et al., 2017. Reviving the Western Indian Ocean Economy: Actions for a Sustainable Future - Summary. WWF International, Gland, Switzerland. 20pp.

³⁴ www.clubofmozambique.com; see news, dated 31.1.2019.

³⁵ Swiss RE: Caribbean Catastrophe Risk Insurance Facility; 2010.

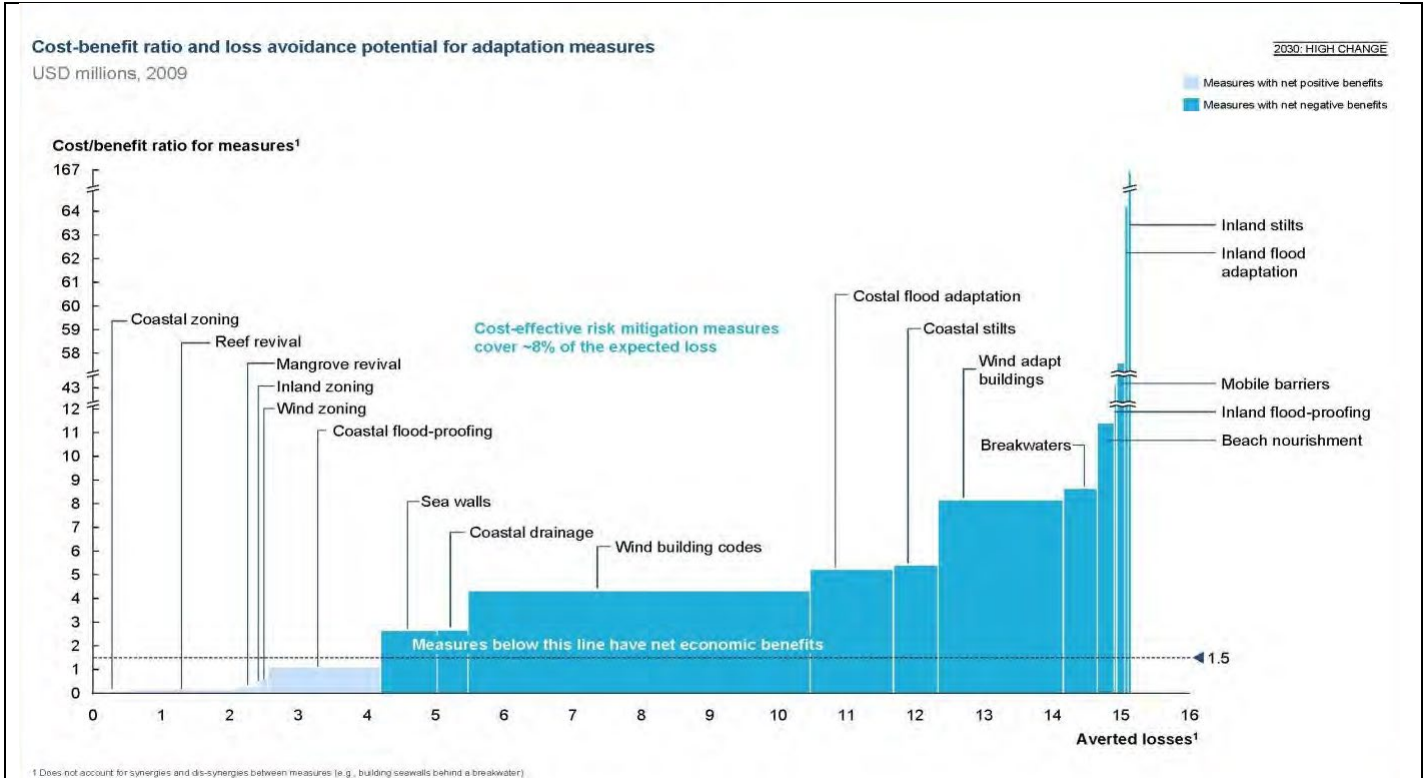


Figure 11: Swiss RE: Enhancing the Climate Risk and Adaptation Fact Base for the Caribbean, 2010, p.19.

Main results of the case studies are demonstrated in the graph above (Antigua and Barbuda case; please see also Annex 3):

- (1) the cost-benefit ratio (CBR) of mangrove planting and of reef revival ($CBR > 0.1$) is much lower than that of infrastructure measures, such as coastal stilts or sea-walls ($CBR > 5$);
- (2) Mangrove planting and reef revival are under the most cost-efficient measures identified;
- (3) The CBR of mangrove planting and reef revival is far below the threshold of 1.5, which is defined as the line for measures with net economic benefits.

A study on valuation of ecosystem services of mangroves in the Zambezi delta of Mozambique (WWF 2017, see annex 3) resulted in the following yield figures: i) USD 2,240/ha/year for direct use (charcoal and poles production) and a total of USD 26,600 for indirect use (coastal protection, habitat value for fish, carbon sequestration). This compares very favourably with reforestation or rehabilitation costs for mangrove forests (see below). This illustrates that the value of restoration projects for mangroves but also coral reefs can be enormous. They represent low cost and site-specific alternatives to traditional 'grey' adaptation measures.

EbA measures in coastal and marine ecosystems are of increasing importance in climate adaptation strategies. As people are at the core of EbA, it is crucial to engage affected communities in designing respective EbA measures, ensuring not only the suitability but also the sustainability of the adaptation strategies.³⁶

Efficiency and effectiveness are key evaluation criteria applied by BAF and KfW to assess and monitor sub-projects before, during and after implementation. For ensuring the effectiveness of the proposed concepts and measures to be financed, the criteria of the Draft Appraisal Matrix in Annex 23 will apply during project selection. Quantitative full-fledged cost-benefit analysis is not required from the NGOs as this is not suitable for this type of sub-projects. However, during project appraisal and selection a rigorous assessment of costs in relation to expected impacts/ benefits will be performed. Minimum thresholds for impacts are defined in individual calls for proposals. Reasonable thresholds appear 5,000 direct beneficiaries per project and 100,000 ha protected area per project. Assuming total average costs of EUR 3 million for a sub-project the following upper cost thresholds can be derived: maximum total costs per beneficiary:

³⁶ Evaluation, Cost-Benefit and Cost-Effectiveness-Analysis of Ecosystem-based Adaptation measures in Vietnam; (ELAN, 2015; Reid, 2016).

