UNIVERSIDAD PARA LA COOPERACION INTERNACIONAL
(UCI)

PROJECT MANAGEMENT PLAN FOR THE SUSTAINABLE DEVELOPMENT
PROGRAMME OF THE CARIBBEAN COMMUNITY (CARICOM) SECRETARIAT

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Master in Project Management (MPM) Degree

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DEDICATION

First and foremost, I dedicate this project to Almighty God for His divine guidance, wisdom, and strength in undertaking this project. I would like to dedicate it to my ever-praying mother and my friends who have been unwavering in their support and motivation throughout these challenging two years of this Master of Project Management (MPM) program. Lastly, dedicate this project to my nieces and nephews — may this serve as a reminder that anything is possible with determination, perseverance, and prayers.

ACKNOWLEDGMENTS

ABSTRACT

This document aims to develop a project management plan for the Sustainable Development Programme of the CARICOM Secretariat. This plan will help to improve the implementation and sustainability of projects. Effective resource mobilization is critical for the successful implementation of projects. Notwithstanding, access to resources for the Caribbean Community continues to be challenging as developing and developed countries continue to experience economic, social and financial constraints. Official Development Assistance (ODA) from International Development Partners (IDPs) are the main source of contributions to the Caribbean region. The decrease in donor contributions to the region has been a cause for concern. Development partners prioritize addressing urgent national, regional and international challenges through direct financing to donor-supported projects. Majority of projects within the CARICOM Secretariat's are implemented through various technical programmes. Projects within the Sustainable Development Programme are utilized to address capacity building and institutional development as well as to provide support for addressing health, agriculture and food challenges in the Caribbean region. Key project management knowledge areas and processes will be applied to facilitate *inter alia*, timely and efficient execution of projects, effective communication among all stakeholders and synergistic organization of work, effective monitoring and control of the project's progress and improved scheduling and cost efficiency. The final deliverables for the project are templates for management plans covering many areas including scope, schedule, costs, quality, resources, communications, risks, stakeholders and sustainable and regenerative development guidelines. An analytical-case study methodology and the guide provided by the Project Management Institute are used to create these templates.

Fundamentally, the approved version of this project management plan will serve as a primary tool that will complement the other strategic plans utilized by the Sustainable Development Programme of CARICOM to manage projects effectively.

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ABBREVIATIONS AND ACRONYMS

ACP	African, Caribbean and Pacific Countries
CCS	Caribbean Community Secretariat
CARICOM	Caribbean Community
COTED	Council of Trade and Economic Development
EA	Executing Agency
EEF	Enterprise Environmental Factor
EIID	Economic Integration, Innovation and Development Directorate
FGP	Final Graduation Project
IA	Implementing Agency
IDP	International Development Partner
MEA	Multilateral Environmental Agreements
OPA	Organisational Process Asset
ODA	Official Development Assistance
PM	Project Manager
PMI	Project Management Institute
PMP	Project Management Plan
PMMM	Project Management Maturity
PU	Project Unit
RD	Regenerative Development
SDP	Sustainable Development Programme
SIDS	Small Island Developing States
SDG	Sustainable Development Goal

EXECUTIVE SUMMARY

The work of the Caribbean Community (CARICOM) Secretariat (CCS) is guided by the Revised Treaty of Chaguaramas. the Secretariat is tasked with assisting in the development and implementation of proposals and programmes and coordinating activities of donor agencies, international, regional and national institutions. to achieve the Community's objectives. It is worth noting that presently, there is yet a consistent project management structure or standard for project management within the Secretariat. Projects are generally implemented by technical programmes that are affected by limited human and financial resources, time constraints, and limited project management processes and plans based on international best practices. To fulfil the Treaty obligation to develop programmes and projects and provide support for their implementation with sound project management standards, it is imperative that the Secretariat develops a project management structure and standards. As the Secretariat strives to improve on its functions outlined in the Treaty, greater focus has been placed on ensuring that programmes and projects are aligned and properly resourced.

The Sustainable Development Programme (SDP) within the Economic Integration, Innovation and Development Directorate (EIID) received donor funding to strengthen regional environmental governance through capacity building and policy dialogue for Multilateral Environmental Agreements (MEAs). Effective resource mobilization is critical for the implementation of projects, and with eighty percent (80%) of the total International Development Partners (IDP) resources used to implement regional projects, it was imperative that results-based metrics, built on best practices benchmarks, templates, and continuous improvement systems established for all projects.

Key knowledge areas and project management processes should be applied to projects within the SDP that comply with the strategic management plan of CCS. A project management plan (PMP) was developed in accordance with the standards of the Project Management Institute (PMI), to develop, outline, monitor and control projects within the SDP of the CCS.

