

Technical Assistance to the Republic of Seychelles for the GCCA Seychelles Global Climate Change Alliance+ *Component A*

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Climate Change Capacity Needs Assessment

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List of acronyms:

ANHRD: Agency for National Human Resource Development
CBD: Convention on Biological Diversity
CNA: Capacity Needs Assessment
CESD: Climate and Environmental Services Division
DRDM: Department of Risk and Disaster Management
ENSO: El Niño Southern Oscillation
EU: European Union
GCCA+: Global Climate Change Alliance +
ICT: Information Communication Technology
INDCs: Intended Nationally Determined Contributions
MEECC: Ministry of Environment, Energy and Climate Change
MSc: Master of Science
MTNDS: Medium Term National Development Strategy
NBSAP: National Biodiversity Strategy and Action Plan
NCCC: National Climate Change Committee
NCSA: National Capacity Self-Assessment
NDS: National Development Strategy
NGO: Non-Governmental Organisation
SFNSP: Seychelles Food and Nutrition Security Policy
SIDS: Small Island Developing State
SNAIP: Seychelles National Agriculture Investment Plan
SSDS: Seychelles Sustainable Development Strategy
SWOT: Strengths, Weaknesses, Opportunities and Threats
UNDP: United Nations Development Programme
UNFCCC: United Nations Framework Convention on Climate Change
UniSey: University of Seychelles

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1 INTRODUCTION

1.1 Background and rationale

Climate change represents a major threat to Seychelles' economy and way of life due to changes in rainfall patterns, sea level rise, increased coastal erosion and flooding, as well as impacts on marine ecosystems and fisheries due to ocean warming and coral bleaching. As an isolated Small Island Developing State (SIDS) located in the middle of the Western Indian Ocean, the Seychelles has a number of inherent vulnerabilities which include lack of substantial natural resources, vulnerability to natural disasters, excessive dependence upon imports, limited economic base, high costs of transportation and communication, and inaccessibility to economies of scale and technology. As a result of these vulnerabilities, key weaknesses in the human, scientific, financial, technical, technological and institutional capacity can be observed. These weaknesses are already having an effect on the country's ability to effectively adapt to and mitigate the effects of climate change.

In order to address these weaknesses, the Seychelles National Climate Change Strategy (NCCS) was prepared in 2009 to provide a framework for action. The shared vision of the strategy is "To minimize the impacts of climate change through concerted and proactive action at all levels of society". This vision is nested in the country's broader aspiration of sustainable development: finding strategies to realise the nation's economic, social and cultural potential through an innovative, knowledge-led and gender-sensitive approach. Seychelles' approach to climate change adaptation is guided by a collective understanding of the need to ensure that all actions taken must conserve the integrity of the Seychelles natural environment and heritage for present and future generations. The climate change strategy focuses on five key priority areas which are:

1. To advance our understanding of climate change, its impacts and appropriate responses;
2. To put in place measures to adapt, build resilience and minimize our vulnerability to the impacts of climate change;
3. To achieve sustainable energy security through reduction of greenhouse gas emissions;
4. To mainstream climate change considerations into national policies, strategies and plans;
5. To build capacity and social empowerment at all levels to adequately respond to climate change.

In 2011, Seychelles prepared its Second National Communication under the United Nations Framework Convention on Climate Change (UNFCCC) to report on the efforts that it is doing to address issues related to climate change. More recently, the Government of Seychelles committed to reducing the country's contributions to greenhouse gas emissions and for planning ahead to adequately prepare for the impacts of climate change. This commitment has been captured in the Intended Nationally Determined Contribution report submitted at the Paris Climate Change Summit in 2015. In all of these major climate change-related national documents, issues concerning the lack of human capacity to adequately deal with the effects of climate change continue to be highlighted, despite the fact that many climate change capacity building efforts have been implemented by government and civil society partners over the past ten years.

The current Capacity Needs Assessment (CNA) forms part of a Global Climate Change Alliance + (GCCA+) project launched in November 2017 and ending in July 2020, which aims to help the Government of Seychelles to mainstream climate change into its national systems and processes, across diverse sectors. The main purpose of this CNA is to identify gaps in present capacity and to identify

priority capacity building programmes which can be put in place to help Seychelles in addressing its vulnerabilities to climate change. The CNA targets primarily those government institutions that will lead the policy and regulatory framework changes needed for effective climate change adaptation, in line with the mission of the GCCA+ project. The CNA focuses primarily on adaptation, while recognizing that many mitigation issues such as energy and water conservation are closely intertwined with adaptation and can be addressed at the same time through capacity building programmes.

The GCCA+ project (Component A), is being funded by the European Union's GCCA+ program, and is managed by the consulting firm STANTEC under the supervision of the Ministry of Environment, Energy and Climate Change (MEECC).

1.2 Objectives of the capacity need assessment (CNA)

The objective of the Capacity Needs Assessment (CNA) was to identify the capacity gaps in key State actors within the Seychelles working in sectors that are or could be affected by climate change. The final output is a prioritised capacity building programme to allow the Seychelles to more effectively mainstream climate change across different sectors and improve adaptation to climate change. The implementation of the capacity building program will initially be supported by the GCCA+ project but will require additional financial and in-kind support from the MEECC and other partners.

1.3 Key direction of capacity building in climate change adaptation in Seychelles

The implementation of effective capacity building for climate change stems out of the Environment Management Plan 2000-2010 of the Seychelles. This plan which identifies both climate change and capacity building as cross-sectoral issues, identified a number of areas where capacity building in climate change is linked to the wider strategy of sustainable development, education for sustainability, and conservation of biodiversity. A number of key projects were planned as part of this first management plan to address issues of capacity building to deal with the impacts of climate change.

In 2005, Seychelles produced the National Capacity Self-Assessment (NCSA) to determine the priority needs and establish a plan of action for developing Seychelles' capacity to meet its commitments to global environmental management with a special focus on the "Rio Conventions" which includes the United Nations Framework Convention on Climate Change (UNFCCC). The NCSA, led to a much more complete understanding of capacity needs of the Seychelles for fulfilling its international commitment to the UNFCCC and to general climate change adaptation. The main priority areas for capacity building dealing with climate change issues were highlighted in the National Circumstances Report from the 2nd National Communication to the UNFCCC (Agricole, 2009). There were strong recommendations for supporting the capacity building process in climate change, with attention given to the capacity of the Climate and Environmental Services Division (CESD) so that it can effectively deliver the information and services required by all stakeholders on climate change. The following capacity building needs were prioritized back then. Many are still relevant today due to a lack of training courses organized in the past, but some have been implemented in part or full.

- Strengthen and increase observational networks over the islands of Seychelles, through community and private sector participation;

- Establish a database related to the performance of all basic meteorological instruments;
- Enhance efforts to monitor, document, understand and model climate processes and consequences at local, island, national and regional levels;
- Strengthen support for research and observing systems for meteorological/atmospheric, oceanographic and terrestrial variables in the Seychelles archipelago, including the engagement of local observers and practitioners in the design and operation of climate observing systems;
- Improve information on the nature and consequences of climate conditions.
- Develop and apply predictions of climate variability on various timescales as well as reliable projections of climate change;
- Improve baseline information, including that on the physical, human and built environments, to better support monitoring and assessment studies at local, island, national and regional scales;
- Improve historical data sets that incorporate observations and insights from scientific and traditional sources (including anecdotal data) to better document past climate variability and the resilience of Pacific island communities and ecosystems;
- Improve understanding of extreme events, from the frequency and severity of tropical cyclones and the El Niño Southern Oscillation (ENSO) events to trends in heavy precipitation, including current patterns of frequency and severity and improved projections of how those patterns might change.

The NCSA produced a series of reports and strategies, which, despite being well constructed, were not clearly anchored and were not operationalized, and as a result, the action plan were not used in any dedicated way by any national agency (UNDP, 2009). During the time that the NCSA was launched, the Seychelles had a very weak financial and fiscal situation, which prompted the initiation of the Macroeconomic Reform Programme in 2008. As a result, funding for climate change capacity building was limited.

In 2009, the National Climate Change Strategy reiterated many of these same recommendations for improved capacity for climate science and monitoring, and elaborated further actions focused on implementing climate change education and awareness programs for all levels of the education system as well as civil servants and the community (as listed in the previous section).

Several climate change capacity building efforts recommended in the NCSA, the 2nd National Communication to the UNFCCC and the NCCS have been implemented, including:

- Extra-curricular competitions and activities on climate change organised by the MEECC, Ministry of Education and other partners
- Work has begun to integrate climate change into the geography curriculum by the Ministry of Education
- The Ministry of Education has organised in-service teacher workshops on climate change
- Climate change related workshops, events and activities targeting community groups, youth leaders, the public, artists and musicians, organised by the MEECC in collaboration with civil society partners.

However, no extensive evaluation of all climate change capacity building activities in Seychelles has been undertaken. The reasons for this may include ineffective operationalization of the NCSA, lack of funding

for research and evaluation, and the inactivity of the Seychelles National Climate Change Committee (NCCC), a multi-sectorial committee intended to provide oversight of Seychelles' efforts to address climate change, including capacity building.

