Norad

FISH FOR DEVELOPMENT

Annual report 2019

Content

Acknowledgements

The report is primarily based on voluntary reporting from our cooperating partners. As such, not all projects supported by Norway for fisheries and aquaculture development have been included. Other important sources of information in this document are based on yearly reports, progress reports and reviews from partners and FAO data and reports.

Norwegian fisheries development cooperation has a long history, dating back to the 1960s. Since then, many different development projects linked to fisheries and aquaculture have been implemented. This report aims to consolidate and showcase the breadth of Norwegian fisheries cooperation in 2019.

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If you would like to print, please remember to do so in landscape orientation.

Introduction

PICTURE

Fisheries is an important part of Colombian livelihoods.
Photo: Conservation International.

Introduction

Norwegian management and research institutions have longstanding traditions in fisheries management, cooperation with other countries and industries, and technological innovation in the fisheries sector. Due to Norway's experience in resource and fisheries management, several developing countries have requested collaboration.

Over 59 million people are engaged in fishing and aquaculture worldwide, and between 660 and 820 million are entirely or partly reliant on fisheries. At the same time, millions of people living close to or below the extreme poverty line are dependent on fisheries, especially small-scale fisheries.

Fisheries is an international sector. Marine fish stocks are, to a large extent, shared between countries and international waters. UN treaties and several international agreements have been established in order to manage the oceans and their fish stocks. Additionally, codes of conduct for responsible fisheries, international plans of actions, and a number of regional agreements and protocols between countries have been established to manage marine fisheries internationally.

United Nations agencies, first and foremost The Food and Agriculture Organization of the United Nations (FAO), but also the International Labour Organization (ILO), International Maritime Organization (IMO), International Criminal Police Organization (INTERPOL), the United Nations Environment Programme (UNEP), United Nations Development Programme (UNDP), United Nations Office on Drugs and Crime (UNODC) – are all important actors in promoting good management practice and crime prevention in fisheries. Important multilateral banks, such as International Fund for Agricultural Development and the World Bank, provide funding and loans for developing the sector. Support given to developing countries through multilateral channels is therefore important.

The report begins with a brief introduction to the Fish for Development (FfD) programme, followed by a description of the financial support distributed in 2019. Next, the individual projects are presented, divided by country. Finally, concluding the report is a description of the support provided to regional and global projects in 2019.

The Fish for Development programme

In 2015, the Norwegian government launched the FfD programme, and in the second half of 2016, the FfD Secretariat was established in Norad.

The programme is responsible for coordinating all development projects supported by Norway in the field of fisheries and aquaculture so that Norwegian competence and expertise can be of greater benefit to developing countries.

The UN Sustainable Development Goal (SDG) 14—'Conserve and use the oceans, seas and marine resources for sustainable development'—is a key goal of FfD. Many of the other Sustainable Development Goals, especially SDG 1 ('End poverty in all its forms everywhere') and 2 ('End hunger, achieve food security and improved nutrition and promote sustainable agriculture'), also underpin FfD.

FfD focuses on the following main components (Fig. 1):

1. Resource management, legislation and the combating of illegal fishing and fisheries-related crime
2. Research and education, including the EAF-Nansen programme
3. Private sector development, including aquaculture

Through FfD, the Norwegian government wants to utilise Norway's comparative advantage to respond to the request from developing countries for advice and capacity-building in sustainable fisheries and aquaculture. The Inter-Ministerial Advisory Group consists of the Ministry of Foreign Affairs (MFA) and the Ministry of Trade, Industry and Fisheries (MoTIF) and oversees the work of FfD (Fig. 1); this group provides advice to the programme at the strategic level. MFA makes the strategic decisions concerning FfD, and has established the frameworks and guidelines for the programme. When developing and operationalising a country programme, FfD draws upon the expertise and experience of Norwegian universities and institutions in fisheries management in its collaborations with institutions in FfD partner countries.

The FfD Programme's

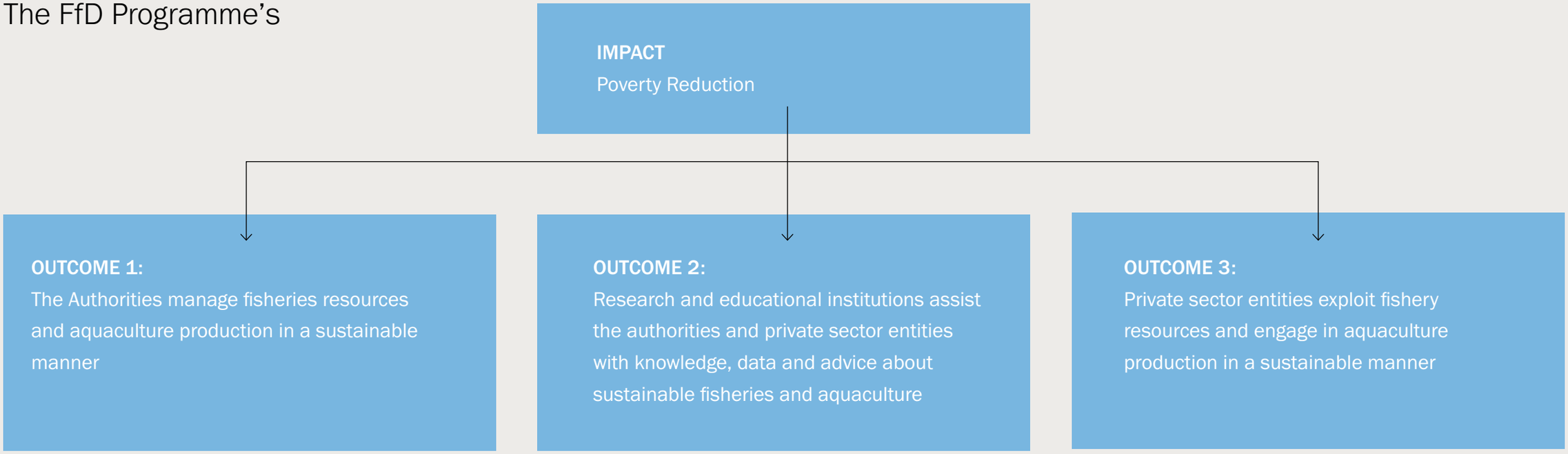


Figure 1. **The fisheries and aquaculture sector directly promotes food security, employment, export and tax revenues. In order to promote food security or nutritional goals and to end poverty, FfD will support partner countries in their efforts to ensure sustainable fisheries and aquaculture and to increase the sustainable production of fish and seafood. FfD has been organised into these main components.**

Artisinal and small-scale fisheries often employ women and provide important income to households in many parts of Africa. Photo: Bodil Maal.

Theory of change

Many developing countries have considerable potential in fisheries and aquaculture for better nutrition, business development and economic growth, but non-sustainable fisheries, inequitable resource distribution, climate change and pollution are undermining living conditions and food security. Overfishing results in depletion of the fish stocks and changes in the ecosystems. Weak governance, corruption and insufficient competence and capacity in the resource management area stand in the way of improving the situation in many developing countries. There are often insufficient data and a lack of research-based knowledge, which are necessary for sustainable, ecosystem-based management. This also applies to aquaculture, in addition to challenges involving health, the environment, technology and competence. Adapted policy and regulations, suitable institutions and good management practices are crucial in order to ensure the framework conditions that are needed to achieve the necessary changes. There is a need for better framework conditions and more investment in order to ensure increased sustainable aquaculture production.

Fish is food. Among other things, the fisheries sector contributes to food security, employment, export revenue and taxes. In order to help promote food security and the nutritional goal and to eradicate poverty, FfD will support partner countries in their efforts to ensure sustainable fisheries and ecosystems and to increase the sustainable production of fish and seafood through both increased knowledge and better framework conditions. A sound, knowledge-based management is the key to ensuring that we will also be able to eat healthy, nutritious seafood in the future. A knowledge of the size of the fish stocks, where they are located and what environment they inhabit enables us to share the resources to be harvested at a sustainable rate. It is important to monitor and conduct research on the fish stocks and likewise to ensure that the countries have good fishery statistics in order to know how many fish can be caught. In addition, we acquire knowledge about the ecosystem that the fish inhabit and an understanding of the interactions in that ecosystem. Increased knowledge also helps promote a greater awareness about food security in the population.

In order for the fisheries and aquaculture to be able to promote economic development, they must be based on sustainable management by the authorities and sustainable resource exploitation by private-sector entities. Research and educational institutions must

furnish both public and private-sector entities with knowledge, data and analyses. FfD should assist local institutions in developing countries with data from research cruises and analyses from fish stock assessments, which in turn will provide the basis for improved management. Support to education and competence building, at both the university, college and vocational school levels, should raise the level in the educational sector, in public administration and in the private sector. There is generally a high correlation between competence building and improved outputs and/or production.

Good, effective legislation is also necessary in order to build up a modern, sustainable fisheries and aquaculture industry that can attract capital. The authorities must ensure that there are good framework conditions for the industry, such as infrastructure, production regulations, allocation of licences, etc. Illegal, unregistered and unreported fishing (IUU) is a major problem, drains the countries of capital and revenue and thus lowers living conditions. Reduced illegal fishing helps promote more sustainable fisheries, a better economy for those who are operating legally and improved profitability and food security, because the value chain goes through formal channels. Civil society organizations have a role to play in helping promote openness and transparent processes. FfD should help develop better management plans and legislation, as well as other mechanisms for reducing IUU.

In order to achieve a fair and sustainable distribution of fish stock, close cooperation among countries that harvest the same resources is absolutely necessary, but often difficult to achieve.

Assuming that there is the will and ability to implement political decisions, improved governance, relevant policies and better framework conditions for the sector will facilitate investment, increase production and improve access to local and international markets. This in turn will help promote better food security and job creation.
FfD is based on an assumption that sustainable management and exploitation of aquatic resources needs structures that include the public and private sectors, civil society and cross-sectoral approaches. For example, the development of fisheries management and the aquaculture industry in Norway was based on a close collaboration among research, the private sector and public administration. Our experiences show that when these entities cooperate in a complementary and constructive way, it can help create a win-win situation.

The private sector and private-sector entities contribute to economic growth and employment, which in turn generate taxes and export revenue. Civil society organizations play various roles and operate at various levels.

Read more about the Fish for Development programme (including its Theory of Change) here, and past Norwegian development assistance for fisheries and aquaculture here.

2019 in brief

The FfD programme made significant progress in 2019. Bilateral agreements were signed with Ghana and Myanmar, two of the programme's three main partner countries.

FfD is part of Norad's Knowledge Bank, in which Norwegian institutions participate to strengthen institutional partnerships and sectors in countries through knowledge-sharing and competence-building. Some important Norwegian institutions in this regard are the Norwegian Institute of Marine Research, the Fishery Directorate, the Norwegian Veterinary Institute, UIT–The Arctic University of Norway and the Norwegian University of Life Sciences (NMBU).

FfD is improving partnerships with multilateral organisations to support the programme's three main pillars (see figure above). Since 2018, Norway has supported the aquaculture research programme of WorldFish, and FfD is in the process of expanding this cooperation in Africa. FfD has engaged in extensive collaboration with FAO, both through the Nansen programme and other projects that are linked to sustainable fisheries management and aquaculture. FfD is also following up on the support it has given to the World Bank's multi-donor trust fund PROBLUE: this should facilitate improved framework conditions for the private and public sectors, and across the entire value chain.

In November, the first 'Nansen forum' in this phase of the programme was successfully organised by FAO in Benin. Participants were from 29 countries in Africa and Asia, as well as regional fisheries management organisations. The forum was entitled 'The Sustainability of Fisheries in the Context of EAF-Nansen'. Furthermore, through the Nansen programme, the research vessel Dr. Fridtjof Nansen (DFN) completed 299 survey days in 2019, in which a total of 229 scientists from 20 countries participated and received on-the-job training.

Efforts to combat illegal, unreported and unregulated (IUU) fishing and fisheries-related crime continued to be an important priority.

Regarding IUU fishing, the collaboration with Trygg Mat Tracking (TMT) and the United Nations Office on Drugs and Crime (UNODC) continued, and other projects were developed. For example, UNODC developed a resource guide entitled 'Rotten Fish', focused on ways to fight corruption in the fisheries sector, while Norad continued its support of FAO in its efforts to assist developing countries in implementing the Agreement on Port State Measures (PSMA).

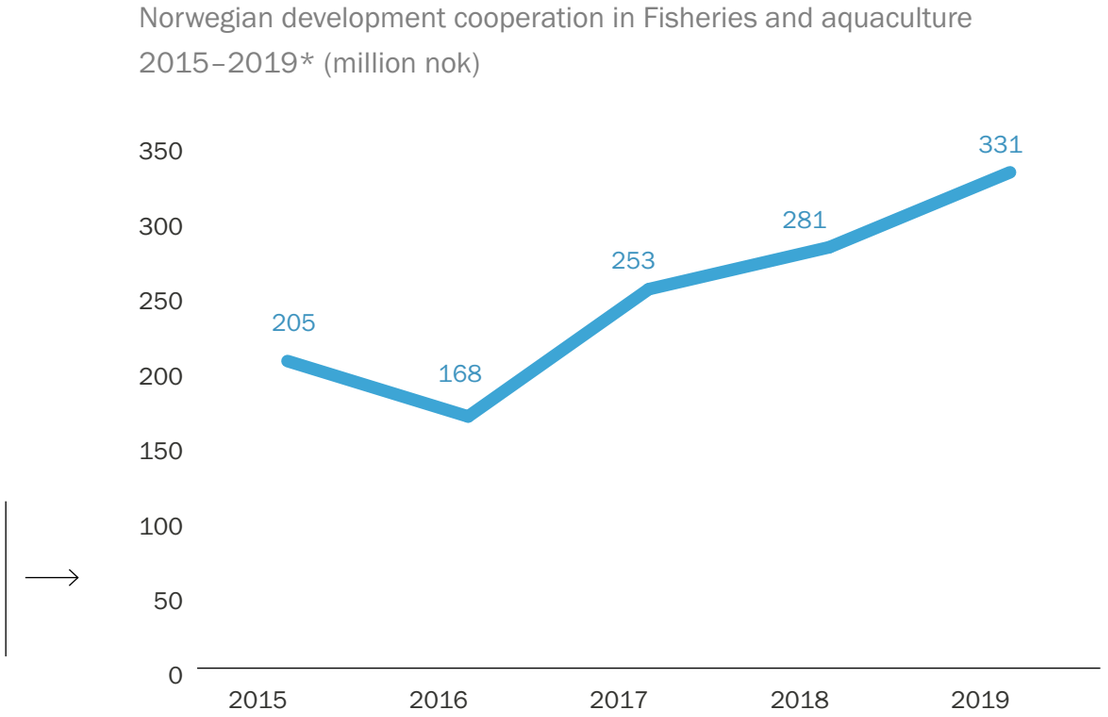
Norad has also continued its long-term support of FAO in implementing the guidelines for sustainable small-scale fisheries (SSF) in developing countries. This collaboration with FAO was strengthened in 2019 as part of "Norway's" action plan on sustainable food systems, 'Food, People and the Environment', which was launched in 2019.

In October, Norad, the Norwegian Ministry of Foreign Affairs and the Alliance of Small Island States (AOSIS) organised the seminar ‘Ocean Management: Opportunities, Challenges and Experiences’ as part of the Our Ocean conference in Oslo. The objective was to share experiences, opportunities and challenges with regards to ocean management between and for Small Island Development States (SIDS): Norway’s contribution centred on their experience with integrated ocean management. Ninety-eight participants from 18 SIDS were represented, as well as regional, multilateral and Norwegian institutions.

2019 in numbers

In 2019, total Norwegian Development Aid was NOK 37,7 billion (more statistics available here). Of this, the total Norwegian support for fisheries and aquaculture development cooperation reached NOK 331 million. There has been a stable annual increase in development aid since the FfD programme was launched in 2016 (Fig. 2).

