

**SeyCCAT Project Full Proposal**

**PART 1. NARRATIVE (Maximum 10 pages)**

1. **COVER PAGE**

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| **Title** | Assessment and Mitigation of Impact of the Artisanal Fishery on Species of Local Concern |
| **SeyCCAT Strategic Objective** | Empower the fisheries sector with robust science and knowhow to improve governance, sustainability, value and market options. |
| **Name, contact details and status of lead applicant organisation / individual** | Ms Wilna Accouche  General Manager  Green Islands Foundation    The Green Islands Foundation (GIF) is an environmental NGO established in Seychelles since 2006. GIF was registered on the 11th April 2006 under the Registration of Associations Act (Certificate Number: A430918). |
| **Partner organizations** | GIF partnered with the Bel Ombre Fishers Association, the Fishing Boat Owners Association (FBOA), the Artisanal Shark Fishers Association (ASFA) and the Seychelles Fishing Authority (SFA) in the implementation of the 2017 Threatened species survey and will continue with these partnerships for this project. |
| **Project location** | Mahe, Seychelles |
| **Duration – start and end dates** | 16 months – proposed June 2018 - September 2019 |
| **Total budget requested** | SR 599,500 |
| **Indicative co-financing** | SR 862,544 |

1. **SUMMARY (max 1 page)**

In 2017 GIF undertook the first assessment of the artisanal catch of threatened species (IUCN criteria). This involved intensive monitoring of more than 50% of the artisanal catch and extensive consultation and partnership with artisanal fishers. During consultations fishers identified a list of additional species (Annex I), that were of local concern due to the decline in catches fishers had noted over the last 20-30 years. This project proposes to undertake 12 months intensive monitoring of the artisanal catch to:

* Assess the nature of the artisanal catch of these species of local concern (Annex I) i.e. number, size/maturity, seasonality and method of catch.
* Undertake the first assessment of the artisanal ray fishery, a research priority under the Seychelles National Plan of Action for the Conservation and Management of Sharks (2016-2020)(NPOA).
* Gather a 12 month dataset (i.e. double the dataset) on the catch of threatened species (Annex II).

Issue: there is a chronic lack of species specific data available to assist in identifying fishery impact upon species of concern. This prevents identification and development of priority targeted management measures. This project will address this by a 12-month intensive targeted catch monitoring of: i) species of concern to local fishers, ii) the artisanal ray fishery, a priority under the NPOA, and iii) threatened species. This will provide insight into the population demography, seasonality and catch methodology, and enable fishers to identify pragmatic and targeted management measures.

Site: The project will take place on Mahe and cover more than 50% of the national artisanal catch by monitoring key landing sites and points of sale.

Rationale for the project approach: - this project seeks to build the national capacity to develop and implement management approaches to the conservation and sustainable use of fisheries by providing the species-specific information required to i) empower fishers to participate in co-management approaches, ii) to inform ray research and management and iii) enhance threatened species conservation.

Beneficiaries: The primary beneficiaries will be fishers and their associations. The information provided empowering them to undertake a constructive co-management role in fisheries. Secondary beneficiaries will be: fishery managers and researchers, the broader public due to enhanced fishery management.

Timeline: June 2018 – September 2019

Alignment with international and national priorities: Notable national strategic plans and international commitments advanced, include:

a). The National Biodiversity Strategy and Action Plan (NBSAP) – Objective 2.2. (Aichi target 6), Objective 3.2 (Aichi target 12) and realise aspects of NBSAP project Numbers: 5, 14 and 28.

b). SDG 14: “Conserve and sustainably use oceans, seas and marine resources for sustainable development” and specifically targets 14.2 and 14.4.

c). The National Plan of Action for the Conservation and Management of Sharks (NPOA) particularly strategic Objectives 3 and 9 and specifically Work Programme 2 activity i.

d). Provision of additional information to support phase II of the national MSP process.