1.4 Scope of the study

Given the restricted scope of the assignment, which is focused on key State actors within the Seychelles working in sectors that are or could be affected by climate change, it has not been possible to undertake a comprehensive capacity gap assessment of the capacity needs required to mainstream climate change across all sectors and levels in the Seychelles. While much effort is underway to adapt to and mitigate climate change by NGOs, private sector organisations and the community, these are not considered here. One of the recommendations of this study is to undertake a country-wide capacity climate change needs assessment that includes NGOs and private sector companies. Such an assessment would allow for identification of capacity that exist in NGOs and private sector that the government can make use of for internal capacity building.

The study relies heavily on the review of government's policies, strategies, assessments, reports, and other national documents to compile information on what is planned or has already been undertaken in various sectors. The documents reviewed as part of this assignment are listed in Section 2.1. As many reports were outdated, interviews were undertaken with high ranking government officials in different organisations (Annex 1) to get updated information. The interviews were conducted using a slightly modified version of the questionnaire (Annex 2) that was provided as part of the assignment's Terms of Reference (Annex 3).

The study was meant to document the types and quality of training on climate change and related adaptation measures that staff in different government departments have received over the years. However, this study has revealed that specific training sessions on climate change issues were largely absent. Formal records were not kept of other training sessions which had components touching on climate change related issues. Training opportunities and materials from overseas courses were also not usually recorded by the participating local organisations. This issue is addressed as part of this report's recommendations.

2 METHODS

2.1 Review of documents, reports and publications

Extensive reviews of existing government policies, strategies and action plans with climate change relevance were undertaken to gauge the degree of integration of climate change in different sectors. This included review documents compiled by the GCCA+ team of various government agencies' strategic plans currently under development. Extensive reviews were also undertaken on past studies which have a bearing on climate change adaptation for the Seychelles. The documents reviewed are listed below:

Climate change related policy and strategy documents

- Seychelles Intended Nationally Determined Contributions (INDCs) for submission to the UNFCCC (2015)
- Seychelles Sustainable Development Strategy (SSDS) (2012 – 2020).

- Seychelles National Climate Change Strategy (2009)

Policies, Strategies and other national documents

- Seychelles Marine Spatial Planning Policy (2018)
- Seychelles National Aquaculture Policy (2018)
- Seychelles National Water Policy (2017)
- Seychelles National Agriculture Investment Plan (2015 – 2020)
- National Biodiversity Strategy and Action Plan (NBSAP) (2015 – 2020).
- Seychelles National Food and Nutrition Security Policy (2013)
- Seychelles Protected Area Policy (2013)
- Seychelles Energy Policy 2010 - 2030
- Seychelles Fisheries Policy (2005)

Technical Reports

- Seychelles Climate Change Policy Assessment (2017)
- Fifth National Report to the United Nations Convention on Biological Diversity (2014)
- Seychelles' Second National Communication Under the United Nations Framework Convention on Climate Change (2011)
- Seychelles National Capacity Self-Assessment (2005)
- Republic of Seychelles Report on Climate Change and its Possible Security Implications (General Assembly resolution 63/281)
- Impact of Climate Change on Tourism in Seychelles and Comoros (2004)
- Seychelles Freshwater Country Profile (2004)
- The Seychelles Tuna Fishery and Climate Change. Climate Change Impacts on Fisheries and Aquaculture: A Global Analysis.
- Impacts of climate variability on the tuna economy of Seychelles (2009)
- Assessment of Technology Transfer in Seychelles within the context of Climate Change (2009)
- Seychelles' Initial National Communication under the United Nations Framework Convention on Climate Change (2000).

2.2 Stocktaking of climate change capacity development activities in Seychelles

Below are some of the government projects which have been implemented since 2005, that have components of training or knowledge transfer addressing climate change. It has however not been possible to get details of individual training and skills transfer which were undertaken, as records were not kept or were not easily available in most of the cases. The list reveals a broad diversity of government projects and programmes from diverse sectors that are related to climate change adaptation. These programmes have mostly been financed by external sources of funding.

Project short title	Budget (EUR)	Status
Initial National Communications to UNFCCC	€ 54,982	Completed
Environmental Management Plan	€ 43,000	Completed
Praslin Restoration Project	€ 43,000	Completed
National Capacity Self-Assessment	€ 171,931	Completed

Second National Communications to UNFCCC	€ 296,700	Completed
Tsunami Assessment Project	€ 43,000	Completed
Seychelles Tsunami Reconstruction Project	€ 4,208,993	Completed
Early Warning System	€ 536,572	Completed
Sustainable Land Management Project	€ 430,000	Completed
Mainstreaming Biodiversity Project	€ 3,281,726	Completed
Biosecurity Project	€ 1,720,000	Completed
4th National Report to CBD	€ 17,200	Completed
Capacity Development Seychelles	€ 344,000	Completed
Protected Areas Project	€ 1,806,000	Completed
National Biodiversity Strategy and Action Plan	€ 172,000	Completed
Mitigation policies building resilience for adaptation to climate impacts	€ 1,720,000	Completed
Grid Connected PV Project	€ 997,600	Completed
BIOFIN (EU)	€ 250,831	Completed
Mahe Sustainable Water Augmentation Project (Project Neptune)	€ 22,356,044	Completed
GCCA Climate Change Support Fund	€ 6,000,000	Completed
Rapid Damage Assessment for Farquhar after cyclone Fantala	€ 43,000	Completed
Integrated Water Resources Management	€ 456,660	Completed
Ecosystem Based Adaptation in SIDS Project	€ 455,800	Completed
Outer Islands Protected Areas Project	€ 1,535,530	Ongoing
Resource Efficiency Project	€ 1,522,200	Ongoing
Ecosystem Based Adaptation to Climate Change (Adaptation Fund)	€ 5,117,000	Ongoing
Biodiversity Financing Project	€ 203,820	Ongoing
Protected Area Finance Project	€ 2,388,134	Ongoing
GCCA+ Component B (La Digue Adaptation)	€ 1,118,000	Ongoing
GCCA+ Project Component A(Adaptation)	€ 1,350,000	Ongoing
Ecosystem Based Adaptation through South-South Cooperation.	€ 462,680	Ongoing
Curieuse 100% Renewable and Solar Schools	€ 3,569,000	Ongoing
Marine Spatial Planning Project	€ 860,000	Ongoing
Third National Communications to UNFCCC	€ 412,800	Ongoing
Ridge to Reef Project	€ 3,353,066	Planned
Restoration of Coral Reefs Project	€ 8,600,000	Planned

Many of these projects are currently ongoing and their capacity building programs may provide synergies with the GCCA+ project, and opportunities for collaboration and co-funding of training programs, degrees, mainstreaming climate change into policy, as well as education and awareness programs. For example, the GCCA+ has already collaborated with the EBA Adaptation Fund project to offer climate training to district administrators and journalists.

2.3 SWOT analysis of completed and ongoing initiatives

The result of a Strengths, Weakness, Opportunities and Threats (SWOT) analysis of completed and ongoing initiatives is based on responses from interviews undertaken with government officials on past

climate change related training sessions. As there was no specific question that asked respondents to identify SWOTs of past trainings and training plans, the SWOT is based on different points of conversation concerning climate change capacity building during the course of the interviews. The findings of the SWOT analysis are presented in the diagram below:

INTERNAL

POSITIVE	<p>Strengths</p> <ul style="list-style-type: none"> • There are certain programmes which have offered training sessions on topics of relevance to climate change adaptation even if those have not been identified as climate change related. • There is agreement on what types of training sessions are required. • Training seems to have focused on certain priority areas which had been previously identified. • There has been strong interest from organizations to train their staff on climate change related issues. • Training sessions have been well received overall. • Organizations have taken opportunities to send their staff on international training sessions when they were externally financed. 	<p>Weaknesses</p> <ul style="list-style-type: none"> • The number of capacity building activities have been extremely low. • Training sessions have rarely been identified as climate change related even if they are. • There has been no proper documentation of training sessions received. • There have been little post-training applications of new skills developed. • Most training session have not been done in an interactive manner using real life scenarios. • Climate change related training sessions has not been prioritized for funding by organizations. • Training reports are not available in easily accessible formats. • Organizations have not kept track of training sessions received. 	NEGATIVE
	<p>Opportunities</p> <ul style="list-style-type: none"> • Government staff have expressed interest in climate change training • Opportunities exist to better manage and share training materials. • ICT tools offer facilities for government to better track climate change related training in its organizations. • To identify and make use of numerous training opportunities available online. • To have accreditation of local training courses by recognized local, regional or international partners. • Training of trainers in certain areas where refresher training sessions are important. 	<p>Threats</p> <ul style="list-style-type: none"> • Limited financial resources are dedicated to climate change related training sessions. • Climate change related training is not prioritized as high by most governmental organisations. • Training sessions have mostly been financed by international initiatives. • There is a lack of a coordinating mechanism for climate change related training sessions. • Tight work schedule may make it difficult for organisations to release staff for climate change related training session. 	

