

Beyond Dramatic Imagery

While Seychelles Blue Bond scheme for conservation funding is often portrayed in glowing terms, the initiative has several inherent contradictions

In 2011, Seychelles began a collaboration with The Nature Conservancy to restructure the country's debt and plan a new conservation area. The so-called 'debt-for-nature swap' freed up funds from Seychelles' cumbersome national debt, helping fund a new conservation area with 'no-take' and 'sustainable use' zones. The deal was finalized in 2016. Since then, media outlets around the world have hailed the project that has now rezoned approximately 350,915 sq km of ocean as conservation area.

Such staggering numbers make it easy to rally behind the effort. Headlines like 'Seychelles preserves swathes of marine territory in debt-for-nature deal', or gimmicks like 'Debt for dolphins' appeared in British media outlets in early 2018, after the first areas were protected. In October 2018, the hype shifted to Seychelles' launch of the Blue Bond for conservation funding. It is an additional financing mechanism for conservation and development.

The initiative uses marine spatial planning to minimize conflict among ocean activities. Yet it has invited to the

The Nature Conservancy hopes to replicate this model in other countries, claiming that 'everybody wins' from this debt swap. (See the TedTalk titled 'An ingenious proposal for scaling up marine protection'.) It is important to not take their word as a given. A critical analysis shows contradictions inherent to the initiative.

What is the Seychelles Blue Bond? How did it come about?

The Seychelles Blue Bond is a pilot project led by the World Bank. Interviews available online with representatives from the initiative suggest the idea was first discussed among Seychelles, the Prince of Wales' Charities International Sustainability Unit and the World Bank. The bond was devised to gather private capital from investors hoping to profit from projects that have positive environmental outcomes. Three US-based investment firms—Nuveen, Prudential Financial and Calvert Impact Capital—invested US\$5 mn each in the bonds, hoping to receive in ten years their principal amounts plus interest.

Repayments of this US\$15 mn, plus interest, will come from Seychelles' national budget. The World Bank and the Global Environmental Facility (GEF) stepped in and reduced investor risk, lowering Seychelles' interest repayment costs by providing it additional credit and guarantees. Put simply, a 'blue' bond is like a regular bond, but the capital raised must go towards environmentally friendly projects related to the ocean.

Seychelles needs alternative funding for conservation because its economy depends on sustainable use of marine resources and is vulnerable amid global economic crises. Firstly, Seychelles' biggest revenues derive

Seychelles needs alternative funding for conservation because its economy depends on sustainable use of marine resources.

negotiating table industries with a poor environmental track record, including tourism and aquaculture entities. What's more contentious, though, is the presence of industries like oil and gas exploration. It is also not clear exactly how debt-for-nature swaps and blue bonds promote conservation success and sustainable development.

*This article is by **Patrick John Bolliger** (patrick.bolliger@nmbu.no), a master's student in International Environmental Studies at the Norwegian University of Life Sciences (NMBU), Ås, Norway*

from tourism arrivals and export of fish products, with a large share stemming from European markets. It has to import essential commodities like oil and gas and has been hit by increasing energy prices. It sits precariously at the whim of some European countries.

The country's foreign debt became too much for its small economy after the 2008-2009 global economic crisis. It forced the government to accept assistance from the International Monetary Fund (IMF) and the World Bank; the loans were tied to austerity measures. Despite this, Seychelles has maintained a strong social welfare system. Besides, Seychelles is now categorized as a 'high income country', limiting its access to development aid. Its small-scale fisheries are said to be overcapitalized. That is, its fishing efforts have increased while catches have remained relatively stable. They mainly target demersal species through trapping and line fishing in near-shore waters.