The general objective was to develop a PMP to sustainably manage projects within the SDP that fully adheres to the rigorous standards set by the PMI. To achieve this, some specific objectives were established. Firstly, thoroughly assessed the project management maturity level of the SDP of CCS with the goal of gaining insight into the methodologies, approaches, strategies and decision making processes used for PM; developed a project management plan modeled within the standards of the PMI that can be seamlessly integrated into the SDP; developed a scope management plan to identify and define the actions required to achieve project goals and avoid scope creep; created a schedule management plan to establish the processes and procedures for the timely development, monitoring and controlling of the schedules of projects; developed a cost management plan that clearly outlines how project costs should be estimated, budgeted, managed, monitoring and controlled; produced a quality management plan that outlines procedures and recommendations that needed to be applied to ensure that project outputs met all quality requirements and satisfy expectations for approval within time, cost and scope constraints; created a resource management plan to guide the categorization, allocation,

management and use of human resources; created a risk management plan that describes how risk management processes will be structured and performed to minimize the likelihood of risks on projects; created a stakeholder management plan that outlines effectives strategies and actions for promoting active stakeholder participation in decision making and execution of projects; and lastly, created a regenerative and sustainable development guide that aims to improve how resources within the SDP are used for holistic wellbeing with an emphasis on building the capacity to support systems needed for future growth.

The SDP project management maturity had been rated at level 1. This was due to the high risk of changes that could result from implementing a project management plan to the organization's culture. There were few organisational processes and standards that hold project managers accountable for their performance in key project management knowledge areas. However, the project maturity level of SDP-CCS provided sufficient justification for the need to establish a PMP within the SDP-CCS department. In addition, since the SDP-CCS is a project-oriented department that further justifies the need for a PMP. The interview results indicated that there was a desire for more standardization and governance within the organization, among the respondents who were primarily staff who have worked on projects with some level of project management qualification or experience.

The research methodology for this project included a combination of quantitative and qualitative elements in the analytic-case study method. Identified sources of information – such as reports, print and electronic records of the organization, projects progress and annual reports, briefs, online press releases and other articles – were systematically analyzed to gather relevant information, elicit meaning, gain understanding, and develop empirical knowledge. During the synthesis of this project management plan, the data from these sources of information were verified through key resource persons internal and external to the organization to corroborate findings and reduce the impact of biases.

The author of this FGP, who currently serves as the Project Manager for the ACP MEAs Project within the Sustainable Development Programme, recommended the submission of a request for a one-year project extension due to administrative challenges and the impact of the pandemic, which caused a delay in implementation by a year. Activities requiring visits and travel (national and regional) were most affected. The pandemic revealed the fragility of the relationship between people and the natural world. Notwithstanding, it created opportunities for the Caribbean Hub of the ACP MEAs Phase III Project to expand its reach and strengthen existing and new partnerships to achieve the program's objectives in new and strategic ways that may not have been previously considered before 2020.

1. INTRODUCTION

1.1. Background

In accordance with Article 25(3) of the *Revised Treaty of Chaguaramas Establishing the Caribbean Community including the CARICOM Single Market and Economy*, the CARICOM Secretariat (CCS) is responsible for assisting the organs of the Community in the development and implementation of proposals and programs for the achievement of the objectives of the Community. Moreover, Article 25(f) mandates that the CCS coordinate the activities of donor agencies and international, regional, and national institutions to achieve these objectives. Article 25(h) also requires the CCS should provide technical assistance to national authorities, when requested, to facilitate the implementation of Community decisions. The CCS, therefore, has a Treaty obligation to develop programs and projects and support their implementation. Therefore, if called upon by Member States or Regional Institutions to provide technical assistance for projects, the CCS, should be in a position to provide this assistance, since it is obligated to do so.

Figure 1 Member States of CARICOM (geographical context) (Source: Google)

As the Secretariat strives to improve on the functions outlined in Article 25 of the Revised Treaty, greater emphasis has been placed on the alignment of programmes and projects with the Community Strategic Plan and ensuring adequate resource allocation.

The development of the Community Strategic Plan, Community Operational Plans, the Secretariat Strategic Business Plan, and the Secretariat work programmes, and implementation of those programs and projects therein, therefore, requires the development of projects following sound project management standards. Robust resource mobilization policies are also needed.

The Environment and Sustainable Development Programme "promotes and develop policies for the protection and the preservation of the environment and for sustainable development" (CCS, 2002, p. 13). Given the region's small size and vulnerability, it lacks the necessary resources, whether human or financial, to pursue such an approach. In this regard, there has been a growing consensus that the region must link the various sustainable development processes and address them in a coordinated and coherent manner.

