

**CONCEPT NOTE**

**INSTRUCTIONS**

**Read the following before designing your concept**

All proposals submitted to the fund must have as their main purpose the conservation and/or management of marine and coastal biodiversity and/or ecosystem based adaptation to climate change in the Seychelles.

Refer to the Call for Proposals to see the priorities for funding in the current round of SeyCCAT grants. Do not submit a proposal that falls outside of these identified priorities.

Do not include activities or costs that are defined as ineligible by SeyCCAT.

Proposals must be compliant with Environmental and Social Safeguards applied by SeyCCAT.

Refer to the SeyCCAT website for information on the above: [www.seyccat.org](http://www.seyccat.org)

In the event of specific questions, contact the SeyCCAT Secretariat.

**In preparing your concept**

Be clear and concise.

Follow the guidelines and instructions (major points) described below.

The concept should be provided in Font Times New Roman size 11 characters, single spacing.

The concept should not exceed five pages in length (excluding budget and annex).

**SeyCCAT Project Concept Note**

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| **Small-medium grant** | **x** |
| **Large grant** |  |

*(tick)*

**BACKGROUND INFORMATION**

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| **Project Title** | Improving the socio-economic knowledge of the Seychelles Artisanal Fishery |
| **SeyCCAT Strategic Objective – *as listed in the Request for Proposals*** | 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** | Karine Rassool  PhD Candidate – University of York |
| **Partner organizations (include country if not based in Seychelles)** | University of York, United Kingdom |
| **Project location** | Mahe, Praslin, La Digue |
| **Duration – start and end dates** | July 2018 – July 2019 |
| **Total budget requested** | SR 100,000 |
| **Indicative co-financing** | The project being proposed will form part of my PhD thesis. My PhD research (in Environmental Economics and Environmental Management), being undertaken at the University of York, is being funded by the Seychelles Fishing Authority (SFA). However, these funds do not cover any fieldwork which will be carried out as part of this research. |