Figure 2. Total Norwegian bilateral (including multi-bilateral and triangular) development aid to DAC sector 313–Fisheries over the past five years. These numbers only include projects that fulfil the OECD’s criteria OECD for DAC sector–313; as such, development assistance where fisheries development is not the primary goal, but may be a secondary goal—e.g. the support Norway has provided to the Global Environment Facility (GEF) and certain training and educational projects—have been omitted.



* Bilateral (including multi-bilateral) development aid to DAC-sector 313 – Fisheries.

PARTNERS

In 2019, most of the Norwegian support was disbursed to multilateral institutions (70%), followed by Norwegian NGOs (17%), and governments and public sectors in developing countries (2%) (Fig. 3). The Norwegian public sector was also given funding for institutional cooperation projects (5%), and local and international civil society organisations also received support (4%). Private-sector and public–private partnerships accounted for 2% of the support. The different partnerships highlight the diversity of the cooperation models in Norway's fisheries and aquaculture development assistance and in the FfD programme.

Fisheries and aquaculture developement by type of partnership agreement, 2019.

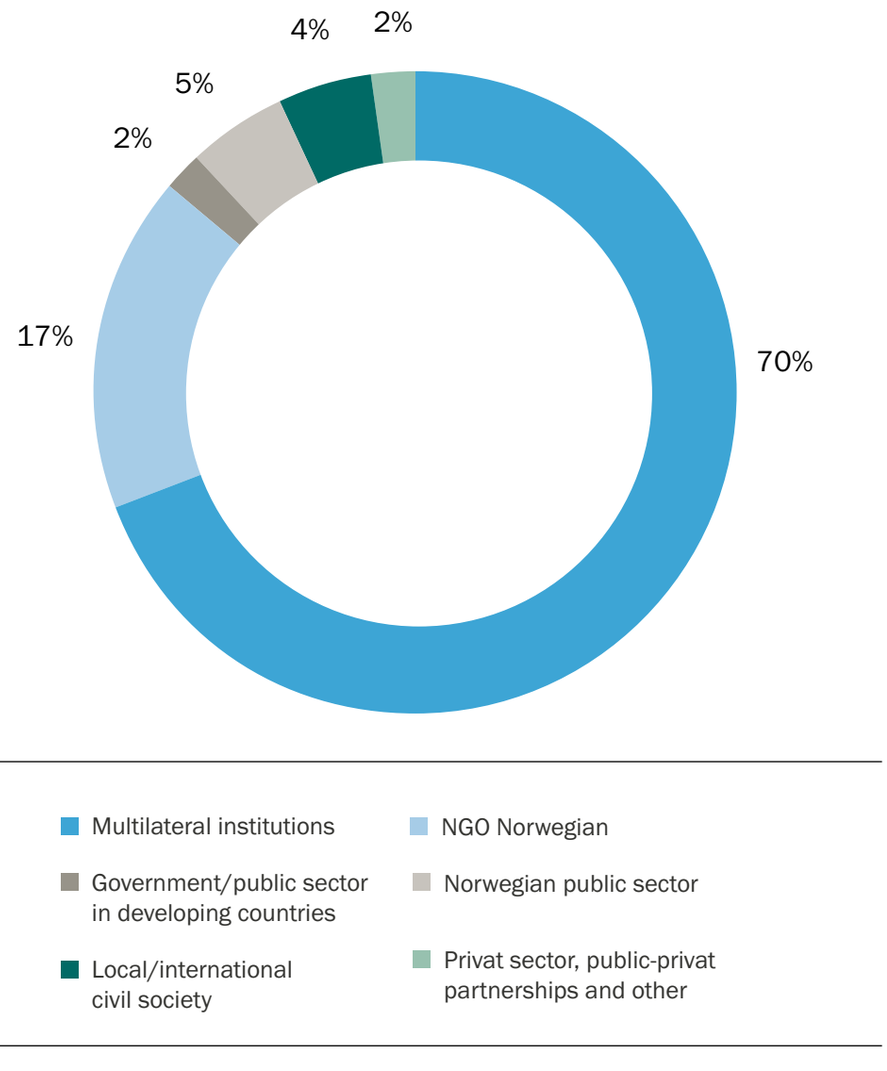


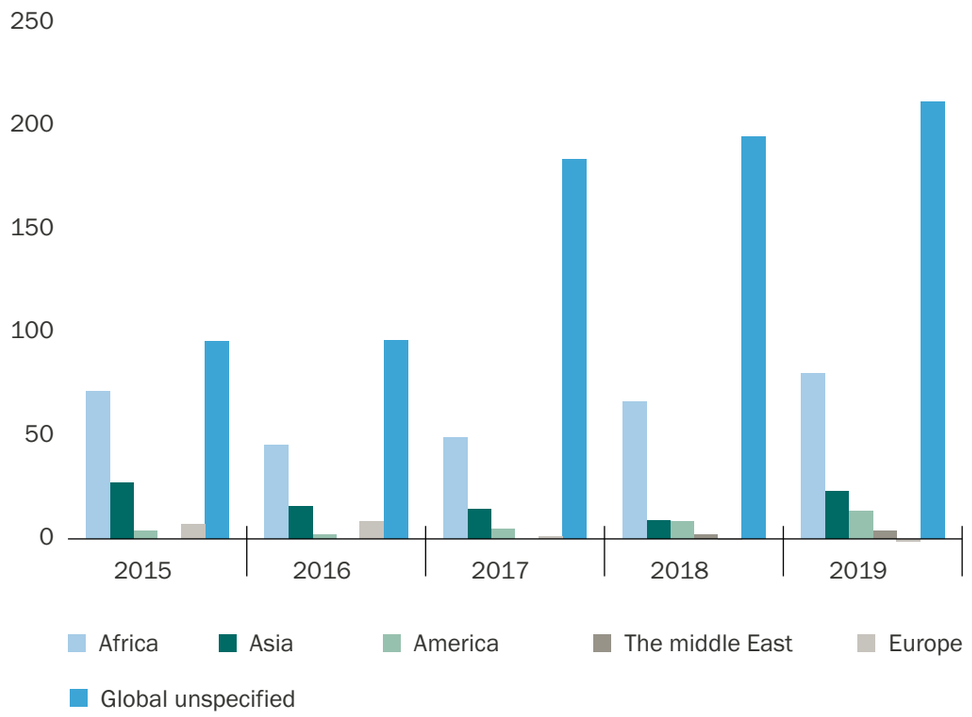
Figure 3. Total Norwegian bilateral (including multi-bilateral and triangular) development aid to DAC sector 313–Fisheries over the past five years, by type of partnership agreement.

REGIONS

Relative to other regions, support provided to Africa has increased over the past four years (Fig. 4). However, 'Global unspecified', which includes the Nansen programme, has received the great majority of Norwegian support. This increase in support coincides with the new phase of the Nansen programme.

Figure 4. Norwegian development aid to DAC sector 313 – Fisheries, divided into regions.

Norwegian development cooperation in Fisheries and aquaculture by region* (million nok)



* Bilateral (including multi-bilateral) development aid to DAC-sector 313 – Fisheries.

COUNTRIES SUPPORTED

Mozambique has received the most Norwegian development support in fisheries and aquaculture over the past five years (Table 1). This support is based on a long history of fisheries cooperation between the two countries. Sudan has received the second largest amount of funding over the past five years, primarily through a project that includes the United Nations Industrial Development Organization (UNIDO) and Norway's Institute of Marine Research (IMR). Sudan is followed by Madagascar and Colombia, for which the funding is distributed through NGOs. Sri Lanka has also received Norwegian support, through an important cooperation between the Norwegian Ministry of Fisheries, IMR and governmental partners in Sri Lanka. More information on these projects is provided later in this report.

Table 1. The 20 countries that have received the most fisheries development support from Norway over the past five years.

Country-specific development cooperation in fisheries and aquaculture	2015	2016	2017	2018	2019	TOTAL 2015–2019
Mozambique	42.2	16.0	21.2	32.7	32.2	144.3
Sudan	11.0	10.0	11.0	4.0	16.0	52.0
Madagascar	6.1	5.3	4.7	4.7	4.7	25.4
Colombia			1.3	8.4	13.7	23.4
Timor-Leste	6.9	8.3	3.4		2.5	21.1
Myanmar	4.2		3.0	0.8	10.1	18.2
Sri Lanka	0.9	1.0	5.0	5.4	5.2	17.6

Table 1. The 20 countries that have received the most fisheries development support from Norway over the past five years.

Country-specific development cooperation in fisheries and aquaculture	2015	2016	2017	2018	2019	TOTAL 2015–2019
Zambia				6.6	7.3	13.8
Indonesia	8.0	1.3	0.3		2.0	11.7
Kenya	2.0	0.2	0.3	2.6	3.6	8.7
Cuba	2.9	2.0	3.7			8.6
Viet Nam	4.6	1.7	-0.1	1.3	0.5	8.2
Somalia		4.1	0.9	1.7	1.3	8.0
Ukraine	4.1	4.1	1.0	-0.4	-1.0	7.8
Ghana	0.2	0.8	2.2	0.2	4.5	7.8
China	0.8	1.5	1.5	1.3	2.0	7.1
Angola		2.4	1.8	2.3	0.2	6.7
Lebanon				2.0	3.8	5.8
Morocco					4.4	4.4
Tanzania				3.5		3.5

Cooperating countries

PICTURE

Harvesting of bivalves is important for women in Mangan, Colombia. Photo: Conservation International.

Colombia

PICTURE

Coastal communities are reliant on fisheries in many parts of Colombia.
Photo: Marte Lid, Norad.

Colombia

Title Preparation of Bilateral Cooperation Between Norway and Colombia in Fisheries and Aquaculture
Recipient Institute for Marine Research, Bergen, Norway
Partners National Authority of Fisheries and Aquaculture in Colombia (AUNAP)
Project period 2017–2020
Geographic location Colombia
Total budget NOK 2 906 200
2019 budget NOK 576 665

OBJECTIVE(S)

To develop a programme document and sign a cooperation agreement between Columbia and Norway, with subsequent implementation of a Fish for Development programme in Colombia.

MAIN ACHIEVEMENTS

Contact established and technical discussions initiated between Norwegian and Colombian experts and institutions.

MAIN CHALLENGES & LESSONS LEARNT

Fruitful exchange visits have been undertaken, but AUNAP and its partners in Colombia have needed substantial time to clarify their priorities for the cooperation and have not yet been able to complete the project document.

Ghana

PICTURE

Fishermen cleaning fishing nets at the Pram Pram landing site in Ghana.
Photo: Ida Aronsen, Norad.

Ghana

Title Fish for Development Institutional Cooperation Programme in Ghana*
Recipient Ministry of Fisheries and Aquaculture Development in Ghana, Fisheries Commission in Ghana
Partners Institute of Marine Research, Norwegian Directorate of Fisheries, Norwegian Veterinary Institute
Project period June 2019–December 2024
Geographic location Ghana
Total budget NOK 50 million
2019 budget NOK 3 942 970

* The planning phase for establishing the institutional cooperation programme is included in the description below, covering the period from September 2017 to May 2019.

OBJECTIVE(S)

Overfishing is a major concern in Ghana, as the rapid reduction in fish stocks is negatively impacting local communities. Illegal fishing is widespread, and law enforcement is relatively weak. In aquaculture, there is little regulation on zonation and environment, and there have been recurrent and large disease outbreaks in the aquaculture industry in Lake Volta. The capacity of the authorities to investigate and deal with diseases is limited.

Norway received a formal request from Ghana to establish an institutional collaboration programme under the Fish for Development programme in July 2018. A grant agreement between the Norwegian Ministry of Foreign Affairs and the Ministry of Finance in Ghana was signed on 1 June 2019 in the presence of the Norwegian Prime Minister and the President of Ghana. The objective of the cooperation is to enhance the Fisheries Commission's capacity for sustainable management of marine fisheries resources and aquaculture production.

The programme is to be implemented by December 2024, and consists of a total grant of NOK 50 million.

MAIN ACHIEVEMENTS

Under the patronage of the Minister for Fisheries and Aquaculture Development, Elizabeth Naa Afoley Quaye, the Fish for Development programme in Ghana was formally launched by the Fisheries Commission and the Norwegian Embassy in Accra at a ceremony held in Pram Pram in September 2019. Representatives from

Ghana

the government, international development partners, civil society and academia attended and were informed about the programme; key challenges in the fisheries and aquaculture sector were also discussed, to motivate joint action and commitment to reforms.

IUU fishing is a major challenge in Ghana. There is a relatively low level of compliance with regulatory requirements and improved fisheries control is needed to reverse the negative trend in stocks and fisheries. A first step towards improved monitoring, control and enforcement of fisheries regulations was initiated. One standard tool is a vessel monitoring system (VMS), a satellite-based monitoring system that provides regular data to the fisheries authorities on the location, course and speed of vessels. A VMS system is in place for segments of the fleet in Ghana, but the data is not collected, analysed and used optimally. The potential for increased and more effective application of VMS and Automatic Identification Systems (AIS) in Ghana was assessed by experts from the Norwegian Directorate of Fisheries and the VMS unit of the Fisheries Commission. A range of stakeholders were consulted, including the Fisheries Scientific Survey Division, Eastern Naval Command, Ghana Harbour Authority, National Fisheries Association of Ghana, Western Naval Command, Marine Police and Fisheries office in Takoradi. The assessment identified the potential for expanded and combined use of VMS, AIS and reports from observers, vessels and the sampling of landings. The collection of data would benefit from increased accuracy and systematisation for improved continuous monitoring of the size of fish catches.

Overexploitation of fisheries resources is severely challenging the fish stocks in Ghana. For example, to preserve the livelihoods and food security of small-scale fishing communities along the coast, trawlers must avoid catching small pelagic fish. Currently, however, fisheries regulation only includes regulation regarding mesh size with regards to fishing gear, and the Fisheries Commission expressed concern that this is insufficient to control the size selectivity of catches. One way to reduce size selectivity and overall fishing pressure is to introduce more specific regulations concerning trawl gear. The capacity of the Fisheries Commission to conduct inspections of trawl gear was improved through joint inspections of trawl gear on six trawling vessels in Tema. The inspection team consisted of local gear inspectors and experts from the Norwegian Fisheries Directorate and the Norwegian Institute of Marine Research. In addition, the team reviewed the existing legal framework. Recommendations for specific regulations on trawl gear were consequently identified and discussed, including needs for further capacity development.

Most of Ghana's aquaculture production comes from cage culture of tilapia in Lake Volta. National aquaculture planning is a tool for improving sustainable farming, given that unplanned aquaculture development may have negative environmental, economic and social impacts. To strengthen the regulatory framework for the protection of the aquatic environment, a review and update of the Ghana National Aquaculture Development Plan (from 2012) was initiated via a workshop with experts from the Norwegian Veterinary Institute and the Fisheries Commission. The Lake Volta Zonation Plan related to farmed fish health was also assessed,

Ghana

including defined and planned zones suitable for different activities or a mix of activities.

Sustainable aquaculture management also requires efficient fish health management, with established systems for disease diagnostics and prevention. An audit of four public veterinary laboratories located in Takoradi, Kumasi, Koforidua and Accra were conducted. A team of experts from the Fisheries Commission, University of Ghana and Norwegian Veterinary Institute conducted the audit. The available capacity, competence and resources of each laboratory concerning fish health management were assessed. The audit identified needs for more technical and specialised staff, capacity development, better management and quality assurance systems, and investment in some basic equipment. The audit further recommended a focus on the laboratory in Koforidua in the Fish for Development programme, due in part to its proximity to Lake Volta and the aquaculture production facilities.