1.2. Statement Of the Problem

Effective resource mobilization is critical for project implementation. However, mobilizing resources for the Community in a changing international environment has become more complex. An analysis of the data collected indicates that the majority (80%) of financial contributions received by the Secretariat are from IDPs to implement regional projects (CCS, 2019). However, globally, there has been a noticeable decline in IDPs by 27%

(OECD, 2017), which may be attributed to external factors such as the economic and financial recovery of many development partners who are directing financing to address critical issues such as migration and refugee, terrorism. A shift in priority and focus of the IDPs to other regions with higher investments and value may be attainable.

Over a ten-year period, the Secretariat has successfully implemented one hundred and sixty-nine (169) projects (CCS, 2019). All the implemented projects were completed. However, these projects reported facing challenges of scheduling, cost, and scope creep. Currently, there is no comprehensive organization-wide project management structure in place and projects are implemented through technical programmes such as the Sustainable Development Programme. Some of the major project management issues identified included weak project implementation and management, the absence of a structured approach to project management, time delays and scheduling difficulties and staff without the requisite project management training or experience. Among recommendations to address these issues were the development of standardized templates, procedures and the institutionalization of policies for project management processes consistent with international standards to improve project success (CCS, 2019).

1.3. Purpose

There has been a growing consensus that the region must link the various sustainable development processes and address them in a coordinated and coherent manner. In assessing potential measures to address the persistent challenges to achieving sustainable development, the Caribbean region has put forward a series of recommendations to regional institutions, development banks and the international intergovernmental organisations.

Some of the proposed measures included: capacity strengthening for development; support for the use and institutionalization of appropriate tools for science-based sustainable natural resource management; and increase support for Caribbean Small Island Developing States (SIDs) to address health, agricultural and food challenges. Hence, financial contributions totaling over USD1.5 million was received from developed countries and international donor agencies to support the implementation of 4-year Capacity Building projects within the Sustainable Development Programme to address some of these issues.

The development of a Project Management Plan using PMI standards must be optimized to increase efficiency, improve collaboration, performance, sustainability, communication, monitor risks and control projects within the Sustainable Development Programme of CARICOM. The final deliverable of this project is a Project Management Plan that assesses the possibility of building and using essential project management knowledge areas to enhance the sustainability/regenerative approach to projects within the Sustainable Development Programme of CARICOM. The expected benefits to be derived from implementation of this project include *inter alia* effective communication among all stakeholders, effective monitoring and control of projects progress, reduced likelihood of scope creep and systematic coordination of processes and activities.

1.4. General objective

To create a project management plan, in accordance with the standards of the Project Management Institute, to develop, outline, and monitor and control projects within the Sustainable Development Programme of CARICOM.

1.5.   Specific objectives

1. To assess the project management maturity level of CARICOM's Sustainable Development Programme, which should give insights into the methodologies, approaches, strategies and decision-making processes used for project management;

2. To develop templates of key project management knowledge areas for the scope, schedule, cost, quality, resource, communications, risk, and stakeholder management plans for projects being implemented through the Sustainable Development Programme of CARICOM;

3. To apply templates to the Capacity Building Related to Multilateral Environmental Agreements (ACP MEAs) Project as an example which outlines the main steps to be followed to improve project scope, cost, and time implementation within the Sustainable Development Programme;

4. To provide recommendations for successful regenerative and sustainable development projects within the Sustainable Development Programme.

2. THEORETICAL FRAMEWORK

2.1 Company/Enterprise Framework

2.1.1 Company/Enterprise Background

The Community Secretariat—the Administrative Organ of the Community—through its Sustainable Development Programme (SDP) is responsible for the day-to-day oversight and implementation of the Policy Framework. However, to perform this role effectively and efficiently, the Sustainable Development Programme will need considerable strengthening, a need which has already been recognized by the COTED [Environment], which at its Fifty-Third Special Meeting raised the concern that action had not been taken 'to submit a five-year proposal to international partners to support the institutional strengthening of its Sustainable Development Unit, (CCS, 2015) as recommended by the COTED. Against this backdrop, it is evident that the CARICOM Region cannot adopt a silo approach to addressing its sustainable development whether it be at the national level or the regional level. The Region's smallness and vulnerability mean that it does not have the resources, neither human nor financial, to adopt such an approach. In this regard, there has been an emerging conviction that the Region must link the separate Sustainable Development processes and address them in a coordinated and coherent manner. The contribution of the Project Management Plan for Sustainable Development Programme will be made in this context.