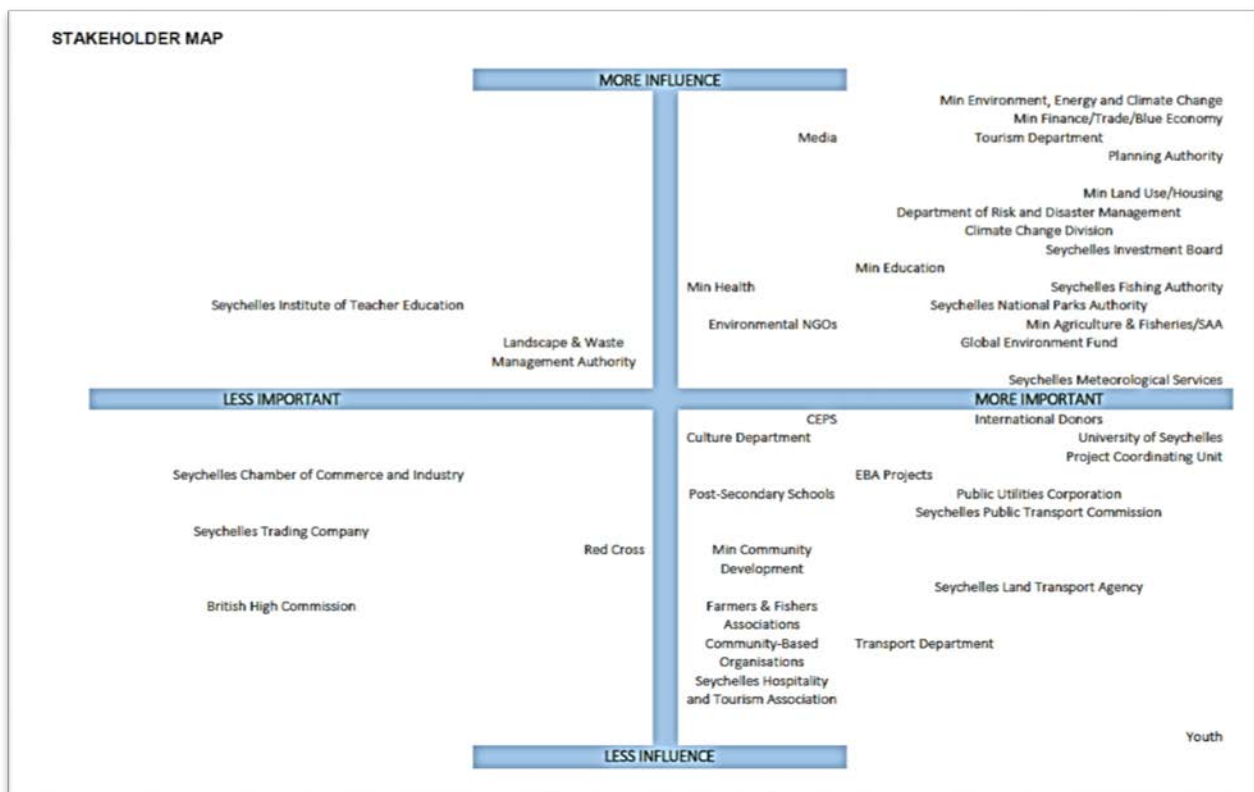
EXTERNAL

Overall, the SWOT analysis reveals that tracking of training sessions concerning climate change for government stakeholders has not been effective and there are no systems in place to manage training materials and share them among people or organisations that might be interested. There are many training sessions which have touched on climate change related issues in the past but these have not been identified as climate change related and have not been taken into account in the evaluation of climate change related training that have been provided. While access to funding remains the biggest threat to climate change related training in the Seychelles, there are opportunities to make better use of online training and for sharing of training materials now that there is better Information Communication Technology (ICT) infrastructure and support within government organisations.

2.4 Key informant interviews

Key informant interviews were undertaken between June and July 2018 with high ranking government officials from a number of organisations (departments, agencies, authorities). See Annex 1 for a list of all organisations interviewed. Identification of organisations for interview were based a stakeholder mapping exercise undertaken as part a 2015 formulation exercise for the Intended Nationally Determined Contributions (INDCs) for submission to the UNFCCC. These were typically the organisations with *high importance* and *high relevance* from the upper right hand corner of the stakeholder map (Fig. 1). Interviews were based on a set of 16 pre-defined questions (Annex 2). Interviews were conducted in Creole and notes were taken in English. The interviews took the form of a discussion and questions were not necessarily asked in the order they appear on the questionnaire.

Fig.1. Stakeholder map of influence and importance of different government organisations for climate change adaptation in Seychelles.



3 RESULTS

3.1 Status of capacity development on climate change adaptation

The results presented here are derived from two sources: (1) review of past documents (strategies, workplans, reports, assessments) related to climate change capacity development in the Seychelles and (2) interviews of high ranking government officials from different departments, authorities and agencies (Annex 3). These were selected based on a stakeholder mapping exercise undertaken as part of the formulation of the Intended Nationally Determined Contributions (INDCs) for submission to the UNFCCC in 2015. The analysis of the responses is based on Content Analysis, which is a systematic approach to analysing qualitative data based on answers provided to set questions. The questionnaire used for the interviews can be found in Annex 2. Content analysis distils qualitative information into categories that allow for recognition of patterns in answers and help in making more sense of the data.

3.1.1 KNOWLEDGE ABOUT CLIMATE CHANGE

The high-ranking government officials that were interviewed had a strong notion of what constitutes climate change and the implications for the country if nothing is done about it. Most described climate change as being associated with changes in the world's weather pattern and linked this to human interventions. Most people described climate change as change in the weather pattern for the worst.

3.1.2 LEARNING ABOUT CLIMATE CHANGE

Most respondents originally learned about climate change through the media and by attending different fora where climate change was mentioned. Many of the younger respondents had learned about climate change from their university training, with many having done modules as part of their courses which touched on climate change and its impacts in their particular thematic areas. It is expected that learning about climate change will receive a big boost now that the University of Seychelles (UniSey) will be starting (from February 2019) a Master of Science (MSc) in Climate Change and Marine Science. This course is being offered in blocks so that people who are already in employment can also attend part-time, or only take specific modules for credit. UniSey is also working towards developing a green campus which takes many of the climate change related issues in consideration and use it as a demonstration for integrating climate change in professional education.

3.1.3 PUBLIC CLIMATE CHANGE EDUCATION

The general response was that not enough was being done to teach the public about the effects of climate change. Many respondents found climate change to be something abstract that is difficult to explain as there are many confounding effects. Respondents described climate change as something vast and a big risk factor for the country in many sectors particularly for food security and disaster risk management. They favoured continuing climate change advocacy and awareness programs by government and its local and international partners. The general feeling was that climate change education should focus on highlighting the danger of climate change and that it should be adequately pitched, friendly (i.e. that climate change is not a lost cause that nothing can be done about) and used to shock people into taking action.

3.1.4 RELEVANCE OF CLIMATE CHANGE TO ORGANISATIONS MISSION AND ACTIVITIES.

All respondents believed that climate change was important to the mission and activities of their organisation, citing mandates for managing different sectors that are at the mercy of climate change. There was a strong belief that climate change would bring negative impacts to people's lives, causing new problems for which the country is not currently prepared. Respondents said that in order to reduce the impacts of climate change, their organisations need more information on what can be done and how to do it.

3.1.5 ADDRESSING CLIMATE CHANGE AT THE POLICY, STRATEGY, TRAINING AND ACTIVITY LEVEL

The majority of organisations did not yet have any policies and/or strategies that directly address climate change although the GCCA+ project is starting to provide support for them to develop them. It should be noted that the country does not have a national policy for addressing climate change despite the fact that it has had a National Climate Change Strategy since 2009. Preliminary work is however presently being undertaken to prepare a Climate Change Policy for the country with support from the GCCA+ project.

Two sectors which have done some work in terms of putting in place policies and strategies for adapting to climate change are health and agriculture. In the health sector, the Seychelles National Climate Change and Health Adaptation Plan of Action (2014-2018) includes a set of public health and environment interventions to strengthen its resilience for public health adaptation to climate change.

The Agriculture sector has the Seychelles Food and Nutrition Security Policy (SFNSP), which addresses the issue of climate change in the food production sector. The agriculture sector also has the Seychelles National Agriculture Investment Plan (SNAIP), which is derived from the SFNSP, which is described by the Department of Agriculture as being 90% climate responsive, meaning the activities captured in various programmes take into consideration climate change and adaptive solutions. New policies being developed for agroforestry, agritourism, and livestock production consider climate change as does the new Comprehensive Agricultural Development Action Plan.

At the level of economic planning, the National Development Strategy (NDS) is currently being developed and is working on mainstreaming climate change considerations with support from the GCCA+ project. The NDS is supposed to create the mechanism for guiding and coordinating national efforts and initiatives for sustainable development in Seychelles. The Blue Economy Road Map which was prepared with technical support from the Commonwealth also deals with climate change through its strategic priorities, which addresses climate resilience, climate risks to ecosystem services and the integrity of marine habitats.

While the Fisheries Policy (2005) makes no mention of climate change, it does promote research that is to better understand how climatic factors influence the management of fisheries resources. The Ministry of Fisheries and Agriculture is in the process of preparing fisheries and aquaculture sector plans, which are expected to address climate change more directly.

In the field of risk and disaster management, there are no policies that addresses climate change directly. However, the Natural Disaster Risk Reduction and Management Bill, which is under preparation makes reference to climate change related drivers of risk in the Seychelles community and proposes legal measures to reducing these risks. The Department of Risk and Disaster Management (DRDM) has given indication that the bill will be completed by October 2018.

In many other key sectors, such as Public Infrastructure and Tourism, policies and strategies to deal with climate change issues have not yet been developed but their management has identified the need to do so.