1. **Organizational Background and Capacity**

The Green Islands Foundation is an environmental NGO established and was legally registered under the Registration of Associations Act on the 11th April 2006 (Certificate no: A430918)

The Mission Statement of the Association is:

***“To Promote The Mainstreaming Of Sustainable Development In Seychelles.”***

The main objectives of GIF pertinent to this project are:

* To integrate biodiversity concerns into land and sea use regimes.
* To further the conservation and sustainable use of biodiversity.

GIF is overseen by a Board of Directors and employs 3 fulltime and 1 part time staff complemented by volunteers for specific programmes.

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| GIF Staff allocation for proposed SEYCCAT project implementation | | | |
| Title | Name | Experience (years) | Role in proposed project |
| General manager | Wilna Accouche | 17 | In charge of project administration and management including management of consultant, staff and reporting to SeyCCAT. |
| Project Manager | Mariliana Leotta | 7 | Project management, workshop organisation, data compilation, development of training and educational materials, field support for fishery survey. |
| Project Officer | Frank Volcere | 5 | Assist with fisher consultations, fishery monitoring and general project implementation. |
| Accounts Manager | Christina Savy | 17 | Management of Project finances and accounts. |

Since its formation GIF has sought to develop partnerships with the private sector to enable the realisation of its Mission. GIF has conceived, coordinated and implemented a range of projects with a strong marine management component. In the last five years, GIF has expanded its involvement in fishery sustainability, establishing working relationships with fishers and fisher organisations, to the advancement of national conservation and sustainable use objectives. Most recently GIF has worked with fishers and associations in the implementation of the GEF Satoyama project to investigate and seek to minimise the impact of the artisanal fishery on threatened species. Pertinent projects are summarised overleaf.

**D.** **Project outcomes, Objectives and Expected Results**

Problem Statement: The utility of official artisanal fishery catch monitoring in Seychelles is restricted by the limited resolution of the data gathered. Except for a handful of economically important species all data is collected on the basis of family (e.g. Serranidae and Lutjanidae – Groupers and Snappers) or even sub-class (e.g. Elasmobranchii - sharks and rays). In the Seychelles’ fishery context this means 30 or more species can be covered by a single catch tonnage figure. As a consequence individual species can become scarce or even be extirpated without this being noted or recorded in fishery statistics. The lack of species specific data is acutely limiting to the development of sound management measures and the sustainable development of fisheries and prevents the application of the desired best practice of an Ecosystem Approach to Fisheries Management (EAFM). This short coming is reflected in the new Mahe Plateau Demersal Fishery Management Plan which contains specific measures for only 8 commercially important species.

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| Project title | Year | Budget (US$)/Donor | Description |
| The development of a co-management plan, designed by fishers, to minimise the impact of the Seychelles artisanal fishery on threatened species. | July 2016  to  Dec 2018 | US$ 88,000  Global Environment Facility  GEF-Satoyama  Contact Person:  Mr Yoji Natori, Manager  GEF-Satoyama Project  Conservation International Japan  e-mail: [ynatori@conservation.org](mailto:ynatori@conservation.org)  Tel: +81 3 5315 4790 | Project Leader: GIF  Project Partners: Bel Ombre Fishers Association, FBOA, ASFA, SFA.  The objective of this project is to reduce the Seychelles artisanal fishery’s impact on globally threatened species. The project developed a baseline dataset of threatened species in the artisanal fishery through fisher interviews, literature review and an intensive 12-month survey of artisanal catch. The project supports fishers’ identification and development of a proposal for a threatened species co-management plan to be submitted to SFA. |
| Increasing public awareness and educating local communities in understanding the behavioural ecology of sharks in order to reduce conflicts between fishermen and dive operators in Seychelles. | Aug2010  to  Sep 2015 | US$ 50,000  Global Environment Facility- Small Grants Programme  Contact Person:  Ms Lyndy Bastienne  GEF SGP  Programme Asssistant  e.mail: [lyndy.bastienne@undp.org](mailto:lyndy.bastienne@undp.org)  Tel: 4225914 | Project leader: GIF  Project partners: SFA, FBOA, Ministry of Education, Natural History Museum, SOSF, Wise Oceans.  Project had two main components: i) to increase local capacity in shark fishery monitoring by developing a shark identification guide in collaboration with local fishermen and training technicians in species identification and catch monitoring, and ii) educating the community about the importance of sharks for a healthy and productive marine ecosystem. |
| Capacity Building in Artisanal shark fishermen | May2010  to  Nov 2011 | US$ 7,165  Mangroves For the Future  Contact Person:  Ms. Elke Talma  MFF National Coordinator  Tel: 4225914 | Project Leader: GIF  Project Partners: Artisanal Shark Fishers – latterly ASFA.  The main goal of this project was to enable the full and effective participation of artisanal shark fishers in the implementation of the Seychelles' NPOA Sharks. This involved the creation of an Artisanal Shark Fishers Association (ASFA), and training of shark fishers to collect catch data. |