2.1.2 Capacity Building Related to Multilateral Environmental Agreements (MEAs) Project in African, Caribbean and Pacific States (ACP) – ACP MEAS Project

The program on Capacity Building Related to Multilateral Environmental Agreements (MEAs) in the African, Caribbean, and Pacific (ACP) countries resulted from a partnership

between the European Commission (EC), the Secretariat of the African, Caribbean and Pacific Group of States (ACP Secretariat), and the United Nations Environment Programme (UNEP). This program aims to empower key stakeholders to address environmental challenges and reap the benefits of improved environmental management at the national and regional levels.

Throughout the first two phases of the programme, environmental management issues were successfully integrated into institutional and national development plans of numerous Caribbean ACP countries. The programme has promoted an integrated and synergistic approach to effectively implement the relevant Conventions on biodiversity, chemicals and waste management. The evaluators and partners involved in the programme have expressed a strong desire to continue this effort. The third phase of the programme will build upon the efforts made in previous phases, which had a strong focus on developing national legislative frameworks and strategies to translate multilateral commitments into national commitments. The goal of the third phase would therefore be to provide interventions that will support countries in the implementation of this strategy to deliver on their biodiversity commitments. Overall, the third phase will provide an opportunity to consolidate the achievements of previous phases and focus on the effective implementation, enforcement, monitoring and reporting of MEAs and related commitments in the biodiversity and chemicals and waste clusters. The CARICOM Secretariat, through the Sustainable Development Programme, has received financing contribution from the European Union, to implement a 4-year Action for Capacity Building related to MEAs project. The Project will be used as an example to utilize the Project Management Plan to show improvements in project implementation.

Figure 2 Governance Structure (Source: ACP MEAs Project Brief, 2020)
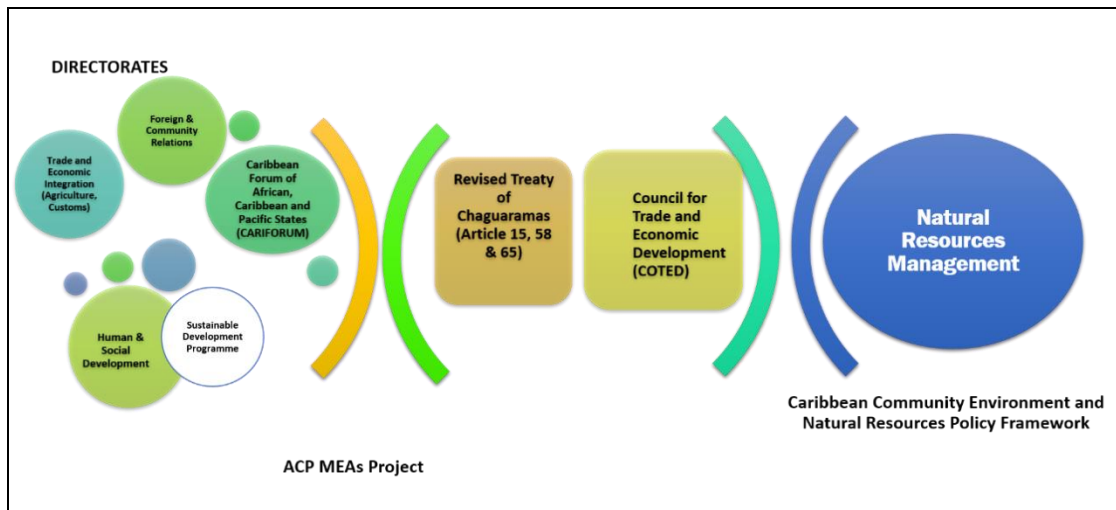
2.1.3 Mission and vision statements

<u>Mission Statement</u>

The mission of the Project Management Plan for the Sustainable Development Programme is '*To effectively and sustainably manage the Community's environmental, natural and cultural resources, including creating and improving conditions necessary for the conservation of nature and maintaining the ecological balance to capitalize on the benefits that will accrue from their optimal utilization of project funding, thereby, contributing to the balanced economic, environmental and social development of the Community as a whole and its Member States.'(Jn Baptiste, 2023)*

The platform provided by the CARICOM Secretariat, supported by its policy framework, will enable the Sustainable Development Programme to promote the prudent and rational management of projects related to environmental, cultural and natural resources. The goal is thus to maintain aa balance between economic development and the preservation of a healthy environment.

<u>Vision Statement</u>

To achieve the benefits of a shared vision for project management in the Sustainable Development Programme, the development and implementation of a central Project Management Plan with direct responsibility for standardizing, controlling and continuously improving the Sustainable Development Programme's project management processes. It is recommended that this occurs in coordination with other efforts underway at the CARICOM Secretariat.