MAIN CHALLENGES & LESSONS LEARNT

Planning and designing an institutional collaboration programme is an intricate process, due to the high number of stakeholders involved and the complexity of the involved topics. While ensuring commitment and ownership at high management and political levels is important, this took more time than expected.
The programme is at an early stage of establishment, and was operational for only the last six months of 2019. An effective management structure and communication practice between the Norwegian and Ghanaian counterparts has not yet been established. Moreover, many of the human resources appointed to the programme in the Fisheries Commission struggle with competing priorities—this has taken more time and resources than planned. Further strengthening ownership of and commitment to the cooperation at a high level will be prioritised moving forwards, including ensuring that key staff can set aside time and resources to engage in the programme. The presence of and follow-up by the Norwegian Embassy in Accra has been important for driving progress.

Due to the challenges in finalising the programme management structure of the cooperation, the Institutional Cooperation Agreement between the Norwegian Institute of Marine Research and the Fisheries Commission has not yet been finalised. The agreement is important to define the obligations and duties of the parties. In addition, progress in some technical areas has been slower than expected due to a lack of understanding of roles and responsibilities, resulting in delays in key deliverables.

Myanmar

PICTURE

A fishing vessel in Haing River Insein Township.
Photo: Jens-Otto Krakstad, IMR.

Myanmar

Title Cooperation Between Myanmar and Norway in the Fisheries and Aquaculture Sector (MYANOR-FISH)
Recipient Institute of Marine Research (IMR), Norway, Department of Fisheries (DoF), Myanmar
Partners Directorate of Fisheries, Norway
Project period 2019–2024
Geographic location Myanmar, National and Regional, Thaninary region, Myeik area
Total budget NOK 70 million
2019 budget NOK 6 805 059

OBJECTIVE(S)

Myanmar is one of the world's largest seafood producers, but there is considerable uncertainty regarding the state of its marine resources and existing resources and catch data. Recent surveys have shown a significant reduction in important marine species, which may threaten income and food security. More knowledge and institutional capacity-building for sustainable management of these resources could contribute significantly to addressing these challenges.
The main goal is to contribute to the environmentally and socially sustainable economic growth of the marine fisheries and aquaculture sector in Myanmar by enhancing the DoF capacity for sustainable management of marine fisheries resources and marine aquaculture production. Key elements of the project are to establish a digital fisheries information system (e.g. fishing licences, vessels register etc.); train the DoF staff; support the development of environmentally sustainable marine aquaculture production; and improve governance and legislation related to marine fisheries and aquaculture.

MAIN ACHIEVEMENTS

Work towards the establishment of a digital licence registry for the marine offshore fishing fleet in Myanmar has commenced, building on the work already carried out by the DoF and a software company, to digitalise the register for fishing vessels and licences.

A preliminary environmental mapping and assessment of areas suited for marine aquaculture has been conducted and a decision was made to monitor environmental parameters in the Myeik area that will form the basis for modelling suitable areas for marine aquaculture. Myeik University and relevant stakeholders are involved in the sampling of additional plankton parameters.

Myanmar

Networking between DoF and seven universities in Myanmar has been facilitated, exploring the expertise, courses and training necessary to increase the capacity of DoF staff. A Terms of Reference (ToR) for a formalised network has been drafted.

English and computer skills among 25 DoF staff have been improved through English courses and basic computer training, including working with real fisheries data. One staff member from DoF started a two-year master's programme in International Fisheries Management in the Norwegian College of Fishery Science at UIT–The Arctic University Norway in Tromsø. Five new applications to this master's programme have been submitted by eligible candidates after additional and customised English training.

A seminar on ''Realistic Options in a Situation with Overfishing' examined challenges and recommendations regarding improving fisheries management in Myanmar. The 2018 survey results from the Dr. Fridtjof Nansen research vessel were discussed, highlighting the necessity of making changes to the management regime; in addition, a draft of the Myanmar Marine Fisheries Law was reviewed, and the Directorate of Fisheries in Norway proposed several modifications to the law. Based on the outcome of the seminar, a list of recommendations for improved management of the Myanmar marine fisheries—related to licensing, technical regulations, closed seasons/areas, control and enforcement, and science—was submitted.

A seminar on international law provided an overview of and background information on fisheries negotiations at both the bilateral and multilateral level. The discussion that followed highlighted the need to focus on the Indian Ocean Tuna Commission (IOTC) and the MoU with Thailand.

MAIN CHALLENGES & LESSONS LEARNT

The fisheries sector is known to be vulnerable to various types of corruption. With this in mind, the project is centred around the idea that the development of the digital system will also help reduce corruption related to e.g. fishing licences and catch data. Clear and transparent rules for the granting of licences must therefore be communicated to stakeholders, and a public licence register will increase transparency. This has been included in the project's recommendations for amendments to the draft of the new fisheries law.

Moreover, the project is cooperating with UNODC's country programme on anti-corruption in the fisheries sector.

The planned output related to environmental mapping and mapping areas suitable for aquaculture is premised on the understanding that sustainable aquaculture requires knowledge of how aquaculture interacts with the surrounding ecosystem, if these impacts are to be minimised. It is therefore important to include relevant stakeholders in the aquaculture industry, to identify geographical areas where the fish farms will do the least harm to the environment, and to develop good governance practices to establish sustainable management of this growing industry.

The long-term advisor from IMR has been present in Myanmar since the start of the project and has played a key role in getting the programme established according to plan.

Limited Internet capacity is an obstacle to the digitalisation of the Fisheries Information System; an upgrade and commitment from a local partner is therefore necessary.

China

PICTURE

Aquaculture production of multiple species (such as bivalves, sea cucumbers, fish and seaweed) is done on a large scale in Sanggou Bay in China. Photo: Gabriella Kossmann, Norad.

China

Title Environment and Aquaculture Governance (EAG) in China: Phase III
Recipient Norwegian Institute of Marine Research (IMR)
Partners Yellow Sea Fisheries Research Institute (YSFRI)
Project period 2019–2022
Geographic location People's Republic of China
Total budget NOK 18 million
2019 budget NOK 2 029 190

OBJECTIVE(S)

The project's goal is to advance the scientific and applied knowledge base in order to develop aquaculture management principles and tools supporting sustainable development of China's aquaculture industries.

MAIN ACHIEVEMENTS

In 2019, the collaboration was expanded to include research on fish feed and nutrition. The project also achieved better integration with university education programmes for student exchange, through the PhD programme at the University of Bergen for a PhD student from YSFRI. The operationalised hydrodynamic model of the Yellow Sea was applied to aquaculture questions in China as part of this PhD programme. Several other scientific papers are in progress. To improve the research facilities in China that are being used in the collaboration, a workshop was organised that included expert visits to relevant facilities, followed by discussions among the partners regarding advice and actions for facility improvements. A Chinese post doc is being 25% financed by the project and is currently working at IMR. The outputs all contribute to advancing the scientific and applied knowledge base in aquaculture management development.

MAIN CHALLENGES

A delay in project implementation until late April made it challenging to follow the implementation plan. Activities with key personnel had to be postponed in 2019 or scheduled for 2020. The budget has been adjusted accordingly.

The project experienced differences between the partners regarding approaches to research and work, mainly with respect to culture and language, which posed some challenges. During this phase of the project (Phase III; 2019–2022), the project is providing funding for a part-time (25%) post doc position at IMR, which complements the strong personal relationships established during the project. Having a Chinese post doc at IMR will also improve communication and understanding between the collaborating partners.

Colombia

PICTURE

Training of youth in progress.
Photo: María Ilse Andrade Soriano, Caritas Colombia.

Colombia

Title Improved Livelihoods in Aquaculture for Rural Youth in Caquetá, Colombia
Recipient Caritas Norway
Partners* Caritas Colombia, Norwegian University of Life Sciences (NMBU), Val High School (Norway)
Project period 1 November 2018–31 October 2022
Geographic location Caquetá, Colombia
Total budget NOK 19 902 000
Grant received from Norad in 2019 NOK 7 698 369

* The term 'partner' here indicates signature holders in a consortium agreement.

OBJECTIVE(S)

Lack of access to quality education is one of the main causes of poverty and forced labour, especially among the rural population in Colombia. A high percentage of students leave school early, and those who graduate often face unemployment or lack further learning opportunities. Many migrate to the cities or engage in illicit activities; in the best case, they join the agricultural sector as part of the unskilled workforce. The goal of this project is thus to improve the livelihoods of rural youth and their households in the department of Caquetá. To achieve this goal, the project will develop the skills of 300 youths to meet the demands of the local aquaculture labour market; improve their household income through the creation of formal businesses and/or jobs in the aquaculture market; and encourage the formalisation of these new youth-driven businesses to help them improve the quality of their product.

MAIN ACHIEVEMENTS

The intervention was initiated in January 2019, and this first year focused on providing theoretical and practical training to 203 students (primarily aged 14–18), from 8 rural schools. Eighteen ponds (approximately 7000 m2 of water surface) have been either established or improved in these 8 schools, to be managed by the students and provide practical knowledge about fish farming; food security (as part of the production goes

Colombia

to the school canteens); and business opportunities (as the surplus fish is sold and the profit returned to the school). In addition, a collaboration between the local university (Universidad de la Amazonia) and NMBU resulted in the design and implementation of a 3-month specialised course (diplomado) as a way to transfer relevant knowledge and strengthen the local institutions. Seventeen veterinary professionals and zootechnologists were trained, half of whom will assist the young students with their productive initiatives, which will be submitted to a Colombian fund (SENA Fondo Emprender) in 2020.

MAIN CHALLENGES & LESSONS LEARNT

The security situation in Caquetá has been the main concern, as well as the coordination with Colombian public institutions, who have their own tempo and internal mechanisms. In one case, the community decided they did not want a fish farming operation because they feared for their water sources. Caritas decided to withdraw from that community, as without the community's full support, the project would not be sustainable. The lesson learned regarding the coordination with the Colombian education institutions centres on the necessity of ensuring that all relevant officials at the local, regional and national levels are well-informed and willing to support the initiatives; this, in turn, requires more meetings and fluid communication channels.

Colombia

PICTURE

Vaccination of fish (tilapia).
Photo: Caritas Colombia.

Colombia

Title Improving Productivity and Sustainability in the Tilapia Value Chain
Recipient Caritas Norway
Partners* Caritas Colombia, PHARMAQ AS, Colombian–Norwegian Chamber of Commerce, Piscícola Botero
Project period 1 January 2019–31 December 2021
Geographic location Caquetá and Huila, Colombia
Total budget NOK 14 999 970
Grant received from Norad in 2019 NOK 5 214 807

OBJECTIVE(S)

This project aims to increase productivity, profitability and sustainability in the tilapia value chain in Huila and Caquetá, Colombia. Introduction of better health management and vaccines, encouragement of best practices and the formalisation of farms will improve the quality of the fish, reduce mortality levels and costs for producers, significantly reduce the environmental impact of fish farming, and create higher income and new jobs in a growth sector.

MAIN ACHIEVEMENTS

During the first year, 12 local fish farmers' associations in Huila and Caquetá were promoted and strengthened. Almost 525 000 fish juveniles were vaccinated in 10 ponds in Lake Betania, and subsequent tests showed improved sanitary response and fattening processes. In total, 326 fish operators, young students, professionals, university professors and small fish farmers were trained in vaccination techniques, 165 on best practices, 175 on community strengthening and 70 on environmental standards. Some of the project partners participated in AquaNor, the world's largest aquaculture technology exhibition in Trondheim, which allowed them to network and create contacts to invite to the upcoming summit in Colombia.

MAIN CHALLENGES & LESSONS LEARNT

The fish sectors in Caquetá and Huila are remarkably different, with Huila being the main fish producer in the country, and Caquetá still more focused on cattle ranching than on aquaculture. Caquetá also has a wider range of Amazon species, and fewer tilapia. These circumstances made it more difficult to engage local producers in improving their tilapia crops in terms of the quantity and quality adequate for export. Another challenge encountered by the project was the inability to transport biological samples from Colombia to Norway for analysis, as originally planned: it proved impossible to obtain the official permits. As an alternative, the samples will be analysed in Colombia by special laboratories.

Lebanon

PICTURE

The project assessed the needs of the fishermen while they refurbished their salt pans. Here, a senior fisherman is mending a modified trammel net used to target shrimp.
Photo: Ziad Samaha, IUCN.

Lebanon

Title Enhancing Socio-Ecological Climate Change Resilience of Marine and Coastal Systems in Lebanon
Recipient International Union for Conservation of Nature (IUCN), Lebanon project office
Partners IUCN Regional Office of West Asia
Project period 2018–2021
Geographic location Lebanon
Total budget NOK 9 000 000
2019 budget NOK 3 800 000

OBJECTIVE(S)

The Lebanese coastline is facing many challenges, including overexploitation of marine resources; declining fish catches; uncontrollable privatisation of beaches; construction (largely illegal); pollution; and vulnerable coastal communities. This project aims to reduce the vulnerability of the Lebanese coastline, with its critical sustainability issues, and improve Marine Protected Areas (MPAs) through ecosystem-based mitigation and adaptation. The project is also aimed at building the capacity of the local communities to measure, assess, analyse, monitor and adapt to climate change. Here, an important first step is to establish baseline data and provide the country with sources of data collection and marine monitoring stations, so future scenarios can be developed and projected through modelling and data manipulation.

MAIN ACHIEVEMENTS

During the implementation period of the project, the work focused on:

Developing preliminary data regarding the vulnerability of coastal cities to climate change, sea level rise and other natural and anthropogenic factors. The procurement of a smart buoy will assist in the gathering of data on sea currents, temperature and PH changes; this, in turn, will enable the development of better adaptation and mitigation measures for coastal communities. The National Council for Scientific Research in Lebanon will run, operate and be responsible for the buoy, as well as for the data collection from its sensors and the subsequent analyses and modelling.

Lebanon

Providing existing MPAs with technical support. The project funded the procurement of a freezer, water tank, and medical and laboratory equipment for the Tyre Coast Nature Reserve's Turtle Rescue Centre. Support was also provided for the preparation of an inclusive and updated checklist of the fish fauna in Lebanon, which includes the native and non-indigenous species as well as visiting and migrating species. A scientific paper related to the development of the checklist, will be published soon; based on that paper, a field guide will be developed for these species in both Arabic and English. This study will help the project team and the Department of Fisheries and Wildlife at the Ministry of Agriculture establish fishing priorities, recommendations, and guidelines for fishermen to target previously unexploited fish stocks.

Encouraging the ratification, assessment and implementation of international instruments related to MPAs and the marine environment. The project provided funds for IUCN Lebanese members to attend the ninth IUCN Regional Conservation Forum and for government representatives from the Ministries of Environment and Agriculture to participate in an 'other effective conservation measures' (OECM) workshop. The main objective of this workshop is to support learning about other effective area-based conservation measures and to share guidance about how to identify, support and enact Decision 14/8 of the UN Convention on Biodiversity (CBD). Following the workshop, we continued to support both Ministries in their reporting on and updating of the protected areas; we also provided GIS maps for sites lacking them, and are still updating Lebanon's protected areas coverage, percentage and classifications.

Providing institutional and technical assistance to the relevant ministries. Two depth meter and 11 digital handheld outdoor grade tablets were purchased for the technical cooperation programme, to assess the replacement of illegal fishing gear in Lebanon.

MAIN CHALLENGES & LESSONS LEARNT

The first year of implementation of this project was marked by many challenges:

- Staff turnover at the Regional Office in Amman. This delayed the recruitment of project staff in Lebanon from February 2019 to August 2019.
- Anti-government protests, public sit-ins and strikes, which lasted for roughly three months. The political instability in Lebanon affected many of the planned activities during that period.
- USD exchange rate and cash shortage. There was (and still is) a growing discrepancy between the official bank exchange rate and the market exchange rate.
- Formation of a new government. After the resignation of the previous Prime Minister, and the subsequent two-month government closure, a new government was formed. Politics aside, this negatively impacted some of the agreements we were about to sign with the previous Ministers; we are now almost back to where we started, as the new Minister has requested to review the entire procedure again. Despite these administrative challenges, we did not stop our activities in the field, nor our technical and institutional support.
- COVID-19 outbreak and lockdown. On 16 March 2020, the Lebanese government declared a state of emergency due to COVID-19. In light of this decision, meetings, workshops and fieldwork were put on hold. Additionally, procurement was affected, as shops and retailers were closed for at least two weeks.