This led to another World Bank project called SWIOFish3 (Third South West Indian Ocean Fisheries Governance and Shared Growth Project). The aim of the project is to

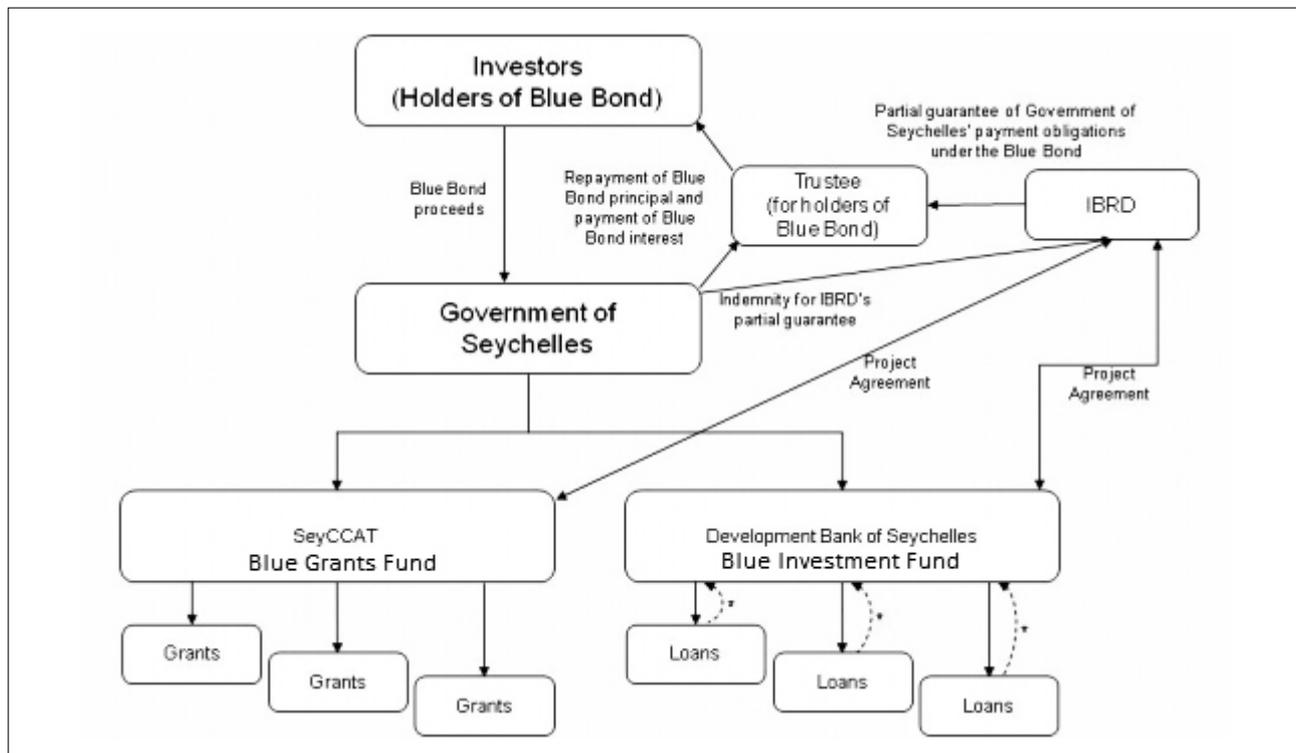
assist Seychelles in regulating its fishery and extending its value chains. It is a programme to improve governance and guide the State's fisheries policy. Since fish resources are central to Seychelles' economy, new fishing regulations are a part of conservation efforts and SWIOFish3 directs some blue bond capital towards achieving these ends.

What type of projects will the blue bond support?

Capital from the blue bond and the debt-for-nature swap will be distributed to projects that support marine conservation, sustainable development or ocean research. Therefore, US\$3 mn raised from the blue bonds was combined with US\$20.2 mn freed up from the debt swap and placed in a national trust fund called SeyCCAT (the Conservation and Climate Adaption Trust of Seychelles).