3.1.6 CAPACITY BUILDING STRATEGIES THAT HAVE BEEN USED IN THE PAST

While some organisations have organised local training sessions that touch on issues of concern to climate change in the past these have been one-off's, few and far in between. The scarcity of climate change related training that has been offered has been due to several factors including a lack of locally available resource people to deliver them, limited training budgets received by most organisations as well as the lower priority of climate change training compared to other training priorities facing government institutions. Most organisations dedicate their limited training budget to areas that are of more direct relevance to their organisational mandates. In instances when training sessions have been done locally, these have often made use of international experts, been short and been done in groups with participants coming from different sectors. Most government organisations have relied on externally funded regional or international initiatives to build human capacity to deal with climate change related issues. Most organisations claimed that they have piggy-backed on such internationally funded initiatives to train their staff as it has had minimal cost and preparation implications for them. Some of these initiatives have offered the training overseas.

3.1.7 AVAILABILITY OF CLIMATE CHANGE TRAINING MATERIALS AND REPORTS

Many of the training sessions touching on issues of climate change that government staff have attended have been held outside of Seychelles. As such, the training materials have been either bulky and staff have had only one copy or they have been given a copy in digital format. However, as most organisations do not have a repository for saving these materials; they were largely absent from government institutions and/or unavailable. The lack of availability of materials from training sessions that staff have attended has meant that the benefits of this training have in most cases been restricted only to the attendees.

3.1.8 EFFECTIVENESS OF PAST CLIMATE CHANGE TRAINING INITIATIVES

The effectiveness of climate change related training has been limited since there have been so few training sessions, despite the fact that climate change training has been identified as a priority at several points in the past. Many respondents were of the opinion that training has been more effective in sectors involving natural resource management. They noted that climate change related training has rarely filtered down to other organisations/sectors. One point that came up repeatedly was that the effectiveness of training is low because it is seldom given to the right person. Many people that have attended training sessions on climate change related subjects in the past have not had the right background or position to fully benefit it. Respondents felt that local opportunities for training are not trickling down to the right individuals due to communication problems and because the training opportunities are not properly advertised and shared.

3.2 Capacity needs in various sectors and thematic areas

Table 1 highlights the capacity needs in different sectors and thematic areas identified through interviews with high ranking government officials. Responses from organisations within the same sector and/or thematic areas are grouped.

Tab. 1. Priority areas for capacity building to address climate change adaptation in the key sectors in the Seychelles.

Major sectors	Priority areas
Environment	<ul style="list-style-type: none"> – International climate negotiations, lobbying and climate diplomacy; – Effective communication of climate change; – Integrating climate change issues in national policies and strategies; – Techniques for mainstreaming climate change in national development; – Data collection and analysis; – Data archiving and retrieval; – Project writing and identification of needs; – Effective conversion of policy to legislation; – Geographical Information System and remote sensing – Effective communication with policy makers – Data visualisation for effective communication – Communicating to policy makers – Statistical analysis – Modelling climate change impacts on terrestrial and marine ecosystems.
Education	<ul style="list-style-type: none"> – Implementing climate change education and awareness programs – Modelling for decision making (post -secondary); – Integration of climate change into campus policies, strategies and plans (post-secondary); – Organisational audits related to climate change (post-secondary)
Agriculture	<ul style="list-style-type: none"> – Extension training for provision of technical support to introduce practices allowing for adaptation to climate change in the agriculture sector; – Translating ideas into practical climate change adaptation solutions; – Basic principles of climate change and adaptation in the agriculture sector; – Valorisation of traditional practices that can help adaptation to climate change – Statistical analysis – Modelling effect of climate change on crop and livestock yields – Understanding crop performance in relation to climate variables – Food security and nutrition in the face of climate change
Fisheries	<ul style="list-style-type: none"> – Setting up climate change tracking data collection programme in the fisheries sector; – Modelling impacts of climate change on the marine ecosystem, fisheries resources, catch; – Statistical training to quantify effects of climate change from other effects; – Integrating climate change into fisheries policies, strategies and other guiding documents; – General training on understanding climate change and its possible impacts; – Communicating effects of climate change in the fisheries sector;
Public infrastructure and physical planning	<ul style="list-style-type: none"> – Terrain risk assessment; – Modelling of water flow and retention in built environments; – Modelling effect of climate change on design parameters for construction of roads, buildings and other infrastructure; – Incorporating renewable energy options in design of infrastructure projects; – Disaster management; – Communicating effects of climate change; – Integrating climate change into development policies, strategies and other guiding documents; – Effective policy and strategy implementation. – Cost-benefit analyses of climate change adaptation measures
Disaster risk	<ul style="list-style-type: none"> – Scenario exploration between climate change and natural disasters;

management	<ul style="list-style-type: none"> – Probabilistic risk assessment – Risk and emergency management – Data management – Consequence analysis – Community engagement and climate change education
Financial sector	<ul style="list-style-type: none"> – Budget forecasting; – Keeping track of climate change related expenditure; – Economic planning in the face of climate change and other vulnerabilities; – Modelling effect of climate change on economic performance; – Analysing possible impacts of climate change in financial sector (e.g. insurance, capital flight) – Climate finance sources – Cost-benefit analyses of climate adaptation measures
Tourism sector	<ul style="list-style-type: none"> – Setting up climate change tracking data collection programme in the tourism sector; – Integrating climate change issues in national tourism policies, strategies, work plans, sustainability labels; – Preparing climate change related regulations in the tourism sector; – Climate change education and awareness in the tourism sector;
Meteorology	<ul style="list-style-type: none"> – Modelling and interpretation of models; – Climate risk profiling; – Calibration of weather equipment; – Climate data management and quality control; – Statistical data analysis; – Applied meteorology (e.g. Agro-meteorology, Hydro-meteorology)
Health	<ul style="list-style-type: none"> – Managing aftermath of natural disasters and epidemics; – Vector control in face of climate change; – Integrating climate change issues in national health policies, strategies, work plans; – Communicating climate change and its impacts in the health sector; – Modelling of climate change health impacts, disease spread

4 PROPOSED PRIORITY AREAS FOR TRAINING AND APPROACH

4.1 Priority areas of training to be conducted under GCCA+ project

Respondents recommended that the priority areas for climate change capacity building to be supported by the GCCA+ project should focus mainly on short term training courses that would meet as much of the criteria below:

- Have a high probability of success;
- Have the greatest impact on the ability of the country to adapt to climate change;
- Have previously been recommended in other national documents related to climate change;
- Result in capacity building for a critical mass of people involved in climate actions;
- Put in place structures for data collection and analysis that can be used to document climate change at the local level and its impact on the natural environment, communities and expenditures;
- Create opportunities to generate additional resources for climate change adaptation and mitigation;

- Strengthen the position of Seychelles for negotiating with foreign government and multilateral instruments;
- Contribute to the achievement of internationally agreed goals and obligations;
- Contribute to reduction of climate associated risks faced by the country.

Based on these criteria as well as the priority areas for capacity building identified by interviewees listed in Table 2, the following training courses are recommended for support by GCCA+ project in order of priority (Tab. 2). Priority has been determined based on frequency of request for this type of training from government stakeholders interviewed.

4.2 Rationale for prioritization for training

The rationale for prioritization of training is outlined under section 4.1. Short courses to be held in the Seychelles have been prioritised, along with training sessions that would be of benefit to more than one organisation. Of high priority are those training sessions which will build capacity for integrating climate change issues into national policies and strategies. These were given priority number one by respondents, as one of the main objectives of the Seychelles Government is to ensure that climate change concerns are adequately addressed across all sectors in the country.

Also of very high importance are training strategies to support the implementation of effective climate change education and awareness programmes. Very high level of support was given for these types of capacity building programmes, as many organisations claimed that their staff and the general public find it difficult to comprehend the issue of climate change in terms of the impacts that it could have on their life.

The interviews revealed that many organisations are not able to track the impacts of climate change on their sector as they do not know what type of data they should be collecting and analysing. As such, training sessions that will help in the setting up of climate change impact tracking in different sectors have also been given high priority along with training in data analysis, especially analyses to help distinguish between the effects of climate change from other causative agents.

Most sectors requested training in computer modelling of climate impacts, as they want to use information from forecasting to influence their present management. However, with modelling training, different types of models are used for different types of data and it would be impossible to run one course to meet the specific needs all potential participating agencies, or to hold a large number of different modelling training sessions to accommodate each organisation.. Therefore, further prioritisation should be undertaken to identify priority areas for modelling training. Essentially, areas chosen should be those in which there are already at least basic existing capacity for running and interpreting models.

Tab. 2. Priority capacity building strategies which have been identified by stakeholders for support by the GCCA+ project and recommended approaches.

