



**COMMUNITIES
LIVELIHOODS
FISHERIES** Fisheries Governance
and Shared Growth
in Mozambique



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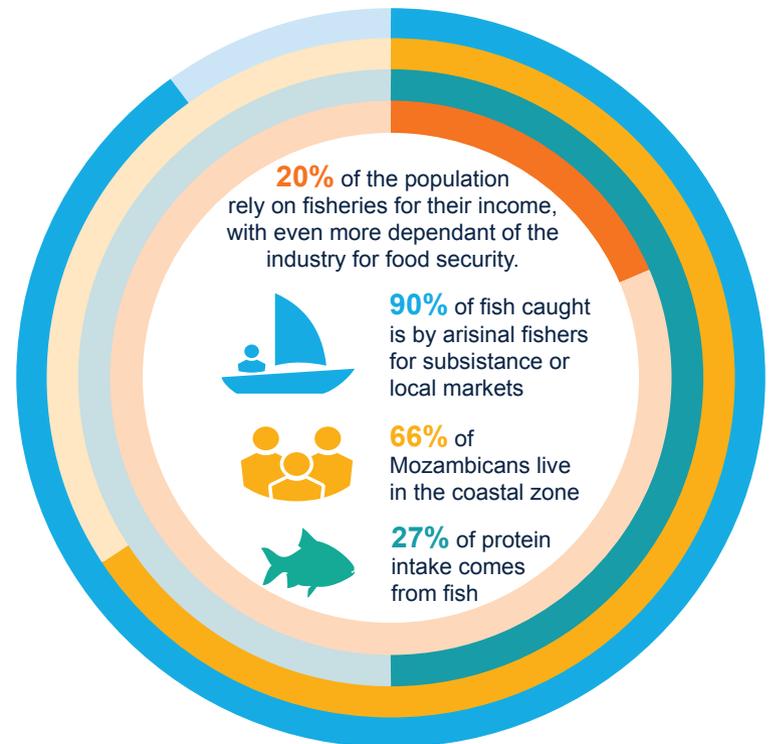
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Mozambique's Fisheries Sector

Mozambique's 2,700km coastline teems with rich marine life, supporting livelihoods for hundreds of remote coastal communities. Over 580 thousand km² of oceanic and inland waters and 200 miles of Exclusive Economic Zone (EEZ) shelter abundant and diversified fisheries, and despite a relatively low direct contribution to GDP (below 2 percent), their social value is considerable. The sector represents a major source of food and nutrition for the country's population and is a vital job market, providing an important source of cash income for many households. While men are primarily engaged in harvesting, Women, who make up almost half the labor force, are responsible for gleaning. Fishing is also an important income supplement, with people turning to fishing when other forms of food production and income generation fall short.

Mozambique's fisheries sector has great growth potential and the ability to boost economic output by providing significantly larger returns and contributing towards poverty alleviation. Production potential is estimated at well over 300,000 tons of fish, and an additional to 78,000 tons of aquaculture. Between 2009 and 2016, the country's 104 registered semi-industrial operators produced an average catch of 14,500 tons. Industrial fishing could also play a key role in economic growth, particularly in shrimp, tuna and lobster, with fishing efforts concentrated in the Sofala Bank and southern regions. Several industry associations represent the private sector in a well-established formal dialogue.

The Government's Fisheries Master Plan 2010-2019 focuses heavily on food security, poverty reduction, improving the balance of payments, aquaculture and strengthened human and institutional capacity. In 2015, a new Ministry of Sea, Inland Water and Fisheries (MIMAIP) was established to develop a strong blue economy and support the sustainable use of ocean and inland water resources through increased decentralization.



Challenges:

Fisheries in Mozambique is an under-performing sector. Overfishing and destructive fishing techniques are leading to declining fish catches and a degraded ecosystem, while the rapid and uncontrolled expansion of artisanal fisheries is threatening the sustainability of this precious natural resource.

Fishing communities are often small, isolated and poor. Although artisanal fishers produce 85% of the annual catch, only 10% of the sector's labor force employed in processing and marketing, indicating substantial post-harvest economic opportunities. Benefits from semi-industrial and industrial fishing perform well below potential, especially given the increasing interest from small and medium-sized enterprises (SMEs) for snapper, tuna, swordfish and other high-value species. Recent estimates show that economic rents from shrimp could be increased to approximately US\$30 million per year.