Despite many administrative challenges and external difficulties, we have managed to continue our fieldwork and advocacy activities, targeting national and local stakeholders, from Ministry to mayoral levels.

Madagascar

PICTURE

Mahajanga and around Madagascar's coast, livelihoods often depend on the ocean's rescources.
Photo: Liv Røhnebæk Bjergene.

Madagascar

Title Local Business Development and Poverty Reduction through Sustainable and Climate Sensitive Productive Activities—MAG Tilapia Aquaculture
Recipient Royal Norwegian Society for Development (Norges Vel)
Partners Tilapia de l'Est (TDE)
Project period May 2016–December 2019
Geographic location Madagascar, Antsinanana Province, Tamatave
Total budget NOK 12 269 921
2019 budget NOK 3 160 844

OBJECTIVE(S)
Sustainable tilapia farming on the East coast of Madagascar, contributing to increased availability of fish on the markets of Tamatave and Antananarivo.

The expected outcomes are:
1. Improved tilapia farming business operations
2. Well-functioning producer-steered cooperatives
3. Improved market integration of small tilapia farmers

In 2011, 60 local farmers in the Tamatave area produced tilapia without monosex fingerlings, affordable quality feed, competence in profitable tilapia/organisational/entrepreneurship development or common organisation for large-scale benefits with access to inputs and reliable markets. TDE established a producer-owned supply chain of tilapia from pond digging and egg production (in their own hatchery) to common input, access and sales, with support from Norges Vel and Norad.

MAIN ACHIEVEMENTS
By the end of 2019, 340 members had joined the 7 local cooperatives currently constituting TDE, owning in total 470 ponds of on average 850 m3 each.
The ponds are climate resilient in construction and operated with environmentally sustainable techniques.
In 2019, with 525 kg harvested tilapia per pond and 1.44 harvests per pond, in total 357 tonnes of fresh tilapia on ice were harvested in the cooperatives and sold to all main markets in Tamatave and through various sales points in the capital Antananarivo.

Madagascar

Women comprise 31% of the members and board members in TDE and their cooperatives, thus earning a substantial share of the total income and contributing significantly to their development.

TDE's overall coverage of its own costs increased from 64% of its operational costs in 2018 to nearly 80% in 2019; however, support is still needed to increase production and thus sales and liquidity/working capital.

In 2019, TDE also achieved: (1) further development of its own low-cost local breeding of tilapia niloticus—to avoid possible Tilapia Lake Virus (TiLV) infection from imported broodstock from other countries; and (2) the start of a new technical site—conforming to Malagasy and EU standards as required for sales of increased volumes of tilapia on ice to the capital Antananarivo.

MAIN CHALLENGES & LESSONS LEARNT

The main challenges for TDE during 2019 were related to ensuring a continuous supply of feed and fingerlings to farmers, and tax regulations obliging TDE to pay 20% of its turnover to the state. Regular feed provision will be solved with the storage capacity increase at TDE's new technical site (under development, 2020–2022), as fingerling production can be done continuously once the borehole for water supply at TDE's hatchery is in place (2020). The tax issues will be mitigated by a progressive increase of the sales price on the market (2020–2023).

An external evaluation by a Malagasy firm conducted between the end of 2018 and the beginning of 2019 also recommended that (1) TDE and Norges Vel share more of their experiences with the other players; and (2) environmental sustainability documentation/ practices should be improved further, as needed. As of 2020, work is being done to ensure full sustainability—financially, organisationally, environmentally and socially (the project's end).

Mozambique

PICTURE

Pilot project training centre established with partner Papá Pesca Lda. Photo: Anne Mugaas, Norges Vel.

Mozambique

Title Tilapia Value Chain Development—Producers/Private Sector in Mozambique—Pilot Phase
Recipient Royal Norwegian Society for Development (Norges Vel)
Partners Papá Pesca Lda. (Papá Pesca)
Project period 23 November 2016–31 November 2019
Geographic location Mozambique, Gaza Province, Chokwe District
Total budget NOK 19 059 000
2019 budget NOK 6 675 550

OBJECTIVE(S)
Profitable and sustainable tilapia farming businesses; improved market integration and an enabling environment; and integrator model in place promoting tilapia business development—in Chokwe, Gaza, Mozambique.

The Inception Phase Report 2015 by Norges Vel-FIAS for the Norwegian Embassy in Mozambique documented that, in 2016 (and as of 2019/2020), the volume of fish proteins, e.g. from tilapia, were insufficient to meet the needs in Gaza, and in Mozambique more generally. Around 250–300 small tilapia farming ponds were scattered around Gaza Province, with production estimated at below 5 tonnes annually, similar to other parts of Mozambique (including subsistence ponds, private initiatives and projects). Low volumes of locally fished tilapia were and are sold in villages near fishing sites and at local markets, and some in the capital Maputo. Bottlenecks, with regards to the profitability and development of the sector, are due to: (1) a lack of access to affordable and quality monosex fry/fingerlings; (2) a lack of affordable quality tilapia feed; (3) a lack of technical tilapia farming/business management competence; (4) a lack of collaboration on improvements in (1)–(3) (i.e. a lack of large-scale benefits from collaboration between small-medium

Mozambique

enterprises and larger players on input, competence and markets, and an overall lack of efficiency in the value chain organisation); and (5) a need for an improved enabling environment, including an update on Mozambican laws and regulations for aquaculture.

MAIN ACHIEVEMENTS

An external evaluation in May 2019 documented that a profitable tilapia farming model has been demonstrated and market demand is larger than the production achieved. Financing for a follow-up project, 'Scaling Up Profitable Aquaculture in Mozambique', was granted by the MFA to Norges Vel for December 2019 to December 2023 (ongoing). In 2018 and 2019, a total of 19 and 12 trainees (respectively) were trained, of whom 51% were female; these trainees operated 24 ponds of 2000 m3 each, producing nearly 2 tonnes per pond annually and demonstrating gross margins between 45% and 38% in 2018 and 2019, respectively. Expected gross average profit from the ponds was 20%. For 2019, fish growth to an average of 250 gr in 110–120 days and a feed conversion ratio (FCR) of 1.1:1, which was achieved in 2018, was more challenging due to testing smaller fish of 150 gr and higher fish densities. Payments to trainees were achieved at USD 62 per month in 2019 plus bonuses for those with an FCR below 1.2:1. Fresh tilapia production sales in 2019 totalled 21 tonnes—sold by women (bakaristas) who traditionally sell wild-fished tilapia.

MAIN CHALLENGES & LESSONS LEARNT

If input costs are considered, larger gross profits will be achieved during the cold season, as well—this can be achieved with larger scales of production/increased fingerlings or fry demand. A structure ensuring large-scale benefits for the small-scale trainees and giving selected trainees the opportunity to develop into real entrepreneurs is needed: increasing from 2000 m3 per person to 10 000–20 000 m3 ponds per entrepreneur has been implemented in the scaling up of profitable tilapia farming between December 2020 and November 2023 (ongoing). This will also ensure significantly higher profits and a production of over 800 tonnes of fresh tilapia over the next four years (by the end of 2023). In addition, sustainability will be achieved in all areas for the tilapia incubator, with a focus on service delivery, coordination of inputs and sales, and policy advocacy.

Sri Lanka

PICTURE

Some of the participants, including Sri Lankan authorities, which participated in the Sri Lankan survey with the research vessel Dr. Fridtjof Nansen. Photo: FAO.

Sri Lanka

Title Technical Assistance for Formulation of New Fisheries Aquaculture Policy for Sir Lanka
Recipient Ministry of Fisheries and Aquaculture Resources Development (MFARD) in Sri Lanka
Partners Norwegian Ministry of Trade Industries and Fisheries (NFD)
Project period 2017–2019
Geographic location Sri Lanka
Total budget NOK 8 300 000
2019 budget NOK 2 420 200

OBJECTIVE(S)

Sri Lanka has experienced overfishing and exploitation of its fisheries resources due to the absence of a proper policy framework. Technical assistance will be provided by the Norwegian Ministry of Trade, Industry and Fisheries to the Sri Lankan Ministry of Fisheries and Aquatic Resources Development (MFARD), to formulate a National Fisheries Policy for Sri Lanka at the request of the Sri Lankan government. Through comprehensive technical assistance for improved management of fisheries and aquaculture industries in Sri Lanka, this project ultimately contributes to improved sustainable management of fisheries and aquaculture resources in the country.

MAIN ACHIEVEMENTS

- New Fisheries and Aquaculture Policy supported through the project approved by the Cabinet of Sri Lanka.
- Two new Acts drafted for implementation: i) sustainable management of fisheries and aquatic resources; and ii) sustainable management of aquaculture.
- Improved competence of MFARD to provide legal assistance for policy enactment.

Sustainable management of fisheries and aquaculture resources has improved through the use of science-based information and compliance with regional and

Sri Lanka

international obligations, related to fisheries. Increased fish production from fisheries and aquaculture and minimised post-harvest losses have added value to existing fisheries and aquaculture production. Further policy enactment may improve opportunities in the sector for leisure, employment and enterprise development and the overall socioeconomic conditions of the fisheries community.

MAIN CHALLENGES & LESSONS LEARNT

Throughout the project, there have been challenges related to a lack of interest and commitment at the administrative and/or political level concerning the implementation of the project. Changes in the political scenarios in Sri Lanka and in Norway, particularly at the upper administrative level (including Ministers and Secretaries), delayed the project.

A lesson learned is that proper inter-agency cooperation and coordination between the key stakeholders is essential for a successful implementation of the project. Legal assistance has been helpful in furnishing the Policy and the Acts, which enabled relevant institutions to internalise key policy guidelines. Recruitment of external consultancy support and the personal commitment of select administrative staff have contributed to the success of this project.

Sri Lanka

PICTURE

Sri Lankan navy participates during the Nasen survey in Sri Lankan waters. Photo: FAO.

Sri Lanka

Title Technical Assistance to Improve Management of the Fish Resources in Sri Lanka
Recipient National Aquatic Research and Development Agency (NARA), Sri Lanka
Partners Institute of Marine Research (IMR) Norway
Project period 2017–2019
Geographic location Sri Lanka
Total budget NOK 6 726 000
2019 budget NOK 2 131 374

OBJECTIVE(S)

An increased number of fishing vessels and illegal fishing in Sri Lanka, together with a lack of data from Sri Lankan fisheries, has raised concerns about the fish stocks in Sri Lanka. Hence, the fisheries sector is not seen as sustainable and the Government of Sri Lanka wants to strengthen the marine fisheries sector with modern technology and scientific knowledge, for a more sustainable fisheries sector.

MAIN ACHIEVEMENTS

- Improved fisheries data collection system for coastal fisheries, to provide reliable statistical landing data covering the entire country for sustainable management of the coastal fisheries
- Technical assistance and competence-building enabled in fisheries research through fisheries' independent surveying
- Improved fisheries management, in accordance with the United Nations Fish Stocks Agreement (UNFSA) Precautionary Approach
- Authorities and fishermen made aware of available fisheries resources and the level of harvest in specific coastal communities.
- Fishermen equipped with GPS for single-day and multi-day offshore fishing

Sri Lanka

MAIN CHALLENGES & LESSONS LEARNT

- Main external risk factors were lack of public funding, lack of cooperation between the relevant Sri Lankan institutions, political ownership and high staff turnover.
- Main internal risk factors were maintaining good cooperation and clearly defined responsibilities to ensure maintenance and sharing achievement of collective project goal.
- Regular teleconference meeting proved useful for promoting shared understanding, avoiding misunderstanding, and ensuring progress in the activities.
- Proper stakeholder engagement was administered throughout the project.
- The complexity of developing and establishing a new system for fisheries data collection, data infrastructure and data flow was larger than expected and required more resources, including time, money and staff.
- When using external resources in technical development, it is important to have a future and/or sustainability plan for maintenance and administration of the system.

Sudan

PICTURE

Fish market in Sudan.
Photo: Jan Eriksen, Norad.

Sudan

Title Building Institutional Capacities for an Ecosystem Approach to Management of the Marine Fishery in the Red Sea State (Phase II)
Recipient United Nations Industrial Development Organisation (UNIDO)
Partners Institute of Marine Research (IMR) Norway, Marine Fisheries Administration Red Sea State (MFA), Red Sea University–Faculty of Marine Sciences and Fisheries, Red Sea Fisheries Research Centre, Port Sudan
Project period 2018–2021
Geographic location Red Sea State, Sudan
Total budget NOK 45 600 000
2019 budget NOK 16 000 000

OBJECTIVE(S)

This project builds upon the efforts and outcomes of two previous project periods (2012–2013 and 2015–2018). First, the present project is aimed at building institutional capacities among the partner institutions to collect, store and analyse data from the artisanal/small-scale fisheries based on the capture of coral reef fish along the extensive coral reef system spanning the entire coast of Sudan's Red Sea State. Secondly, the project aims to analyse fisheries' independent data on the status of harvested fish stocks, while also training counterparts to carry out this kind of survey work. Third, the project is designed to lay the foundations for an ecosystem approach to fisheries management (EAFM) of the marine fisheries in the Red Sea State and to develop a management plan based on the best available science and practice.

MAIN ACHIEVEMENTS

Capabilities of key institutions for the use of a fisheries statistics system (FSS) have been further consolidated with data sets regularly collected at the Sigala fish market and the Suakin landing site.

Decision-makers at the level of the federal and state government have been made aware of the benefits of an EAFM approach and are fully supportive. In February 2019, the Government of the Red Sea State made the decision to suspend trawling activities until further notice.

Sudan

All logistical preparations and preparatory trainings for the 2020 survey have been completed. For EAFM-related trainings and workshops, the UK-based consultancy IMA International has been subcontracted by IMR. This entity allows its employees to travel according to UN Department for Safety and Security's assessments, which means that they have been able to carry out trainings in Port Sudan throughout the year.

Cooperation and synergies with other NGOs, UN agencies and regional organisations working in the Red Sea have continued. Exchange of data and information, attendance at workshops intended to address issues in fisheries, and consultative meeting are examples of such cooperation.

@To address the aim of building institutional capacity to use and analyse collected data in locally initiated reports or scientific publications, five staff members from the partner institutions were selected as master's (MSc) students and enrolled at Red Sea University in the Faculty of Marine Sciences and Fisheries.

MAIN CHALLENGES & LESSONS LEARNT

Due to the unrest that began in December 2018, and the altered political situation in Sudan as of April 2019, the numerous planned project activities were not carried out according to plan in the first year of the new project phase. The Norwegian Ministry of Foreign Affairs (MFA) issued advice against any travel to Sudan as of April 2019, which was later changed to advice against 'non-essential' travel as of September 2019. Thus, IMR policy does not endorse travel to Sudan under the prevailing advice. The budget and expenses for 2019 are therefore greatly reduced, compared to the initial plan.

The fisheries statistics system (FSS) and the database updated with data collected from the Sigala fish market and Suakin landing site are an important source of information regarding the state of the fisheries, and are essential for achieving the long-term aims of the project. Staff and project partners with the Marine Fisheries Administration (MFA) in Port Sudan are responsible for the collection and entering of data from Sigala, and they are supervised by one local UNIDO staff member at Suakin. Due to the deteriorating political stability and financial situation in the country, staff felt that their wages did not justify the workload incurred with sampling at Sigala, as they needed to spend a certain amount of their working hours looking for additional income to support themselves and their families. Thus, the database was not sufficiently maintained in the latter half of 2019. An agreement between UNIDO and project partners has been reached regarding compensation, however, to ensure that MFA staff can indeed take the time to collect data and maintain the database as of January 2020.