Capacity Building areas	Desired outcomes	Target Organizations	Recommended Approach by GCCA+
1. Integrating climate change into national policies, strategies and other guiding documents.	Technical skills are developed to integrate climate change related issues in policies, strategies and other guiding documents across all key sectors in the country.	All government ministries and agencies TGMI (The Guy Morel Institute)	Introductory sectoral or multi-sectoral workshops by GCCA+ team followed by individual support for policy writing International online courses for managers and policy analysts Support integration of CC into all TGMI management programs
2. Implementing climate change education and awareness.	Capacity is built to effectively plan, execute and evaluate effective climate change education and awareness campaigns that help Seychellois take action to deal with climate change	MEECC Ministry of Education Department of Community Development Youth Department Media houses	3-5 day courses for educators and community workers offered by local/ international experts on a range of education/ communication strategies Consultant support for curriculum development in Ministry of Education International online courses for educators
3. Climate data and document management.	Capacity is developed to manage and effectively share climate change related documents through the use of ICT infrastructure.	<ul style="list-style-type: none"> - Department of Information Technology - DRDM - MEECC - Seychelles Planning Authority - National Meteorological Agency - Ministry of Health - Public Health Authority - National Bureau of Statistics 	One 3-5 day workshop offered through UniSey's IT department, using local or international facilitators
4. Modelling of climate change	Capacity is built to populate, operate, analyze and interpret data from an array of specific	<ul style="list-style-type: none"> - MEECC. - National Meteorological Agency 	Introductory 3-day workshop on climate change modelling followed by specific 3-5

impacts (thematic area specific training courses).	models to forecast impacts of climate change on a range of issues.	<ul style="list-style-type: none"> - Seychelles Agricultural Agency - SFA - Seychelles Energy Commission - DRDM - Department of Information Technology - Ministry of Finance, Trade Investment and Economic Planning - Ministry of Habitat, Infrastructure and Land Transport - Seychelles Ministry of Tourism Civil Aviation Ports and Marine 	day workshops. Offered in collaboration with UniSey IT department.
5. Project writing and identification of needs.	Technical skills are developed for identifying key climate change related issues and write projects to source finances to address them.	All government ministries and agencies	A 3-day one-off multi-sectoral workshop at TGMI in climate finance and grant writing, focusing on local funding sources such as ETF / SEYCATT
6. International climate negotiations, lobbying and climate diplomacy.	Capacity is increased to effectively participate in international meetings, discussions and negotiations.	<ul style="list-style-type: none"> - MEECC - Ministry of Foreign Affairs - National Meteorological Agency - Seychelles Energy Commission - President's Office - Vice-President's Office - University of Seychelles 	Online courses offered by international institutions
7. Keeping track of climate related expenditures.	Capacity is developed and systems are put in place to track climate change adaptation and mitigation related expenditures in the public and private sector.	<ul style="list-style-type: none"> - Ministry of Finance, Trade Investment and Economic Planning - University of Seychelles - Guy Morel Institute 	Introductory 3-5-day workshop led by international and local consultants, in collaboration with TGMI Follow up workshops for specific sectors as needed. Ongoing support from GCCA+ team for Ministry of Finance
8. Organisational audits related to	Capacity is built to keep tracks of efforts in addressing climate change related issues at	<ul style="list-style-type: none"> - University of Seychelles - Guy Morel Institute 	Development of a short course at the TGMI or integration into an existing

climate change	organizational level.		auditing course
9. Data visualisation for effective communication	Capacity is developed to visualize complex data on climate change to facilitate understanding by policy makers and the general public.	All government agencies undertaking CC community education and awareness.	Online courses for IT and communications staff Two 3-day workshops with local/international facilitator held at TGMI or UniSey IT dept.
10. Managing natural disasters and epidemics	Capacity is developed across different sectors to effectively manage the aftermath of natural disasters and climate related epidemics	<ul style="list-style-type: none"> - Ministry of Health - Public Health Authority - DRDM - MEECC - Seychelles Fire and Rescue Services Agency - Seychelles Police Force - Seychelles Coast Guard 	Online introductory courses for managers and technical staff 5-day workshop offered with UniSey in collaboration with DRDM and other partners
11. Setting up of climate change tracking data collection programmes.	Capacity is developed in various sectors to identify critical data that needs to be collected and analyzed to track the effect of climate change at the national level.	<ul style="list-style-type: none"> - MEECC - DRDM. - Seychelles Fishing Authority - Seychelles Agriculture Agency - National Meteorological Agency - Ministry of Health - Public Health Authority 	- Introductory 3 day workshop on CC data tracking methods followed up by sectoral mini-workshops in collaboration with UniSey IT department and supported by GCCA+ team.
12. Effective conversion of policy to legislations.	Capacity is developed at the level of ministries and agencies to convert policies into draft legislations to be further developed by the Office of the Attorney General.	<ul style="list-style-type: none"> - Office of the Attorney General - Department of Legal Affairs - All other government ministries and agencies involved preparation of legislations. 	- In-house collaboration with sectors by members of GCCA+ team, ongoing as needed
13. Terrain risk assessment.	Capacity is developed to do effective terrain risk assessments and provide public advice.	<ul style="list-style-type: none"> - DRDM - Seychelles Planning Authority - Ministry of Habitat, Infrastructure and Land Transport - Department of Environment - Seychelles Fire and Rescue Services Agency 	- 5 day workshop in collaboration with UniSey and DRDM facilitated by international consultant assisted by local expertise

4.3 Priority participants for training and selection criteria of participants

Selection of participants to attend different types of training should be left to the heads of the organisations with which they are employed. These organisations to be targeted by the different training sessions have been identified in Tab 2. To facilitate the identification of the most ideal candidates at the organisational level, the training organisers should prepare an ideal profile for would be participants to the course and send those along with the nomination requests. Though this assessment was focussed on the identification of key capacity gaps for State Actors, it came out strongly in the interviews that whenever possible training sessions should include both State and Non-State Actors (from civil society and the private sector) as this would improve sharing of experience and will lead to better collaboration and absorption of new methods at all levels.

4.4 Proposed approach for training on climate change adaptation

The proposed approach for training on climate change adaptation comes mostly from the interviews undertaken. Most organisations were in favour of longer-term training programmes with delivery broken down into a series of short 1-5 day workshops. Government organisations were of the opinion that short, in-country training sessions facilitated by experts in the field would be of more benefit, as many staff members are unable to attend overseas training due to family and other commitments. There was support for sending staff on overseas short courses, but only in instances when training could not be done in the country. Further to the point made above, respondents were of the opinion that ideally, training should involve both government employees and other people working in the same industry. It was argued that being in the same training will ensure that people in government and in the private sector or civil society speak the same language, and that this will reduce instances of misunderstanding. Respondents wanted training sessions that have a good balance of theory and practical sessions that is delivered in an interactive manner to allow for faster absorption. There was very high support for training that deals with real life scenarios for attendees to see the direct application of the training they are doing.

The usefulness of online training was also acknowledged, along with the realisation that Seychelles is not currently making full use of training courses that are available online. The main reason why these online courses were not being fully utilised was believed to be because these opportunities are not well communicated to staff that could benefit from them and/or because there were small fees that had to be paid. Organisations believed that they should do more to get their staff to follow on-line training sessions that can provide them with formal qualifications without having to travel to other countries for a long time period. To motivate staff, there is also a need to clearly outline the career benefits that such training would bring. An initial list of potentially useful online climate change training is provided in Annex 4.

Support for more in-depth overseas training in climate science at undergraduate or graduate levels came mostly from organisations that are dealing with climate change issues on a day to day basis as part of their core mandate, such as the Department of Energy and Climate Change, The Department of Environment, The Department of Agriculture and the National Meteorological Agency. These organisations wanted to build strong internal capacity on climate science on which other people in the sector could depend on. The MSc in Climate Change and Marine Science that UniSey is starting in 2019 would help in filling some of the demand for longer-term university level training. However, since the MSc will be very focussed on the marine and coastal science sectors organisations working in fields such as agriculture and meteorology will need to continue to look externally for trainings on the integration of climate change in their specific

fields. While these requests represent worthwhile needs, it is not within the scope of the GCCA+ project to provide financial support for them.

5 PROPOSED CAPACITY BUILDING PLAN

5.1 Implementation modalities

Implementation modalities will change for each type of training. Most organisations indicated a preference for longer-term training programmes delivered locally by experts in their field, with delivery broken down into a series of short 1-5 day sessions. In other cases training can be delivered through supported on-line courses. In other cases the capacity building will take the form of personalized support for government agencies who need ongoing help with policy writing, curriculum development, education campaigns etc., and may be delivered by members of the GCCA+ team. Where local capacity exists for delivering the training courses or other forms of capacity building support, these should be used in preference. Wherever possible, when international experts are brought in to deliver training, they should be paired with local experts to ensure that the training is relevant to the local context, and to build local capacity for delivering these types of more specialized training courses.

5.2 Proposed implementation plan

An implementation plan spanning two years from September 2018 to April 2020 is currently under development and will be circulated by the GCCA+ team and stakeholders at a later date.

5.3 Required resources for training

The required resources for the proposed implementation plan are associated with the use of local and international consultants to facilitate the training, which will be necessary where no local expertise exists in that particular field. The cost of venue and catering can be partly covered by the GCCA+, while cash or in-kind contributions from local training/education partners and other projects will also be sought.

The GCCA+ Project has already initiated discussions with the University of Seychelles (UniSey) and The Guy Morel Institute to explore the possibility of collaboration for capacity building sessions on climate science and management respectively. By using these venues and developing the local training courses as certificate courses under these two institutions, the GCCA+ project can contribute towards developing their capacity to sustain climate change adaptation capacity building programs in future years. Both of these institutions have appropriate training venues and have a track record of offering successful professional development courses to government and other stakeholders.

5.5 Outline of proposed training courses

An outline for each proposed training course should be developed by a local professional in the field, in close consultation with the Seychelles GCCA+ Project Capacity Building Expert (KE3), and other organisations who will participate in/be involved in the training. The person developing the outline should have a good understanding of the working environment within government organizations in the Seychelles as well as the local context for climate change adaptation. In some cases, the outline may be developed by the course trainer in consultation with local partners. Taking time to develop comprehensive training course outlines will ensure that:

- The right facilitators are selected to deliver the training courses;
- Training sessions requirements are set at the right standard to cater for the level of participants who will be attending,
- Competencies to be developed and expected conditions at the end of the training are well understood by all involved;
- Appropriate real-life case studies can be selected to facilitate training and absorption;
- Most appropriate implementation modalities can be agreed upon;
- Appropriate venue and resources for training sessions can be sought;
- The right profile of people who should attend the course could be put together to help organization in the selection of the most appropriate candidates.