EUR 600.00³⁷, maximum total costs per ha coastal ecosystem under improved management: EUR 30.00. Furthermore the maximum share of indirect costs is set at 10%. For some specific measures cost benchmarks will be applied, based on cost data of the current BAF portfolio, e.g. for mangrove reforestation (EUR 3,000/ha) and mangrove rehabilitation through assisted natural regeneration and planting of wildlings (EUR 250/ha).

No strict thresholds for cost effectiveness can be applied since the sub-projects are too diverse in terms of requirements and planned activities³⁸. Instead, sub-project-specific assessment of budgeted costs (including adequacy checks of unit costs, bill of quantities and proposed overheads, such as staff and travel costs) with planned measures and impacts is performed. As an input for this analysis, comparison of costs with similar projects will be carried out during the appraisal. BAF, supported by independent experts and IUCN will select submitted proposals based on their economic and financial effectiveness and efficiency.

EbA measures such as coastal management and protection and restoration of ecosystems are public services that do not generate direct cash flow for the public authorities or the implementing entities. As such, there is no financial return on investment to be expected from the sub-projects. As mainly environmental and social benefits from an increased provision of ecosystem services will prevail, grant-financing of these measures can be justified. In conclusion, while the Programme bears economic benefits, none of the planned outputs entails significant revenue generation or cost recovery through payments from the beneficiaries to the government or to the implementing agencies (NGOs). Any loan repayment from benefits generated by the Programme is therefore assumed to be impossible.

Financial sustainability beyond the life of sub-projects has been an over-riding consideration during the design of the BAF grant-making mechanism and the definition of project eligibility and appraisal criteria. The planned EbA measures within the GCF Programme are public sector activities (e.g. protection and management of MPAs and LMMAs and coastal management) for public goods in nature, and will not themselves generate cash flow for public authorities. The funded projects will bear mainly ecological and socio-economic benefits. Nevertheless, they are designed in a way to maximize sustainability, for example by anchoring them within existing governmental institutions (national and local) as well as local communities and NGOs, so that they are not dependent on ongoing external support. Benefits generated by projects are used to cover operational costs wherever possible and to ensure the sustainability of project measures and activities. In the last year of project implementation, the funding of projects will be reduced and in this transition phase O&M funds will have already been borne by the project stakeholders (local communities and NGOs, governmental institutions). The project applicants have to provide details on the exit strategy of the sub-projects (see B.6.).

Best available technologies and best practices regarding EbA approaches in marine and coastal ecosystems will be used in the scope of the Programme. International available knowledge and state-of-the-art EbA measures, available in international NGOs, will be connected with knowledge from the local target communities, which will be integrated in the concepts of sub-projects. The BAF, supported by an independent expert group from the IUCN, will critically review the appropriateness of the design of submitted project proposals regarding technical concepts, innovative character and effective achievement of project objectives. The BAF has a large funding scope, connecting international-level organizations with the grass-root level, as well as NGOs with governmental organizations, with the aim of working across sectors and national boundaries. This means that the operational range of ongoing measures is enlarged, knowledge exchange is fostered, and climate change adaptation tools and mechanisms are mainstreamed.

³⁷ Assuming total costs of sub-project of EUR 3 million and defined minimum size of target group of 5,000 ; however, for achieving full marks under this indicator, 20,000 beneficiaries have to be supported, equalling a total cost of EUR 150/beneficiary

³⁸ If sufficient cost data are available for the second call of proposals of the Programme similar benchmarks could be developed for other measures, e.g. restoration of coral reefs or sea grass meadows.

E. LOGICAL FRAMEWORK

E.1. Paradigm shift objectives

- Shift to low-emission sustainable development pathways
 Increased climate resilient sustainable development

E.2. Core indicator targets

Provide specific numerical values for the GCF core indicators to be achieved by the project/programme. Methodologies for the calculations should be provided. This should be consistent with the information provided in section A.

E.2.1. Expected tonnes of carbon dioxide equivalent (t CO ₂ eq) to be reduced or avoided (mitigation and cross-cutting only)	Annual	not applicable
	Lifetime	not applicable
E.2.2. Estimated cost per t CO ₂ eq, defined as total investment cost / expected lifetime emission reductions (mitigation and cross-cutting only)	<p>(a) Total project financing _____ Choose an item.</p> <p>(b) Requested GCF amount _____ Choose an item.</p> <p>(c) Expected lifetime emission reductions _____ t CO₂eq</p> <p>(d) Estimated cost per t CO₂eq (d = a / c) _____ Choose an item. / t CO₂eq</p> <p>(e) Estimated GCF cost per t CO₂eq removed (e = b / c) _____ Choose an item. / t CO₂eq</p>	
E.2.3. Expected volume of finance to be leveraged by the proposed project/programme as a result of the Fund's financing, disaggregated by public and private sources (mitigation and cross-cutting only)	<p>(f) Total finance leveraged _____ Choose an item.</p> <p>(g) Public source co-financed _____ Choose an item.</p> <p>(h) Private source finance leveraged _____ Choose an item.</p> <p>(i) Total Leverage ratio (i = f / b) _____</p> <p>(j) Public source co-financing ratio (j = g / b) _____</p> <p>(k) Private source leverage ratio (k = h / b) _____</p>	
E.2.4. Expected total number of direct and indirect beneficiaries, (disaggregated by sex)	Direct	~minimum of 85,000; 340,000 likely 50% female
	Indirect	Indirect beneficiaries comprise the total coastal population dependent on ecosystem services in the project areas, which differs significantly between the sub-projects. Number of indirect beneficiaries will be known after selection of sub-project proposals and reported about in annual progress reports to the GCF. 50% of indirect beneficiaries are women
<i>For a multi-country proposal, indicate the aggregate amount here and provide the data per country in annex 17.</i>		
E.2.5. Number of beneficiaries relative to total population (disaggregated by sex)	Direct	Estimate for direct beneficiaries: 5-10% of the project areas of the funded sub-projects (50% being women), equal to approx. 0.4 % of the total coastal population of the four countries (indicative estimate).
	Indirect	Number of indirect beneficiaries will be known and reported about after selection of sub-projects.
<i>For a multi-country proposal, leave blank and provide the data per country in annex 17.</i>		