2.1.4   Organizational structure

Figure 3 Organizational structure (Source: ACP MEAs Project Brief, 2020)

	Assistant Secretary-General Economic Integration, Innovation and Development CARICOM Secretariat
	Director Sustainable Development CARICOM Secretariat
	Project Coordinator ACP-MEAs Caribbean Hub
Project Implementation Committee CARICOM Secretariat Participating programmes: Legal and Insitutional Framework; Finance; Communications; Admin and Procurement Services	
	Project Assistant ACP-MEAs Caribbean Hub

The Assistant Secretary-General, Economic Integration, Innovation and Development (EIID) heads the EIID Directorate, which includes the Project Unit, and has official oversight concerning the administration of projects and serving as a liaison with funding agencies. The Director, Sustainable Development manages the program that the project falls under and holds technical authority for projects. The Project Coordinator and Project Assistant are the full-time project staff responsible for planning, coordinating and carrying

out the effective implementation of the project program of work. The internal project committee provides additional guidance, expertise and support to ensure effective project implementation and administration, in accordance with the procedures required by the CARICOM Secretariat.

2.1.5   Products Offered

The Project Unit (PU) comprises a Project Coordinator and Project Assistant. The Implementation Agency, the CARICOM Secretariat provides the necessary support and structure for the PU's functioning. Under the direction of the Programme Manager, Sustainable Development, the PU is responsible for the following:

a. Ensuring project execution (all technical aspects of project implementation);

b. Planning, implementing, and monitoring of project activities;

c. Providing technical assistance, training, policy and advisory support services to enhance the capacity of Caribbean countries to implement their obligations under MEAs;

d. Building and strengthening partnerships with relevant stakeholders, both internal and external, for the benefit of Caribbean countries;

e. Monitoring and reporting on the implementation of the project work program;

f. Overseeing consultants and project partner agencies;

g. Raising the profile/level of importance and inclusion of MEAs implementation and compliance within CARICOM's development agenda; and

h. Sharing of all achievements and products with all Member States.

2.2   Project Management Concepts

2.2.1   Project

A project is defined as "*a temporary endeavour undertaken to create a unique product, service or result*" (Project Management Institute, 2017a, p. 4). The main purpose of executing a project is to fulfil specific objectives through the production of deliverables. At present, there is no organization-wide project management structure in the Secretariat, neither is there an organization-wide standard for managing projects. The Resource Mobilisation and Technical Assistance (RMTA) Programme handles certain aspects of project management, but it lacks the power and authority to make decisions or enforce project management standards. Technical programs are generally responsible for implementing projects. Although many of their personnel have technical expertise in their various disciplines, many of them are not trained in the discipline of Project Management. This has become a concern, as the Secretariat seeks to professionalize project management and improve the organization's project management maturity levels.

2.2.2   Project Management

Project Management is "the *application of knowledge, skills, tools and techniques to project activities to meet the project requirements"* (Project Management Institute, 2017a, p.10). The tailored application and integration of project-specific management processes are key to effective and efficient project management. Failure to do so may result in rework, missed deadlines, unsatisfied stakeholders, scope creep, loss of reputation, and poor quality. Effective project management is undeniably a strategic competency required to consistently deliver business value and increase competitive edge in an ever-evolving project environment. The project management tools and techniques will be applied across

all projects to be implemented by the SDP. The focus will be on doing the project the
"right" way via the development, implementation, and progressive elaboration of this
integrated project management plan.

2.2.3 Project life cycle

The project life cycle includes the steps/phases that a project requires for project managers
to successfully manage a project from start to completion (Project Management Institute,
2017a). This is the basic framework for managing the project and determining how the
Project Integration Management processes are applied. All projects follow the project life
cycle, as illustrated in Figure 5, regardless of whether the phases are sequential, iterative, or
overlapping.

**Figure 4 Generic Project Life Cycle – including genesis and value achievement phases
(Source: Lukas, 2014)**
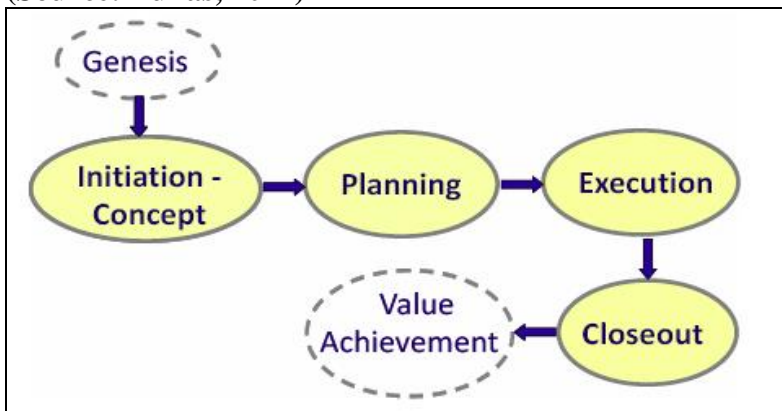
**Note. From "Value achievement — The final project phase" by J. A. Lukas, 2014,
PMI® Global Congress 2014—North America, Phoenix, AZ, p. 1. Copyright 2014 by
Author. Permission not sought.**

One of the issues that affects project management in the CCS-SDP is that Technical
Officers often struggle to identify and respond to the early warning signs that a project is in
trouble. In addition, contracts are not always managed effectively and deliverables from

consultants may not be reviewed on a timely basis. Some other critical issues include the length of the procurement process; failure to prepare for implementation; and failure to observe timelines.