**PROJECT DESCRIPTION**

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| **Abstract (500 words max)** | The artisanal fisheries sector is an important contributor to both employment and food security in the Seychelles. In addition to supplying fish for the local population and tourism establishments, an estimated 10%[[1]](#footnote-1) of the total landed catch is exported. This contributes an additional USD 1 million[[2]](#footnote-2) in yearly foreign exchange earnings to the national economy.  Despite the fundamental economic, social and cultural significance of the fisheries, there have been recent concerns about the status of the demersal stocks exploited by artisanal fishers around the Mahe Plateau, particularly due to the open access nature of this multi-species fishery. In response, the Seychelles Fishing Authority (SFA) developed a demersal fisheries management plan in 2015.  The Fisheries Act (2014) outlines the Government’s commitment to using the Ecosystem Approach to Fisheries (EAF) to develop its fisheries management plans. EAF management recognizes “the interdependence between human wellbeing and ecosystem health” [[3]](#footnote-3) and in turn stipulates the need for policy makers to assess the social and economic implications of managing a fishery[[4]](#footnote-4). This is because, while management plans emphasize the importance of taking long-term views when it comes to determining optimal yields, immediate economic pressures may force fishermen to take a short-term view when weighing up a multitude of competing costs and benefits operating over different time horizons. This generally results in an aggravation of the problem of overexploitation.  Despite this, SFA has yet to develop a harmonized method to capture socio-economic information related to the various fisheries sub-sectors. As a result, the management plan for the demersal fisheries was developed with only a limited understanding of the socio-economic profiles of artisanal fishermen[[5]](#footnote-5). Thus, it has been widely criticized [[6]](#footnote-6) as placing “the fish before the fisher” and has lacked support from the fishing community, thereby limiting its efficacy.  The central aim of this proposed project is to fill this gap in knowledge by developing an effective and efficient methodology to elicit socio-economic information from local boat owners and fishermen involved in the demersal fisheries sector. Additionally, the project will also seek to gain a better understanding of boat owner’s and fishermen’s behavior and opinions, i.e. what drives their decision-making processes, how they perceive they will be affected by the new proposed management plan and what measures they believe would successfully ensure long term sustainability of the demersal fish stocks of the Mahe Plateau.  The methodology being proposed to achieve this is a mixed methods representative sample survey, integrating both quantitative and qualitative data collection and analysis, of boat owners and fishermen involved in the demersal artisanal fishery.  The project will also form part of my PhD research conducted at the University of York, the aim of which is to explore the social, cultural and economic value of the artisanal fisheries in Seychelles and to assess the biological, social and economic tradeoffs when formulating policy. As such, the project will benefit from the supervision of Dr. Bryce Stewart, a fisheries biologist, Dr. Peter Howley, an environmental economist (from the University of York) as well as a local supervisor, Dr. Jan Robinson, a marine scientist with more than two decades of experience working on projects related to the Seychelles artisanal fishery. |
| **Outcomes and impacts** | The main outcome of the project is to provide evidence-based information on how best we can promote sustainable management of the artisanal fisheries.  Often, there is an imbalance given to the various components of sustainability, i.e. bio-ecological, social, economic and institutional. By providing a methodological guide on socio-economic data collection for the artisanal fisheries sector, this will enable long term monitoring of socio-economic indicators as well as effective evaluation of policy decisions. As well as a guide, this project will make available a comprehensive baseline of socio-economic indicators for the artisanal sector, which can immediately inform and/or validate policy making, particularly the ongoing development of the demersal management plan.  The project will complement the Ministry of Fisheries’ efforts to set up a Fisheries Economic Intelligence Unit (FEIU) (see Breuil, 2015 – Concept Note on FEIU) by providing a methodological framework as well as a base line for socio-economic fisheries indicators. This is outlined in more detail below.  The lack of and need for quality socio-economic data has previously been identified in various policy notes, notably “Concept Note on FEIU Seychelles” (Breuil, 2015, the report on the “Fisheries recovery on the Mahe Plateau, Seychelles” (Vivideconomics, 2015) and the “Demersal Management Plan Report” (Welch & Kerrigan, 2015).  It is anticipated that the outputs of this project, which is mainly to provide key socio-economic information relating to the artisanal fishing sector, can then be incorporated in policy decisions, and address the imbalance of information that exists, to achieve a sustainable fishery.  For example, by providing data on the operating costs of different fishing fleets involved in the artisanal fishing sector, this can feed into the evaluation of fisheries loans. Tasked to SFA, these are currently being evaluated with limited data on the fishing fleets’ operations. Having this data could better inform SFA’s decision-making regarding the profitability of the fishing business and approval of these loans. This could maybe mitigate some of the associated risks, such as defaulting on loans.  