Timor-Leste

PICTURE

WorldFish staff training fisheries officers and data collectors in fish identification and use of the tablet-based data system. Photo: WorldFish.

Timor-Leste

Title Fisheries Sector Support Programme: Increasing the Contribution of Coastal Fisheries to National Food and Nutrition Security

Recipient WorldFish

Partners Directorate General of Fisheries, Ministry of Agriculture and Fisheries, Government of the Democratic Republic of Timor-Leste

Project period 2016 to present (with a number of extensions)

Geographic location Timor-Leste. Development focus on the districts of Dili, Bobonaro, Baucau and Viqueque. National focus on data system, strategy and legal system

Total budget NOK 12 900 000

2019 budget NOK 318 309

OBJECTIVE(S)

The programme's planned outcomes are:

— increased availability of affordable marine products in rural areas
— increased marine fish portion in average food basket and daily household diet

Project funding specifically targets:

1. Improved information and capacity for sustainable resource management
2. Improved sustainable small-scale fishing technologies
3. Participatory pro-poor market chain scoping and development
4. Formal and informal capacity development
5. Marine fisheries strategy and policy development

MAIN ACHIEVEMENTS

The project video abstract can be found here.

1. Co-development with the Ministry of Agriculture and Fisheries (MAF) of a cutting-edge mixed-technology fisheries information system designed for the context of Timor-Leste, and providing automated output of essential metrics for monitoring and management. This has now been fully integrated into the MAF's ongoing budget and work plan, and has received an international award for incorporation of 'big data' streams into resource management.

Timor-Leste

2. Greatly increased knowledge of the fisheries sector, including concerning women's participation. Results have been published in an accessible format to improve future interventions and management.

3. Worked with communities to develop and test a design for a fish aggregating device that will increase sustainable access by small-scale fishers to highly resilient small pelagic species, and decrease reliance on vulnerable reef stocks.

4. Worked extensively with the Government of Timor-Leste, resource owners and stakeholders through >40 community consultations nationwide, stakeholder and working group meetings and national forums to co-design a National Fisheries Strategy and revise the country's extensive fisheries legislation. This is currently undergoing the final stages of technical translation for approval by the government.

MAIN CHALLENGES & LESSONS LEARNT

Fish consumption in Timor-Leste outside of coastal villages is low. With undernutrition rates among the worst in the world, fish can have a substantial impact on nutrition, particularly for children in the first 1000 days of life. However, the sector remains highly under-developed, as human, institutional and financial capacities for management are exceptionally low. To achieve all of the original objectives of the project within the initial timeline, we would have had to sacrifice key capacity-building objectives. WorldFish has a long-term commitment to the Government of Timor-Leste, within which building capacity towards sustainable management is a central objective. Ultimately, ambitious objectives relating to value chain development were sacrificed to ensure that all activities were carried out in direct collaboration with MAF, building capacity and ownership though engagement. The project has led to very strong and persistent relationships with the Ministry; strengthened capacities in community relations and management; reformed the legal system; and built a strong basis for improved management and nutrition outcomes.

Uganda

PICTURE

Preparation of pond for aquaculture.
Photo: Christopher Olenge Dougg, programme officer in Caritas Gulu, Uganda.

Uganda

Title Farming Jobs—Building Skills in Aquaculture/Fish-Farming for Jobs in Uganda
Recipient Caritas Norway
Partners Caritas Uganda and Hauge Aqua
Project period 2018–2021
Geographic location Northern region of Uganda (West Nile and Acholi sub-regions)
Total budget NOK 15 000 000
2019 budget NOK 2 535 374

OBJECTIVE(S)

The programme is being implemented in a region previously affected by armed conflict, with current high poverty levels and food insecurity. It is aimed at addressing youth unemployment in the region (currently at 95%) and the need for skills training. Other specific issues the programme aims to address are the region's poor quality of fingerlings; little or no availability of fish feed, aquaculture services or equipment; and low levels of female employment in the aquaculture sector.

MAIN ACHIEVEMENTS

- *Increased knowledge and skills in aquaculture:* Thus far, 499 youths (211 females–42%; 288 males–58%) and young adults have received documented skills in aquaculture.
- *Increased knowledge and skills in entrepreneurship and business:* 499 youths and young adults (211 females–42%; 288 males–58%) have received documented skills in entrepreneurship.
- *Established community infrastructure for support of aquaculture sector:* Two community aquaculture schools have been established and accredited by the Ministry of Education and Sports; one fish feed mill has been completed for the production of quality feed; and three demonstration ponds have been constructed and stocked.
- *Increased aquaculture business in the region:* Twenty-six trained youth have established and stocked their own ponds.

Uganda

— *Increased employment opportunity and income:* Twenty-nine trained youth are self-employed in the fish value chain, while another 23 are employed by other medium-scale fish farmers in the region.
— *Improved livelihood:* General living conditions of project graduates have greatly improved; they are able to meet other livelihood needs, such as paying for their siblings' or children's education and purchasing other assets for the expansion of their business.
— *Mind-set change:* Fish farming is often perceived as a 'male' job in the region; to date, 42% of the trainees in the field are women, as are 11 of the 29 self-employed individuals. In addition, the graduates have embraced the idea of borrowing to start their business, compared to the previous attitude of expecting handouts from programmes or projects.

MAIN CHALLENGES & LESSONS LEARNT

One internal risk was the long procurement procedures at the implementation level, which caused delays and thus hindered the timely implementation and completion of some activities.

External risks

— *Gender role bias linking fish farming to men:* This has been mitigated through the project's provision of a nanny for breastfeeding mothers, who takes care of the children while the mother studies.
— *Poor attitude towards agriculture as a means of income generation compared to other ventures:* This has been mitigated through an emphasis on the profitability of fish farming, and keynote speakers were invited to give motivational talks to the youth.
— *Drought:* The extreme dry season from October 2018 to February 2019 led to the dry-up of five ponds; this is being mitigated through the construction of water reservoir ponds.

— Support from local government and line ministries, especially the Ministry of Agriculture, Animal Industries and Fisheries and the Ministry of Education and Sports, as well as the line departments at local government levels.
— Technical support from the Norwegian aquaculture company Hauge Aqua was valuable.

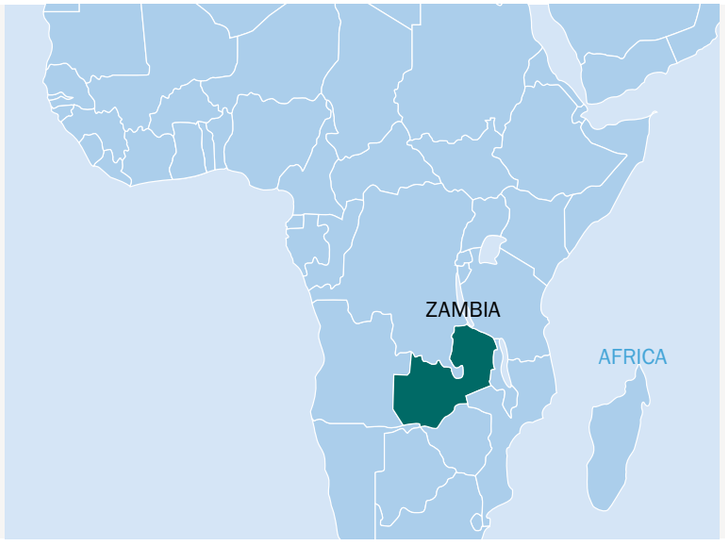
— There could be increased focus on monitoring, evaluation and learning: routine monitoring and establishment of expected income-generating ventures. Moreover, using good yearly statistics and establishing benchmark indicators for measuring change and impact, is vital to improve the project outcomes.
— Stakeholder involvement and information-sharing between partners, line ministries, local government and the community is crucial for obtaining desired results.
— Intentional empowerment of vulnerable groups, especially female participants, and change of perceptions of gender and female participation among men and local societies, is important.

Zambia

PICTURE

Artisinal fisheries in Luangawa, South Zambia.
Photo: Ken Opprann.

Zambia



Title Aquaculture Technical, Vocational, and Entrepreneurship Training for Improved Private Sector and Smallholder Skills Project in Zambia

Recipient International Center for Living Aquatic Resources Management (ICLARM), also known as WorldFish

Partners BluePlanet Academy (BluePlanet), Natural Resources Development College (NRDC) and Musika Development Initiatives (Musika)

Project period 1 July 2018–31 December 2021

Geographic location Zambia (Lusaka, Northern and Luapula Provinces)

Total budget NOK 20 million

2019 budget NOK 6 547 442

OBJECTIVE(S)

The overall objective of the project is to develop the aquaculture knowledge and practical skills of students and smallholder commercial fish farmers (especially women and youth) participating in aquaculture technical, vocational and entrepreneurship training (TEVET), to enable them find gainful employment in the private sector.

MAIN ACHIEVEMENTS

To address the constraints facing students at NRDC (and youths in Zambia more generally), the project has upgraded the fisheries science curriculum, constructed an aquaculture field training centre and established an online training platform at NRDC. A total of 58 students (66% male, 34% female) were enrolled in 2019. The enrolment figure represents 42.9% of the intended target of 135 by 2021. The instructors in the faculty of fisheries were also trained in enhancing their ability to administer the upgraded curriculum.

In addition, four private sector companies signed memoranda of understanding (MoUs) with the project, aimed at supporting the growth of smallholder aquaculture in Northern and Luapula Provinces. The signing of these MoUs has thus far yielded exciting results, such as (1) the opening of a new aquaculture

Zambia

input supply store in the Kasama District of Northern Province to provide feed and extension services to the smallholder fish farmers (see here); and (2) the establishment of a nucleus breeding centre (hatchery) to provide high-quality fingerlings (sex-reversed fingerlings), technical services and training to smallholder commercial farmers. The project has also developed a better management practices manual for farmers farming tilapia in pond-based systems in Zambia. A cluster of 380 farmers (38% of the 1000 farmers who will be targeted by 2021) have received a range of aquaculture extension service support (e.g. access to fish feed, seed and aquaculture training).

MAIN CHALLENGES & LESSONS LEARNT

The curriculum was not finalised and approved until December 2019, which means that the project will only be able to monitor curriculum implementation by NRDC for 18 months instead of the planned 24 months.

Further, the project experienced less support from the private sector than anticipated, with regards to working with smallholder farmers who are widely dispersed over a large geographical area and characterised by low levels of commercialisation, productivity, technical capacity and purchasing power. This led to a delay in reaching the planned number of private sectors.

Global and regional support

PICTURE

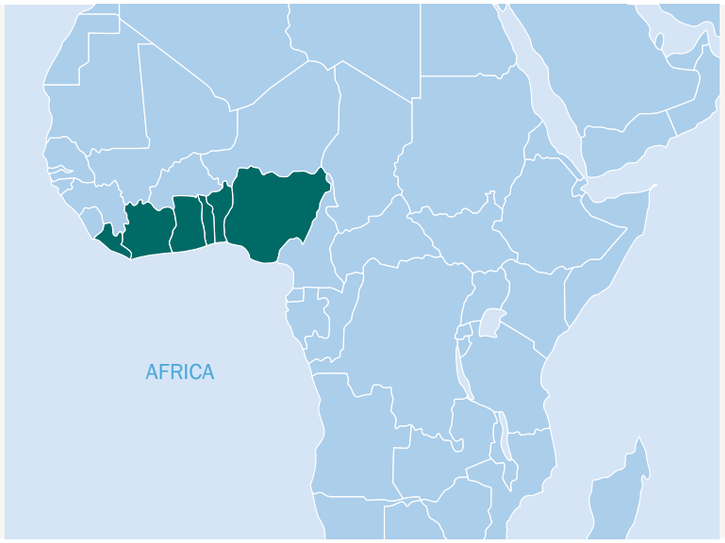
In 2018, an estimated 59.51 million people were engaged in the primary sector of fisheries and aquaculture (FAO). Photo: Conservation International.

Fisheries Intelligence and MCS Support in West Africa Phase II: The West Africa Task Force (WATF)

PICTURE

Offloading of fisheries vessels in Abidjan, Ivory Coast.
Photo: FCWC, Tryg Mat Tracking ©

Fisheries Intelligence and MCS Support in West Africa Phase II: The West Africa Task Force (WATF)



Recipient Trygg Mat Tracking (TMT)
Partners Fishery Committee for the West Central Gulf of Guinea (FCWC) and Stop Illegal Fishing (SIF)
Project period October 2018–September 2022
Geographic location West Africa (Ghana, Cote d'Ivoire, Nigeria, Liberia, Togo and Benin)
Total budget NOK 33 722 539
2019 budget NOK 11 060 055

OBJECTIVE(S)

West Africa is endowed with abundant fisheries resources. The fisheries sector, in addition to providing revenue to governments through royalties and other fees, plays an important role in meeting the nutritional needs of populations and providing employment to more than three million people. Due to various political, economic and environmental factors, however, the region has historically been identified as the most significant hotspot for illegal fishing globally.

To respond to this challenge, the West Africa Task Force (WATF) was established under the Fisheries Committee for the West Central Gulf of Guinea (FCWC) to bring together national enforcement authorities, regional organisations and international technical and legal experts to combat large-scale illegal fishing through information-sharing and regional cooperation between the Member States—Liberia, Cote d'Ivoire, Ghana, Togo, Benin and Nigeria. The aim is that the cooperation will prove a deterrent to illegal operators and help member countries achieve lower risk and more compliant fisheries operations and, ultimately, more sustainable fisheries.

MAIN ACHIEVEMENTS

- Regular bi-annual Task Force meetings and the FCWC Ministerial Conference ensures that the Member States are frequently interacting, strengthening relationships, building and sharing capacity and knowledge, providing input regarding project implementation, and making positive political decisions.
- Regional information-sharing mechanisms have been further reinforced, including regular sharing of licence information, 'live' illegal fishing case cooperation, and assessment of risk through the WATF communication platform.

Fisheries Intelligence and MCS Support in West Africa Phase II: The West Africa Task Force (WATF)

- Routines for the conduct of due diligence concerning vessels—in particular, background checks prior to licensing or flagging—are regularly requested, resulting in high-risk vessels being denied a licence or flag.
- The national inter-agency working groups (NWGs) have been further supported through dedicated workshops and the inception of national 'focus projects'. Most countries have identified their NWG as the relevant information-sharing mechanism for implementing the FAO PSMA, and the sensitisation of member agencies has begun.
- The capacity of national authorities has been strengthened through, e.g., targeted trainings on VMS updated training materials, technical exchange visits and peer-learning between member countries in the WATF. Training of trainers has contributed to building a pool of fisheries personnel trained in teaching and mentorship techniques. A new manual on vessel document verification was also developed, with a focus on how to detect and address document forgery and related flag/registry abuse.
- The institutional capacity of FCWC has improved through participation in trainings, more efficient communication and IT capacity in situ, as well as the launch of a revamped website and resources to better coordinate stakeholders and initiatives in the region. Key functions, such as the management of the regional communications platform, have been handed over to FCWC.
- The WATF has contributed to informing and shaping international processes to end illegal fishing and fisheries crimes, including in the ASEAN region, where the design and operations of the WATF model for regional cooperation was presented: this included criteria identified as key for the success of regional cooperation. The WATF was also identified as a relevant mechanism for implementing other international instruments in the region, such as the Cape Town Agreement on the safety of fishing vessels.