The business climate remains weak, with low private sector engagement available to finance sustainable fisheries and aquaculture. Although there is interest in expanding semi-industrial fisheries for high-value species, poor access to investment capital and credit, is deterring private-sector investment. Coupled with high interest rates and a weak network of micro-credit organizations, financing sustainable fisheries and aquaculture is challenging.

Compounding these challenges, is the ever-present risk of climate change, which, when coupled with weak coastal management and low resilience, continues to cause habitat loss and ecosystem degradation, jeopardizing the natural capital and livelihoods of thousands of vulnerable people, and the health and wealth of the entire country.

Looking Ahead:

Mozambique's fishing industry and the health of its ocean ecosystems will face new challenges in the coming decade, with revenues from the extractive industry, particularly offshore gas extraction, are expected to grow exponentially. While this has the potential to transform the country's economy, the fragile coastal environment will be tested by increasing industrial expansion and marine-based transport corridors.

Opportunities:

Mozambican fisheries sector has the potential to make significant contributions to food security, employment and inclusive growth, while ensuring ecosystem wellbeing for future generations.

Fisheries has the potential to provide an important source of cash revenue to service international debt, fund government activities and import food for domestic consumption, which in turn will contribute towards national food security and diversification of diets. This could all be achieved by strengthening governance and sustainable management, expanding financing and linking sustainable community fisheries to urban and markets, and industrial growth poles.

Capturing these opportunities requires thinking in holistic and integrated fashion, while also addressing issues at the regional level. Investing in sustainable coastal tourism could provide an alternative income source to artisanal fishing, and exploring food, health and cosmetic value-chains could diversify livelihood opportunities.

Sustainable Fishing in the South West Indian Ocean



Reduce resource degradation



Boost the economic contribution of fisheries



Increase fisheries related livelihoods

The South West Indian Ocean Fisheries Commission (SWIOFC), a regional collaboration between twelve member states (see Map 1), is working to reduce resource degradation and strengthen fisheries management to boost the regional economy and enhance local livelihoods. Healthy coastal and marine ecosystems in the SWIO are part of a larger common good, with each country relying on its neighbor to sustainably manage resources and maintain clean waters for the benefit of the region.

Facing similar challenges in regard to weak governance, low human and institutional capacity and fragile business environments, the SWIOFC countries are using a regional platform to share experiences in implementing sustainable and economically viable policies and practices and enhance their ability to participate in international negotiations.

The World Bank stepped up its fisheries-sector support in the SWIO in response to member countries' request to strengthen sustainable governance, the integration

SWIOFish1 works with local fishers, such as these fishermen in Mozambique's Angoche Basin (Nampula Province), to increase profits, improve food security and maintain healthy and productive marine ecosystems (World Bank, 2015)



of regional fisheries management, and enhance the potential socio-economic contribution of marine fisheries. The SWIOFish Program was developed as a series of projects aimed at increasing the economic, social, and environmental benefits of sustainably managed fisheries.

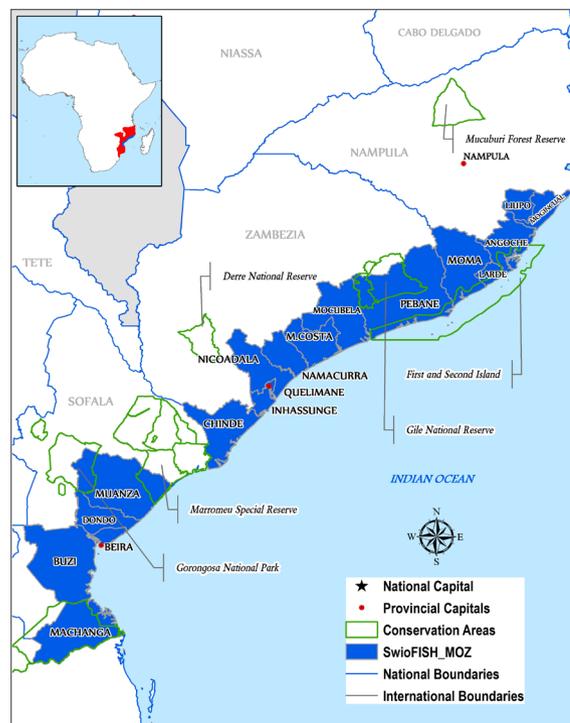
SWIOFish1 was the first project in the series to be approved (2015). It targets Comoros, Tanzania and Mozambique, and will be implemented until 2021:

Financing (USD Million)

Comoros	13.0
Mozambique	37.0
Tanzania	36.0
Regional	5.0
Total	91.0

SwioFish in Mozambique

SWIOFish1-MZ is led by Mozambique's Ministry of the Sea, Inland Waters and Fisheries (MIMAIP) and coordinated by a team within the Directorate of Studies, Planning and Infrastructure (DEPI), who are responsible for liaising with other provincial Directorates (DPMAIPs) and institutions (see map 2). The project receives strategic guidance from a Minister-chaired National Steering Committee which meets twice a year.



Box 1: The Ministry of the Sea, Inland Waters and Fisheries

In January 2015, MIMAIP was established to manage the sustainable utilization of the sea and inland waters, including fisheries exploration, ecosystem, waste and pollution management, research, as well as their respective regulation, planning, licensing and inspection. As such, MIMAIP is responsible for coordinating the blue economy agenda, collaborating with diverse sectors such as marine renewable energy development, tourism, maritime transport and other cross-sectoral agendas.

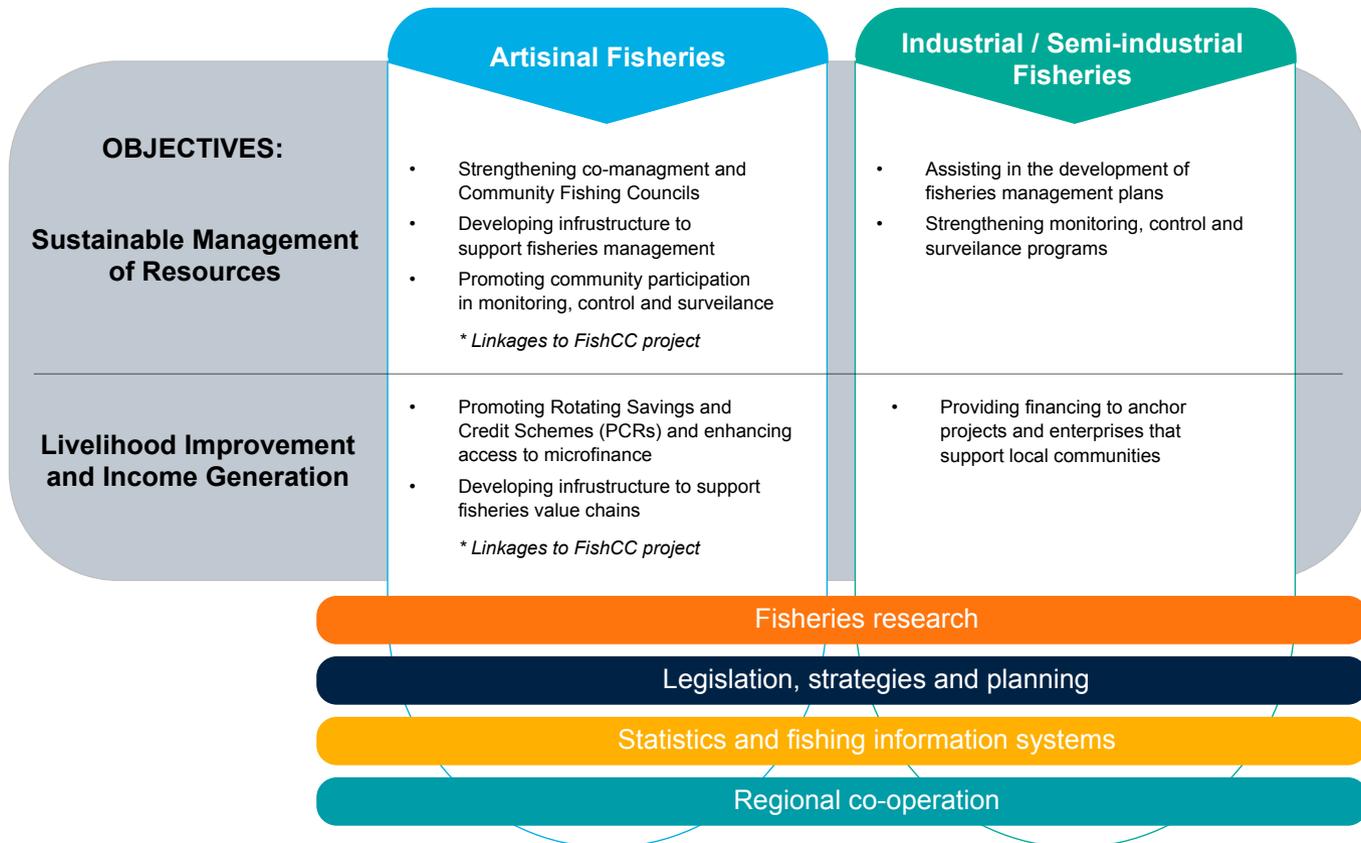
All institutions and agendas of MIMAIP are supported through SWIOFish1-MZ. The more closely engaged institutions include the Directorate of Studies, Planning and Infrastructure, the National Directorate of Operations, the National Directorate of Fisheries and Maritime Policy, the National Institute for the Development of Artisanal Fisheries and Aquaculture, the National Administration of Fisheries, the Fisheries Development Fund, the Institute for Fisheries Investigation, and the National Institute for Fisheries Inspection.