Project rationale: This project seeks primarily to: i) inform and empower fishers in the development of pragmatic, targeted co-management measures to address their issues of priority concern – i.e. the species identified by fishers as being of concern due to declines in catch over the last 20-30 years, and ii) undertake the first survey of the artisanal ray fishery identifying species composition, relative abundance, seasonal occurrence and population demography. The monitoring effort will also be utilised to build on the data gathered under the 2017 GEF Satoyama project by doubling the dataset (12 months to 24 months) on the impact of the artisanal fishery on threatened species.

This will be realised by undertaking an intensive 12 month monitoring of the artisanal catch. This monitoring will focus upon species identified by local fishers as being of local concern (see Annex I), the ray fishery, and threatened species caught in the artisanal fishery (see Annex II). The monitoring method is highly representative of the overall national artisanal catch as it covers key landing sites and points of sale (Bel Ombre, Port Victoria, Roche Caiman, Cascade, Anse Royale and Victoria market) meaning more than 50% of the artisanal catch will be monitored for the species of interest. Monitoring will be undertaken in partnership with fishers, various fishers associations (i.e. Bel Ombre Fishers association, FBOA, ASFA) and build upon the relationships established in 2017 under the GEF-Satoyama project.

The 2014 Fisheries Act marked a significant change in the national approach to fisheries management with the emphasis now being placed upon co-management rather than the traditional top down approach. Under the Act fishery co-management plans will be developed through consultation and fishers will be empowered/required to undertake aspects of implementation and monitoring themselves. The resulting plans can be promulgated into law by gazetting concomitant regulations. The current lack of species specific data however, severely hampers fishers and fishery managers alike in the informed development of co-management plans with targeted management measures. The data gathered in this project will: i) provide the baseline needed to allow fishers to identify pragmatic management measures for species of local concern (annex I) that will complement the new demersal fishery management plan; ii) provide the crucial basic information sought under the NPOA to inform the targeted future research and management of the ray fishery; and iii) augment by 100% the threatened species dataset and enhance the process to develop a co-management plan to mitigate the impact of the artisanal fishery on threatened species.

The ethos of the co-management approach is the consultation and empowerment of stakeholders to address their concerns in the fishery management framework and enable them to fulfil a co-management role. This project is founded on fisher consultation and empowerment to inform fishery research and management, incorporating fishers at all stages, building stakeholder trust and buy-in to the co-management approach.

Outcomes

1). Baseline for species of local concern established and fishers empowered to develop recommendations for the sustainable use of these species through co-management approaches.

2). Fisher recommendations for local concern species co-management measures, submitted to SFA.

3). Implementation of NPOA enhanced by submission of ray fishery assessment providing a basis for identifying management and research priorities.

4). Enhanced development of threatened species co-management plan.

5). Fisher partnerships fostered, their involvement in co-management processes enhanced, and development of co-management approaches advanced.

6). National strategic plans and commitments supported, notably:

a). The National Biodiversity Strategy and Action Plan (NBSAP) – Objective 2.2. (Aichi target 6), Objective 3.2 (Aichi target 12) and realise aspects of NBSAP project Numbers: 5, 14 and 28.

b). SDG 14: “Conserve and sustainably use oceans, seas and marine resources for sustainable development” and specifically targets 14.2 and 14.4.

c). The shark NPOA particularly strategic Objectives 3 and 9 and specifically Work Programme 2i.

d). Provision of additional information to support phase II of the national MSP process.