E.3. Fund-level impacts						
Expected Results	Indicator	Means of Verification (MoV)	Baseline	Target		Assumptions
				Mid-term	Final	
<i>A1.0 Increased resilience and enhanced livelihoods of the most vulnerable people, communities and regions</i>	<i>A1.2 Number of males and females benefiting from the adoption of diversified, climate resilient livelihood options (including fisheries, agriculture, tourism, etc.)</i>	Household Surveys, Monitoring Reports from BAF; Mid-term review and final evaluation reports	0 men 0 women		50,000 men, 50,000 women direct beneficiaries (estimate; tbc at mid-term review)	
<i>A2.0 Health and well-being, and food and water security</i>	<i>A2.1 number of males and females benefiting from access to health care, food or water and overall well-being</i>	Household surveys, Monitoring Reports from BAF; Mid-term review and final evaluation reports	0 men 0 women		30,000 men, 30,000 women direct beneficiaries (estimate; tbc at mid-term review)	
<i>A3.0 Increased resilience of infrastructure and the built environment to climate change</i>	<i>A3.1 Number of physical assets made more resilient to climate variability and change, considering human benefits</i>	Rehabilitation records, contracts; photographs; Monitoring Reports from BAF; Mid-term review and final evaluation reports	0 communities (with infrastructure)	10	40 communities with infrastructure (100,000 men & 100,000 women as direct beneficiaries (estimate; tbc at mid-term review)	
<i>A4.0 Improved resilience of ecosystems and ecosystem services</i>	<i>A4.1 Coverage/scale of ecosystems protected and strengthened in response to climate variability and change</i>	Mapping of areas, legal demarcation of new areas, surveys, photographs, Monitoring Reports from BAF; Mid-term review and final evaluation reports	0 ha	3,000 ha	28,000 ha of coastal and marine ecosystems (mangroves, coral reefs, seagrass) (a) newly protected and (b) protected and under more effective management (measured with adequate methods, e.g. METT or others) ("X" tbd in the concepts of the funded sub-projects)	Activities foster the population's mobilization for protection and restoration activities, community-based management of MPAs and sustainable fisheries.

E.4. Fund-level outcomes						
Expected Outcomes	Indicator	Means of Verification (MoV)	Baseline	Target		Assumptions
				Mid-term	Final	

<p>A5.0 Strengthened institutional and regulatory systems for climate-responsive planning and development</p>	<p><i>A5.1 Institutional and regulatory systems that improve incentives for climate resilience and their effective implementation</i></p>	<p>Revised planning documents, new legislation or regulation. Annual Reports from sub-projects; Mid-Term and Final Monitoring Reports</p>	<p>0</p>	<p>1</p>	<p>8</p>	<p>Capacity development with competent authorities will result in 2 improved systems in each of the countries.</p>
<p>A7.0 Strengthened adaptive capacity and reduced exposure to climate risks</p>	<p><i>A7.2 Number of males and females reached by [or total geographic coverage of] climate-related early warning systems and other risk reduction measures established/strengthened</i></p>	<p>Household Surveys; Annual Reports from sub-projects; Mid-Term and Final Monitoring Reports</p>	<p>0</p>	<p>10.000</p>	<p>200.000</p>	<p>Capacity-building and outreach activities foster the adoption of EbA approaches by the local communities; National institutions and policies provide ongoing support to the approach, tools, instruments and strategies developed by the sub-projects</p>

E.5. Programme performance indicators						
<i>The performance indicators for progress reporting during implementation should seek to measure pre-existing conditions, progress and results at the most relevant level for ease of GCF monitoring and AE reporting. Add rows as needed.</i>						
Expected Results	Indicator	Means of Verification (MoV)	Baseline	Target		Assumptions
				Mid-term	Final	
Output 1. Coastal ecosystems, which are particularly relevant for climate change adaptation, are better protected and managed in a more sustainable way	Number and size of new marine and coastal protected areas; Number and size of protected areas with improved protection level and efficient management	Mapping of areas, legal demarcation documents, Management Effectiveness Tracking Tool (METT) documentation. Annual Reports from sub-projects; Mid-Term and Monitoring and Evaluation Reports from BAF	0 ha under adequate protection/management	200,000 ha	1.7 million ha	National institutions responsible for protected areas and their management support the activities and provide improved enforcement; The infrastructure is respected and duly maintained
Output 2. Degraded coastal ecosystems, which are particularly relevant for climate change adaptation, are rehabilitated	Size of marine and coastal ecosystems rehabilitated/restored	Mapping of areas, surveys of rehabilitated ecosystems, photographs. Annual Reports from sub-projects; Mid-Term and Monitoring and Evaluation Reports from BAF	0 ha rehabilitated	3,000 ha	25,000 ha	Enforcement from governmental authorities improved; rehabilitated sites will not be destroyed by extreme weather events
Output 3. Enhanced knowledge, expertise and capacity of relevant national agencies to use Ecosystem-based Adaptation (EbA) approaches for a climate-resilient coastal zone management	Lessons learned / best practices are documented and published in renowned regional and international media; number of local, national and international institutions with which lessons learned were disseminated and actively shared; Revision of national strategies resulting in higher importance of EbA approaches for climate-resilient coastal management	Reports, publications and presentations Minutes, photographs and participants lists of meetings, trainings and conferences. Annual Reports from sub-projects; Mid-Term and Monitoring and Evaluation Reports from BAF	0 articles of lessons learnt placed in renowned scientific journals 0 revised strategies	0	At least 2 of the 4 partner countries have drafted revised strategies with more focus on EbA	

E.6. Activities ³⁹			
<i>All project activities should be listed here with a description and sub-activities. Significant deliverables should be reflected in the implementation timetable. Add rows as needed.</i>			
Activity	Description	Sub-activities	Deliverables

³⁹ All activities (apart from the cross-cutting ones, see activity 3.4) are carried out by BAF through NGOs on the basis of project concepts appraised and selected by BAF. The contractual arrangements GCF-KfW and KfW-BAF will reflect this.