This project also aims to gather insights on the awareness, opinions and attitudes of fishermen. Local fisher knowledge could inform the design of current and future management plans. This is important, as while management plans emphasize the importance of taking long-term views when it comes to determining optimal yields, immediate economic pressures may force fishermen to take a short-term view often weighing up a multitude of competing costs and benefits operating over different time horizons. This generally results in an aggravation of the problem of overexploitation. By gaining a deeper understanding of the multiplicity of factors affecting the decisions of fishers, this can better advise policymakers relating to how best they can manage the fisheries.  I will also collect information relating to alternative skills/jobs of part-time fishermen which could provide an indicator of alternative employment opportunities for displaced fishermen and areas in which the government may want to incentivize investment (e.g. fish processing, tourism activities).  By making available a clear methodology and a sample questionnaire which can easily be replicated, this project will enable long-term monitoring and reporting of the socio-economic indicators of fishermen in Seychelles. Long-term monitoring would also make it possible to assess the successes and failures of various policies and allow for them to be amended according to managers’ objectives.  In future, it is expected that the existence of a robust methodology would ease the capture of socio-economic data for other fisheries such as the sea cucumber and long-line fisheries.  The project will also provide data that will feed into my PhD research at the University of York. The lack of key socio-economic data relating to the fisheries sector, which could be used to promote more efficient and effective policies, is the main motivation behind my PhD research.  So, along with building an initial understanding of the socio-economic profiles of fishermen and boat owners in the demersal artisanal fishery in Seychelles, the project will also enable me to analyse the socio-economic tradeoffs of various policy measures. In particular, I am interested in the objectives of policy makers (i.e. is it maximizing catch, employment or profitability?) and measures they will implement to achieve these. As it is known that most fishermen are from the lower income sector of society, there is need to understand how they will be impacted by such measures.  This project will also enable me to gain a better understanding on the social and economic influences that affect fishers’ behavior and how these can ultimately be used to inform decision makers on how to alter behaviors to achieve their objectives.  This project, and my research, therefore comes at a critical time when Government is considering the introduction of various management measures which will undoubtedly impact the fishing community, although the impacts at present are not clear. |
| **Objective/s** | The key overarching objective of this work will be to develop a methodological guide to produce socio-economic indicators. These will be used to integrate key socio-economic information into policy decisions to promote more effective management of the fisheries.  By way of background, when formulating policy, fisheries managers face many conflicting goals and objectives. Successful fisheries management requires not just biological information relating to fish stocks but also an in-depth understanding of the many social and economic influences on the behavior of fishers. Despite this understanding, due to lack of technical expertise, time and costs associated with gathering socio-economic data, policies continue to be driven by biological science. In Seychelles, this is no different. A lot of effort has been made to better understand the bio-ecological aspects of the fisheries sector, neglecting its socio-economic dimension.  It has also been widely recognised that the changes needed for more effective management of small-scale fisheries include mechanisms to promote objective decision-making that incorporate a methodology for stakeholder participation and concensus building.  As an attempt to address these shortcomings and improve policy making decisions, this project will:  1) Assess the current socio-economic status of boat owners and fishermen involved in the demersal artisanal fishery.  Specifically, I will aim at gaining a better understanding of the socio-economic profiles of various stakeholders in the artisanal fisheries sector; their behaviors and motivation to join this sector, and to elicit key socio-economic indicators for the artisanal fishery. This will include demographics and ownership structures, the cost structure of artisanal fishing operations to assess economic performance; level of investments, debts and subsidies; livelihoods and alternative employment; activity levels; marketing strategies.  Several previous socio-economic studies have been done in the Seychelles, namely “The Fishermen of Seychelles: Results of a Socio Economic Study of the Seychelles Fishing Community” by Mees (1990) and “Baseline survey for artisanal fishers on Mahe, Praslin and La Digue” by Bijoux (2015). Although both these studies provide insightful knowledge on the fisheries and will be consulted during the design of the questionnaire for this project, the former is outdated and the latter lacked some key questions to elicit quantitative (e.g. operating costs of fishing) and qualitative (e.g. fisher knowledge on the problems and possible solutions relating to the fisheries) data. Such data (to be gathered in this new study) would provide crucial insights which could be used to inform effective and successful policy-making.  2) Generate information on the awareness, opinions and attitudes of boat owners/fishers’, relating to for example, factors that affect their fishing activities (e.g. climate change, overfishing, industrial fishing, policies, behaviors of other fishermen), their views on stock status and various new policy decisions including the proposed management measures, Marine Spatial Plan (MSP) and possible phasing out of subsidies. Open ended questions designed to get the interviewee to reflect on their personal experiences and knowledge will be used to elicit the aforementioned as well as possible solutions to some of the identified issues.  