Objectives:

1). Address the lack of species specific data on species, identified by artisanal fishers as being, of local concern (annex I) and develop recommendations for their enhanced management and sustainable use. (12 months of catch data collected on species of local concern including: size, seasonality and catch methodology, presentation of data to fishers and workshop development of management options/recommendations in months 13-16).

2). Undertake the first ever assessment of the ray fishery in Seychelles to inform its future research and management. (12 months catch data collected on ray fishery including, species, size, maturity, seasonality and catch methodology. Data analysed and report submitted to NPOA secretariat in months 13-16).

3). Double the timespan and value of the threatened species artisanal catch database (annex II) to enhance the development of the threatened species co-management plan. (12 months of threatened species catch data collected and fed into the threatened species co-management plan development process).

4). Inform and empower artisanal fishers to participate effectively in the development of fishery co-management approaches. (The provision of targeted information, e.g. posters and standardised species identification guides, in months 6-12).

Specific outputs:

1). A detailed assessment of the artisanal fishery catch of species of local concern (annex I), including specimen size, population demography, seasonality, fishery vulnerability etc…, and recommendations for their sustainable use. (Supports the realisation of Outcomes 1, 2, 5, 6a, b & d).

2). A first assessment, species make-up, population demography and seasonality, of the artisanal ray fishery with recommendations for future research and management. (Supports Outcome 3, 5 & 6c)

3). Artisanal catch of threatened species ascertained and scope for fisher mediated reduction in impact identified and incorporated into co-management plan. (Supports Outcomes 4, 5, 6b, c, d & e)

4). Educational and technical materials (i.e. species identification guide with local nomenclature, species poster and monitoring protocol in Creole and English) to increase project awareness and capacity amongst fishers and fishery monitors. (Supports Outcome 5)

Activities: This project will build upon fisher partnerships established under the 2017 GIF GEF-Satoyama threatened species project and greatly expand the scope of species-based fishery monitoring to support a sustainable artisanal fishery. This method will cover 50% or more of the artisanal catch and is thus highly representative and provides a strong basis for analysis.

1). 12 month intensive survey of artisanal catch (recording catch demography, seasonality and methodology for species of local concern, rays and globally threatened species). This will provide the detailed species-specific data required to develop the recommendations and baselines below.

2). Analyse data and present to stakeholders in workshops and produce pragmatic fisher-developed and agreed recommendations for:

* sustainable use of species of local concern- i.e. this will empower fishers to effectively participate in and contribute to the demersal fishery co-management plan elaboration and implementation.
* priority management/research measures for rays – provide the species data required by the NPOA.
* mitigation of artisanal fishery impact on threatened species – this will supplement and add significant value to the process to develop a co-management plan for threatened species.

3) Production of educational/technical materials (species ID Guide, poster and creole monitoring protocol) – empowering fishers to participate in the development and implementation of co-management measures.

Expected results:

1). Species-based data on fisher identified species of local concern increased from baseline of zero to 12 month representative survey. Analysis and recommendations presented in report.

2).Fishers empowered and their ability to identify, develop and implement co-management measures enhanced. Consensus fisher recommendations for demersal fishery co-management plan submitted to SFA.

3). Species based data on artisanal ray fishery from baseline of zero to 12 month dataset. Report and analysis with recommendations submitted to NPOA steering committee.

4). Dataset on threatened species impact of artisanal fishery doubled from 12 months to 24 months. Process to develop threatened species co-management plan strengthened.

Location: The project will be undertaken on Mahe. SFA reports consistently show that approximately 90% of artisanal catch is landed on Mahe. This project will monitor intensively, for 12 months, key landing sites and points of sale meaning constituting 50% or more of the overall artisanal catch. This constitutes a highly representative, cost-effective and powerful survey that would not require upscaling.