MAIN CHALLENGES & LESSONS LEARNT

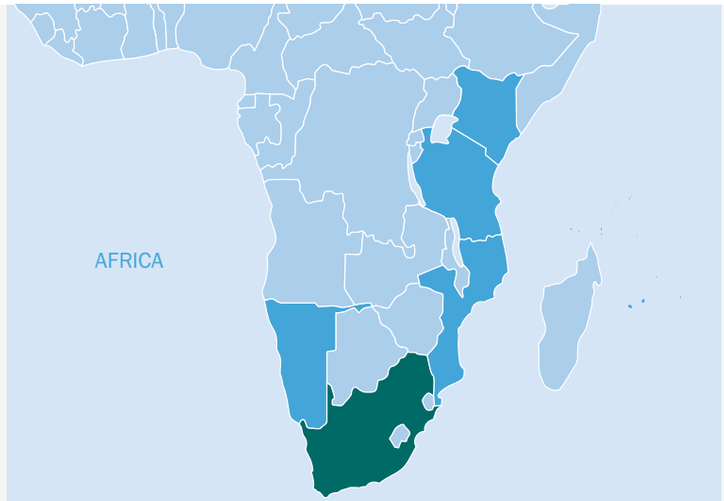
- Staff turnover among beneficiary institutions, including participants in the WATF, has been a concern. Efforts were made to strengthen the institutionalisation of competence, in combination with improved communication efforts.
- Information-sharing and exchange of intelligence among the WATF members are key to the success of the project. It is a concern that increasing pressure by international partners (e.g. from the World Bank and the EU) and the threat of sanctions may push countries to turn inward, to the detriment of regional cooperation. Targeted and continuous efforts to strengthen trust between the stakeholders will increase in priority moving forwards.
- There are several donor-funded projects in West Africa implementing capacity-building activities in fisheries management. Training activities and related travel can sometimes put national fisheries departments under pressure, and they may nominate participants on a rotating basis. Ensuring coordination of efforts is therefore crucial.
- Partnering with regional maritime academies will help formalise capacity-building interventions and allow the project to benefit from existing training infrastructures while indirectly reaching a wider audience, ensuring that the content and materials developed are re-used and integrated into the institutional memory of those institutions.

Support for the FishFORCE Programme

PICTURE

Vessel inspection by Tanzanian fisheries officers.
Photo: Mike Markovina—FishFORCE facilitator and course developer.

Support for the FishFORCE Programme



Recipient Nelson Mandela University
Partners N/A
Project period 2016–2021
Geographic location Primarily South Africa, but the programme is expanding into Kenya, Mauritius, Seychelles, Tanzania, Mozambique and Namibia
Total budget NOK 23 907 000
2019 budget NOK 4 241 956

OBJECTIVE(S)
Fisheries crime, or 'multicrimes' affecting the fisheries sector, range from illegal capture of fish to human trafficking and forced labour, fraud, forgery, corruption, money laundering and tax and customs evasion. These crimes pose a real challenge to fisheries law enforcement agencies in developing countries across the world.

Many developing countries are unable to effectively enforce fisheries laws and are therefore unable to manage their coastal zones. The result is fish stocks in sharp decline, instability, food insecurity and the loss of livelihoods and state revenue.

The Nelson Mandela University Fisheries Law Enforcement Academy is a unique institution in Africa, which is helping to strengthen the fisheries law enforcement capacity in developing countries to meet emerging threats and build adequate and resilient law enforcement responses. The aim of the Academy is to establish a 'FishFORCE' that can handle the increasingly complex investigations and prosecutions of fisheries crime throughout Africa and the world. The programme is expanding into Kenya, Mauritius, Seychelles, Tanzania, Mozambique and Namibia

Fisheries crime law enforcement requires traditional policing methods and tools, but these must be adapted to the specific circumstances affecting the fisheries sector. It is a cross-disciplinary field, and includes aspects related to law, criminology and police science, but also

Support for the FishFORCE Programme

fisheries management and conservation. The aim is to achieve knowledge- and intelligence-led investigations and prosecutions of criminals engaged in fisheries crime.

MAIN ACHIEVEMENTS

A recent mid-term review concluded that much has been achieved; moreover, in terms of outputs, FishFORCE has achieved or surpassed many of its original goals. With regards to outcomes:

Outcome 1, building technical expertise in developing countries: The level of attendance at the short learning programmes was much higher than originally planned and most participants claim to have had a good learning experience. However, as most of the short learning programmes are at a basic level, coverage of more advanced topics is needed: e.g. fishery intelligence; port state measures; international catch certification; international legal cooperation; risk-assessment of IUU fishing; and development of integrated compliance and enforcement policy.

Outcome 2, improving multi-agency and cross-border coordination and cooperation: The number of agencies involved in training in South Africa has exceeded expectations, and cross-border training, particularly with Kenya, has started. Through the realisation of short learning programmes for attendants from different agencies, as well as participation in common forums, multi-agency cooperation in South Africa has been maintained or improved.

Outcome 3, external expertise harnessed, research stimulated and law enforcement in the fisheries crime field promoted: Some academic research is already underway, as demonstrated by recent publications and the enrolment of master's and doctoral students, but it is unclear whether this is a result of the Norwegian-supported programme. There is a feeling of cooperation between the forces and Operation Phakisa, but it is not easy to evaluate whether this has contributed to more or better law enforcement.

MAIN CHALLENGES & LESSONS LEARNT

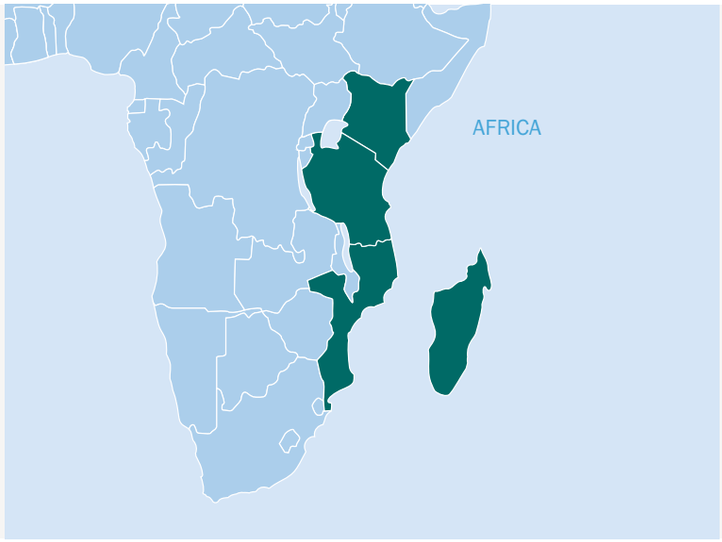
FishFORCE addresses a very broad set of issues, and clearer results could possibly be attained with an increased focus on fisheries rather than on all types of illicit activities involving fishing vessels or fishers. In addition, the training courses should increasingly focus on more advanced topics as the general level of competence increases. A strengthened research component of the programme would be beneficial, as well, and could provide further insight into (1) how different enforcement and compliance styles may be tailored to different fisheries and regulations, and (2) the use of graduated sanctions in enforcement.

Regional South-West Indian Ocean Sustainable Fisheries Programme

PICTURE

Training on participatory fisheries catch data collection and monitoring. Here, men and women from local fishing communities are being trained on how to identify and collection basic measurements such as the species name, weight and length to the lowest taxa. The data is used to compute fishing effort and biological parameters to be used in stock assessment, which is necessary to inform the formulations of sustainable and effective fisheries conservation and management measures. Photo: Jeffrey Barbee.

Regional South-West Indian Ocean Sustainable Fisheries Programme



Recipient WWF Norway
Partners WWF Kenya, WWF Tanzania, WWF Madagascar, WWF Mozambique
Project period 1 July 2016
Geographic location Kenya, Tanzania, Mozambique and Madagascar
Total budget NOK 22 744 693
2019 budget NOK 8 369 712

OBJECTIVE(S)

Overexploitation of fish stocks in the South-West Indian Ocean has severely increased from 2005 to 2013. In 2013, 34% of the relevant marine South-West Indian Ocean fish stocks were overexploited. Overfishing threatens the region's ecological stability and thus the food security and livelihoods of its communities, while also undermining regional economies. For example, Kenyan and Tanzanian shallow water shrimp fisheries have collapsed, and seem to be approaching collapse in Mozambique and Madagascar. Most of the nearshore/coastal reef-based artisanal fisheries are near collapse. Some important offshore commercial tuna and tuna-like stocks are at serious risk of overexploitation across the Indian Ocean, including the South-West Indian Ocean, driving the yellowfin tuna stocks, for instance, into the red zone.

Urgent measures must be taken in the South-West Indian Ocean to return stocks to sustainable levels, counter the fishing fleets' problems with fleet data deficiency, and strengthen the stock assessments for both tropical and neritic tuna species.

MAIN ACHIEVEMENTS

The South-West Indian Ocean programme boasts many achievements. Ultimately, we would like to highlight that the culmination of the WWF's broad engagement and support of Fishery Improvement Projects (FIPs) in Coastal East Africa has significantly contributed to

Regional South-West Indian Ocean Sustainable Fisheries Programme

restoring fishery stocks through active engagement with national, regional and international authorities, industrial and artisanal fisheries, and civil society organisations. The lobster and octopus fishery stocks in Kenya and Tanzania are moving towards sustainability, as indicated by their Marine Stewardship Council Bench Marking and Tracking Tool (MSC-BMT) score. The Kenyan lobster fishery stock's MSC-BMT score is 92% (CY2019), against a 78% baseline (CY2015) and CY2020 target of 82%, which is a 14% increase and has surpassed the final target by 10%. Plans are underway to subject Kenya's lobster fishery stock to full assessment. The Tanzania octopus fishery stock's MSC-BMT score is 79% (CY2019), against a 48% baseline (CY2016) and CY2020 target of 60%, which is a 31% increase and has surpassed the final target by 19%. The Mozambique shallow water shrimp fishery stock's MSC-BMT score is 69% (CY2019), against a 66% baseline (CY2015) and CY2020 target of 70%, which is a 3% increase. The Mozambique deep-water shrimp fishery stock scored at 60–79% in 2019, against a 56% baseline (CY2015), indicating at least a 4% increase.

This is a clear demonstration that FIPs can be powerful market-based tools that improve stock sustainability on the ground, thereby enhancing the socioeconomic security of local fishing communities, including food security and income.

MAIN CHALLENGES & LESSONS LEARNT

The turnover of South-West Indian Ocean programme staff in the respective countries has slowed down programme engagement, as it took time to bring new staff up to speed; this, in turn, has required increased effort from core support staff in these countries. Some external risk factors were associated with existing partnerships and dealing with expectations concerning tuna fishery improvement projects. This meant that the WWF had to exceed delivery expectations by running an advocacy campaign to garner support and buy-in from producers, retailers, and the Member States of the Indian Ocean Tuna Commission. Furthermore, urgent measures must be taken in the South-West Indian Ocean to counter the fishing fleets' problems with fleet data deficiency, and to strengthen the stock assessments for both tropical and neritic tuna species. Internal factors included the attention to detail in project design and implementation and the monitoring of the project interventions. External factors included maintaining good communication, and developing synergies and joint implementation of activities with national fisheries management agencies and strategic partners: namely, the SWIOFISH project of the World Bank, IOTC, SWIOFC, SADC, African Union (AU-IBAR) and Marine Stewardship Council (MSC). This ensured successful leverage of resources and the delivery of more impactful work.

Supporting Climate Change Adaptation Measures in Fisheries and Aquaculture

PICTURE

Saint Lucia fish farmers exchange visit to the Philippines. Photo: FAO/Labaria.

Supporting Climate Change Adaptation Measures in Fisheries and Aquaculture

Recipient FAO
Partners N/A
Project period December 2018–June 2021
Geographic location Global, Saint Lucia, South Africa and the Philippines
Total budget NOK 11 539 500
2019 budget NOK 4 539 000

OBJECTIVE(S)

Millions of people are dependent on fisheries and aquaculture to maintain their livelihoods, and they are often the most vulnerable to the impacts of climate change. While effective mitigation and adaptation will be required across all scales and sectors of fisheries and aquaculture, attention needs to be given to the most vulnerable if the sector is to continue working towards global goals of poverty reduction and food security. The project aims to improve the countries' capacity to develop and implement climate change adaptation plans and actions that promote socioeconomic development, with specific attention to poverty reduction and food security in the fisheries and aquaculture sector.

MAIN ACHIEVEMENTS

The capacity of national authorities and community leaders to design and plan climate change adaptation actions has increased. The understanding of climate change adaptation planning, including climate risk sequencing over time—looking at current risks, near-term risks and long-term risks, and how this information can help inform adaptation—has resulted in an increased capacity to identify and prioritise adaptation actions at the national and local level.

Women and youth have strengthened their adaptive capacity concerning climate change, including through skills trainings on the use of alternative marine

Supporting Climate Change Adaptation Measures in Fisheries and Aquaculture

resources and improved fish handling that would enable them to adapt to negative changes in fish resources availability and poor catch periods. Furthermore, knowledge among local fisherfolk has increased concerning climate-smart practices, including the adoption of methods for more efficient and targeted use of fishing gear and the slaughtering and handling of captured fish in ways that maximise their quality and value; exchange of best practice on climate-smart coastal aquaculture; and safety at sea. Capacity development material has been developed from lessons learned in the project, aimed at broad distribution and re-use.

Limited safety at sea knowledge was identified as limiting fisherfolk's ability to manage climate variability risks. Through collaboration with the Fisheries Division, Coast Guard and other relevant authorities, practical accident and fatality reporting systems have been developed and understanding increased on how to improve safety at sea for the small-scale fisherfolk through a training of trainers.

FAO has developed a climate change adaptation toolbox for fisheries and aquaculture. It comprises institutional, livelihood, risk reduction and management measures for strengthening the resilience of the sector to climate change. The toolbox has been tested in the three countries, and global guidance has been developed to help countries and communities identify and develop adaptation roadmaps. The guidance is included in an FAO publication on decision-making on climate change adaptation, which includes a review of existing cost–benefit analyses of climate change adaptation in the fisheries and aquaculture sector.

National authorities in Saint Lucia have improved competence concerning the development of bankable climate finance projects, and thereby increased access to potential funding, e.g. from the Green Climate Fund, for adaptation measures.

MAIN CHALLENGES & LESSONS LEARNT

The capacity of designated authorities to fulfil their climate change mission is limited. To offset this, the project recruited a national project consultant in each country to assist in the implementation of activities and maintain a constant link between the project and responsible institutions and officers.

The project activities have benefited from collaboration with existing FAO projects. The project could draw on the results of the community-level vulnerability assessments conducted by these projects, to focus its action on strengthening adaptation-planning capacity and developing adaptive capacity, as requested by governance actors and small-scale communities.

Given the limited execution period, the project focused on early adaptation actions. It has developed best practice and/or capacity-building materials to capitalise on and scale out lessons learned, and has provided capacity-building in climate finance to support the country's access to climate change adaptation funding.

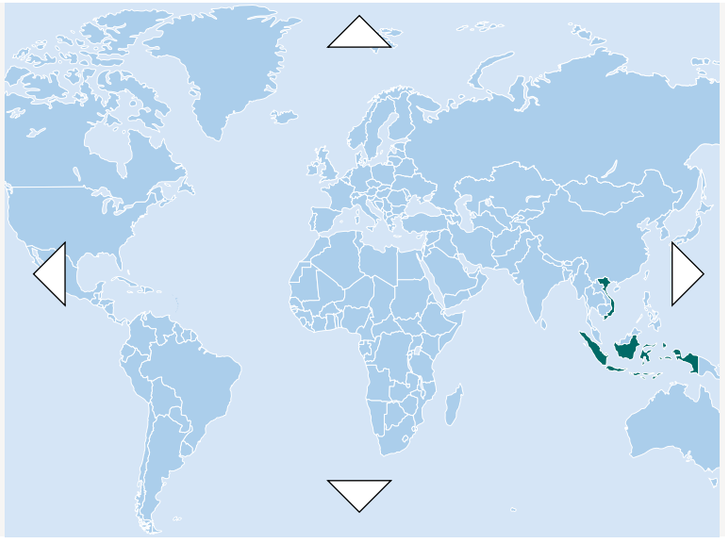
The project's attention to adaptation reflects the demand from government actors and communities. In addition to requests for practical adaptation actions, and the development of adaptation-planning capacities, requests arose as to how to institutionalise adaptation in the policies, regulations and everyday work of fisheries departments to strengthen enabling environments. This aspect needs to be targeted in follow-up projects.