In line with the broader Government direction, MIMAIP and the fisheries sector are undergoing an important decentralization process to improve service delivery, effectively address local challenges and increase citizen engagement. This is supported by SWIOFish1 through policy and legislation reform and development, capacity building and financing. Since 2018, SWIOFish1-MZ has been transferring resources to engaged provinces to enhance local ownership of activities. DPMAIPs and districts are engaged in a structured training program for procurement, financial management and other administrative issues to ensure quality of implementation.

Box 2: Artisanal Fisheries and Climate Change Project

Contributing to SwioFish, is Mozambique's Artisanal Fisheries and Climate Change Program (FishCC). A joint project between the World Bank and RARE, FishCC is working to improve the livelihoods of poor fishing communities through rights-based fishery management and a social marketing campaign to trigger behavioral change.

SWIOfish1 Project Summary:



Enhancing Regional Cooperation

This component is led by the Indian Ocean Commission (IOC) with dedicated regional financing, while closely linking with the national-level implementation of SWIOFish1-MZ, particularly with regards to Monitoring, Control and Surveillance (MCS).

SWIOFish1-MZ is supporting artisanal, semi-industrial and industrial fisheries by assisting with the establishment of sustainable financing for MCS systems and updating the national action plan to combat Illegal, Unreported, and Unregulated (IUU) fishing. By supporting regional patrols, SWIOFish1-MZ is strengthening control over IUU fishing and building a stronger regional integration of policies, while also encouraging knowledge exchanges and capacity building within SWIO countries.

As such, the national and regional components of SWIOFish1 mutually reinforce each other to achieve incisive and sustainable results in the long term.

Human and institutional capacity development is a large part of the SWIOfish project. This includes a strong gender focus, as women often contribute to more than half the labor force along the value chain. (World Bank, 2015)



Box 3: Avoiding the *Tragedy of the Commons*

Tuna is a valuable resource for all SWIO countries. If the harvest of this migratory species isn't managed sustainably and coordinated at the regional level, stocks will rapidly be depleted, with severe implications for food security and the regional economy.

Close coordination between neighboring countries is key in reducing economic and resource competition, avoiding conflict and maintaining healthy marine ecosystems. SWIOFish1-MZ supports regional collaboration efforts and the implementation of agreed international standards and commitments.

To assist Mozambique in developing its sustainable tuna export market, SWIOFish1-MZ is financing the audits required for laboratories to maintain international accreditation and supporting capacity building within the National Fish Inspection Institute.



Increasing Economic Benefits of Priority Fisheries

SWIOFish1-MZ is assisting fishing communities in diversifying livelihoods to reduce pressure on priority fisheries and improve economic opportunities. Specifically, the Project supports public investments that are critical in establishing a profitable and sustainable private sector and improving the overall business climate, through the following activities:



Improving business and investment by undertaking analyses to identify and address market constraints and developing an action program to improve opportunities and investment.

