GEF Small Grants Programme

Sustainable Reef Fisheries Management in the Protected Rodrigues Lagoon

Title	Database #	Grantee	Focal area	Start date	Amount	Cofinancing
"Sustainable Reef Fisheries Development in the Rodrigues Lagoon"	MAR/01/02	The Shoals Rodrigues Association	Biodiversity, International Waters	5/2001 - 5/2004	US$ 42,254	US$ 37,500
"Marine Environmental Education in the Community"	MAR/04/01	The Shoals Rodrigues Association	Biodiversity, International Waters	1/2005 – 12/2006	US$ 37,019	US$ 61,015
"The Development of Ecotourism in Rivière Banane as an Alternative to Fishing"	MAR/SGP/OP4/RAF/07/02	Ocean Tribe	Biodiversity, International Waters	12/2007 – 4/2009	US$ 49,226	US$ 23,566
"Small-scale Animal Husbandry as a Sustainable Alternative to Fishing"	MAR/SGP/OP4/CORE/07/03	Association des Pêcheurs de Riviere Banane	Biodiversity, International Waters	12/2007 – 4/2009	US$50,000	US$ 40,991
"Empowering the SEMPA Fisher Community through Ecotourism Development"	MAR/SGP/OP4/YR2/RAF/08/03	Association des Pêcheurs du Parc Marin du Sud	Biodiversity, International Waters	6/2009 – 9/2010	US$49,959	US$ 17,825
"Improving Management Effectiveness for the Marine Protected Areas of Rodrigues"	MAR/SGP/OP4/YR3/CORE/09/04	The Shoals Rodrigues Association	Biodiversity, International Waters	7/2010 – 5/2012	US$47,010	US$ 92,759
"Alternative livelihoods and support for sustainable marine resource management in Rodrigues"	MAR/SGP/OP5/Yr2/CORE/BD/13/07	The Shoals Rodrigues Association	Biodiversity, International Waters	6/2013 – 10/2014	US$ 150,000	US$ 59,640

Project Description

These projects funded by the GEF Small Grants Programme, started in 2001 and aimed to protect the Rodrigues Lagoon through the creation of 4 Marine Reserves with the collaboration of fisher communities. Indeed, after decades of poor regulation in the fisheries sector, the resources in the lagoon have been overexploited leading to a rapid decline in the octopus stock and fishery. These numerous SGP funded projects were critical in leading to the decision of the local government to temporarily close the fishery to allow octopus stocks to recover and catches to increase. Through the SGP projects, it became clear to all

stakeholders that it was important to provide alternative activities to redundant fishers. The Government thus came forward with voluntary retirement compensation to fishers.

Background and Context

Rodrigues is a semi-autonomous dependency of the Republic of Mauritius, situated within the Mascarene Archipelago, a recognized global biodiversity hotspot. The island is of volcanic origin and is encompassed by an extensive fringing reef, with a wide shallow lagoon that covers an area of 240 km^2.

Fisheries are a vital source of employment, income and subsistence livelihoods in Rodrigues and have an important role in the local culture and tradition and their sustainable management is thus a priority. The fisheries of Rodrigues are highly multispecies with over 100 fish species from a diverse range of families recorded from fisheries sampling so far, and a variety of invertebrate species are also exploited. However, through the years, intensive fishing pressure in the lagoon has resulted in drastic declines of both finfish and invertebrate landings and degradation of lagoon habitats. Some important commercial species could become rare or even locally extinct if they are not protected. Surveys indicate that annual landings of lagoon fish fell from 1,240 tonnes in 1999 to 641 tonnes in 2006 and annual octopus landings fell from 775 tonnes in 1994 to 354 tonnes in 2010. This has resulted in a decline in earnings for fishers, who are one of the poorest communities on the island. In 2010, there were 1,407 registered fishers (8.5% of the total workforce) with an estimated additional 2,000 people fishing on a casual basis. A survey in 2000, found that 91% of octopus fishers earn less than US$70 per month from fishing with an average monthly earning of just US$28 per month. As a result, many fishers are dependent on government subsidies and their standard of living is below the national average.

