

## Environmental and Social Management Plan for “Roadmap to Blue Carbon opportunities in the Seychelles”

### 1. **Project Description** (rationale, objectives, location, specific activities)

*Briefly describe the proposed project. Clearly identify the problem to be addressed and the proposed solution (to be retrieved from the concept note and/or full proposal - 500 words max).*

Blue carbon ecosystems are among earth’s most efficient carbon sinks, burying carbon up to 40-times faster than tropical rainforests and locking away carbon in the ground for millennial time scales. In addition to sequestering carbon, they provide other important ecosystem including support fisheries, enhance biodiversity, and protect shorelines from erosion, extreme weather events and sea level rise.

Under the UN Framework Convention on Climate Change in 2015 (UNFCCC), Seychelles was recognized as a fortunate nation serving as a net carbon sink. However, over the next 5-10 years it is expected to become a net emitter due to the development of the energy sector and an increase in terrestrial deforestation. Although Seychelles has often acknowledged the potential of coastal Blue Carbon systems to serve as carbon sinks (Seychelles Strategic Plan 2040), it is yet to report their carbon offsetting capacity within national greenhouse gas (GHG) inventories or account them as a key mechanism to achieve the country’s Nationally Determined Contribution. In the low-carbon economy the world is moving towards, blue carbon sinks represent a significant asset for which conservation and restoration can generate important monetary benefits. Many of the costs of achieving emission reductions in the energy and transport sector could be met through international climate financing and Blue Carbon Markets.

Our research proposal seeks to explore the Seychelles' Blue Carbon future, by developing a roadmap to potential Blue Carbon opportunities in the Seychelles and building local capacity and literacy on Blue Carbon.

#### **Objective 1. Review and synthesize Seychelles’ Blue Carbon research.**

We will review and synthesize in a single document all available literature on Seychelles’ Blue Carbon.

#### **Objective 2. Develop a roadmap to determine Blue Carbon opportunity in Seychelles.**

We will develop a Blue Carbon Roadmap for the Seychelles, including a tailored-strategy to best map and quantify Blue Carbon opportunities in Seychelles and develop a Blue Carbon Market. The document will target the most critical questions underpinning further research and investment in Seychelles’ Blue Carbon.

#### **Objective 3. Raise awareness and build Blue Carbon capacity**

Scientists from the Blue Carbon Lab will coordinate, prepare, and deliver the following workshops and meetings in order to educate Seychellois on Blue Carbon systems.

##### **A. Community engagement sessions**

Two full-days of immersive learning experience to promote the awareness of Blue Carbon systems among local stakeholders, while examining their receptiveness

towards a Blue Carbon economy that favours the conservation of mangroves and seagrass habitats. Sessions with the community will be run as 'Citizen Science days', including a mixture of workshops and fieldwork.

**B. Scientific training and upskill workshop**

A skill development workshop will be delivered to scientists and on-ground personnel involved in the management of Blue Carbon data in Seychelles. The workshop will include tailored-training on the protocols for collecting, processing, monitoring and analysing mangrove and seagrass data.

**C. High-level awareness meeting**

Scientists from the Blue Carbon Lab will present the Seychelles Blue Carbon Roadmap and lead a discussion with Seychelle's high-level executives who have the potential to steer Seychelles' Blue Carbon economy and research.

Environmental risks associated to this project are related to vegetation damages in mangroves, a potential critical natural habitat, during field work and mitigation measures are proposed to avoid any impact.

## 2. Risks, mitigation measures and monitoring

Identify and list potential environmental and social risks associated to the project. For each of the identified risks proposed mitigation measures to mitigate these risks and develop indicators to monitor the implementation of the proposed mitigation measures.

Potential risks	Mitigation measures	Indicators to monitor implementation of mitigation measures
<b>Environmental risks</b>		
Vegetation damage from participants walking into the mangroves	<b>M1.</b> Develop a protocol that limits the trampling over plant vegetation	A protocol to reduce damage to vegetation will be prepared and implemented
	<b>M2.</b> Train participants in the use of this protocol	Before conducting the fieldwork, 100% of the field participants will be trained in this protocol.
<b>Social risks</b>		
Injuries to participants during the fieldwork (from wildlife or the use of research equipment)	<b>M3.</b> Develop a Health and Safety protocol	A Health and Safety protocol will be prepared and implemented.
	<b>M4.</b> Staff trained in First-Aid and CPR	100% of the staff leading the Citizen Science days and training workshops will have current First Aid and CPR certificates
	<b>M5.</b> First-Aid kits available	At least one emergency kit will be held on site, in case of any emergency.
	<b>M6.</b> Demonstration of the correct use of field gear and availability of field protocols	Instructions and protocols be printed and provided. Staff will also demonstrate the correct way of sampling.
Working with youth (<18 years old) during community workshops	<b>M7.</b> All Deakin personnel will have up-to-date working with children check	Deakin personnel to have valid working with children card
	<b>M8.</b> All Deakin personnel will have review Deakin working with Children policy prior to workshop	100% of Deakin personnel to sign off at bottom of Deakin's working with children policy upon completion of reading

	<b>M9.</b> All youth (<18 years old) participating in workshop will have permission from legal guardians	Permission slips will be collected prior to the youth participating in workshop.
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### 3. Monitoring Plan

*The objective of the monitoring plan is to ensure that the mitigation measures are properly implemented.*

- The monitoring plan to ensure mitigation measures for both environment and social risks highlighted in **section 2** is broken down into sections below to ensure proper implementation of activities before and during the project.