This trust fund channels money to the marine spatial planning initiative and gives grant funding to businesses and scientific research projects by application through the subsidiary 'Blue Grants Fund', while the remaining US\$12 mn in bond capital is dispersed via the Seychelles Development Bank

Figure 1. Blue Bond Proceeds – Flow of Funds



Source: World Bank. (2017). Project Appraisal Document (PAD2156)

as easy loans to businesses through the bank's 'Blue Investment Fund'. To receive these loans, business projects should comply with the World Bank's environmental and social safeguards.

With SWIOFish3 aiming to extend fisheries value chains, projects will mainly target fish-processing activities. Research and business projects in sectors such as aquaculture, fish processing, product development, and biotechnology to produce fish oils and protein extracts, for example, are eligible for such loans.

Indeed, there are many business opportunities in fish processing to increase the use of fish by-products that may otherwise have been wasted. By extending fisheries value chains, while at the same time restricting fisheries, the World Bank hopes that

To help include Seychelles' fishers in designing the new regulations, the blue bond also helps fund a marine spatial planning (MSP) initiative.

more value can be extracted from fisheries without increasing fishing pressure. Considering this, the Seychelles blue bond and SeyCATT are crucial for stimulating innovation and economic growth, but also for funding the implementation of stricter fishing regulations.

Why is the Seychelles' conservation initiative problematic?

Some Seychellois have reacted negatively to the new conservation initiative, particularly due to new fishing regulations and the government's ambitions to extract oil and gas from the country's exclusive economic zone (EEZ). To help include Seychelles' fishers in designing the new regulations, the blue bond also helps fund a marine spatial planning (MSP) initiative. The initiative is commendable for its iterative approach to planning and zoning Seychelles' EEZ with stakeholder inputs over a long period (2014 – 2020). However, early in the process, one environmentalist

criticized the purpose, feasibility and the lack of transparency in deciding to implement the MSP process. Summaries from several years of stakeholder workshops conducted within the MSP process portray dialogue among stakeholders vaguely. Discussions are reduced to one-line summaries that mask the inherent politics negotiated at such events (see www.seymsp.com/outputs/documents/).

The MSP process has come in for criticism in other contexts, too. In the US, MSP was considered instrumental in defining how plans will operate, rather than informing the overarching goals of the project. In Europe, researchers described how the authorities' strong will to implement strategic economic development objectives over-ruled stakeholder priorities.

In Seychelles, fishers have voiced concerns in the media over stricter fishing regulations. As of this year, boat owners and fishers must purchase licences. In return, the government has pledged to build more infrastructure such as ice facilities and docking areas. Still, one article in *Euromoney*, a finance magazine, quoted a fisher as saying "things are only getting harder for us", referring to bycatch law changes and new rules that make it more difficult for them to access fuel subsidies.

"There are so many of these small things that all add up and impact our lives for the worse. Why would we believe that the final plans for the MSP will work in our favour?" asked the fisher. A recent BBC article also suggests that some fishers feel the new rules are inequitable, with one fisher saying: "I think having a protected area is good, but what has happened now is simply to me a publicity stunt. We have [...] to make sacrifices - but sacrifices should not come only from the fishermen". Additionally, some environmentalists disagree with Seychelles' goal to establish an oil and gas industry within its EEZ.

Through the MSP process, The Nature Conservancy and Seychelles are incorporating input from the state-owned oil and gas company, PetroSeychelles. While oil and gas are currently in the exploratory phase

in Seychelles, it seems the country anticipates a commercially feasible oil strike. For example, a tax regime for oil extracting companies was enacted in 2008, and then reformed in 2013. The World Bank also donated funds to support Seychelles in implementing an initiative to ensure transparency in their oil and gas industry.

This contradicts Seychelles' reputedly 'green' image. However, since the country's economy is largely dependent on importing petroleum for energy, the Seychelles government believes that establishing its own oil and gas supply can reduce the effect of international price fluctuations, providing new jobs and economic growth. A map provided by PetroSeychelles shows that exploration blocks, currently leased by an Australian company known as Sub-Saharan Resources Ltd., lie about 25 km from the outer islands of the main archipelago. On the other hand, exploration wells lie much further afield, about 100 km west of the main islands.