The Shoals Rodrigues Association is a non-governmental organization, which was established to promote marine environmental awareness, provide training to ensure local capacity for marine environmental research, conduct studies of different marine ecosystems, and provide education and outreach. Shoals Rodrigues has access to a well equipped, purpose-built marine research, training and education centre, from which they have conducted studies on marine ecology, biodiversity, oceanography and fisheries; they have also developed a range of education resources and established successful education and training programmes for primary school children, young people, fishers and teachers and other interested adults.

Key activities and innovations

Shoals Rodrigues Association did not exist until September 2001, when it was established in order to continue the work started by the UK NGO 'Shoals of Capricorn Programme', an initiative supported by the Royal Geographical Society and Royal Society in the United Kingdom. Indeed, when this UK NGO arrived in Mauritius to start environmental projects, the SGP National Coordinator (NC) had many discussions with the directive board of the 'Shoals of Capricorn Programme' about ways to more deeply involve the local communities. The main objective of involving the local community was to not loose the knowledge and experience gained by this UK NGO when it would leave Mauritius and by doing so, enable local communities to pursue these activities. From these discussions and through the active support and leadership from the NC, the new organization 'Shoals Rodrigues Association' was then born and many local people were trained and recruited.

After its establishment, Shoals Rodrigues Association secured funding from the GEF Small Grants Programme, the Christensen Fund and the British High Commission in Mauritius to establish pilot Marine

Reserves through the project "Sustainable Reef Fisheries Development in the Rodrigues Lagoon". As part of the project, consultation meetings were held at 18 villages (with over 400 fishers attending) to discuss the concept of Marine Reserves and their benefits to the ecosystem and fisheries. Village groups nominated areas within their local fishing grounds that they wished to see protected, and made suggestions for management and enforcement of the reserve areas. Five potential reserve areas were proposed and the villages closest to these reserve sites were visited again to ensure that they were still supportive of the reserves.

During the implementation of this project, an inventory of local fish species was carried out by a team of local and international marine scientists to determine the state of their populations and to measure the size of the fishes caught by fishermen. Based on this survey, it was showed that the fishes caught were not of the appropriate size and that the fishing techniques used were harmful and destroying the lagoon. As a positive aspect, several new endemic species of fishes and corals were discovered during these surveys, namely "The Rodrigues Damselfish" and the "Rodrigues Acropora", named after the island. These studies and discoveries have been acknowledged in leading scientific journals.

In early 2003, Shoals Rodrigues and the experts contracted under the GEF SGP project submitted a report to the local government, the Rodrigues Regional Assembly (RRA) proposing the establishment of a Marine Protected Area (MPA) - a network of no-take fishing reserves around the lagoon and recommendations for the management strategies. Four of the sites (Rivière Banane, Anse aux Anglais, Grand Bassin and Passe Demi - covering 24.2 km^2) were selected by the Coordinating Committee for Fisheries and Marine Resources and the regulations to legally protect these sites was prepared and submitted to the RRA.

In 2004, a second project funded by SGP "Marine Environmental Education in the Local Community" supported the development of the Marine Reserves by raising awareness amongst the young local population, and thus the future leaders, of the need for the protection and sustainable use of the marine environment. Some components in this project have been replicated in Mauritius several times by other NGOs and the Government, for example, the setting up of environmental corners in primary schools. The SGP NC was personally involved in promoting the replication of these components by other partners such as the Rotary Clubs.

Later on, Shoals Rodrigues successfully secured funding from the Darwin Initiative to support the further development of the northern Marine Reserves through a combination of research, training and education between 2005 and 2008. With the support of this project, the legislation to gazette the Marine Reserves was passed by the RRA in 2007 and a management plan was prepared for one of the four northern reserves (Rivière Banane) in 2008. Funding was then obtained from French Global Environment Facility (FFEM) through the Indian Ocean Commission's programme "Network of Marine Protected Areas" and from the Decentralized Cooperation Programme (DCP) of the European Union to demarcate the Marine Reserves.