6 POSSIBLE CHALLENGES TO DELIVER CLIMATE CHANGE CAPACITY BUILDING ACTIVITIES IN SEYCHELLES

There are a number of challenges that Seychelles will need to face in developing capacity for climate change adaptation. These include, but are not limited to:

- Lack of funding as Government annually dedicated only a small proportion of its budget to capacity building. Lack of funding will become a more serious issue in the future since Seychelles is now considered as a High-Income Country and is no longer eligible for certain types of donor assistance.
- Government departments are already under pressure with high workloads and limited workforce. Releasing staff to attend training courses is always an issue and could affect the effective implementation of capacity building programmes if training opportunities are not communicated early enough to allow for government departments to plan the use of their staff.
- While holding training locally ensures that maximum participants can attend, it can be challenging to ensure that all participants are committed to attending all sessions in full.
- Most of the priority training sessions which have been identified as part of this assignment will be delivered by international experts, which are often costly and in high demand. Getting the right people to facilitate the training course might be a problem. Expression of interest to get experts to facilitate the training sessions undertake the trainings should be advertised as widely as possible to

ensure that lots of experts apply and that the GCCA+ project has a wide pool of experts to choose from.

7 RECOMMENDATIONS AND WAY FORWARD

To date, climate change capacity building and training programs for government staff, initiated locally, have been limited. Most of the training that government staff have participated in over the last decade have been part of regional or international initiatives. Despite the fact that various plans have been prepared to address issues of capacity to deal with climate change, most of the activities have not been followed up upon either because of a lack of funding, with government dedicating very little funding for training, and/or a lack of a coordinating mechanism and/or climate change training being of lower priority compared to others. There is always more demand for capacity building than funds available to deliver the training. The recommended training proposed as part of this CNA are what is believed by the key stakeholders interviewed as the most needed. Indeed, there is no great divergence of what is suggested here from the recommendations that have been listed in previous documents on the same topic.

In order to make capacity building initiatives more successful and effective, there are a number of activities which can be implemented in parallel.

- Government should put in place a portal for online records of training (not limited to climate change) undertaken by staff from across different sectors. Such a system would allow for better tracking of training and identification of gaps, and could be used to store training materials and reports as well as the names of resource people who have benefited from the training
- An online repository for government documents should be set up to manage the vast number of national documents and reports which are produced by government and other key stakeholders (once again not limited to climate change). The repository should be used as a tool to provide public access to climate change related documents in line with the newly approved Access to Information Act. It would make it easier to obtain information for future capacity needs assessment.
- This capacity needs assessment has focussed only on the government sector. There is thus a need to prepare a country-wide capacity needs assessment for addressing issues of climate change that assesses capacity in government, NGOs and private sector companies. Such an assessment would allow for identification of capacity that exist in NGOs and the private sector that the government can make use of for internal capacity building.
- The GCCA+ Project should continue to strengthen its partnership with other climate change orientated donor funded projects currently under implementation or those planned for implementation in the near future, to create synergies, share costs and reduces instances of training duplication.
- The Government should play a stronger role in encouraging young people to take a career in fields related to climate change such as climate science or applied meteorology. These training requirements should feature in the list of priority training sessions that is prepared by Agency for

National Human Resource Development (ANHRD) and should be communicated to Careers Guidance Officers in schools.

- A portal should be set-up to channel available courses offered by foreign governments and universities and regional programmes and initiatives that can be consulted by the general public. This would make it easier for people to identify and apply for online or overseas training courses. It will also help in circumventing problems of information on available courses not trickling down to the right candidate that have been raised by many people interviewed.
- Efforts should be put on completing the Climate Change Policy with minimal delay. The new policy will provide the right framework for implementation of climate change adaptation and mitigation inclusive of capacity building and technology transfer.
- A coordination mechanism should be put in place for coordination of climate change related actions including capacity building. This would ensure synergies among programmes and ensure that available resources are used more effectively. The National Climate Change Committee is being reinstated and can include this as one of their functions.

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8 ANNEXES

8.1 Annex 1 – People interviewed as part of the assignment

Name	Organisation
Selvan Pillay Justin Prosper	Climate Change Division, Department of Energy and Climate Change
Phillip Michaud Chrissent Barbé	Department of Blue Economy
Wills Agricole Sophie Morgan	Department of Energy and Climate Change
Allain Decommarmond Marie-May Muzungaile	Department of Environment
Jude Talma	Department of Fisheries
Yves Choppy	Department of Infrastructure
Ravi Valmont	Department of Lands
Paul Labaleine	Department of Risks and Disaster Management
Philomena Hollanda Louis Desnousse Sinha Lekhovic Bernice Elizabeth Janice Bristol	Department of Tourism
Rodney Quatre	GCCA+ Project (Component B)
Jennifer Jasmin	Ministry of Finance, Economic Planning and Trade
Vincent Amelie Marcel Belmont Gerrard Bijoux George Uzice	National Meteorological Authority
Rodney Philo	Public Health Authority
Rodney Govinden	Seychelles Fishing Authority
Parinda Herath	Seychelles Land Transport Authority
Selby Remie	Seychelles National Parks Authority
Fanette Albert Ashley Philoe	Seychelles Planning Authority
Kelly Hoareau	University of Seychelles

8.2 Annex 2 – Questionnaire used for interviews with government officials

Questionnaire for undertaking of Capacity Needs Assessment for Climate Change in Seychelles

Interviewee(s): _____

Organisation: _____

Date: _____

1. When I say the word climate change what pops into your head?

2. How did you learn about climate change?

3. Do you think enough is being done to teach the public about the effects of climate change? Yes
No

4. In your view, is climate change relevant to the mission and activities of your organisation? If yes, how? Yes No

5. Are you familiar with Seychelles' national climate change-related policies, strategies and plans? Which ones? Yes No

6. In which ways, if any, is your organisation addressing climate change? (e.g. in strategy documents, policy, training plans, activities)
Policies:

Strategy documents:

Training plans:

Activities:

7. What types of capacity building strategies, if any, have you used to train staff to integrate climate change considerations into their work?

8. Do you have any training materials or reports related to the above that you can share?
Yes No

List of reports:

9. Have your staff participated in climate change training or capacity building organised externally by other organisations? If yes, on which topics?
Yes No

List of topics/name of courses:

10. In your view, have these training initiatives in climate change been effective? Why/why not?

11. Moving forward, what are the areas of training needed by your organisation for climate change adaptation?

12. Which are the priority and emerging aspects of training needed and why?

13. Who are the priority targets for training in climate change in your organisation?

Positions:

Divisions/Sections/Units:

14. What would be the ideal approach for climate change capacity building for your organisation?

15. What strategies could be used to motivate government departments (or your organisation) to offer and/or participate in climate change training?

16. Any other comments or suggestions?

8.3 Annex 3 – Terms of Reference for consultancy to undertake climate change capacity needs assessment

TERMS OF REFERENCE

FOR A PART-TIME CONSULTANT TO CONDUCT A CLIMATE CHANGE CAPACITY NEEDS ASSESSMENT

A project based at the GOS-UNDP-GEF Coordination Unit in Victoria seeks a local expert in **Climate Change Capacity Needs Assessment**, to provide part-time consulting services on a short-term basis. This assignment forms part of a Global Climate Change Alliance + (GCCA+) project launched in November 2017, to help the Government of Seychelles to mainstream climate change into its national systems and processes, across diverse sectors. The project is being funded by the European Union's GCCA+ program, managed by the consulting firm STANTEC under the supervision of the Ministry of Environment, Energy and Climate Change (MEECC). It is being delivered by a core team of consultants, working in collaboration with government counterparts and other partners. The successful candidate will form part of this team.

Context of the work

Climate change represents a major threat to Seychelles' economy and way of life due to changes in rainfall patterns, sea level rise, increased coastal erosion and flooding, as well as impacts on marine ecosystems and fisheries due to ocean warming and coral bleaching. The Government of Seychelles has recently committed to both reducing our own contributions to greenhouse gas emissions and planning ahead to adequately prepare for the impacts of climate change, and this commitment has been captured in the Intended Nationally Determined Contribution report submitted at the Paris Climate Change Summit in 2015. While awareness of climate change is generally high in Seychelles, this has not yet translated into concrete policies and plans to seriously address climate change in most government sectors. The costs of shifting to climate-friendly and climate-proof development strategies are significant, but far outweighed by the diverse co-benefits generated by climate change action, including energy, food and water security, diversification of the economy and generation of new green jobs, and protection of coastal resources needed to sustain a viable tourism industry for the future. Capacity building has been identified as one of the key strategies to move forward to mainstream climate change across all sectors, but an assessment exercise is needed to determine present capacity and anticipated needs.

Scope of work

The successful candidate will carry out a capacity needs assessment (CNA) for the key stakeholders that are involved in dealing with climate change at all levels, with a particular focus on government stakeholders who are required to lead policy and regulatory framework changes needed for effective climate change adaptation. The consultant will work in close cooperation with the Institutional/Capacity Building expert (Key Expert 3) on this task. She/he will contact and interview key informants from about 15 stakeholder groups, compile and analyse this data, and work closely

with KE3 to produce a detailed report including a proposed training program. The consultant will be expected to contribute up to a maximum of 25 days of work, between April and July 2018.