Improving Biosecurity Governance and Legal Framework for Efficient and Sustainable Aquaculture Production

PICTURE

Fish market in Bogor, Indonesia.
Photo: Ken Opprann/Norad.

Improving Biosecurity Governance and Legal Framework for Efficient and Sustainable Aquaculture Production



Recipient FAO
Partners Norwegian Veterinary Institute and INFOFISH
Project period December 2018–June 2021
Geographic location Global, Viet Nam and Indonesia
Total budget NOK 12 447 400
2019 budget NOK 4 477 400

OBJECTIVE(S)

Aquaculture is poised to contribute to an ever-increasing share of the aquatic production (e.g. fish and crustaceans) for human consumption. Improving biosecurity will enable countries to grow more food efficiently, increase their incomes and thus strengthen their resilience, reduce their vulnerability and enhance their ability to respond to the impacts of higher food prices and other threats to food security.

The overall objective of this project is to assist national competent authorities and farming communities in preventing and managing diseases through enhancing their capacity for biosecurity governance, risk assessments, surveillance and emergency preparedness. The project can be divided into two components. The first is to assist national authorities in improving aquatic animal health and to develop a tool for this purpose, the PMP/AB (Progressive Management Pathway for improving Aquaculture Biosecurity including Antimicrobial Resistance (AMR)). The second is to review the legal framework on aquaculture, to strengthen and promote responsible and sustainable aquaculture production.

MAIN ACHIEVEMENTS

A visit to Indonesia to initiate engagement with officers in the Ministry of Marine Affairs and Fisheries (MMAF) was undertaken. Preliminary findings regarding weaknesses, strengths and recommendations for better

Improving Biosecurity Governance and Legal Framework for Efficient and Sustainable Aquaculture Production

aquaculture development were exchanged with relevant officers in the country.

A number of documents to assist stakeholders in improving aquatic bio-security are being completed: namely, (i) combined reports related to (1) and (2) (below) that included the PMP/AB checklist (ii) guidelines for the design and implementation of active surveillance of diseases in shrimp; and (iii) report of (4, below) that will also include a draft of the 'Decision Tree Manual for Responding to Aquatic Animal Mass Mortality Events'.

A total of eight activities were carried out with international aquaculture experts and national experts, including a field visit to meet with national authorities in Indonesia. These activities were organised to advance national and international expertise on how to improve aquatic biosecurity, through different methods and the development of the PMP/AB tool. In total, 159 participants, representing 31 countries, participated in these activities (details of which can be found in the links below).

1. Meeting related to the Progressive Management Pathway for Improving Aquaculture Biosecurity (PMM/AB).
2. The first field visit to Indonesia took place in May 2019, in which the surveillance work was carried out.
3. A roundtable discussion took place: 'Moving Forward through Lessons Learned on Response Actions to Aquatic Disease Emergencies'.
4. PMP/AB awareness-raising was initiated and is ongoing, through various communication streams: for example, this FAO document.

Regarding the second component of the project—the legal review to promote responsible and sustainable aquaculture production—the first draft of the legislative study is near completion. In parallel, the first draft of the Aquaculture Law Assessment and Review Tool (ALART) (a method/toolkit for legal analysis to improve the legal framework on aquaculture) has been delayed but is underway.

MAIN CHALLENGES & LESSONS LEARNT

For both components, issues related to the countries' endorsement of the project constituted a challenge. This will be mitigated through close liaison with FAO representatives and engagement with competent authorities. Furthermore, the circumstances resulting from COVID-19 have delayed field visits to Viet Nam.

Aquaculture Biosecurity. The originally planned active surveillance work for Viet Nam has now been converted to an introductory training course, 'Designing and Implementing an Active Surveillance for Aquatic Animal Diseases'. All other activities are proceeding according to plan, but have required continued adjustment due to the travel impact of COVID-19.

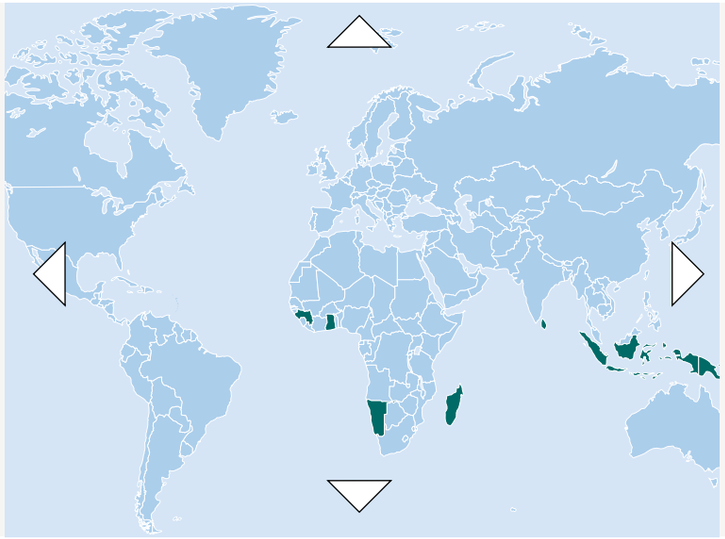
Aquaculture Legislation. As the project has not been finally approved by the countries' authorities, implementation support is expected to be limited from some authorities, and some missions have had to be cancelled at a very late stage. Attempts to expand country case studies to help expand the field for mapping trends and best practice has been partially successful.

Port State Measures Support Project

PICTURE

Training of port personnel in Conakry, Guinea through the project. Photo: FAO/Matias Salas.

Port State Measures Support Project



Recipient FAO

Partners The IMO International Maritime Law Institute (IMLI), Msida, Malta
The Australian National Centre for Ocean Resources and Security (ANCORS), University of Wollongong, Wollongong, Australia

Project period January 2018–June 2021

Geographic location Global, Small Island Developing States (SIDS), Ghana, Guinea, Indonesia, Madagascar, Namibia, Papua New Guinea and Sri Lanka

Total budget NOK 20 364 000

2019 budget NOK 10 364 000

OBJECTIVE(S)

IUU fishing is a major global problem causing detrimental effects to fish stocks, marine ecosystems and the livelihoods of legitimate fishers. The PSMA is the first binding international agreement that specifically targets IUU fishing. Established in June 2016, it outlines a minimum set of measures for countries to apply when foreign vessels seek entry into their ports or while they are in their ports. Robust implementation, supported by effective monitoring, control and surveillance (MCS) and supplemented by market access and trade measures, would also support the strengthening of fisheries management and governance. Many developing countries generally lack the capacity to prevent, deter and eliminate IUU fishing through the implementation of effective port state measures and the application of effective flag, coastal and market state responsibilities. The objective of the project is thus to improve the states' capacity to implement provisions and procedures consistent with the PSMA and related international instruments, regional mechanisms and tools to combat IUU fishing.

MAIN ACHIEVEMENTS

National strategies and action plans to address the requirements of the PSMA and complementary international instruments to combat IUU fishing have been drafted and delivered to the governments of Indonesia, Ghana, Madagascar and Namibia.

Port State Measures Support Project

Assistance was provided to Ghana and Indonesia to strengthen their national policy and legislative frameworks to combat IUU fishing. Several recommendations concerning legal reforms, the development of institutional frameworks and mechanisms for sustainable fisheries were identified for both countries.

Selected officials of key institutions in Ghana, Indonesia, Namibia and Sri Lanka have increased their applied knowledge of international fisheries law and enforcement through targeted training activities.

National means and competencies to carry out coordinated MCS operations to combat IUU fishing through port state measures and complementary tools have improved in Guinea. A review of MCS systems and operations was carried out in June 2019, resulting in an updated national strategy and roadmap for compliance with the PSMA. In addition, a Government Decree outlining the roles and responsibilities of relevant authorities was submitted to the Cabinet of the Minister of Fisheries for approval. The Decree was developed jointly by all responsible authorities. Finally, 23 officials increased their understanding of port inspection procedures in line with the PSMA through an intensive and customised training intervention.

The participation of developing countries in the Meetings of the Parties of the PSMA was strengthened, ensuring their voice and engagement at key events. The project funded participation of 37 participants from SIDS and other OECD-DAC countries in the second Meeting of the Parties and the third Meeting of the PSMA Part 6 Working Group held in Santiago, Chile, in June 2019. This represented 70% of the developing PSMA Parties, and 70% of all the Parties attending the meetings.

The understanding of the PSMA and its importance in combating IUU fishing was improved, through targeted outreach activities and the production of knowledge briefs and materials. The benefits of the PSMA were communicated, and adherence to non-parties were encouraged. Nine new countries deposited an Instrument of Adherence to the PSMA in 2019 (Bangladesh, Cambodia, Canada, Cote D'Ivoire, Ecuador, Fiji, Liberia, Vietnam, Trinidad and Tobago).

MAIN CHALLENGES & LESSONS LEARNT

Ensuring appropriate commitment of concerned national institutions and public officials engaged in MCS to the project's implementation is crucial for sustainable results. In some of the project countries, this has been a challenge, requiring continued policy dialogue to secure the necessary engagement of the stakeholders.

The limited project implementation period was a risk identified in the project design stage. Contributing to countries' adoption of relevant policies and legislation and thereby improved fisheries governance frameworks takes time. Supporting institutional change is a complex task, and future projects should consider longer implementation periods.

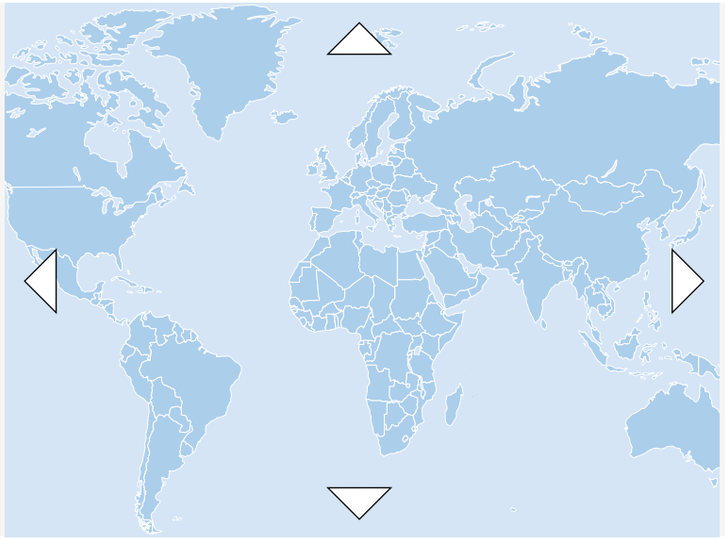
The risk of a lack of relevant expertise to assist in the implementation of the project materialised. As a mitigating action, FAO invested in developing its network of external experts. This now allows continuity in in-country assistance, which is also resulting in improved working relationships between FAO and the recipient countries' institutions.

FishNET

PICTURE

Workshop conducted with UNODC's country office in Yangon, Myanmar.
Photo: UNODC.

FishNET



Recipient United Nations Office on Drugs and Crime (UNODC), Global Programme for Combating Wildlife and Forest Crime (GPWLFC), Global Container Control Programme (CCP)

Partners N/A

Project period 2016–2020

Geographic location Global, regional and national

Total budget NOK 39 660 000

2019 budget NOK 15 548 563

OBJECTIVE(S)

The goal is to assist developing countries to more efficiently prevent, identify, investigate, prosecute and adjudicate fisheries crime. This is done through strengthening the legal and policy frameworks to address fisheries crime, enhance the criminal justice and law enforcement response to fisheries crime, enhance the capacity of law enforcement to detect and inspect fisheries crime in containers, and raise awareness at all levels to highlight the serious nature of organised fisheries crime.

MAIN ACHIEVEMENTS

Fifteen countries were assisted in effective prosecution of fisheries crimes and three countries were assisted in risk identification and mitigation strategies for corruption and economic crime in fisheries. Training evaluation results demonstrate that participants found the activities to be highly useful. Continuation is needed to follow up on the outcomes of the trainings and the corruption risk assessment and mitigation efforts.

In 2019, 341 officers were trained and a total of 25 activities were implemented. During mentorships and follow-up activities, it appeared that traction was gained in several countries in terms of inter-agency cooperation. Continued follow-up is still needed, however.

FishNET

During 2019, the GPWLFC continued to increase awareness at a national, regional and global level concerning fisheries crime, its links to IUU fishing and the importance for Member States to address these crimes. This was achieved through participation in five regional and international events.

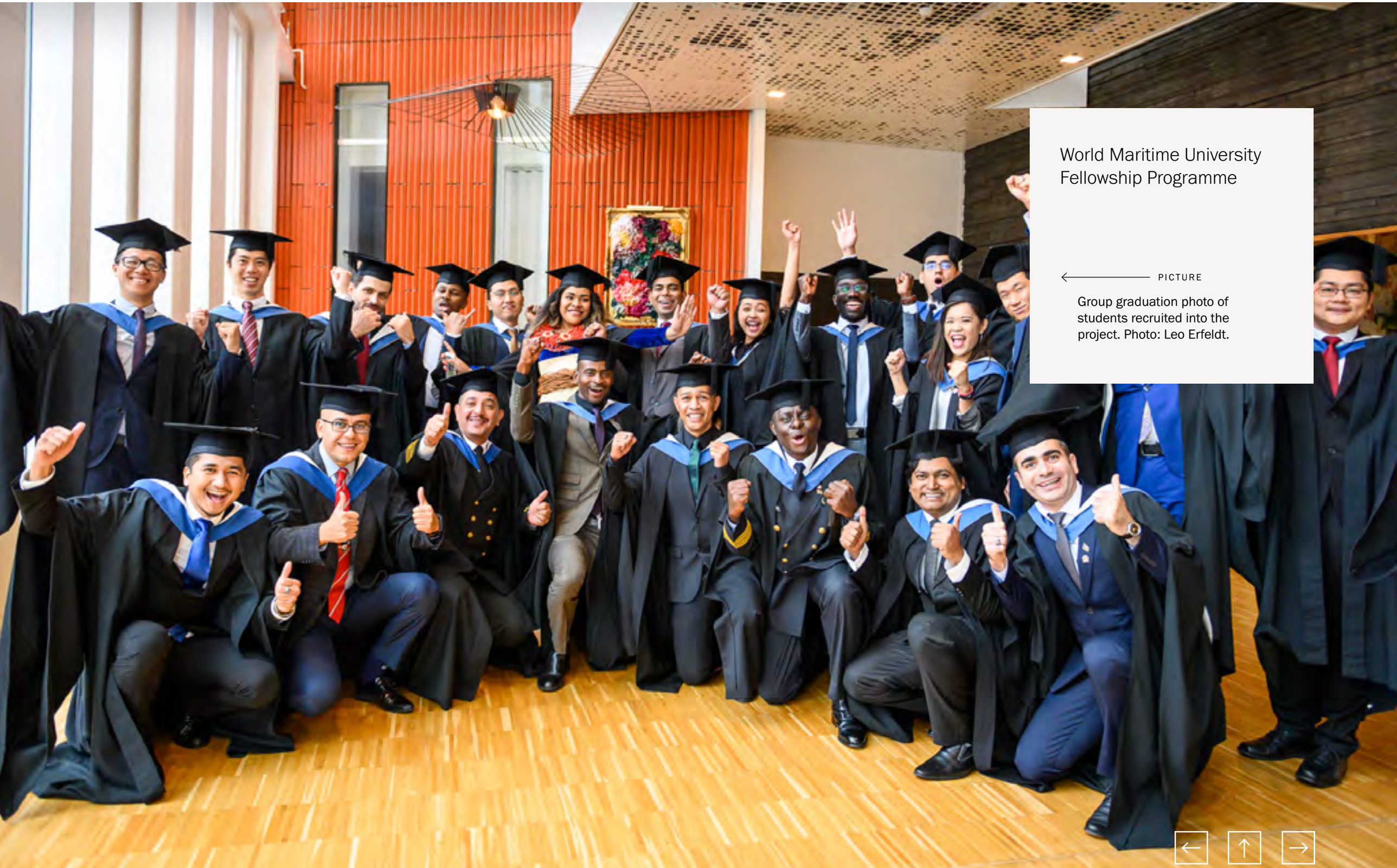
MAIN CHALLENGES & LESSONS LEARNT

Unexpected political circumstances and security risks in three target countries were encountered, which delayed the implementation of activities in these countries.