**E. Description of the Activities and their Effectiveness**

This project will build upon fisher partnerships established under the 2017 GEF-Satoyama project and greatly expand the scope of species-based fishery monitoring to support a sustainable artisanal fishery. The GEF Satoyama project monitoring was very successful with 50% plus of the artisanal catch monitored for threatened species. The species catch demography was elucidated, including juvenile-mature ratio, seasonality and method of catch. The survey identified and confirmed the exploitation of key nursery habitats, and recorded three new species in the catch one of which was an endangered.

Activity description:

1). 12 month intensive survey of artisanal catch (recording catch demography, seasonality and methodology for species of local concern, rays and globally threatened species).

Monitoring will be undertaken at key landing sites and points of sale – Port Victoria, Bel Ombre, Victoria market, Roche Caiman, Cascade and Anse Royale constituting monitoring of more than 50% of the artisanal catch. Catch monitoring will be led by the fishery consultant assisted by the Project officer both of whom will be equipped with transport. Fishers/vendors at 5 sites will be paid an allowance to communicate arrival of catch and also to record catch when the lead monitors cannot attend. These assistants will be equipped with measuring equipment, waterproof note books and digital cameras to enable confirmation of species identification. This model proved successful under the GEF Satoyama project with monitors trained and relationships established. The Project Manager will provide catch monitoring back up when required.

Data gathering has been designed to be as quick and simple whilst gathering the required information and has proven to be successful in the GEF Satoyama project. For teleosts total length (TL) and standard (SL) or fork length (FL) (depending on species anatomy) are recorded. For rays disk width and body length are recorded, as well as gender and maturity where possible. For sharks total length, interdorsal space (IDS) and precaudal length (PCL), gender and maturity are recorded where possible. For dressed shark carcasses the IDS is sufficient to derive the required information.

2). Analyse data and present in fisher workshops to produce pragmatic fisher-agreed recommendations for: i) sustainable use of species of local concern, ii) priority management measures and/or research for rays, and iii) mitigation of artisanal fishery impact on threatened species. Data compilation will be undertaken by the Consultant and the Project Manager. Analysis will be undertaken by the Consultant in liaison with GIF staff. Fisher meetimgs will be organised by the Project Manager and facilitated by the Consultant. The Consultant will prepare the Ray fishery report and recommendations therein. The consultant will compile the threatened species data and incorporate into the threatened species co-management plan process.

3) Production of educational and technical materials (species ID Guide, poster and monitoring protocol) will be led by the Project Manager in liaison with the consultant.

**Note:** Project monitoring will assess progress by the sequential attainment of the indicators set out in the activity table below. Project reporting will be undertaken by the Project Manager and submitted to SeyCCAT after 6, 12 and 16 months.