According to Seychelles MSP documents, it is still unclear how oil and gas will be regulated in new 'sustainable use zones' and talks regarding a 'decision-matrix for vulnerable habitats and petroleum' are ongoing. Nevertheless, if The Nature Conservancy plans to replicate the 'blue bond for conservation' model, support for oil and gas extraction should not be a corollary in other countries.

A few independent academic articles have assessed Seychelles' conservation funding. A 2018 article analysed project documents from the Seychelles MSP and its funding system, warning against mirroring the Seychelles model in other places. It argues that the US\$21.6 mn resulting from the debt swap to capitalize a trust fund does not reflect the value of the ecosystem services within Seychelles' EEZ. However, the funding was earmarked to help protect and sustainably use Seychelles' ecosystem services, not to value and commodify them. It also points to a lack of transparency in the blue bond, questioning how it will translate to increased biodiversity and ecosystem

service protection. Yet, it does not analyse the SWIOFish3 project's role in reducing pressure on fisheries in Seychelles. Other reports have since clarified transparency issues to some degree.

What do we learn?

Seychelles' new conservation funding scheme is complex. Conservation there is intrinsically tied to economic development and profiting from ocean resources. This applies to most people living in Seychelles, but also to blue bond investors abroad. However, measuring the impact of projects funded by the blue bond on the environment is somewhat distorted by Seychelles' parallel effort to exploit oil and gas resources within their conservation area. Nevertheless, in a country dependent on importing energy across the sea, producing their own oil and gas might be a more environmentally friendly approach.

Even so, the Seychelles initiative has been dramatized as a victory for conservation due to the massive area now protected and because of its 'innovative' funding scheme. This is often portrayed with the imagery of iconic tropical marine habitats and fishers hauling in their catch. However, the lack of social scientific analysis on the effects of different facets of planning, participation and fishing regulations that have resulted from the debt swap and blue bond funding creates a research gap. It needs to be filled. If The Nature Conservancy plans to scale up this form of conservation financing, especially in countries that are less democratic and wealthy than Seychelles, they must ensure that those who lose out from conservation have an adequate safety net. Furthermore, The Nature Conservancy should work more actively to detach their conservation initiatives from non-renewable energy sources to avoid contradicting the aims of their projects. 

For more

<http://www.fao.org/blogs/blue-growth-blog/innovative-ocean-financing-seychelles-blue-bonds/en/>

Innovative Ocean financing: Seychelles Blue Bonds

<https://www.worldbank.org/en/news/feature/2018/10/29/sovereign-blue-bond-issuance-frequently-asked-questions>

Sovereign Blue Bond Issuance: Frequently Asked Questions

<http://www.seychellesnewsagency.com/articles/3127/Should+Seychelles+keep+it+in+the+ground+Finance+minister+responds+to+oil+exploration+concerns>
Should Seychelles keep it in the ground? Finance minister responds to oil exploration concerns

<http://glispa.org/commitments/11-commitments/208-seychelles-blue-economy>

Seychelles' Blue Economy Strategic Policy Framework and Roadmap: Charting the Future (2018-2030)

Labels from Paradise

The artisanal fishermen of the Seychelles are experimenting with labels to promote responsible and sustainable fisheries

For fishermen of the Seychelles, 14 December 2009 was a red-letter day. That was when the first consignment of 250 kg of labelled fish (red snapper, jobfish and groupers) was shipped to Rungis, the wholesale food market in Paris, much to the delight of French restaurateurs who are already demanding more of such fresh tropical fish, whose traceability is guaranteed by the label tagging done on board the fishing vessel by the fishermen themselves.

But behind the pretty, picture postcard image of the Seychelles as a tranquil holiday paradise lies the

fishers, especially hook-and-line fishermen, play the most important roles in the nation's fisheries.