Although the project has emphasised awareness-raising of the complementary nature of addressing crimes in the fish value chain with IUU fishing, there are many missed opportunities to convey this message. Despite the fact that some states demonstrated an understanding of the links between the two issues, they have not made efforts to mainstream crimes in the fish value chain in relevant forums, resulting in a continued lack of political support for the subject. Conveying the key message explaining why Member States should address both IUU fishing and fisheries crime remains the exception and not the norm. Unless this is resolved, securing political buy-in for the concept will continue to be undermined.

Establishing fisheries focal points to interact with the Port Control Units on a regular basis was important. A fisheries crime mentorship checklist was developed to help monitor progress and bottlenecks in terms of fisheries crime specifically. A systematic approach to monitoring at the output level by means of standardised evaluation assessments of training activities—including satisfaction with/views on the relevance of the activity and acquired knowledge per topic (including human rights and gender equality)—was very useful.

Gender mainstreaming—beyond efforts to achieve gender balance in trainings/meetings and collecting gender-disaggregated data from participants—by introducing a standard training module on gender issues in the specialised fisheries crime training and supporting women's networks was highly valuable.

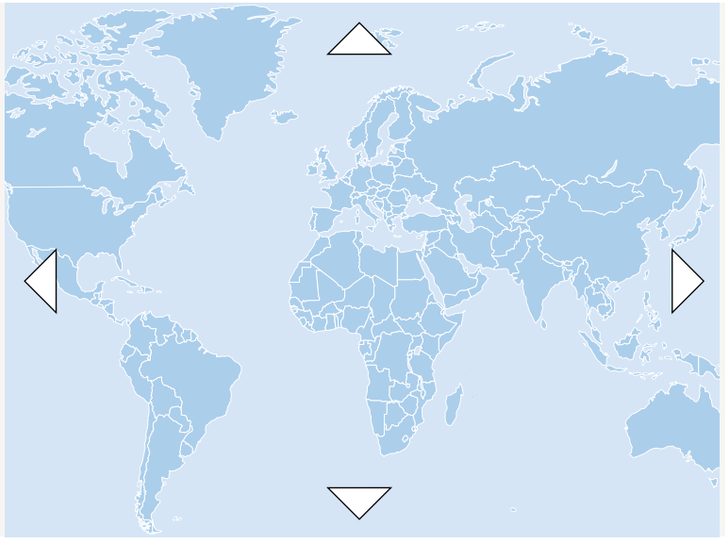


World Maritime University Fellowship Programme

PICTURE

Group graduation photo of students recruited into the project. Photo: Leo Erfeldt.

World Maritime University Fellowship Programme



Recipient World Maritime University (WMU)
Partners N/A
Project period September 2018–December 2020
Geographic location Global and Malmö, Sweden
Total budget NOK 10 010 000
2019 budget NOK 5 005 000

OBJECTIVE(S)

The programme's three main objectives are: (1) to enhance maritime expertise through postgraduate teaching and research in least developed countries and developing countries; (2) to assist in the achievement of the UN Sustainable Development Goals (especially those dealing with the protection of the marine environment and gender equality); and (3) and to assist governments in creating a platform for sustainable development through good governance.

MAIN ACHIEVEMENTS

The stated key performance indicatiors for the project were met. The students were recruited from the target countries, 100% of them graduated and their home governments are making significant use of the expertise they gained at WMU and their research projects. All the graduates returned to their home countries and 40% have already been promoted to more senior roles. Thus far, this project has resulted in 11 students having graduated and returned to 10 different home countries; 11 students from 9 countries are expected to graduate in November 2020.

MAIN CHALLENGES & LESSONS LEARNT

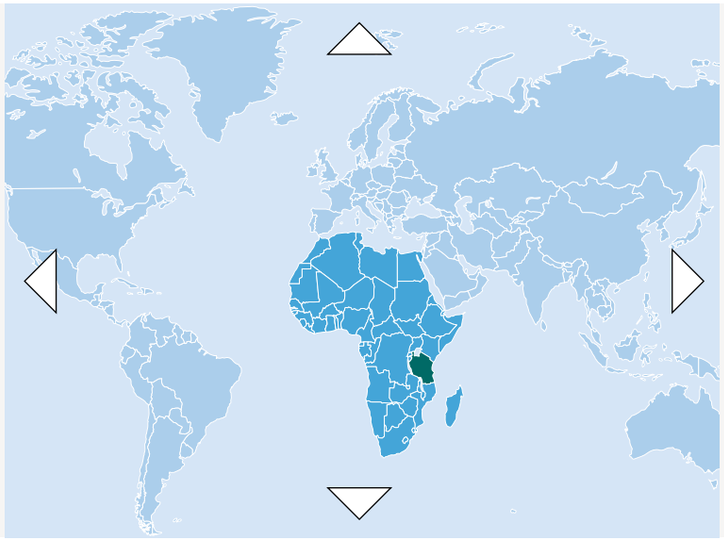
The project was successful. The students were carefully selected from a large pool of applicants to avoid academic failure, and in cooperation with the students' nominating governments. The university instructed the nominating governments that only able and ambitious members of their staff should be nominated, and that the governments had a commitment to continuing to employ the nominees after graduation. (One student was made redundant when he returned to his organisation after graduation, which was a consequence of a change in senior management.)

Enhancing the Contribution of Small-Scale Fisheries to Food Security and Sustainable Livelihoods Through Better Policies, Strategies and Initiatives

PICTURE

Group photo of the launch of the Tanzanian Women Fish Workers Association (TAWFA) in April 2019. Photo: FAO.

Enhancing the Contribution of Small-Scale Fisheries to Food Security and Sustainable Livelihoods Through Better Policies, Strategies and Initiatives



Recipient FAO

Partners Regional organisations, small-scale fisheries organisations, government institutions; Research institutions, CSOs/NGOs

Project period October 2015–December 2020.

Geographic location Global: focus on Illuminating Hidden Harvests study. Regional: focus on Africa. National: focus on Tanzania

Total budget NOK 61 000 000

2019 budget NOK 13 000 000

OBJECTIVE(S)

The specific objective of the project is to support the social, economic and environmental transformation of the small-scale fisheries sector towards its contribution to food security and poverty eradication in selected countries through improved policies, strategies and initiatives. In order to generate the expected results, the project is taking a demand-driven multi-level approach, including:

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— facilitating awareness raising, supporting relevant policy processes, strategies and their implementation, and preparing knowledge products at the global and regional levels.

— providing needs-based and technical support to countries on selected and well-defined issues through the implementation of key activities, including policy support, gathering and sharing of experiences, and capacity development at the national level

MAIN ACHIEVEMENTS

The project operates at all levels: national, regional and global. Three key achievements are detailed below.

— A National Task Team composed of government, civil society organisation and research representatives is currently taking steps to implement the SSF Guidelines in Tanzania. One such step was the launch of the Tanzanian Women Fish Workers Association (TAWFA) in April 2019. The network was accepted as a member of the African Women Fish

Enhancing the Contribution of Small-Scale Fisheries to Food Security and Sustainable Livelihoods Through Better Policies, Strategies and Initiatives

Processors and Traders Network (AWFISHNET), and the members of TAWFA conducted a thorough review of the Tanzanian fisheries law and submitted their views to the Ministry of Livestock and Fisheries Development. Only six months after the launch, TAWFA had over 200 member groups, reaching up to 6000 women.

— The project enabled the International Collective in Support of Fishworkers (ICSF) to take action in a number of countries around the world. Forty representatives of fisheries and regional organisations from across Africa have called for the strengthening of existing small-scale fisheries bodies and the creation of a new pan-African platform; this occurred at the three-day event jointly organised by WorldFish and FAO in collaboration with the African Union Inter-African Bureau of Animal Resources (AU-IBAR) and the Southern African Development Community (SADC).

— Strengthening the science–policy interface: Global study 'Illuminating Hidden Harvests: The Contribution of Small-Scale Fisheries to Sustainable Development' (IHH). This study is being conducted by FAO in partnership with WorldFish and Duke University and is based on a new standardised methodology to collect and collate small-scale fisheries data from different existing data sources at national, regional and international levels. A study including eight sub-studies showcasing good practices in support of sustainable small-scale fisheries was prepared in 2019. FAO commissioned these studies with the aim of sharing experiences and promoting the implementation of the SSF Guidelines. The case studies were also intended to promote participatory approaches—in line with the SSF Guidelines principles—and to promote increased interaction between research and fishing communities, including the use of traditional knowledge and participatory research. The card game 'GO small-scale Fish!ng' is an educational tool teaching the content of the SSF Guidelines through short, simple sentences and descriptive illustrations. It can be used in workshops, trainings, meetings or whenever small-scale fisheries are being discussed. The 'GO small-scale Fish!ng' game was developed for FAO by the Wageningen Centre for Development Innovation (a part of Wageningen University and Research) and tested in a training course in Wageningen in 2019.

MAIN CHALLENGES & LESSONS LEARNT

While the main external risk factors include political change, the internal challenges may derive from the participatory processes called for in the SSF Guidelines—these may be seen as slowing the implementation of the SSF Guidelines. However, the importance of these processes is evident in terms of the uptake of the SSF Guidelines by partners around the world, at all levels and ranging from governments and small-scale fisheries organisations to research and resource partners. Nurturing and further developing partnerships and related capacities will be key to the long-term sustainability of the activities carried out under this project. An important lesson learned thus far is the importance of strong advocates for taking the lead on driving activities and change, whether in the form of a research study coordinator, regional institutional partners or in-country multi-stakeholder teams.

Part II
EAF-Nansen Programme

PICTURE

Beach seine fishery in Benin. The Nansen programme assists Benin, Ivory Coast and Togo in implementing their management plans for beach seine fisheries, developed in the previous phase of the programme.
Photo: Jan Eriksen/Norad.

Part II EAF-Nansen Programme

Recipient: Food and Agriculture Organization of the United Nations (FAO)
Partners: Institute of Marine Research (IMR), Directorate of Fisheries
Local partner(s): Bangladesh, Benin, Cameroon, Capo Verde, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Gabon, The Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Liberia, Madagascar, Maldives, Mauritania, Mauritius, Morocco, Mozambique, Myanmar, Namibia, São Tomé and Príncipe, Senegal, Seychelles, Sierra Leone, South Africa, Sri Lanka, Tanzania, Thailand and Togo
Budget 2017–2021 NOK 637 550 000
Budget 2019 NOK 161 115 114

OBJECTIVE(S)

The EAF-Nansen Programme is expected to contribute to the long-term impact that 'People in partner countries are food and nutrition secure with improved livelihoods'. This is to be achieved through three main outcomes related to fisheries research, fisheries management and capacity development. The new programme period runs from May 2017 to early 2022.

The programme's three main outcomes are as follows:

Outcome 1: Fishery research institutions provide relevant and timely scientific advice for management

Outcome 2: Fisheries management institutions manage fisheries according to the Ecosystem Approach to Fisheries (EAF) principles

Outcome 3: Fisheries research and management institutions apply skills and knowledge gained through programme activities to manage fisheries

MAIN ACHIEVEMENTS

All in all, the research vessel Dr. Fridtjof Nansen (DFN) completed a total of 299 survey days in 2019, in which 229 scientists from 20 countries participated and received on-the job training.

The surveys started on 24 January in Cape Town with Leg 1, a survey of the Discovery Seamounts (Southeast Atlantic) organised in collaboration with the Southeast Atlantic Fisheries Organisation (SEAFO). Leg 2 was a transboundary demersal survey covering the main

Part II EAF-Nansen Programme

species in the Benguela Current Convention region. This leg was supposed to continue to Cape Lopez (Gabon) but unfortunately, due to security reasons, both the Congo and Gabon could not be covered. An alternative survey was planned in the area beyond national jurisdiction of the Gulf of Guinea, to study oceanography and ecology between Luanda and Ghana (where the vessel would start Leg 3). This leg was aimed at covering the pelagic and demersal resources of the continental shelf and upper slope, from Ghana to Guinea Bissau. Leg 4 (Senegal to Morocco) provided a complete coverage of the pelagic resources of Northwest Africa, thus contributing to the time series developed by the EAF-Nansen programme since 1990. During the year, two mesopelagic transects were carried out, one off Namibia and one just south of the Canary Islands, to repeat the coverage of 2017 and add data to the mesopelagic work.

Ten specific science plan meetings and workshops were organised by the programme, in addition to dedicated training workshops and work visits. Many of the identified research projects are advancing well; as a result, most scientific research themes (determined in the science plan) have now moved into the implementation phase, based on the updated descriptions and work plans (although some are more developed than others). The data and samples that were collected support the implementation of the EAF-Nansen science plan. Over 60 scientific papers are under development in partnership between IMR scientists and partner country scientists, and more are planned. Seven scientific papers were published in 2019, of which 4 had women as authors or co-authors. These papers cover the aspects that were defined as priorities in the science plan, which in turn address the main challenges of ocean sustainability (unsustainable fisheries, pollution and climate) as defined in the project document.

While results from the surveys are already being used in analyses and assessments conducted by the regional assessment working groups of the partner Regional Fisheries Bodies (RFBs), the research projects' results will also be integrated into those discussions in the future, as well as in the small projects on fisheries management developed under Outcome 2. The data sampled during the surveys provide input on stock assessment, recruitment studies and management plans. For example, data and biomass estimates from the DFN surveys are used in the regional stock assessments of the Commission for the Eastern Central Atlantic Fisheries (CECAF); results from the surveys and knowledge on vulnerable marine habitats in the Areas Beyond National Jurisdiction (ABNJ) of the South East Atlantic Fisheries Commission (SEAFO) are used to limit fishing activities accordingly.

The surveys in 2019 took place in West Africa, where a key objective is to contribute knowledge for the management of shared stocks and where scientific work is ongoing. Results from this work will be integrated into management as they become available, and as the framework for collaborative management on shared resources reaches a more advanced status.

MAIN CHALLENGES & LESSONS LEARNT

The new vessel and the scope of the EAF-Nansen Programme provide a wealth of opportunities to increase knowledge on key aspects of ocean sustainability. However, taking advantage of these

Part II EAF-Nansen Programme

requires intensive work around planning and implementation, especially in relation to sample collection and analysis and organising work with many different partners. Routines have been developed in order to streamline the work and responsibilities, but there is still room for improvement.

Efforts are being made to better integrate and coordinate the different steps involved in planning the surveys, including discussion with partners (including RFBs) on the broader survey objectives; developing specific sailing orders with cruise leaders and co-leaders and other scientists/technicians involved in the survey (e.g. science plan team leaders, survey and research coordinators); and planning sample collection, related instrumentation, analysis, report writing and delivery of survey results through specific policy/management briefs. A challenge here is to ensure the communication and active participation of relevant staff from Norway and participating countries for each leg, to strengthen ownership of the surveys and their results. This requires intensive coordination of and from all involved.

The amount of data being collected has increased substantially since the previous phase of the programme, both because of improved technologies but also due to the expanded scope of the surveys. IMR is addressing this challenge by dedicating specific staff to the project.

Participants from 29 partner countries in Africa and Asia attended the EAF-Nansen programme forum in Benin, 5–6 November 2019. Photo: FAO.

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Cover photo: CER Project Team conducting interview with Fishermen in Tyre while baiting their trammel nets with imported mackerel and complaining about the doubled-up cost of these fish baits. April 2020.
Cover photo: Ziad Samaha, IUCN.

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