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| **Project title:** Assessment and Mitigation of Impact of the **Project dates:** June 2018 – Sept 2019 Artisanal Fishery on Species of Local Concern | | | | | | |
| Project Outcome(s):  1).Baseline for species of local concern established and fishers empowered to develop recommendations for the sustainable use of these species through co-management approaches.  2). Fisher recommendations for species of local concern co-management measures submitted to SFA.  3). Enhanced NPOA implementation by submission of findings on assessment of the ray fishery - providing a basis for identifying priorities for future management and research.  4). Enhanced development of threatened species co-management plan.  5). Fisher partnerships fostered, their involvement in co-management processes enhanced, and development of co-management approaches to support a sustainable artisanal fishery advanced.  6). National strategic plans and commitments supported. | | | | | | |
| **Specific Objective No. 1** Address lack of species specific data on species of local concern and develop recommendations for their enhanced management and sustainable use. | | | | | | |
| **Activity** | **Responsibility for implementation** | **Timeline of activity** | | | | |
| **Year 1** | | | | **Yr 2** |
| **Q1** | **Q2** | **Q3** | **Q4** |
| 1.1 Undertake 12-month catch survey of species of local concern. | GIF and catch monitors |  |  |  |  |  |
| 1.2 Compile and analyse catch data. | GIF |  |  |  |  |  |
| 1.3 Present data analysis and facilitate fisher development of management recommendations. | GIF, Fishers, Fisher Assoc, |  |  |  |  |  |
| 1.4 Submit co-management recommendations to SFA. | GIF |  |  |  |  |  |
| Indicators: 1.1a) Monthly data compiled. 1.1b) Quarterly data review. 1.2) 12-month data report and conclusions. 1.3) Workshop report & recommendations 1.4) Co-management proposal sent to SFA. | | | | | | |
| Specific Objective No. 2 Undertake the first ever assessment of the ray fishery in Seychelles to inform its future research and management. | | | | | | |
| 2.1 Undertake 12-month intensive survey of artisanal ray catch | GIF & catch monitors |  |  |  |  |  |
| 2.2 Compile and analyse catch data. | GIF |  |  |  |  |  |
| 2.3 Prepare and submit ray fishery report to NPOA steering committee | GIF |  |  |  |  |  |
| Indicators: 2.1a) Monthly data compiled. 2.1b) Quarterly data summary & review.  2.2) 12-month data report & conclusions. 2.3) Report submitted to NPOA Committee. | | | | | | |
| Specific Objective No. 3 Double the timespan and value of the threatened species artisanal catch database (annex II) to enhance the development of the threatened species co-management plan. | | | | | | |
| 3.1 Undertake 12-month intensive survey of threatened species catch | GIF & catch monitors |  |  |  |  |  |
| 3.2 Compile and analyse catch data. | GIF |  |  |  |  |  |
| 3.3 Incorporate data in development of co-management plan proposal | GIF |  |  |  |  |  |
| Indicators: 3.1a) Monthly data compiled. 3.1b) Quarterly data summary & review.  3.2) 12-month data report & conclusions. 3.3) Threatened species co-management proposal updated. | | | | | | |
| Specific Objective No. 4 Inform and empower artisanal fishers to participate effectively in the development of fishery co-management approaches. | | | | | | |
| 4.1 Produce & distribute ID guides posters. | GIF |  |  |  |  |  |
| 4.2 Produce monitoring protocols for fish, rays and sharks. | GIF |  |  |  |  |  |
| Indicators: 4.1a) finalised layouts for ID Guides & posters, b) printed guides and posters distributed.  4.2 Protocols finalised and incorporated into ID Guide layout. | | | | | | |

**F. RISKS TO SUCCESSFUL IMPLEMENTATION AND MITIGATION MEASURES**

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| **Risk/Factors** | **Risk category** | **Potential level of impact** | **Risk mitigation measures** |
| Lack of agreement of fishers on co-management measures. | Social and/or economic | Medium – it is not expected that agreement will be reached on all species. If no agreement is made on any, no fisher recommendations will be submitted for species of local concern. | The species being investigated were identified by fishers in workshops as species of concern so fishers interest regarding these species is the project’s starting point. |

**G. EVALUATION AND INDICATORS**

Project performance will be monitored and review on a quarterly basis utilising the indicators set out in the project activities table. Reporting to SeyCCAT utilising the prescribed format will be submitted after 6, 12 and 16 months respectively.

Project impact will be measured by the realisation of the objectives and the SMART criteria bracketed after each objective respectively in “Section D subheading Objectives” of this document.

**H. SUSTAINABILITY AND REPLICATION**

The project will have a sustained impact through the targeted dissemination of its products that will enable significantly improved marine fishery management and co-management mechanisms:

* The submission to SFA of recommendations for management of species of local concern will i) greatly enhance the resolution of data available, ii) provide a basis for the elaboration of targeted management measures under the demersal fishery plan, and iii) provide a means for artisanal fishers to address their species specific concerns in the co-management process.
* The submission of the ray fishery report to the NPOA secretariat will provide the first ever assessment of the fishery bridging a critical information gap to allow the structured implementation of significant components of the Seychelles NPOA.
* Doubling the dataset for Threatened Species in the artisanal fishery will greatly strengthen the process developing a draft co-management plan for threatened species. This will enable targeted management actions to protect Threatened species and support Seychelles’ implmentation of its extensive international commitments in this domain.
* A key output of this project will be the experience and information gained by fishers to fulfill their role in the development and implementation of fishery co-management approaches. This will be vital in the next 10 years as this methodology is expanded across Seychelles artisanal/demersal fisheries.