The Seychelles produces 450,000 tonnes of fish per year, and nearly 4,000 people (about 15 per cent of the active population) are engaged in fishing and fishery-related activities, which comes second behind tourism, as the country's most important economic activity, contributing to 40 per cent of its national income.

Industrial fishing was initiated in 1983 when around 40 tuna seiners, mostly of European (French and Spanish) origin began operating out of Victoria. The Seychelles' EEZ is very rich in tuna (yellowfin and bigeye), and 350,000 tonnes of tuna are landed annually, much of which is processed onsite by Indian Ocean Tuna (IOT), the second-largest cannery in the world, which employs over 2,000 people. Around a hundred foreign longliners annually harvest about 88,000 tonnes of tuna, swordfish, sharks and sea cucumber.

Source of protein

Artisanal fishing accounts for an annual production of 4,000 tonnes of fish—emperors, red snappers, jack fish, jobfish and groupers represent 83 per cent of the catch, whereas mackerel, tuna, sharks and octopuses share the remaining 17 per cent, caught close to the shore. In a country where each inhabitant consumes an average 62 kg of fish per year (compared to 21 kg in Mauritius and 60 kg in Japan), fish is the primary source of protein and ensures food security for the population. The 1,700 or so fishermen who depend on the future availability of the Seychelles' fish

The 86,000 inhabitants of the Seychelles come from a melting pot of colour, culture and race, from five continents.

reality of a people whose daily lives are intimately bound up with the mercy of the ocean.

Strategically located in the middle of the Indian Ocean (1,800 km from the African coast, 1,100 km off Madagascar and 2,500 km from India), the Seychelles consists of 115 granitic and coral islands occupying a land area of 453 sq km (for comparison, France occupies 549,000 sq km). The archipelago has an immense exclusive economic zone (EEZ) of 1,340,000 sq km, rich in fishery resources.

The 86,000 inhabitants of the Seychelles come from a melting pot of colour, culture and race, from five continents. Each family has some link with the marine world and artisanal

This article is by **Virginie Lagarde** (fboa.labelproject@sfa.sc), Project Manager, FBOA Label Project, Fishing Boat Owners Association, Seychelles, and **M. Gilles Pommeret**, (gilles.pommeret@diplomatie.gouv.fr), Premier Conseiller-Ambassade de France aux Seychelles

resources face several difficulties, namely, rising living and operating costs, competition with industrial fisheries, environmental degradation, and climate change. From 2010, the certification of fish and fishery products as originating from legal fishing (not from illegal, unreported and unregulated or IUU fishing) will become mandatory for exports. Though good in principle, this new requirement could create problems with the amount of checks required for certification.

Hook-and-line fishing, which is selective of both species and size, is the oldest and most widely practised fishing technique among artisanal fishers in the Seychelles. Three types of line fishing are practised: set bottom fishing, ball bottom fishing (in which the bait—mackerel or bonito—and part of the line are coiled into a ball with sand) and bottom fishing adrift. The main catch is snappers (red snapper, humphead red snapper), jobfish, jacks and multicoloured groupers.

Until the 1980s, small-scale coastal fishing was carried out from wooden canoes made from almond trees, using traps, longlines or purse-seines.

The liners originally used wooden whalers (open canoes with sails) or small schooners, all built of timber from the *takamaka* tree, which withstands rot. The most famous shipyards were those on the islands of Praslin and La Digue. For years, the fish was salted on board. This practice began to change in 1967 with the arrival of ice on the island of Mahé, through the service of the brewery Seybrew, the first industrial unit to manufacture and sell ice.

Today, whalers and schooners, of flamboyant colours and 6-16 m long, are built from fibreglass, more often in Sri Lanka, and equipped with diesel engines of 40-45 hp. Shipyards have virtually all disappeared from the Seychelles. The ones which survived, such as the Souris shipyard in Victoria, are adequate for maintenance and expansion services. Many owners prefer to refurbish boats rather than order new ones.