The Project Management Plan seeks to address these, among other issues, by developing project management procedures and templates that are based on best practice and international standards, while being customized to meet the specific needs of the SDP. This PMP can be used by all personnel implementing projects. The PMP will outline what should be done to manage the project throughout the Project Life Cycle: Initiation, Planning, Execution, Monitoring and Control and Closeout phases.

2.2.4   Project management processes

Each project management process results in one or more outputs — deliverables or outcomes — that serve as inputs for the execution of subsequent project management processes. Therefore, the execution of a series of project management processes results in the creation of logical links that will ultimately result in the project life cycle. The project requirements will determine the number of process iterations and interactions between processes. Project Management processes are a logical grouping of project management inputs, tools, techniques and outputs. It includes **initiating processes, planning processes, executing processes, monitoring processes, controlling processes, and closing processes.**

Within the Sustainable Development Programme, Project Managers are responsible for the management of the project management processes to ensure that projects are efficiently and effectively delivered.

2.2.5 Project management knowledge areas

Project management processes are also categorized into knowledge areas — "*an identified area of project management defined by its knowledge requirements, and described in terms of its component processes, practices, inputs, outputs, tools and techniques*" (Project Management Institute, 2017a, p. 23). There are ten (10) knowledge areas used in project management, but the FGP will focus on and provide clarity for nine of these knowledge areas. The Project Procurement Management will be excluded as this is effectively covered as part of a separate CCS process, with standardized formats and guidelines, that must be applied across all work programmes, including the SDP.

1. The Project Scope Management will identify and define the actions required to achieve project goals and ensure successful project implementation;

2. The Project Schedule Management will ensure projects within SDP are timely and meet their objectives by utilizing timely processes and procedures;

3. Project Cost Management will help SDP ensure that project work is completed within the approved timeframes;

4. Project Quality Management will help ensure SDP achieves consistency across projects;

5. Project Resource Management ensures that the SDP team identifies the individual strengths and weaknesses of their Project Unit as well as other officers and creates synergy between the Project Team and other team members within the SDP;

6. Project Communication Management is critical for the timely and effective dissemination of all SDP information;

7. Project Risk Management will ensure that the SDP identifies major project risks and the mitigation plans associated with them;

8. Project Stakeholder Management will ensure that everyone who is impacted by or can affect the projects implemented by the SDP is identified, engaged (in a timely fashion) to ascertain expectations and real impact on intended outcomes and the subsequent development of mitigation plans to reduce negative interference.

These key knowledge areas will be used in the development of the FGP. Their specific processes will be used to develop a PMP for the SDP-CCS.

Figure 6 Mapping of Project Management Process Groups and Knowledge Areas (Source: PMI, 2017 p.25)

| Knowledge Areas | Project Management Process Groups | | | | |
	Initiating Process Group	Planning Process Group	Executing Process Group	Monitoring and Controlling Process Group	Closing Process Group
4. Project Integration Management	4.1 Develop Project Charter	4.2 Develop Project Management Plan	4.3 Direct and Manage Project Work 4.4 Manage Project Knowledge	4.5 Monitor and Control Project Work 4.6 Perform Integrated Change Control	4.7 Close Project or Phase
5. Project Scope Management		5.1 Plan Scope Management 5.2 Collect Requirements 5.3 Define Scope 5.4 Create WBS		5.5 Validate Scope 5.6 Control Scope	
6. Project Schedule Management		6.1 Plan Schedule Management 6.2 Define Activities 6.3 Sequence Activities 6.4 Estimate Activity Durations 6.5 Develop Schedule		6.6 Control Schedule	
7. Project Cost Management		7.1 Plan Cost Management 7.2 Estimate Costs 7.3 Determine Budget		7.4 Control Costs	
8. Project Quality Management		8.1 Plan Quality Management	8.2 Manage Quality	8.3 Control Quality	
9. Project Resource Management		9.1 Plan Resource Management 9.2 Estimate Activity Resources	9.3 Acquire Resources 9.4 Develop Team 9.5 Manage Team	9.6 Control Resources	
10. Project Communications Management		10.1 Plan Communications Management	10.2 Manage Communications	10.3 Monitor Communications	
11. Project Risk Management		11.1 Plan Risk Management 11.2 Identify Risks 11.3 Perform Qualitative Risk Analysis 11.4 Perform Quantitative Risk Analysis 11.5 Plan Risk Responses	11.6 Implement Risk Responses	11.7 Monitor Risks	
12. Project Procurement Management		12.1 Plan Procurement Management	12.2 Conduct Procurements	12.3 Control Procurements	
13. Project Stakeholder Management	13.1 Identify Stakeholders	13.2 Plan Stakeholder Engagement	13.3 Manage Stakeholder Engagement	13.4 Monitor Stakeholder Engagement	