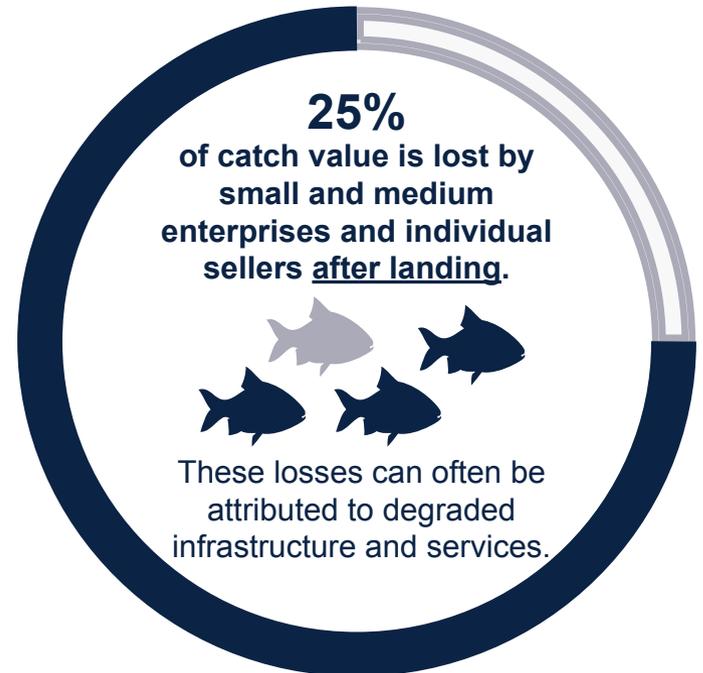


Increasing local benefits and promoting livelihood diversification by supporting entrepreneurs and women's groups in developing alternative business opportunities through access to financing, targeted education and advisory services. SWIOFish1-MZ also supports the Fisheries Development Plan in its strategic organization and the development of financing support to value chains – engaging small-scale fishers and preparing business plans for anchor enterprises. The activity is also promoting the creation of Rotating Savings and Credit Associations to improve financial habits and increase economic resilience.



Planning and investment in strategic infrastructure (landing sites, fish markets, and social facilities) by supporting community selected investments, with in-kind contributions from the community (labor, construction material). The activity also envisages supporting economic analysis and detailed feasibility studies for larger infrastructure projects (fishing ports, fleets,

chilling facilities) that could raise financing from public, private and/or international donor sources. SWIOFish1-MZ is also supporting the development of the Master Plan for Infrastructure supporting Fishing and Aquaculture, which is expected to be finalized in the beginning of 2019.





Box 3: Community co-management

SWIOfish1-MZ supports the design of co-management plans that enable local communities to agree upon fair and equitable management of local fisheries resources. Some of these instruments include:

- The National Co-Management Manual (detailing objectives, responsibilities, best practices and monitoring framework).
- The Regulation on Marine Fishing.
- The Standard Agreement on Local Fisheries Management between Provincial Directorates of Sea, Inland Waters and Fisheries and District Administrations.

SWIOFish1-MZ is also supporting discussions on fisheries co-management, with national and provincial conferences expected to take place in 2018.



Mozambique's unique biodiversity offers many unexplored opportunities for co-management tourism agreements, particularly around marine conservation areas. Tourist activities can provide alternative livelihoods and increased incomes within communities, as well as encourage conservation and strengthen the protection of the natural resources.