<p>Component 1: Funding window for protection and sustainable management of coastal ecosystems relevant for EbA (mangroves, coral reefs, seagrass)</p>			
<p>1.1. Funding for Improved sustainable management of Marine Protected Areas (MPAs) and Locally Managed Marine Areas (LMMAs)</p>	<p>Measures eligible for financing towards supporting local communities managing protected areas may include</p> <ul style="list-style-type: none"> (i) Infrastructure, (ii) boats and other equipment, (iii) demarcation of areas through buoys, (iv) participatory co-management, update of management plans to make sites more resilient to climate change impacts; enforcement of activities outlined in management plans, and (v) reduction of post-harvest losses and improved processing of fish. 	<p>Construction of small buildings, other small works, Supply of equipment, consultancy, technical expertise and consulting, studies</p>	<p>Consultancy for review of existing management plans and updates; develop participatory approach for co-management; define protection measures and sites; plan and implement protection activities (procurement processes for works and equipment); Identify potential for reduction of post-harvest losses and fish processing; method for implementing improvements together with women and men in the supply chain.</p>
<p>1.2. Funding for measures to reduce physical damage to coastal and marine ecosystems</p>	<p>Activities eligible for funding include:</p> <ul style="list-style-type: none"> (i) Mooring buoys for minimizing damage of coral reefs by anchors, (ii) Demarcation and signalling of relevant ecosystems, (iii) Installation of breakwaters to protect parts of reefs from wave action, (iv) Boardwalks for the protection of beach vegetation, and (v) Participatory land use planning for improved protection of coastal ecosystems from damaging human impacts. 	<p>Construction of small buildings, other small works, Supply of equipment, consultancy, technical expertise and consulting, studies</p>	<p>Review of existing coastal management and coastal protection against physical damage and proposal for improvements; planning of protection activities and tender processes; execution of works.</p>
<p>1.3. Funding for measures to reduce pressure and land-based stressors on coastal and marine ecosystems (in and outside protected areas)</p>	<ul style="list-style-type: none"> (i) Promotion of alternative fuel wood sources, where mangroves are used, (ii) Promotion of sustainable fisheries management as well as aquaculture, including co-management approaches with local communities, promotion of Integrated Multi-Trophic Aquaculture (IMTA) and seaweed farming, and (iii) Reduction of sedimentation from land-based erosion through reforestation and/or slope stabilization. 	<p>Consultancy from technical experts and outreach trainers; moderation and workshops; aquaculture facilities; studies; works; services for reforestation</p>	<p>Consultancies for identification of main pressure factors and stressors on ecosystems; identification of alternatives; develop co-management methods together with stakeholders; implement sustainable production and income alternatives with local communities; execute reforestation activities.</p>
<p>Component 2: Funding window for rehabilitation of degraded coastal ecosystems relevant for EbA</p>			
<p>2.1. Funding for mangrove reforestation</p>	<p>Community-based management of selection of suitable sites and rehabilitation measures; combination of physical and biological measures to control site conditions; comprehensive planning of modalities for nursery</p>	<p>Advisory services; seeds; installations/services for nursery; transplanting; workshops</p>	<p>Advisory services to assist communities in site selection and planning of nurseries; Advisory for transplanting and O&M;</p>

	management and seedling production, transplanting and maintenance.		Small works for nurseries, probably on a community working scheme; Workshops with moderation for reforestation techniques; Systematization of lessons learned and best practices.
2.2. Funding for seagrass rehabilitation	Site selection; germination and cultivation of seagrass and transplantation to sites with suitable conditions	Advisory services; seeds; installations/services for nursery; transplanting; workshops	Advisory services to assist communities in site selection and planning of nurseries; Advisory for transplanting and O&M; Small works for nurseries, probably on a community working scheme; Workshops with moderation for reforestation techniques; Systematization of lessons learned and best practices.
2.3. Funding for rehabilitation of beach vegetation	Site selection; cultivation of vegetation and transplantation to suitable sites	Advisory services; seeds; installations/services for nursery; transplanting; workshops	Advisory services to assist communities in site selection and planning of nurseries; Advisory for transplanting and O&M; Small works for nurseries, probably on a community working scheme; Workshops with moderation for reforestation techniques; Systematization of lessons learned and best practices.
2.4. Funding for coral reef restoration (if applicable)	Effective management at an adequate spatial scale to be put in place before active restoration; avoidance of stressors that cause coral damages; re-stabilization of damaged reefs and corals; propagation and transplantation of corals to new sites or construction of in situ coral nurseries; passive restoration via good management of reef resources.	Advisory services; management support; installations/services for nursery; transplanting; workshops	Management plan and personal structures put in place and operational; Sufficient protection measures (Component 1) in place; Studies on adequate restoration technique and proper site selection and planning of nurseries (on-site or off-site); Systematization of lessons learned and best practices.
Component 3: Support to knowledge exchange and capacity building for appropriate and feasible EbA approaches			
3.1. Funding towards awareness raising and capacity building of national / regional agencies on the relevance and options of using EbA measures for climate-resilient coastal zone management	Identify best practice and organize exchange visits; develop communication material for different publics (local communities, national institutions responsible for climate change policies and their implementation). Exchange lessons learned and best practices with broader national, regional and international public.	Studies; Workshops, incl. moderation; travel expenses; consultancy; platform for information exchange.	Studies regarding evaluation of project results and impacts and systematization; Organization of workshops, including moderation, Organization of exchange visits of stakeholders; Development of a suitable platform for information exchange on EbA in marine and coastal ecosystems and lessons learned and dissemination of best practices.