In 2008, additional funding from the GEF SGP supported the development of these Marine Reserves through the development of two alternative livelihood projects: "The development of ecotourism in Rivière Banane as an alternative to fishing" and "Small-scale animal husbandry as a sustainable alternative to fishing". These projects aimed to support the development of the Rivière Banane Marine Reserve, reducing the reliance of the local community on fishing and thus reducing illegal fishing within the reserve. The first project allowed the buying of the first glass-bottom boat in Rodrigues and its equipment. During this project, training to fishers was provided in order to improve their tourism, life saving, marketing and business skills. The second project helped 28 women fishers to gain income from animal husbandry including pigs, chickens, goats, etc.

The big challenge in these 2 projects has been to move the fishers from a practice of day-to-day earnings to the management of small community businesses where they have to share monthly incomes and re-invest part of it in running cost; marketing is also a challenge.

Marine conservation efforts on Rodrigues were thus beginning to gain momentum. In parallel with the efforts in the north, a larger multiple-use MPA has been developed on the south coast (covering 43 km^2), which was co-funded by an UNDP-GEF project. The South-East MPA was formally gazetted in 2009. Staff from Shoals Rodrigues participated in this UNDP-GEF project, and their experience gained through former SGP projects was invaluable, particularly with regards facilitating and supporting community consultation process and outreach. This gave way to another GEF SGP funded project ("Empowering the SEMPA Fisher Community through Ecotourism Development") to empower the South-East MPA fisher community through ecotourism development. The MPA network in Rodrigues now covers close to 80km^2 of the reef and lagoon and will (once fully implemented) provide a refuge for marine biodiversity and help to restore fish and invertebrate stocks.

In the meantime, the RRA established a Marine Reserve Coordination Committee (MRCC) composed of representatives of the relevant Government Authorities, representatives of the Fishers Associations, the local marine NGO (Shoals Rodrigues) and other key stakeholders. Implementation of the northern Marine Reserves had stalled however, partly due to the lack of management plans for all four Marine Reserves. Therefore, a new GEF SGP project 'Improving Management Effectiveness for the Marine Protected Areas of Rodrigues' was developed under the instance of the local government to revitalize the next stage in the implementation of the Marine Reserves. This constitutes a critical event where the local government directly asked for the endorsement of SGP and Shoals Rodrigues in the establishment of the Management Plan of the MPAs since they were involved from the very beginning. In 2010, this project which received support from the Rodrigues Regional Assembly and the Regional Programme for the Sustainable Management of the Coastal Zone of the Countries of the Indian Ocean (ReCoMaP), commenced implementation. The project provided training to local stakeholders and end-users to enable them to prepare their own Management Plan for the four northern Marine Reserves. The resulting management plan is the first ever such plan prepared by end-users themselves. In addition to the Marine Reserves Management Plan, the RRA also established a seasonal octopus fishery closure in order to regenerate the stock of octopus in the lagoon of Rodrigues.

During the last 12 years (2001 -2013), in the course of the implementation of the different GEF SGP projects, it became clear that only the combined efforts of the Rodrigues Regional Assembly, conservation NGOs, namely Shoals Rodrigues Association, and stakeholder groups would lead to the effective management of marine resources in Rodrigues. The scaling up, though not intended, became an evident answer to support the national and local Government aims of strengthening management of protected areas and reducing fishing pressure in the lagoon. A strategic project was the answer to the challenges raised by the outcomes (policy decisions) of the different projects. It not only sustains a second year of octopus fishery closure but also supports the implementation of the Marine Reserves Management Plan.

Under the Strategic Project Funding window, the GEF SGP will support the 2013 octopus fishery closure as well as the implementation of priority actions detailed in the Marine Reserves Management Plan. Several co-funders are also supporting this project which builds upon the previous achievements outlined above, maintaining momentum and continuing to improve the management of marine resources in Rodrigues.

The Strategic Grant will enable the development of alternative livelihoods to provide income to those fishers affected by the octopus fishery closure and the Marine Reserves. It will also provide capacity building to local community representatives to enable them to actively participate in the co-management of their marine resources and to implement community-based monitoring, control and surveillance measures. The project will also develop and expand the education and awareness-raising programmes within the local communities to support successful implementation of these initiatives.