Improving Governance of Priority Fisheries

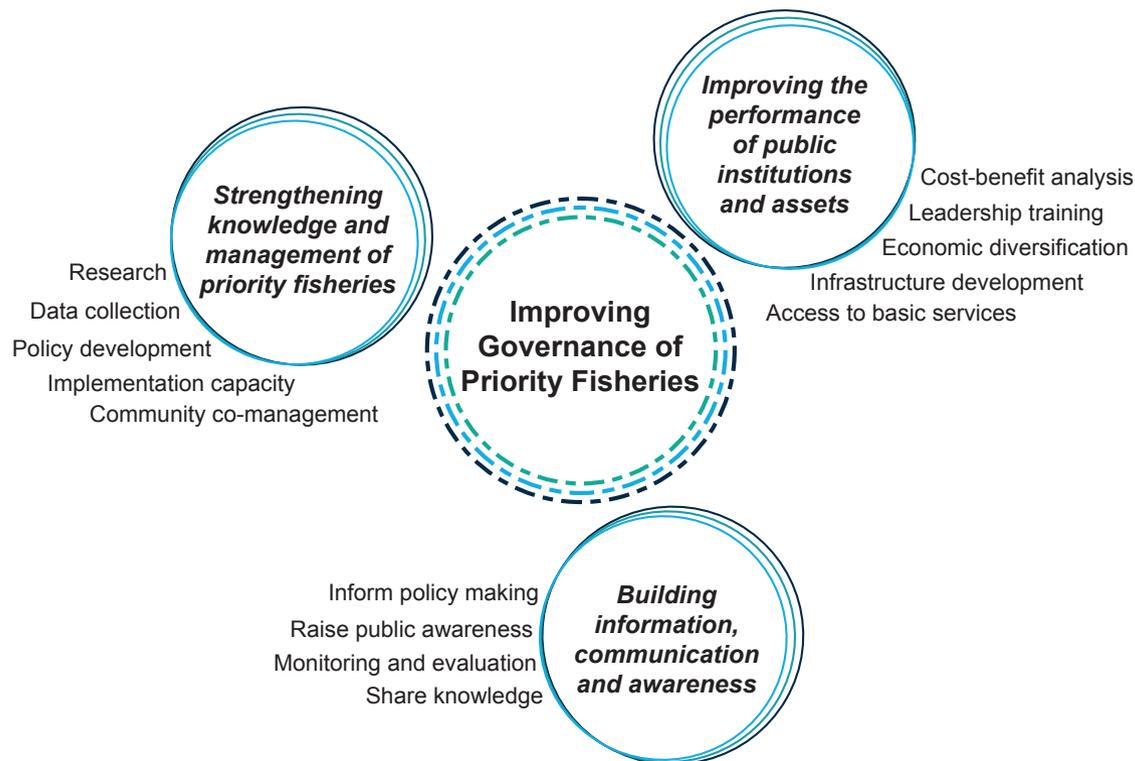
Sustainable fisheries management is the cornerstone of economic growth, livelihood development, food security and healthy ecosystems. The availability of comprehensive and reliable data is in turn crucial for the development of adequate and sustainable management policies and practices. SWIOFish1-MZ focuses on

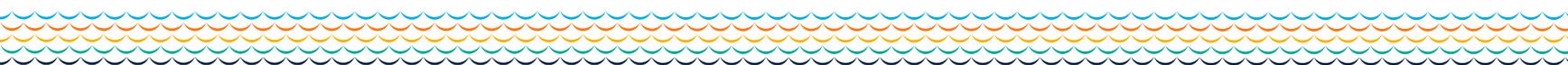
building human and institutional capacity within the Government to collect and analyze data and design and implement effective evidence-based policies that protect priority fish stocks. SWIOFish1 is implementing a series of closely-linked and mutually supportive activities, in collaboration with coastal communities:

Box 4: Priority Fisheries

Tuna, shallow water shrimp, deep-water crustaceans, demersal and small pelagic fisheries have been selected as priority fisheries within SWIOFish1-MZ.

Project activities are designed to protect these stocks, while also generating socio-economic benefits for the livelihoods that depend on them. Other species also benefit from improved sectoral policies and systems, as well as through more sustainable practices. Stock prioritization was based on social, economic, nutritional and environmental criteria, as well as their role in the larger ecosystem.





Box 5: Developing an Integrated Fisheries Information System

With support from SWIOFish1-MZ, Mozambique developed its new Fisheries Statistics Master Plan 2018-2021, to produce and disseminate information for monitoring and evaluation, meeting the needs of national and international users and aligning responsibilities with the new institutional structure of the Ministry. The Plan, which is expected to be officially adopted in the first quarter of 2018, envisages the development of a more integrated information system that can support MIMAIP and other users in evidence-based decision-making, including licensing, input controls, effort restrictions and other public policies.

To develop this system, SWIOFish1-MZ is supporting: (i)

capacity building of national staff in sample-based fisheries data collection following FAO guidelines; (ii) improving artisanal fisheries data collection and management through the rollout of the OPEN ARTFISH software application; (iii) conceptual and IT implementation of Mozambique's integrated fisheries information system database; and (iv) establishment of data collection for economics of the fisheries and management dashboards.

A pilot data collection exercise using OPEN ARTFISH commenced in December 2017 and will run for six months before being extended to other provinces. Significant advances in the implementation of Mozambique's integrated fisheries information system are expected in 2018, including functioning dashboards by 2019.