As outlined previously, such information, which is currently lacking, is key for policy makers to understand how successful their policy measures will be, particularly the currently proposed management plan. It will also elicit what, if any, are the alternative solutions being proposed by the industry that might be integrated in the plan to generate greater success.  The project will also provide staff of SFA, or other relevant Government bodies, a working methodology (including a sample questionnaire and training) to elicit socio-economic information which can be reproduced over time. This can be used to form the basis of a longitudinal study that will facilitate policy evaluation.  A further objective of this project is to obtain data that will feed in my PhD research. The aims of my research are to explore the social, cultural and economic value of the artisanal fisheries in Seychelles and how fishermen/boat owners respond to challenges facing the fishing industry, along with assessing biological, social and economic tradeoffs when formulating policy.  These objectives will be achieved through the production of a methodological guide, including a custom designed survey, and in-person interviews of 300 fishermen, owner-operators and boat owners. The sample will be obtained, using a geographical stratified random sampling approach, from the fleet and fishermen register at SFA. |
| **Outputs** | 1) A methodological guide for conducting a socio-economic survey of artisanal fishers. The guide will include and outline the steps taken to planning the survey, survey strategy, techniques used for sample selection, survey questionnaire (to be administered as part of this project), a short description of what information/indicators are being elicited by each section/question and the methods used for data input and analysis.  2) At least 300 in person interviews of artisanal boat owners/fishermen and a transcription of these surveys that will be compiled in the appropriate format (e.g. Microsoft Access or Excel).  3) As previously outlined, the project will form part of a larger PhD research project, which I am undertaking at the University of York. The survey responses will be used to produce several research and conference papers which will be aimed at exploring the socio-economic profiles of artisanal fishermen in Seychelles, fishermen’s awareness, opinions and attitudes related to fisheries management measures, the factors affecting their fishing activities, their proposed solutions. These insights will also be used to explore possible alternative ways of managing the fisheries, e.g. co-management, rights-based management. These will be made available to SFA.  4) A two-day training course for four survey enumerators and four staff of the Ministry of Fisheries and/or SFA. This will include communicating the importance of socio-economic data in fisheries and training on various components of the questionnaire including; terminologies and variables used, and how to effectively conduct the surveys and data input, verification and analysis. |
| **Activities** | 1. Conduct a desktop study on socio-economic indicators for small scale/artisanal fisheries to inform the design of the questionnaire 2. Conduct an initial round of interviews with key stakeholders. This will also be used to inform the design of the survey. 3. Develop a questionnaire. 4. Develop a methodological guide. 5. Define and select target sample. 6. Training of enumerators – including briefing on the purpose of the project, explanation of all aspects and variables used in the questionnaire, how to conduct interviews and data entry. 7. Pilot the questionnaire. 8. Data Collection - Individual surveys with boat owner, owner/operators and fishermen on Mahe, Praslin and La Digue. 9. A qualitative and quantitative analysis of data that will subsequently feed into analysing policy tradeoffs for the artisanal fisheries sector. |
| **Schedule** | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Task** | | **Start Date** | **End Date** | | **Duration (days)** | | Desktop Study | 01/05/2018 | | 31/05/2018 | 30 | | | Design Questionnaire | 01/06/2018 | | 29/06/2018 | 28 | | | Interviews (Validate Questionnaire) | 02/08/2018 | | 30/07/2018 | 28 | | | Training of Enumerators | 03/09/2018 | | 07/09/2018 | 5 | | | Test Questionnaire | 10/09/2018 | | 14/09/2018 | 5 | | | Data Collection | 17/09/2018 | | 16/10/2018 | 60 | | | Data Input and Verification | 17/10/2018 | | 31/10/2018 | 14 | | | Analysis of Information | 05/11/2018 | | 25/02/2019 | 91 | | | Production of Methodological Guide | 26/02/2019 | | 01/04/2019 | 34 | | | Presentation of Findings | 15/04/2019 | | 16/04/2019 | 1 | | |
| **Sustainability and replication** | A detailed methodological guide of the work carried out for this study, including the survey questionnaire and all data collected, will be made available to the Ministry of Fisheries and SFA. Furthermore, comprehensive training on carrying out a socio-economic survey will be provided to staff of the Ministry of Fisheries and SFA. This will enable this process to be repeated in future for the artisanal fisheries which will be useful to track any changes over time. Also, it will allow for the replication of similar socio-economic studies for other fisheries, e.g. sea cucumber and semi-industrial long-line. Furthermore, collaboration with the Ministry of Tourism could also enable a similar study to be carried out for the Seychelles Sports Fishery. |
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1. The Seychelles Fishing Authority Annual Report, 2014 [↑](#footnote-ref-1)
2. The Fisheries Statistical Report - SFA, 2015 [↑](#footnote-ref-2)
3. Ward et al. 2002 [↑](#footnote-ref-3)
4. FAO, 2011 [↑](#footnote-ref-4)
5. Seychelles Demersal Fisheries Management Plan 2015 [↑](#footnote-ref-5)
6. Grafton et al. 2006 [↑](#footnote-ref-6)