<p>3.2. Funding towards capacity building of national / regional agencies on climate risk assessment and how to include EbA measures in climate-resilient coastal zone management (instruments, methodologies, incentive schemes, etc.)</p>	<p>Workshops and rural extension activities for local communities on EbA measures; developing training modules for capacity building; on-the-ground training regarding sustainable fisheries, coastal management, protected area management. Develop adequate teaching material posters to reach stakeholders (women and men)</p>	<p>Studies; Workshops, incl. moderation; travel expenses; consultancy; printing materials, etc.</p>	<p>Studies regarding evaluation of project results and impacts and systematization; Organization of workshops for capacity building of local and national stakeholders; Elaboration of communication and learning materials, folders, etc.</p>
<p>3.3 Funding towards regional exchange of experiences and lessons learnt from the implementation of EbA measures and on how to make EbA an integral part of climate-resilient coastal zone management.</p>	<p>Studies for consolidation and systematization of experiences and lessons learnt of EbA; Workshops and exchange visits for national authorities;</p>	<p>Studies; Workshops, incl. moderation; travel expenses; consultancy; printing materials, etc.</p>	<p>Studies regarding evaluation of project results and impacts and systematization; Organization of workshops for capacity building of local and national stakeholders; Elaboration of communication and learning materials, folders, etc.</p>
<p>3.4 Cross-Cutting Activities regarding Capacity Building and Knowledge Exchange (managed by BAF):</p> <ul style="list-style-type: none"> - Monitoring and Evaluation of the Programme - Gender mainstreaming guideline development - Funding of gender strengthening measures at sub-project level 	<p>Monitoring and Evaluation of the Programme by specialized experts</p> <p>Consulting services for the Elaboration of a Guide to Gender Mainstreaming of BAF Procedures</p> <p>Funding of gender promotion measures at sub-project level</p>	<p>Specialized expert services (such as IUCN for monitoring and evaluation); Consulting Services</p> <p>Specific gender promotion activities: capacity development, coaching support to women groups, etc</p>	

E.7. Monitoring, reporting and evaluation arrangements (max. 500 words, approximately 1 page)

Monitoring, reporting and evaluation arrangements will comply with the relevant GCF policies. Several qualified stakeholders will be involved, with the IUCN being a key independent evaluator.

On the sub-project level:

Monitoring of the grant activities is considered essential for an effective funding mechanism. NGOs have the main responsibility for monitoring at project level. BAF supervises the implementation of sub-projects. At the beginning of the project, NGOs are required to submit a detailed project work plan divided into quarterly actions and deliverables. Every six months, the NGOs update the project work plan to reflect actions and deliverables achieved and any changes. Each project requires a Mid-term Financial Audit and Technical Review and a Final Financial and Technical Review. The Technical Reviews will be implemented by the IUCN as independent evaluator. The Financial Reviews will be carried out by independent auditing companies.

The BAF's monitoring, internal evaluation and reporting will mainly be done through bi-annual funding advance requests, annual reports, and on-the ground missions. In addition, the BAF contributes to monitoring implementation of projects at field level and ensures that eligibility criteria are met.

On the GCF-funded Programme level:

The BAF, in coordination with the IUCN, undertakes monitoring and selected reviews of the sub-projects funded by the GCF Programme to assess implementation progress and compliance with all Programme agreements, as well as to monitor progress in achieving outputs and evidence of use of funds.

A mid-term review is carried out in the third year of the Programme implementation by independent evaluators. It includes

- (I) Review of the institutional, technical, environmental, social, economic and financial aspects of the Programme;
- (II) Review of the portfolio of sub-projects, incl. activities, planned outputs, expected impacts, cost and financing;
- (III) Review of the achievement of planned impacts and indicators (including estimates for beneficiaries); and
- (IV) Assessment of the need to restructure or reformulate the Programme.

Independent IUCN experts carry out a Final Review mission, where the satisfactory implementation within the agreed framework and good financial practices, the delivery of outputs and the achievement of Programme outputs is evaluated.

KfW will accompany Programme implementation on a regular basis and will ensure the terms set out in the Financing Agreement. KfW Headquarters staff will support the BAF with technical questions; KfW offices in the partner countries will follow up on project implementation and maintain direct contact with Implementing Partners and national counterparts (NDAs, sector ministries).

F. RISK ASSESSMENT AND MANAGEMENT

F.1. Risk factors and mitigations measures (max. 3 pages)

Key financial and operational risks will be assessed in detail during the project proposal preparation by the NGOs. The BAF will ensure that only technically feasible, socially acceptable and financially sustainable project proposals will be eligible for funding. Furthermore, the appropriateness of proposed measures to deal with environmental and social risks is duly discussed during project appraisal. Implementation of mitigation measures is assessed through the BAF's Environmental and Social Impact Management Framework.

The main risks of the Programme relate to the need to strengthen institutions at local levels, due to the limited capacities of stakeholders and relevant authorities with regard to project implementation and sustainable O&M. Appropriate mitigation measures will be built into the concepts of each sub-project (see below).

Taking into account the mitigating measures as described below, the level of impacts of risks to the Programme is medium with a medium probability.

Selected Risk Factor 1

Category	Probability	Impact
Other	Medium	Medium

Description

Occurrence of extreme weather events / natural disasters and environmental risks external to sub-projects, affecting targeted communities and/or ecosystems.

Mitigation Measure(s)

In order to mitigate the risk, BAF will require risk assessment before funding and will select project proposals across various regions to manage risk probability. Areas prone to high risk of extreme weather events, such as low-lying areas that are regularly affected by floods, and where project activities would have little potential for success, shall be excluded. Instead, alternative areas should be identified.

Selected Risk Factor 2

Category	Probability	Impact
Technical and operational	Medium	Medium

Description

Limited capacities of stakeholders and relevant authorities hamper implementation and sustainable O&M.

Mitigation Measure(s)

Implementation by experienced NGOs ensures sufficient capacities for core implementation of activities regarding EbA; NGOs have to present a proven record of execution of projects with community stakeholders in the relevant fields and in the project country. In addition, project proposals must include capacity building of stakeholders for project implementation and O&M. In the one-year consolidation phase of the project, NGOs accompany stakeholders in order to transfer O&M responsibility of project activities gradually.