Note. **Adapted from *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)* (6th ed., p. 25), by Project Management Institute, 2017, Project Management Institute, Inc. Copyright 2017 by Project Management Institute, Inc. Permission not sought.**

2.2.6   Other applicable theories/concepts related to the project topic and context

2.2.6.1 Capacity Building Activities

The priority is to assist the ACP countries in selected chemicals and waste and biodiversity MEAs at the national and regional levels. Activities have been pre-identified based on (i) consultations conducted with CARICOM national focal points and Senior Policy Officials with oversight of environmental management in the Caribbean during Phase II; (ii) recommendations from the mid-term evaluation of Phase II; and (iii) on a first needs assessment conducted with regional implementing partners in 2017. The activities will support the effective integration of environmental concerns addressed in the MEAs into national and regional policies and laws. This also includes strengthening negotiation skills, awareness raising, support to the development of information systems, environmental assessments and sharing of relevant experiences. Phase III is expected to enhance the focus on implementation at the national level. South-South cooperation in the form of exchange of knowledge, lessons learnt, participation of the Hubs into each other's activities as frequently as possible would be an important aspect of Phase III.

2.2.6.2 Project Charter

A Project Charter is "*a document that formally authorises the existence of a project and provides the project manager with the authority to apply organizational resources to project activities*" (Project Management Institute, 2017a, p. 75). Consequently, this project will be authorized by the charter in Appendix 1. The charter was developed as part of the Initiating Process Group and clearly outlines the project's purpose, objectives, expected benefits, risk and other high-level information. This information will serve as a guide to the

Sustainable Development Programme Team, allowing them to effectively plan, execute, and control the project.

2.2.6.3 Project Management Maturity Model

The Project Management Maturity Model (PMMM) was created by Kerzner (2019) to prepare organizations of all sizes to evaluate their progress in effectively integrating project management as the organization progresses. It is important for organizations to have policies and procedures embedded through a methodology that prepares them for the future, helps define maturity levels, uses assessment tools that apply traditional project management tools and provides detailed guidance on how to apply project management methods effectively. Project management methodologies are based on standard procedures for how projects are planned, scheduled and controlled, therefore it is necessary for executive/senior management – the decision makers – to have access to methodologies as supporting tools to enable working together correctly. The PMMM assessment places greater emphasis on people interacting with other people rather than just tools. This focus on behaviour is quantitative and can lead to more effective communication, cooperation, teamwork and trust. This model consists of five basic levels (Figure 6) to enable better understanding of its functionality and proficiency for project management.

Figure 5 The five levels of project management maturity (Source: Using the Project Management Maturity Model: Strategic Planning for Project Manager, Harold Kerzner, 2019 p. 40)
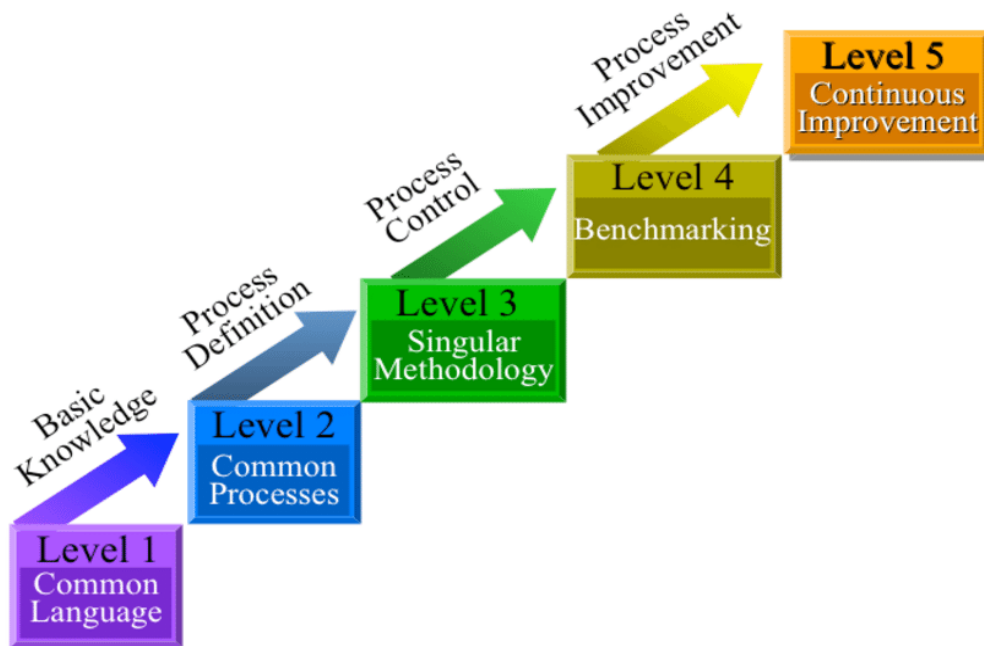
2.2.6.4 Project Management Plan