Designated tasks (with approximate guidelines for allocated days)

Scoping Phase – up to 5 days

- Work with KE3 to finalize the methodology and research tools to be used to conduct the capacity needs assessment.
- Review sector policy and strategy documents.

Operational Phase – up to 15 days

- Conduct interviews and focus groups with key stakeholders
- Compile and analyse data from interviews and other sources and summarize findings.

Reporting Phase – up to 5 days

- Work closely with KE3 to produce a report on the findings of the capacity needs assessment which includes recommendations for a training program to build capacity in climate change in diverse sectors.

List of deliverables

- Finalized and approved methodology for the Capacity Needs Assessment
- Data sheets and interview notes for each sector
- Summary of findings based on analysis of data
- Contributions to capacity needs assessment report and training program

Timeframe for completion

- 4 months

Total maximum working days

- 25

Required qualifications, experience and skills

- Master's degree or equivalent experience in climate change, sustainable development, environmental education, environmental studies, environmental management or similar field
- Proficiency conducting qualitative research, including conducting interviews, data analysis, and report writing.
- At least 5 years professional experience working on climate change or sustainable development issues in a small island state context, preferably Seychelles.
- A good working knowledge of English and preferably also Creole.
- Demonstrable excellent interpersonal skills and ability to maintain effective communications and relationships with different stakeholders.
- Ability to be an effective member of a team, to work independently and deliver on time.

Desirable experience and skills

- Professional experience in Seychelles or other SIDS.
- Previous experience undertaking capacity needs assessments.
- Familiarity with Seychelles' public sector and key stakeholders for climate change.

Annex: Proposed methodology for Capacity Needs Assessment

OVERVIEW & PROPOSED METHODOLOGY

GCCA+ Project “Strengthening the policy framework for climate change in Seychelles” STAKEHOLDER CAPACITY NEEDS ASSESSMENT FOR CLIMATE CHANGE

(RESULT A.4.1.a)

BACKGROUND

The GCCA+ project “strengthening the policy framework”, is expected to deliver tailored capacity building and development in order to bridge current human and institutional capacity weaknesses that prevent the MEECC from effectively addressing climate change, particularly adaptation. For this to be successful, capacity gaps within the MEECC and among key stakeholders need to be first identified first. To this end, the GCCA+ team will carry out a capacity needs assessment (CNA) for the key stakeholders that are involved in dealing with climate change at all levels, with a particular focus on government stakeholders who are required to lead policy and regulatory framework changes needed for effective climate change adaptation. The CAN will be carried out by a short-term consultant in close consultation with the project’s Key Expert for Capacity Building.

The UNFCCC identifies several different levels to consider for national capacity building for climate change adaptation:

- 1) Individual
 - Human capital
- 2) Institutional
 - Ministries/agencies
 - Organizations
 - Research centres
- 3) Systemic
 - Regulatory, legislative and policy frameworks
 - Public awareness on climate change adaptation
 - Accountability frameworks

All three levels will be considered during the CNA exercise for Seychelles.

PURPOSE OF THE CAPACITY NEEDS ASSESSMENT

To identify capacity gaps, it is critical to be clear about the ideal end point: what knowledge and actions are needed to mainstream climate change and associated disaster risk reduction at the national level, and local/community level. The following key competencies that stakeholders collectively need to possess in order to deal effectively with the impacts of climate change are proposed:

1. Understand the present and future climate change at the downscaled level

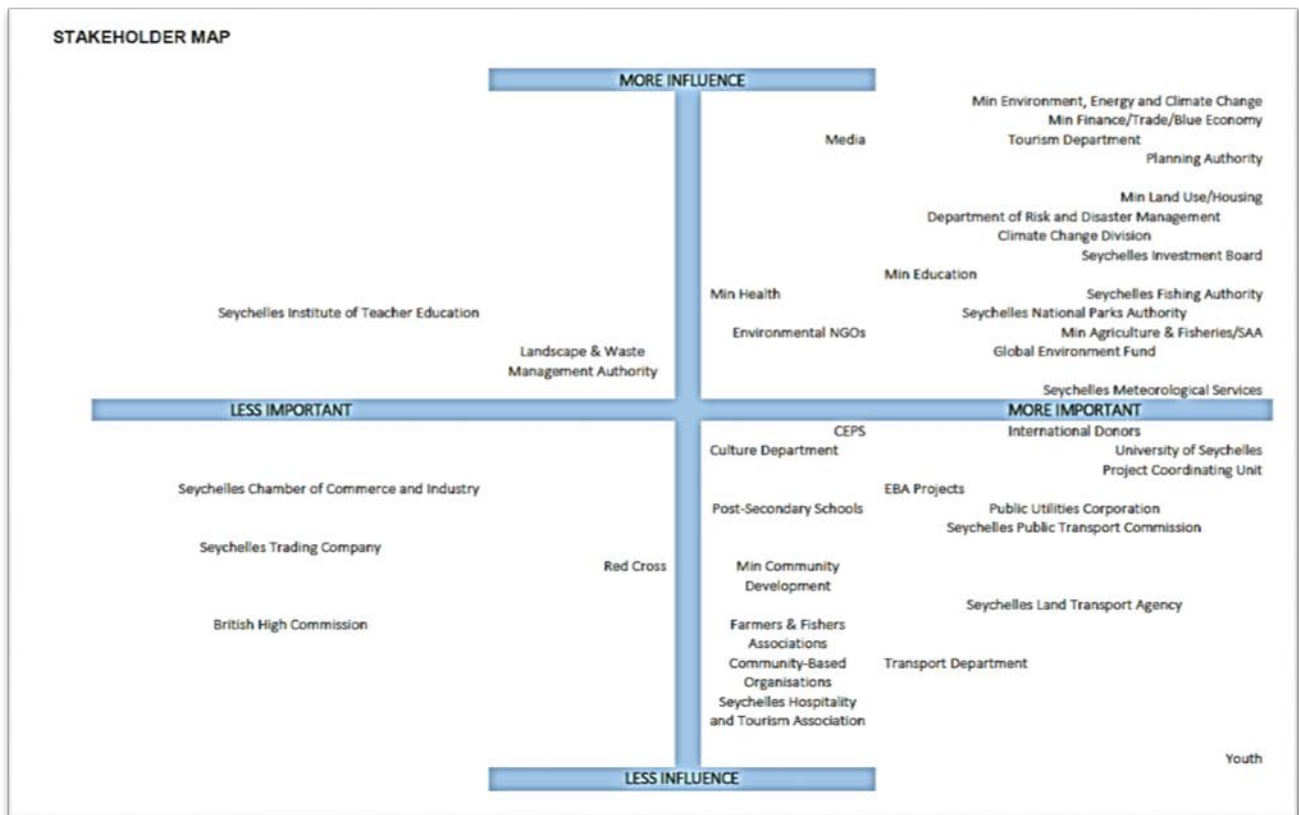
2. Understand the pressing climate variability and expected changes in the future
3. Use a sound approach to carry out climate vulnerability assessments
4. Identify and prioritise climate strategies and measures based on the vulnerability assessments
5. Carry out benefit-cost analysis to make the case for climate change adaptation
6. Integrate the analysis of CCA and DRR into a single framework as proposed under the Sendai Framework for Disaster Risk Reduction (2015 – 2030)
7. Carry out probabilistic analyses of climate-induced disaster risks, including the most response measures (including multi-hazard early warning systems)
8. Ability to use appropriate tools and frameworks for tracking performance on climate action
9. Coordination between stakeholders to enhance efficiency and effectiveness of climate action
10. Ability to use the technical competencies detailed above to develop funding proposals to leverage climate finance

It is important to note that not all of these competencies will be relevant for all key stakeholders. The Capacity Needs Assessment will determine the present state knowledge, skills and actions of the key stakeholders, identify gaps, and propose appropriate training and other measures to fill those gaps. The priority areas of training identified through the CNA will be implemented under the GCCA+ project, component A “Strengthening the policy framework for climate change in Seychelles”, during 2018-2019.

WHO ARE THE KEY STAKEHOLDERS FOR CLIMATE CHANGE ADAPTATION?

The key stakeholders for climate change were identified during a stakeholder mapping exercise done during the INDC planning phase in 2015 and this matrix summarizing stakeholder roles and importance is being used for the purposes of the GCCA+ project – see below.

Stakeholders were mapped in terms of their power and relevance, as follows with the key stakeholders being those that fall within the areas of most importance and most influence. The criteria for “importance” included issues like vulnerability as well as the extent to which their activities are directly relevant to climate change adaptation measures and vice versa.