The fishing crew, exclusively male (with notable exceptions), consists of a

skipper and three to six crew members. They leave for the open seas for six to 12 days, up to the limits of the Seychelles continental shelf, between 20 to 100 miles (161 km) from Mahé. Some even go as far as the Amirantes islands. Fishermen from Mahé leave port early in the morning from Victoria, Anse Royale, Anse Boileau or Bel Ombre. Those from Praslin leave from Baie Sainte Anne, while those from La Digue depart from La Passe. They sail at six knots to reach the fishing grounds, whose location is a jealously kept secret. As soon as the wind picks up, the sail is hoisted to save precious fuel. All vessels are equipped with a global positioning system (GPS) and a very high frequency (VHF) radio, and some even have vessel monitoring system (VMS). They fish on the slope of the shelf or on shoals at a depth between 20 and 60 m. For bait, they use skipjack tuna discarded by purse-seiners (as bycatch) or, rarely, locally caught mackerel.

Fishers' stories

Many Seychellois fishermen have powerful stories to tell, and no two stories are alike. Some were brought to the profession by destiny, others by passion. Patrick, a young skipper of a small longliner, says: "In my family, there was no sailor or fisherman; it was

MARC SAMBI/FBOA



Hook-and-line fishing, selective of both species and size, is the oldest and most widely practised fishing technique in the Seychelles

not an acceptable profession. Some even tried to discourage me. But for me... it was obvious... I had no doubt that my life would be spent on the sea". Today he is proud to be in charge of the *MV Pisces*.

Keith, another fisherman, says: "In my family, we had no idea what would be the job of a fisherman. Yet I was secretly very attracted to the profession, especially when I listened to stories of my friends who were sons of fishermen. I made this choice against the advice of my family, and I do not regret it, even if the situation has become more complicated nowadays".

Many regard fishing as the refuge for dropouts. And yet fishing has created several respectable and independent men with a high social status and promising careers.

Rose, from Praslin, nicknamed "Serieux-Vrai", ("Serious-Honest"), is indeed the perfect example. "At school, I felt out of place, marginalized, was never listened to and was misunderstood by teachers or

Though fishing boats have improved over time with modern fittings and deck cabins, the living conditions on board are still very hard.

students," he recalls. "I was not very talented with what I was asked to learn. However, I knew the names of all the fish as well as how to bring up the lines better than anybody else. I started going to sea at 14 years and every day I learned something new! Gradually, I acquired a real know-how, and now I'm in charge of a small boat. This work allows me to feed my eight children and to be happy and respected".

Some families have had a bond with the sea for generations. These 'clans' are proud of their profession, around which the family is organized. Take the case of Ken, Elvis and Beatty, three brothers who are united in complementing one another in fishing. Elvis is the skipper of the *Albacore*, a beautiful longliner co-owned with Beatty and their wives. Ken is the

owner of *La Fleche*, which he commands along with his son, as well as another small boat. Both practice *palangrotte* fishing (a simple technique involving lengths of nylon and a few hooks, payed out by hand or left dangling from a floating piece of cork). Beatty, a former banker, is very actively involved in managing the family business and also owns a small schooner. "Fishing is our business and our livelihood, but it is important that it allows us to live longer and that future generations get to enjoy it. It would be foolish to cut the branch on which we sit. Fishing is sustainable if it is managed on a long-term basis. Our vision is the sustainable development of our fisheries through responsible management of our resources," he says.

Though fishing boats have improved over time with modern fittings and deck cabins, the living conditions on board are still very hard. Some have not enough space for the crew and rest areas are very restricted. According to Boboy, who owns the schooner *Labrine* on the island of La Digue, "The fishers, who go for eight to 12 days, must feel good on board... It's their second home! This is important because the job is hard and if conditions remain difficult, no young person will want to take to fishing, even with a good salary!".