Environmental Impacts

These projects have led to different outcomes that have positive environmental impacts, including:

1. *A final joint management plan for the four new marine reserves in the northern Rodrigues lagoon.*

A management plan is a fundamental tool to ensure the long-term survival of Marine Protected Areas (MPAs). It is designed to provide guidance to the management team through the identification of the key goals and objectives of the MPA in both time and space.

Previously, a plan for Rivière Banane had been prepared. The joint plan prepared includes the other three reserves. The planning team, consisting of a technical sub-committee, drafted the plan and devised crosscutting action plans to ensure that the four sites operate efficiently in an integrated manner. This is one of the first management plans in the region that has been written by local marine resource users.

A series of training workshops and consultation meetings were also conducted with fishers and tour operators to ensure that their interests were taken into consideration and addressed in the management actions. During the consultation sessions, the majority of fishers stated that they had noticed a decline in fish and octopus catches in recent years and a good majority welcomed the idea of the marine reserves. They were however worried about how they would earn a living while waiting for the benefits of the reserves. The majority stated that for the reserves to be successful there must be better a regulation and enforcement.

A regulation (Seasonal Octopus Fishery Closure) was formulated for the implementation of the first octopus fishery closure scheduled to take place from the 13th of August to the 12th October 2012. This first closure aimed at protecting the female adults during the winter period while they migrate out of the lagoon to lay and brood their eggs. It resulted in an increase in catches both in size and in quantity. However, the island was not prepared for this huge increase in terms of storage facilities and price control. The challenge during the upcoming closure will be to find an outlet for the storage and marketing of the catches. The SGP NC has actively facilitated meetings between the RRA and the private sector in order to address these challenges.

2. *Increased capacity in the MRCC to effectively manage the new marine reserves in the northern Rodrigues lagoon.*

During the training workshops, training was provided to a range of different stakeholders (including Fisheries Protection Service, National Coastguard, Forestry Services, SEMPA) in planning, monitoring and effectiveness evaluation methods, to aid decision-making and adaptive management.

3. *Monitoring programme for the new marine reserves*

Monitoring and evaluation are essential components of any successful management activity. Therefore, a revised monitoring programme for the new marine reserves has been devised to ensure that the biophysical, socio-economic and governance indicators selected are appropriate for monitoring the effectiveness of all the MPAs. The programme engaged community monitors and tour guides in monitoring. A rapid response plan has also been put in place for coral bleaching and other incidents, such as a pollution/oil spills.

4. *Information about the new reserves in Rodrigues has been effectively communicated to the public at the national level and more broadly within the region and internationally.*

Information about the Marine Reserves was communicated widely in Rodrigues and Mauritius through press releases in the local newspapers as well as interviews on the radio and television. A scientific poster describing the project was presented at the Reef Conservation UK Annual Conference in London in December 2011. In July 2012, Mr. Jean Stephen Jovani Raffin, Science Officer at Shoals Rodrigues, attended the International Coral Reef Symposium (ICRS) conference at the Cairns Convention Centre in Australia and presented the outcomes of the project. The conference was attended by over 2,000 scientists, managers, students and journalists from 82 different countries.