Box 6: Sea and Maritime Spatial Planning

In October 2017, the President of Mozambique launched the country's new Policy and Strategy of the Sea. In line with the Legal Regulations on the Use of the National Marine Space, the policy calls for better planning and improved utilization of the sea through the development of a National Marine Spatial Plan. Using an integrated and cross-sectoral approach, the Plan aims strengthen efficient and sustainable management of the marine environment by linking the marine-based with those working in the coastal zones.

SWIOFish1-MZ is supporting the development of Mozambique's

National Marine Spatial Plan by training national staff and financing individual and firm-based technical assistance and facilitating knowledge exchanges between SWIO countries and other areas involved in marine spatial planning initiatives. The Plan's development is expected to launch by mid-2018.

The Ministry of Land, Environment and Rural Development (MITADER) is also involved in the National Spatial Development Plan through the World Bank's Mozambique Forest Investment Project (MozFIP) Focusing on land territory, the MITADER teams are actively coordinating with all departments to establish a coherent spatial development policy across sectors.



Pulling in the day's catch in Angoche Basin, Nampula Province (World Bank, 2015)

FishCC is a pilot project working to improve community management of selected priority fisheries through the establishment of Territorial User Rights for Fisheries (TURFs). It is financed through a EUR2.975 million grant from the Nordic Development Fund, with the World Bank acting as trustee.

Led by MIMAIP and coordinated by the unit responsible for SWIOFish1-MZ, FishCC was launched in 2015 and will be under implementation until April 2019 in six sites along Mozambique's coast (see map X). Lessons learned through FishCC on co-management and sustainable development in fishing communities will be mainstreamed and scaled-up through SWIOFish1-MZ.

The NGO Rare acts a strategic technical assistance partner, providing training for national government staff and support with engaging selected communities. Rare's approach uses "Pride Campaigns", a social marketing method developed by the NGO to promote behavior change and induce communities to be better stewards of the resources they depend on.

TURFs ultimately enable benefits to spillover from fisheries to other nature-based sectors such as tourism, establishing a self-sustaining virtuous circle.

FishCC has three key components:



Improve community rights-based fishery management through the promotion of TURFs in representative habitats (e.g., reefs, mangrove forests, sea grass and coastal dunes), including smaller sanctuaries/no-take reserves within their boundaries. FishCC is assisting Community Fishing Councils organize and develop management plans, TURF delineation, and integration with provincial and district government. Data collected by community members helps to monitor fish stocks and inform management plans to ensure sustainability.



Improve livelihoods using recommendations from site-specific socio-economic analyses to promote alternative income generation. An ongoing study will identify the projects that communities are willing to implement through FishCC financing.



Integrate social marketing strategies into government projects to achieve behavioral change within communities. This includes a series of intensive trainings on the science of behavioral change and environment conservation within MIMAIP.

Box 7: Integrating initiatives for improved fisheries management and livelihoods in Machangulo

Located within the Ponta Do Ouro Partial Marine Reserve in the southern end of Maputo bay, Machangulo is the southernmost pilot site targeted by FishCC. There is limited social and physical infrastructure in place in Machangulo: villagers have limited access to potable water and educational and health services. Fishers in Machangulo have seen a downward trend in abundance and size of local catches in the past years, and are beginning to fear for their livelihoods. To revert this trend, FishCC is strengthening local Community Fishing Councils, and supporting the community in developing and implementing a management plan.

Despite being a relatively remote area with many existing challenges, Machangulo has many things in its favor. It is a beautiful site near the Maputo Special Reserve where tourism potential is large. A sizable part of the adjacent area is within a concession held by a company Machangulo S.A. There are a few luxury lodges that bring investments and opportunities to the area, and the site brings together many actors working towards its sustainable development, including two Conservation Areas, the Peace Parks Foundation, several Government entities, the Administrative Post and District Administration and IDEPA. Machangulo also benefits from at least two other projects funded by international development partners: the World Bank-funded MozBIO project and the IFAD-funded ProPesca project.

An exercise has been carried out to identify opportunities for investment in the area, including marketing of fish products, ice production to store catch, aquaculture and electrification for productive uses. Bringing together finance from the several initiatives and partners in the area in coordinated fashion will allow for greater impact in Machangulo. Technical viability assessments will be carried out in the beginning of 2018, with investments expected to occur in the same year.



Map 3: The FishCC project is currently working in seven locations along Mozambique's coastline.



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