Assuming that not much has changed within the last two years that would significantly alter the stakeholder map, we can use it to infer that the key stakeholders from government that should participate in the capacity needs assessment for climate change adaptation would be those found in the top right block on the “important side” including, approximately in this order:

1. Ministry of Environment, Energy and Climate Change (including agencies as well as Managers of climate change related projects)
2. Ministry of Finance, Trade and the Blue Economy (now called the Ministry of Finance, Trade and Economic Development)
3. Ministry of Tourism
4. Planning Authority
5. Ministry of Land Use and Housing (Now called the Ministry of Habitat, Infrastructure and Land Transport)
6. DRDM
7. Seychelles Investment Board
8. Ministry of Agriculture & Fisheries (including SFA and SAA)
9. Seychelles National Meteorological Authority
10. Ministry of Education
11. Ministry of Health

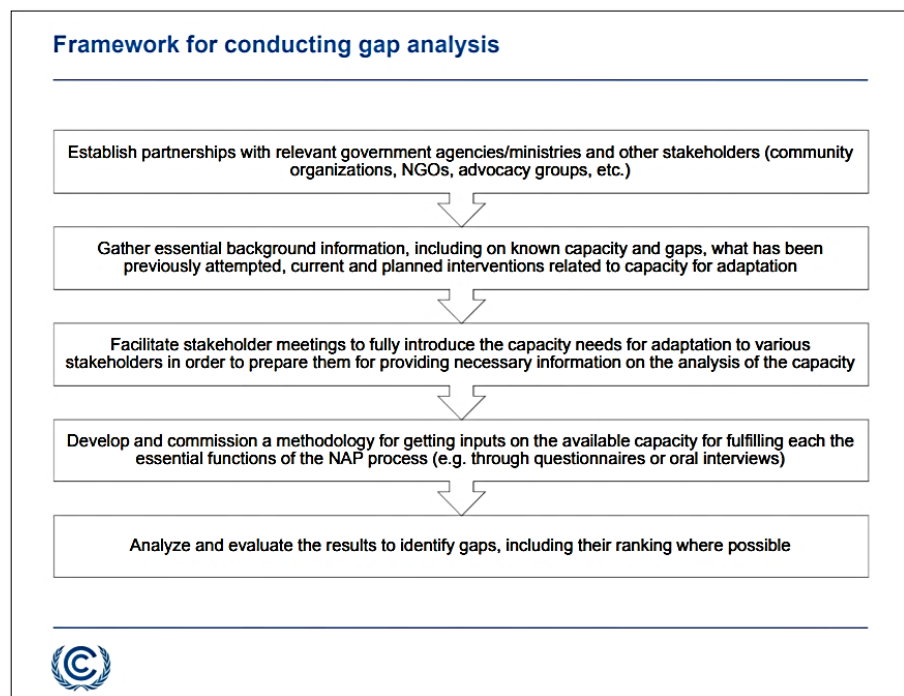
Other key stakeholders which should be added include:

- University of Seychelles / Blue Economy Research Institute
- The Guy Morel Institute
- Vice President’s Office (Blue Economy Depts)
- Office of the Designated Minister (DRDM and Local Government Dept.)

METHODOLOGY

The capacity needs gap analysis will be completed over a period of 5 months starting in February, 2018.

The UNFCCC (2013) recommends the following framework for national capacity needs assessment for climate change as illustrated in the figure the right.



(https://unfccc.int/files/adaptation/application/pdf/7.4_capacity_needs_and_gaps.pdf)

In line with these recommendations, the methods to be used for the CNA are as follows:

METHOD	TIME FRAME
1) Review of documents, reports and publications pertaining to climate change policy and national and sectoral plans and strategies in Seychelles	November 2017-February 2018
2) Review and stocktaking of completed, ongoing and planned capacity development activities on CC since the publication of the National Climate Change Strategy (2009)	April-May, 2018
3) SWOT analysis of completed and ongoing initiatives	April-May, 2018
4) Key informant interviews	May-June, 2018
5) Expert and stakeholder consultation (workshop / focus	June, 2018

group)	
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The key informant interviews listed in the above table will be done use a semi-structured interview guide, based on the following proposed questions:

Proposed Checklist/ Questionnaire for Capacity Need Assessment (will require updating and reduce number of questions)

17. In your view, is climate change relevant to the mission and activities of your organisation? If yes, how?
18. Are you familiar with Seychelles' national climate change policy, strategy and plans? Which ones?
19. In which ways, if any, is your organisation addressing climate change? (e.g. in strategy documents, policy, training plans, activities)
20. What types of capacity building strategies, if any, have you used to train staff to integrate climate change considerations into their work?
21. Do you have any training materials or reports related to the above that you can share?
22. Have your staff participated in climate change training or capacity building organised externally by other organisations? If yes, on which topics?
23. In your view, have these training initiatives in climate change been effective? Why/why not?
24. Moving forward, what are the areas of training needed by your organisation for climate change adaptation?
25. Which are the priority and emerging aspects of training needed and why?
26. Who are the priority targets for training in climate change in your organisation?
27. What would be the ideal approach for climate change capacity building for your organisation?
28. What strategies could be used to motivate government departments to offer and/or participate in climate change training?
29. Any other comments or suggestions?

A detailed report presenting the findings of the Capacity Needs Assessment will be produced in July, 2018, and circulated to stakeholders for feedback. A draft outline of the table of contents is provided below:

PROPOSED TABLE OF CONTENTS FOR REPORT ON CAPACITY NEEDS ASSESSMENT FOR CLIMATE CHANGE ADAPTATION

(Adapted from UNFCCC guidelines for capacity needs assessment in Climate Change and the report “Rapid Assessment of Capacity Needs in Climate Change Adaptation in Bangladesh by the Bangladesh Centre for Advanced Studies”)

Abbreviation and Acronyms

Executive Summary

1. Introduction

- 1.1 Background and rationale
- 1.3 Objectives of the Capacity need assessment (CNA)
- 1.4 Key direction of capacity building in CC adaptation in Seychelles
- 1.5 Limitations of the study

2. Methodology

- 2.1 Review of documents, reports and publications
- 2.2 Stocktaking of completed, ongoing and planned capacity development activities on CC
- 2.3 SWOT analysis of completed and ongoing initiatives
- 2.4 Key informant interviews
- 2.5 Expert and stakeholder consultation (workshop / focus group)

3. Results

- 3.1 Current status of capacity development on CC adaptation
- 3.2 Capacity needs in various sectors and thematic areas

4. Proposed priority areas for training and approach

- 4.1 Priority areas of training to be conducted under GCCA+ project
- 4.2 Rationale for prioritization for training
- 4.3 Priority participants for training and selection criteria of participants
- 4.4 Proposed approach for training on climate adaptation

5. Training Implementation Plan

- 5.1 Implementation modalities
- 5.2 Proposed implementation plan
- 5.3 Required resources for training
- 5.5 Outline of proposed training courses

6. Possible challenges of the delivery of capacity building activities on CC

7. Recommendations and way forward

References

Annexes

- Questionnaires used, list of people interviewed etc.,

8.4 Annex 4 – Examples of online climate change training opportunities. Source: <https://www.class-central.com/>

Name of Course and link	Offered by	Description	Length	Cost
Planning for Climate Change in African Cities	African local government academy; Erasmus university Rotterdam;	An introductory course targeting planners, with a focus on resilience in the built environment. 4 modules	Approx 20 hours to complete, suggested 4 hours per week.	Free but small fee for certificate. Financial aid may be available.
Climate Adaptation in Africa	University of Capetown	An introductory, interdisciplinary course for technicians, and managers which examines adaptation in theory and in practice, through a focus on four sectors Water Security, Agriculture and Food Security, Ecosystems and Ecosystem Services and Resilient Cities	4 weeks	No cost – this course is free to audit
Pathways to climate change adaptation: the case of Small Island Developing States	University of Geneva/UNEP via Coursera	This course provides a thorough introduction to the issues surrounding climate change adaptation using a case study approach. Last offered in 2015 – following up if still available	5 weeks	free
Climate Change Awareness for Small Islands Developing States (SIDS)	UNISDR with CADRIM (Red Cross Caribbean Disaster Risk Management Reference Centre)	Was offered in 2017 check current availability from cadrim.americas@ifrc.org	?	free
Climate Change Science and Negotiations	Independent Taught by Emmanuel Guerin and Jeffrey Sachs and	The course focuses on how countries can transition to a low carbon economy by 2050. Focus on mitigation negotiations.	10 weeks, 4-6 hours per week	free
Climate Change	Macquarie University (Australia) via Open2Study	Introductory course about climate change causes, impacts and solutions	4 weeks, 4 hours per week	free
Climate Change: The Science	University of British Columbia (Canada) via edX	An introduction to climate science basics looking at flows of energy and carbon in Earth's climate system, how climate models work, climate history, and future forecasts.	2-5 hours per week, 7 weeks	Free, \$49 for a copy of certificate
Act on Climate: Steps to Individual, Community, and Political Action	University of Michigan via Coursera	The course focuses on how to translate learning into action on climate change in the areas of food, energy, transportation and the built environment (cities)	7 weeks 4 hours per week	Free but fee for copy of certificate
Climate Change Education	Inter-American Development Bank via edX	A course to help primary and secondary school teachers teach climate change in an engaging and participatory way	7 weeks, approx. 4 hours per week	Free but pay for copy of certificate
The Impact of Climate Change on Public Health	EIT Health via FutureLearn	A course for health professionals or researchers, to explore the impact of climate change on public health and the methods used to evaluate the continuously emerging data in this field.	4 weeks, 4 hours per week	Free, paid certificate available



International Climate Change Law and Policy	University of Newcastle via edX	A course to critically assess Environmental Economics theory and its application to climate change policy, including the use of market-based policy approaches such as environmental taxes and emissions trading.	4 weeks, 2-3 hours per week	Free, paid certificate available
Climate Science and Policy	University of Queensland via edX	A course to help learners understand the size of the climate change problem and policy options that could start to make a difference.	10 weeks	Free, paid certificate available (199\$)