Socio-economic Benefits

1. **How many beneficiaries? How many fishers trained?**
   Sustainable Reef Fisheries: 400 fishers attended consultation meetings; 135 received training in marine ecology, swimming and first aid; 14 people from the Fisheries Protection Service, National Coastguard and the Rodrigues Underwater Group received training in coral reef monitoring and fisheries monitoring; 41 people received dive training. Total beneficiaries: 590
   Marine Environmental Education in the Community: 42 young people received marine ecology training through Club Mer; around 150 primary school children were taught about the marine environment; 60 fishers received training in marine ecology, swimming and first aid; 35 teachers received training in marine ecology and how to integrate this into the national curriculum. Total beneficiaries: 287
   Ecotourism in Rivière Banane and Small-scale Animal Husbandry: 8 fishers attended the Marine Tourist Guide training course learning how to develop an environmentally-friendly marine tourism business (including skipper's license, swimming, customer care and marine ecology) and 20 fishers received training in animal husbandry techniques. Total beneficiaries: 28.
   Improving Management Effectiveness: around 200 fishers attended consultation meetings; 47 people (including 17 fishers) received training in MPA management during the series of training workshops. Total beneficiaries: 247.
   Alternative Livelihoods and support for sustainable marine resource management: 10 fishers will be recruited and trained to create a community forest; 20 fishers will receive training in animal husbandry, compost making and fodder management in order to establish community pasturages; 16 fishers will receive training in marine resource management in order to establish 4 Local Advisory Committees; and 12 fishers will receive training in monitoring and surveillance and will be employed as Community Resources Observers to monitor and support enforcement of the Marine Reserves. Total beneficiaries: 58.
   Total direct beneficiaries from all projects combined: 1,210.

2. **What are the incomes generated by the projects?**

Unfortunately, the alternative livelihood projects in Rivière Banane faced a number of problems. The Association, Ocean Tribe did take some tourist groups out to visit the Rivière Banane Marine Reserve but marketing was a problem and the number of tourists was not sufficient to earn a living from the venture. Shoals Rodrigues is continuing to work with Ocean Tribe to try to resolve this problem and improve marketing so that more tourists know about the glass bottom boat. As part of the project 'Alternative livelihoods and support for sustainable marine resource management in Rodrigues' fishers employed part-time in the community forests and community pasturages will earn Rs2,500 per month and the Community Resource Observers will earn Rs5,000 per month; these wages should be sufficient to encourage them to stop fishing.

3. **What measurable change has there been in local incomes and job opportunities? (change in average household income, job creation, revenues, livelihood diversification, livelihood/income diversification, market access etc) Where possible, please provide statistics and numbers that document the change or impact of the project over time.**
   It is still too early to see any measurable change in income and job opportunities, however the establishment of the alternative livelihood projects in Rivière Banane did pave the way for other similar projects for example in the South East Marine Protected Area (SEMPA). Once working properly, these projects should improve the incomes and livelihoods of the fishers and their families. The current initiative of the Rodrigues Regional Assembly to compensate octopus fishers through payment for ecosystem services during the octopus fishery closure means that over 1,200 fishers will benefit through learning new skills which may help them to find alternative livelihoods in the future.

4. **Have there been secondary benefits? (Investments in infrastructure, poverty reduction, higher awareness, etc.)**
   The main secondary benefits to date have been that the alternative livelihood projects have raised awareness of the need to decrease reliance on fishing and to diversify incomes as well as the need to develop sustainable, environmentally-friendly alternatives. As a result, the projects have been replicated in other areas in Rodrigues; for example, the replication of the glass bottom boat project in SEMPA and the replication of the livestock-raising project in other rural fishing communities. All of the projects supported by GEF SGP have raised awareness of the importance of protecting the marine environment in Rodrigues and the need for Marine Protected Areas and sustainable resource management. Over 200 fishers participated in the consultation sessions and around 450 people responded to the public consultation for the Marine Reserves Management Plan indicating the level of interest that local people now have in protecting their marine environment. Furthermore, as part of the project 'Marine Environmental Education in the Community' the primary school education resource 'Discovering the Ocean World' was distributed to all primary schools in Rodrigues; was trialed in schools in Mauritius as part of a pilot project supported by the Ministry for Education and also distributed to schools in the Seychelles.
5. **Have revenues from the project been reinvested into school fees, hospitals, local infrastructure, etc?**
   It is hoped that incomes generated within the Marine Reserves, for example through tourist fees will be reinvested to support their effective management.

Gender Mainstreaming

The fisher community in Rodrigues includes both men and women. Twenty five percent of registered fishers are women, and octopus fishers tend to be predominantly women. Previous initiatives to reduce fishing

pressure within the lagoon have concentrated on the development of the off-lagoon fishing industry, an activity which is restricted to male fishers. During these projects, the alternative livelihood activities were made available to both men and women on an equal basis. The development of community pasturages, community forests and involvement of fishers in the monitoring of fisheries landings are activities that are attractive to both men and women (over one third of the fishers currently employed as Community Resources Observers to monitor octopus landings are women).