#### 3.1. Data collection, analysis and report responsibilities

*List personnel or organization responsible for collecting data related to monitoring indicators, processing data and reporting to the PIU.*

- Deakin's Blue Carbon Lab (BCL) will be responsible of M2, M4, M6, M7, M8
- The James Michel Foundation (JMF) will be in charge of M5 and M9.
- Together, BCL and JMF will be responsible for M1 and M3.

#### 3.2. Additional support (capacity building, resources etc.)

*List the additional support that is required to ensure that the mitigation measures are properly being implemented.*

### 3.3. Monitoring table

For every mitigation measures proposed, list the monitoring indicator, frequency of monitoring, responsible for monitoring and the associated cost. This will ensure early detection of conditions that require additional or alteration in mitigation actions, provide info on progress and results of mitigation.

Mitigation measures	Indicator	Frequency	Responsibility	Cost
<b>M1.</b> Develop a protocol that limits the trampling over plant vegetation	Protocol	At the start of the project	JMF and BCL	0
<b>M2.</b> Train participants in the use of this protocol	Training	At the start of each field work	BCL	0
<b>M3.</b> Develop a Health and Safety protocol	Protocol	At the start of the project	JMF and BCL	0
<b>M4.</b> Staff trained in First-Aid and CPR	Training	1 month before the start of the fieldwork	BCL	\$ 150 USD/ per person
<b>M5.</b> First-Aid kits available	Purchase or sourcing of kits	At the start of the project	JMF	\$ 100 USD / each
<b>M6.</b> Demonstration of the correct use of field gear and availability of field protocols	Training	At the start of each field work	BCL	0
<b>M7.</b> All Deakin personnel will have up-to-date working with children check	Valid Working with Children card	At the start of the project	BCL	0

<b>M8.</b> All Deakin personnel will have review Deakin working with Children policy prior to workshop	Read and signed off on Deakin's working with children policy	At the start of the project	BCL	o
<b>M9.</b> All youth (<18 years old) participating in workshop will have permission from legal guardians	Permission slip signed up legal guardian	At the start of each field work	JMF	o

### 3.4. Implementation schedule

*Provide a schedule for implementation of the various mitigation measures and activities that will enable for the monitoring of the implementation of the mitigation measures.*

Activity	Timeline of Activity	
	3 months prior to fieldwork	1 day prior to fieldwork
<b>M1.</b> Develop a protocol that limits the trampling over plant vegetation		
<b>M2.</b> Train participants in the use of this protocol		
<b>M3.</b> Develop a Health and Safety protocol		
<b>M4.</b> Staff trained in First-Aid and CPR		
<b>M5.</b> First-Aid kits available		

<b>M6.</b> Demonstration of the correct use of field gear and availability of field protocols		
<b>M7.</b> Valid working with Children card		
<b>M8.</b> Read working with Children Policy		
<b>M9.</b> Youth permission Slips		
<b>M1.</b> A protocol to reduce damage to vegetation will be prepared and implemented		
<b>M2.</b> Before conducting the fieldwork, 100% of the field participants will be trained in this protocol.		
<b>M3.</b> A Health and Safety protocol will be prepared and implemented.		
<b>M4.</b> 100% of the staff leading the Citizen Science days and training workshops will have current First Aid and CPR certificates		
<b>M5.</b> At least one emergency kit will be held on site, in case of any emergency.		
<b>M6.</b> Instructions and protocols be printed and provided. Staff will also demonstrate the correct way of sampling.		

<b>M7.</b> 100% of Deakin staff will have working with children card on them for workshops, available for inspection		
<b>M8.</b> 100% of Deakin staff will have read Deakin's working with children policy		
<b>M9.</b> 100% of youth participating have a signed permission slip		

#### 4. Grievance Redress Mechanism

In line with the World Bank safeguards policies, the SWIOFish3 project has developed a Grievance Redress Mechanism (GRM) to receive, process and respond to complaints from any person or group of people related to the project or is affected by its activities. The GRM is a system designed to answer questions, clarify doubts and resolve implementation problems and complaints of individuals or groups affected by SWIOFish3 project activities. GRMs are intended to be accessible, collaborative, efficient, and effective in resolving concerns through dialogue, joint fact-finding, negotiation, and problem solving. Grievances can surface at different stages of the project cycle. Some grievances may arise during the project design and planning stage, while others may come up during project implementation. In general, grievances that may be encountered in the implementation of the SWIOFish3 project can be grouped into three categories:

- Grievances related to the changes in access to resources through management plans
- Grievances related to proponents and beneficiaries of the Blue Grants Fund (BGF) and Blue Investment Fund (BIF)
- Grievances related to issues encountered by local communities where project activities are occurring

Individuals or groups affected by the SWIOFish3 subproject can

- complete a “complaint form” which will be made available to the public to formulate their suggestions or complaints. These forms can be withdrawn at the PIU office or download from the project website. Once completed, these forms can be deposited in complaint boxes.
- A line of communication will be made for the public so that they can transmit suggestions and complaints through a call or an SMS;
- Formal letters, emails can also be sent to the PIU;
- Suggestions or complaints can also be formulated during consultation meetings.