Selected Risk Factor 3

Category	Probability	Impact
Prohibited practices	Low	Medium

Description

Corruption, fraud and misuse of funds.

Mitigation Measure(s)

Prior to the approval of a sub-project, BAF performs a full due diligence process of the applicant NGO. For each grant, BAF performs a Mid-term Financial and Technical Review and a Final Financial and Technical Review. Renowned auditing companies will conduct the Financial Review. The Technical Review will follow a monitoring concept defined by BAF according to the characteristics, objectives and planned results and impacts of each sub-

project. Financial and Technical Reviews together provide sufficient control of the proper utilization of Programme funds.

Selected Risk Factor 4

Category	Probability	Impact
Governance	Medium	High
Description		
Political support for the Programme will not be achieved and/or maintained.		
Mitigation Measure(s)		
Prior to the approval of a sub-project, BAF performs a full due diligence process of the applicant NGO. For each grant, BAF performs a Mid-term Financial and Technical Review and a Final Financial and Technical Review. Renowned auditing companies will conduct the Financial Review. The Technical Review will follow a monitoring concept defined by BAF according to the characteristics, objectives and planned results and impacts of each project. Financial and Technical Reviews together provide sufficient control of the proper utilization of Programme funds.		

Selected Risk Factor 5

Category	Probability	Impact
Technical and operational	High	Medium
Description		
Limited enforcement by responsible authorities in case of illegal fishery and destructive fishing methods.		
Mitigation Measure(s)		
The interventions by implementing NGOs and a higher presence provides a better supervision of the project areas and additional external checks and balances. Furthermore, project proposals in many cases can include activities to support local monitoring and enforcement.		

G. GCF POLICIES AND STANDARDS

G.1. Environmental and social risk assessment (max. 750 words, approximately 1.5 pages)

The general Environmental and Social Management System (ESMS) of the BAF specifies the details of the ESMS at Fund level as well as the ESMS requirements for NGO sub-projects.

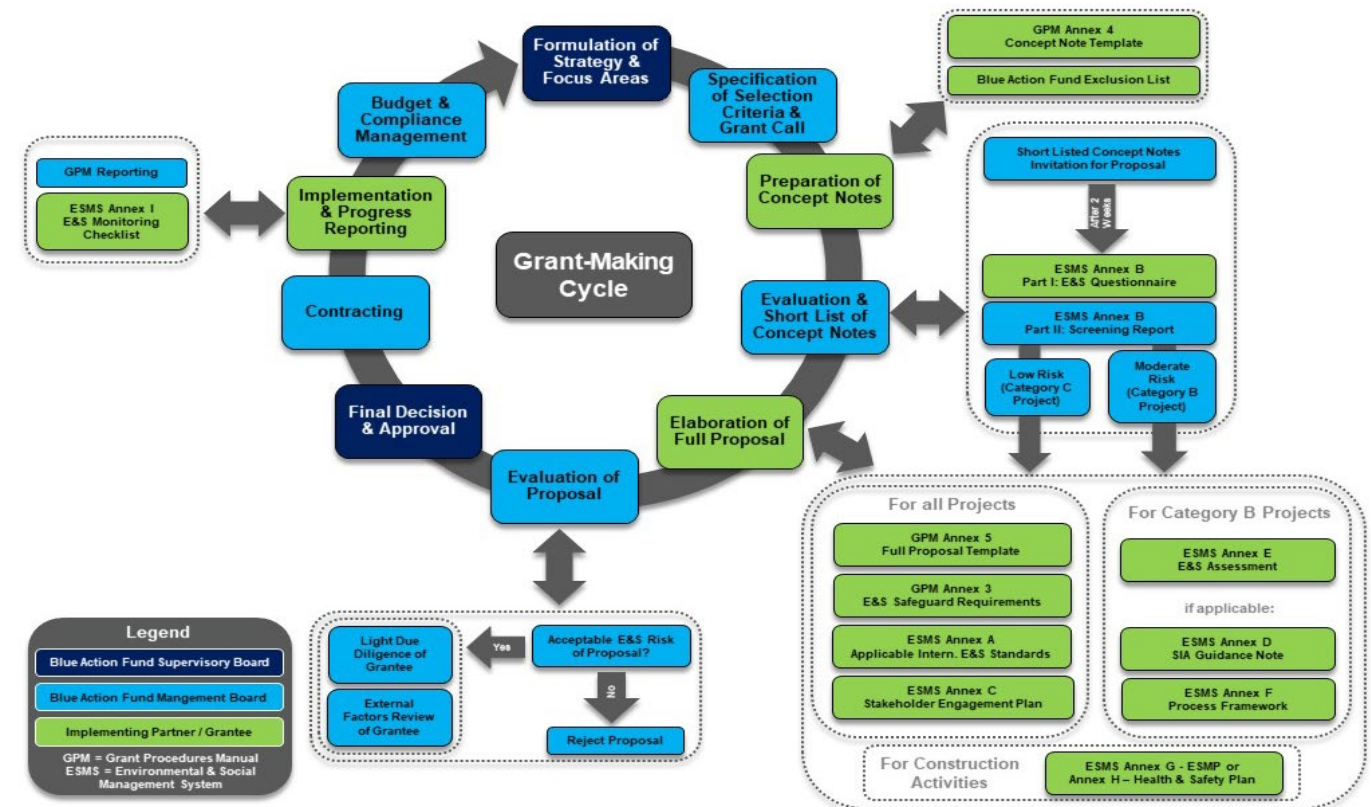
BAF's ESMS provides a description of processes to ensure that Environmental and Social (E&S) topics are duly addressed as part of the Blue Action Fund's activities in line with the Performance Standards (PS) of the International Finance Corporation (IFC) and the Sustainability Guidelines of the KfW Development Bank (2016).