Moreover, the Marine Reserves Management Plan clearly states that the Local Advisory Committees should include women from the local communities, ensuring that both men and women are equally involved in the management of their marine resources.

Policy Impacts

Following these SGP projects, the Rodrigues Regional Assembly (RRA) recognized that after decades of efforts inside the lagoon and also due to the poor regulation of the sector, the resources in the lagoon have been overexploited. Thus as a result of the rapid decline in octopus stock and fishery, the RRA's Executive Council took the decision that the fishery should be closed temporarily to allow octopus stocks to recover and catches to increase. The Seasonal Octopus Fishery Closure Regulations 2012 was debated and accepted by the Rodrigues Regional Assembly on the 3rd of July 2012. It was gazetted on Saturday 7th of July. It was recommended that a second closure should be implemented on 2013 to allow the young recruits into the lagoon to grow and in order to pursue the effort of regenerating the stock of octopus in the lagoon of Rodrigues.

In this context, the RRA's policy had to provide alternative activities to redundant fishers during the octopus fishery closure. Another policy decision of the RRA was thus to move from traditional systems of "financial compensation to fishers" to a system of remuneration for carrying out ecosystem services such as forestry works (weeding and removal of exotic and invasive species); rivers and reservoirs cleaning and rehabilitation; pasture and land preparation, drain maintenance; clean-up of paths and trails; clean-up of islets, dredging and deepening of natural lagoon channels, and cleaning and embellishment of public building and space.

Another policy decision concerns the system of financial compensation to fishers called the "bad weather allowance", a scheme by which fishers are compensated when they cannot go out at sea due to bad weather. This scheme cost millions of rupees each year and is a heavy item under the Government's budget. Therefore, some years ago the RRA took the decision, which is directly linked to the results from the different SGP projects, to move away from this system by removing fishers from the lagoon and providing a one-off voluntary retirement compensation to fishers whilst advocating for sustainable alternative livelihood activities. Many alternative income projects were then supported and are still supported by the GEF SGP for ex-fishers in Rodrigues, some of which are cited above.

The joint Marine Reserves Management Plan prepared by Shoals Rodrigues Association under the GEF SGP project has also been handed over to the RRA to help inform future policy decisions in regard to management of the marine environment.

A change in the local government in early 2012 was a fundamental factor to the enabling policy environment and this resulted in RRA's support and recognition of the importance of marine resources and biodiversity for sustainable development. The projects have definitely created an enabling environment for future Strategic projects. In 2012, the RRA set up a new collaborative mechanism between the local government

and the GEF SGP. All projects pertaining to Rodrigues are discussed with the Economic Planning and Monitoring Unit (EPMU) in order to coordinate and mainstream them into the strategic priorities of the RRA through support to the communities. In turn the EPMU provides support by facilitating administrative procedures and decisions. This gateway to the highest decision making level in Rodrigues has strengthened the partnerships and led to direct support to strategic projects even in the context of regular SGP ones.

Replication

1. **How easy would it be to replicate the successes of the projects in a different context or country?**
   Different context and countries mean different challenges. Nonetheless some challenges will remain the same and some lessons learned from Rodrigues are that (i) we should give to communities viable alternatives to economic and cultural practices that may endanger biodiversity, contribute to climate change, or degrade international waters; (ii) communities will more readily design and participate if their economic and other interests are taken into consideration; (iii) beneficial impacts are obtained when using sustainable livelihood strategies.

2. **What mistakes should be avoided if the project were to be replicated?**
   It is important to consolidate the working relationship between local authorities and NGOs/CBOs. It is a pre-requisite and a constant challenge in the context of a democracy where Governments change and this can affect negatively or positively project implementation.

   The SGP National Coordinator needs to have a deep understanding of the political and environmental challenges. Building goodwill of the SGP helps in ascertaining support.
   There should be parallel work done on policies such as appropriate fiscal/loan measures to fishers.
   There is sometimes a lack of credibility of NGOs and CBOs implementing the projects even vis-a-vis bigger GEF projects.