Some boats may well follow the career of their skipper-owners. *Labrine*, for example, has been sent to the shipyard four times since Boboy had it built in 1984. "It might be more profitable to sell this boat and buy another," he says, "but *Labrine* is my boat, my second home, my livelihood and I could never work on another boat, just like my crew. Besides, *Labrine* was developed in our company and has evolved there. It resembles us and we know very well how to work on it".

Red snapper

Perhaps the most emblematic fish in the Seychelles is the red snapper (*Lutjanus spp*), whose exceptionally enticing taste has inspired chefs into creative recipes. Seychellois cook it the Creole way for special occasions and family celebrations. Bottom

fishing is the main technique used to catch red snapper, mainly by artisanal day fishers. The schooners that leave for several days are equipped with hand or motorized reels to haul in the catch.

The bait used is usually mackerel or other fodder fish; sometimes artificial bait is used. The hooks used are 'circle hooks', which avoid the catching of turtles and seabirds, strictly protected in the Seychelles. The size of a hook determines the size of the fish caught, and so only adult red snappers that have already reproduced are captured. The lines are used in a wide range of depths, depending on the location, the current or the season. This technique makes it possible to fish in rocky depths where the fish can hide.

Equipped with lines, hooks and bait, the schooners leave for six to 12 days in search of *bourgeois* (snapper), jobfish, groupers or trevallies. During the trip, the men will have very little sleep and must share the small restricted space. Their courage is fuelled by short periods of sleep and meals prepared with care by one of them. It takes courage and patience to find the place and time for that magic haul. It also takes courage to fight fatigue and the sea, which can be capricious and dangerous. Each year many lives are lost at sea, especially during the southeast monsoon, which generates very strong gales, just like in the Mediterranean.

Fish is the single most important source of food and protein in the Seychelles. It is also part of the culture and heritage of the country. But serious threats to artisanal fishing are emerging: the rise of industrial fishing and farming, and the influx into the market of fish from multiple sources, often caught by destructive and unsustainable methods. In addition, capital costs and current prices do not provide enough returns for a decent living for artisanal fishermen. These factors have encouraged Seychellois fishermen to look for new opportunities and solutions. An active group is involved in a labelling programme in partnership with the Association des Ligneurs de la pointe Bretagne (ALPB), a group of hook-and-line fishermen,

who catch mainly sea bass in Brittany. They have organized themselves with the support of the Fishing Boat Owners Association (FBOA).

The partnership between the two associations has led to an exchange of knowledge and experiences about the future of fisheries, the management of resources, and globalization.

Drawing on the guidelines of the Food and Agriculture Organization of the United Nations (FAO) for labelling of products from marine capture fishing, the partnership focuses on the changing needs of today's consumers, who are sensitive to information about seafood quality and origin, the fishing techniques used to land the catch, and their environmental impacts. Fairness in trade and working conditions is also an increasingly important criterion in consumer choice.

Under the partnership programme, a label will accompany each fish until it reaches the consumer. The label will inform the consumer who caught the fish, where and how. A strong and direct link is thus established between the fisherman and the consumer.

The labelling campaign is focused on seven species of fish. It will allow fishermen to participate in the management of resources while improving their incomes. The first order of labelled led to a 25 per cent increase in the price of fish sold, despite market sluggishness.

The programme has opened up new opportunities for Seychellois fishermen, allowing them to demonstrate the selectivity of their fishing techniques, to stand out from the industrial fishing sector, and to become real stakeholders in the management of resources. Hook-and line fishermen are committed to prove that sustainable fishing is possible and that consumers can choose products from a responsible fishery. The Seychelles' hook-and-line fishermen appear set to take charge of their destiny.

SEYCHELLES HOOK AND LINE FISHERMEN ASSOCIATION



The label will inform the consumer who caught the fish, where and how

For more 

seychelles-hookandline-fishermen.org
Seychelles Hook and Line Fishermen Association
www.sfa.sc
Seychelles Fishing Authority