In conjunction with BAF's Grant Procedures Manual, the ESMS defines procedures, tools and responsibilities for assessing, managing and monitoring environmental and social risks and impacts associated with projects supported by the BAF throughout the entire project lifecycle, in line with its international and national requirements.

The ESMS is applicable for all projects receiving funding from the Blue Action Fund. Projects can currently be divided into six main types, although some projects can be assigned to more than one type:

- Designation of new Marine Protected Areas (MPAs)
- Development of an effective management system for existing/new-established MPAs
- Implementation of improved nature conservation measures
- Development of alternative sustainable livelihoods
- Projects involving activities related to aquaculture
- Small-scale construction activities (e.g. ranger offices, research or monitoring facilities, jetty, fish processing or storage facilities, access roads, tourism facilities etc.).

A key principle of the E&S risk management process is incorporating E&S concerns as an intrinsic part of project cycle management. Each step of the project life cycle provides opportunities to address E&S requirements to achieve good E&S performance in the projects. The graphic below summarizes the E&S risk management process implemented by the Blue Action Fund.



An Environmental and Social Impact Assessment (ESIA) will be part of any application of the sub-projects. The Programme falls into GCF ISS risk category I-2. The BAF ESMS is documented in Annex 6.

G.2. Gender assessment and action plan (max. 500 words, approximately 1 page)

Within the context of the target countries, issues relating to gender equality remain an on-going challenge, specifically in traditional fishing communities, often living in remote locations, with low access to education, employment and market opportunities. Isolated coastal communities frequently face food insecurity, environmental degradation and vulnerability to climate change, with women often being the most vulnerable and bearing the brunt of these challenges.

Women, as key agents responsible for the resilience of small-scale fishing communities, as well as for the reproductive work, have a leading role to play in climate change adaptation, ensuring climate justice, and disaster risk management. Women and men use and manage marine and coastal ecosystems differently, have specific knowledge, capabilities and needs related to this and are differently impacted by changes in their environment due to climate change, pollution, and globalization.

Therefore, there is a strong rationale to build in gender considerations in the overall Programme strategy and design. The Programme will apply entirely gender sensitive and gender responsive planning, implementation, monitoring and evaluation at the Programme, as well as at the project and community level and in the overall policy dialogue with institutional and non - governmental stakeholders.

A Guide to Gender Mainstreaming that will be developed prior to the official launch of the Programme, will support further gender assessment and analysis, as well as the development of project specific gender action plans. Country level assessments and action plans will be completed as part of the Programme Guide.

The Guide will be developed by a qualified team of consultants, to be assigned by the BAF with funding from the KfW. The approach of the Guide will be aligned to the GCF's "Mainstreaming Gender in Green Climate Fund Projects"-Manual and to the KfW's Gender Strategy (as accredited entity), relevant safeguard requirements of the BAF's ESMS and relevant policies, legislation and actions plans of the target countries.

As a key instrument of the Programme, the Guide will support project developers to ensure an overall gender sensitive approach for the entire project cycle. In this regard, the guidance document will be closely linked to the BAF's ESMS which governs the Programme's environmental and social safeguard requirements. The acquisition of gender disaggregated baseline data for social impact assessment, gender sensitive impact assessments, gender considerations in the development of process frameworks to mitigate impacts from access restrictions to protected areas, gender sensitive indicators for monitoring and evaluation are some of the areas which will be covered by the Guide. Other important topics will comprise gender sensitive stakeholder engagement, as well as guidance for the development of capacity building measures for women and men, e.g. in order to achieve equal representation on different decision making levels, such as in management structures for protected areas or in community based management structures for ecosystems/ecosystem services.

The Programme's Guide to Gender Mainstreaming will inform gender considerations for the overall global BAF funding portfolio with the overall intention to apply the provisions of the Guide for the entire BAF portfolio. Applicants will be required to apply the recommendations and provisions of the Programme Guide to Gender Mainstreaming throughout the project cycle and to provide evidence that they transferred recommendations from the Programme level meaningfully to the specifics of the respective project.

In their project proposals, project applicants will provide information on how they ensure that relevant institutions, groups and local communities are involved in planning and implementation, as well as detailing what stakeholders will be able to change through successful implementation of the project. In addition, a stakeholder analysis will characterize the stakeholders and provide information on the number of households/people that will benefit from the project, as well as the extent to which communities depend on coastal and marine resources for their livelihoods. All these aspects will be analysed using a gender sensitive approach/methodology and by acquiring gender disaggregated information. Detailed approaches and plans regarding involvement of women on the sub-project level will be identified and developed in a participatory manner on the level of the individual projects.

During the project selection process, the BAF will ensure that both men and women equally benefit from sustainable and climate-smart livelihood options in fisheries, aquaculture, tourism, ecosystem restoration and sustainable management of coastal and marine resources. All submitted project proposals will be scrutinized regarding gender-sensitivity in the general project concept. Proposed activities will be gender-sensitive and promote the participation of women in decision-making processes within the framework of the Programme.

In addition, women will be particularly encouraged to take their role in project implementation as well as being part of various implementing and decision making entities at different levels. The resources available for capacity building can provide the necessary support and training to women in the technical, organizational and leadership domains.

More information and possible activities on the project level in the gender mainstreaming context are included in Annex 8.

G.3. Financial management and procurement (max. 500 words, approximately 1 page)

In line with the general arrangements as described in section B.4, procurement and financial management will be implemented according to BAF's Grant Procedures Manual (Annex 22), which details all guidelines and rules for procurement, disbursement methods, financial accounting and auditing. In summary, the methods are as follows.

Procurement

Procurement of goods, works and related services and other consulting services for projects funded by the GCF will be based on strict ethical principles and best international procurement practices for NGOs. Procurement will be conforming with BAF's procurement policy, which is in accordance with relevant KfW procurement guidelines (see Annex 10 and 22).