3. **Have you shared your successful model with other communities?**
   This is done constantly by NC, Shoals Association and its well-wishers.
4. **What was the vehicle for knowledge exchange?**
   Email, scientific review journals, participation in important scientific meetings and seminars, etc.
5. **How many new communities and beneficiaries are applying your model?**
   We build lessons learned from previous projects constantly into the new ones and we share it with our partners, local CSRs. NSC members are also a very good conduit to the sharing of our model.

Key partners

The key partners were the Rodrigues Regional Assembly and the Shoals Rodrigues Association as well as several donors who have supported marine conservation projects in Rodrigues. The RRA's new vision for the fisheries sector is to reduce pressure in the lagoon and promote off-lagoon fishery for sustainable exploitation of marine and fisheries resources. For that purpose the Regional Government intends "to develop an integrated plan for the management of coastal areas; to manage and exploit the resources in an ecological and sustainable way thereby enabling the regeneration of the coastal and marine ecosystems."

The project of the periodic closures of octopus fisheries aiming at regenerating the stock of octopus in the lagoon and its management entails actions that are in line with the government action plan for the fisheries sector and contributes towards its implementation.
Several research work and studies led to this decision:

- The Fisheries Research and Training Unit (FRTU) which estimated annual landings to have fallen from 775 tons in 1994 to 324 tons in 2004 and that according to prediction extrapolated from this data, the octopus stock is doomed to collapse around 2015.
- Shoals Rodrigues's monitoring and research activities on the Octopus fishery since 1999 (several SGP projects) reported that 87% of female octopuses landed are juveniles. These studies also suggest that mature females migrate out of the lagoon predominantly during the winter months to lay and brood their eggs. After the eggs have hatched, the females always die. There is a pulse of juvenile recruitment to the lagoon as soon as lagoon waters warm in summer. Original research concentrated on genetic composition of the local Octopus cyanea, the main target species in Rodrigues suggests the species is divergent from neighbouring islands, which means that Rodrigues is self-seeding and that very little genetic flow exists towards the island.
- The South East Marine Protected Area (SEMPA) also monitored octopus population dynamics using the Shoals Rodrigues methods between May 2011 and March 2012 and returned similar results to the Shoals Rodrigues studies.

The first project of temporary octopus fishery closure was monitored by the Economic Planning and Monitoring Unit (EPMU) under the RRA's Chief Commissioner's Office and involved the following partners:

- The IOC/FAO Smart Fish project;
- Several commissions of the RRA;
- The Mauritius Police Force;
- The non-state actors: Rodrigues Council of Social Service, Mauritius Wildlife Foundation, and Shoals Rodrigues Association.

At the same time EPMU approached GEF SGP to support the second closure and Shoals Rodrigues approached SGP for support towards the activities proposed under their management plan. This is when CPMT communicated that the Strategic funding window was open and this culminated into the development of the first Strategic GEF SGP project in the Republic of Mauritius.

Awards& Recognition

1. **Has this project been awarded a prize or recognized by other groups/agencies/organizations?**

The Golden Jubilee Marine Environment Award was awarded to the Shoals Rodrigues Association by the UK Foreign and Commonwealth Office for its project on "Sustainable Reef Fisheries Development in the Rodrigues Lagoon", MAURITIUS (MAR/01/02). In 2006, Shoals Rodrigues was awarded the AGFUND (Arab Gulf Programme for United Nations Development Organizations) International Prize for Pioneering Development Projects for the development of the primary school education pack, 'Discovering the Ocean World' in project MAR/04/01. In 2015, they received the Barclays Colours of Life Award 2014 - in the category "Environment Protection" for project MAR/SGP/OP5/Yr2/CORE/BD/13/07.

Due to the British roots of the Shoals Rodrigues Association, the SGP projects have been honored by the presence of Prince William during two visits to Rodrigues. During his visit, he was able to appreciate the

great work achieved by our grantee in the marine environmental protection and worked alongside local staff to collect data to assess damage to the lagoon and reef habitats caused by fishing.