The following thresholds apply to all types of procurement for *consulting* services:

Contract value	Procurement method
< EUR 10,000	Discretionary award (= direct award)
EUR 10,000 to EUR 99,999	Limited competitive bidding/price quotation (at least 3 qualified bidders)
≥ EUR 100,000	Open competitive bidding

The following thresholds apply to all types of procurement for *goods and services other than consulting*:

Contract value	Procurement method
< EUR 5,000	Discretionary award (= direct award)
EUR 5,000 to EUR 99,999	Limited competitive bidding/price quotation (at least 3 qualified bidders)
≥ EUR 100,000	Open competitive bidding

Discretionary award: Prior to the first direct award, the contracting party will obtain BAF's no-objection to a standard request for proposal and standard contracts for this type of procurement to be used by the Implementing Partners (NGOs) in the project

Limited competitive bidding: Prior to the first tender, the contracting party will obtain BAF's no-objection to the standard tender documents and standard contracts. The suitability of the shortlisted bidders must be documented by the Implementing Partners.

Open competitive bidding: NGOs implementing the selected sub-projects will inform the BAF as early as possible about their intention to implement open competitive bidding, and are required to provide the BAF with the tender documents prior to invitation to tender and the tender evaluation reports for no-objection. Tenders must be advertised in recognized national, regional and international newspapers as well as on the website of German Trade and Invest (GTAI). Prior to the conclusion of contracts, Implementing Partners are required to submit the negotiated draft contract for no-objection to the BAF. Exemptions from international bidding (i.e. national bidding) must be agreed by the BAF.

All contracts include an agreed declaration of undertaking, following KfW guidelines regarding rules for conflict of interest, corruption and fraud, sanctionable practices, and social and environmental responsibility, as well as safeguards regarding health and working safety.

Accounting and disbursements: Implementing Partners are required to have strong financial management and internal control systems. This includes planning and budgeting, internal control and accounting, as well as funds, cash flow and assets management. Implementing Partners must open a separate bank account for the project or dispose of a sub-account, or a separate and internally tracked and traceable bookkeeping entry in the financial management system. This ensures transparency regarding financial transactions and renders audits more efficient.

On a six-monthly basis, NGOs implementing the selected sub-projects are expected to submit funding requests in relation to the upcoming work, including: a budget and detailed activity plan for the upcoming work period; the initial or updated work plan; a progress report that references the work plan, the most recent detailed activity plan; and the budget for the previous work period (including amounts spent, any unspent funds and a comparison/reconciliation).

In addition, the BAF as well as the KfW staff carry out regular on-site checks of the proper physical implementation and bookkeeping. Internationally renowned and independent auditing companies will conduct the financial reviews.

The KfW will disburse to the BAF according to disbursement procedures agreed with the GCF. The BAF will disburse to sub-projects according to project progress. It is proposed that the GCF disburses funds directly to the BAF Foundation in two tranches (call by call) of 15 million EUR each. Each tranche will fund the sub-projects selected within one of the two calls. Funds will be invested according to BAF investments (these can be provided to the GCF for information). If it turns out during the evaluation of proposals of the first call that the absorption capacity of the proposed region WIO is not sufficient to absorb all of the GCF funds (contrary to current expectations).

G.4. Disclosure of funding proposal

No confidential information: The accredited entity confirms that the funding proposal, including its annexes, with the exception of annex 12 - AE fee request- may be disclosed in full by the GCF, as no information is being provided in confidence.

With confidential information: The accredited entity declares that the funding proposal, including its annexes, may not be disclosed in full by the GCF, as certain information is being provided in confidence. Accordingly, the accredited entity is providing to the Secretariat the following two copies of the funding proposal, including all annexes:

- full copy for internal use of the GCF in which the confidential portions are marked accordingly, together with an explanatory note regarding the said portions and the corresponding reason for confidentiality under the accredited entity's disclosure policy, and
- redacted copy for disclosure on the GCF website.

The funding proposal can only be processed upon receipt of the two copies above, if containing confidential information.

H. ANNEXES

H.1. Mandatory annexes

- Annex 1 NDA no-objection letter(s)
- Annex 2 Feasibility study - and a market study, if applicable
- Annex 3 Economic and/or financial analyses in spreadsheet format
- Annex 4 Detailed budget plan
- Annex 5 Implementation timetable including key project/programme milestones
- Annex 6 E&S document corresponding to the E&S category (A, B or C; or I1, I2 or I3):
[\(ESS disclosure form provided\)](#)
 - Environmental and Social Impact Assessment (ESIA) or
 - Environmental and Social Management Plan (ESMP) or
 - Environmental and Social Management System (ESMS)
 - Others (please specify – e.g. Resettlement Action Plan, Resettlement Policy Framework, Indigenous People’s Plan, Land Acquisition Plan, etc.)
- Annex 7 Summary of consultations and stakeholder engagement plan
- Annex 8 Gender assessment and project/programme-level action plan
- Annex 9 Legal due diligence (regulation, taxation and insurance)
- Annex 10 Procurement plan [\(template provided\)](#)
- Annex 11 Monitoring and evaluation plan [\(template provided\)](#)
- Annex 12 AE fee request [\(template provided\)](#)
- Annex 13 Co-financing commitment letter, if applicable [\(template provided\)](#)
- Annex 14 Term sheet including a detailed disbursement schedule and, if applicable, repayment schedule

H.2. Other annexes as applicable

- Annex 15 Evidence of internal approval [\(template provided\)](#)
- Annex 16 Map(s) indicating the location of proposed interventions
- Annex 17 Multi-country project/programme information [\(template provided\)](#)
- Annex 18 Appraisal, due diligence or evaluation report for proposals based on up-scaling or replicating a pilot project
- Annex 19 Procedures for controlling procurement by third parties or executing entities undertaking projects financed by the entity
- Annex 20 First level AML/CFT (KYC) assessment
- Annex 21 Operations manual (Operations and maintenance)
- Annex 22 BAF Grant Procedures Manual
- Annex 23 Draft Appraisal Matrix: Criteria for the evaluation of submitted sub-project proposals
- Annex 24a Logframe of a theoretical Sub-project Model
- Annex 24b Implementation and Disbursement Plan for Model Sub-Project

** Please note that a funding proposal will be considered complete only upon receipt of all the applicable supporting documents.*