The Project Management Institute (2017) describes a project management plan as "*the document that describes how the project will be executed, monitored and controlled*" (Project Management Institute, 2017a, p. 192). The project management plan is developed as part of the Planning Process Group and includes the definition, preparation, coordination, and consolidation of all plan components into an integrated project management plan. This plan helps to set the foundation of all project work and how it will be executed. The Project Charter, with outputs from other processes (any baseline or component plan), enterprise environmental factors (EEFs) and organizational process assets (OPAs) are critical inputs into the development of a project management plan (Figure 7).

Figure 6 Develop Project Management Plan: Inputs, Tools & Techniques, and Outputs (Source: PMI, 2017 p. 82)
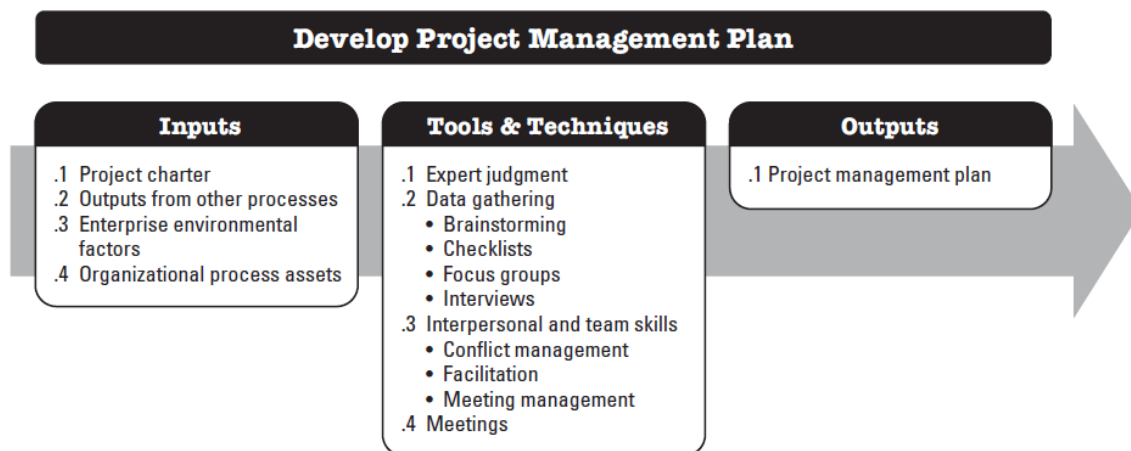
The project management plan is the application of the areas of complexity experienced in project development and implementation. This plan is detailed by each component: management plans, baselines, and additional components such as the validation of regenerative and sustainable development report as part of the Develop Project Management Plan process. The plan is being developed with a level of robustness that can facilitate efficiency with responses to the ever-changing project environment. The plan provides the baselines for references to scope, schedule and cost to enable the monitoring and evaluation of projects' performance; and serve as primary documents to management projects. After this plan is established as a baseline, it can only be changed and progressively elaborated through a change control process and approved updates (PMI, 2017) during annual work programme developments.

The subsidiary management plans relevant to this Project include:

1. Scope Management Plan

2. Schedule Management Plan

3. Cost Management Plan

4. Quality Management Plan

5. Resource Management Plan

6. Communications Management Plan

7. Risk Management Plan

8. Stakeholder Engagement Plan

2.2.6.5 Regenerative & Sustainable Development

In addition to the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals the other major international frameworks for Sustainable Development included the *Addis Ababa Action Agenda*; the *Paris Agreement Under the United Nations Framework Convention on Climate Change (UNFCCC)* and the *Sendai Framework for Disaster Risk Reduction 2015-2030 (Sendai Framework).* The SIDS Accelerated Modalities of Action [S.A.M.O.A.] Pathway) serves as the entry point for SIDS into the other Sustainable Development Frameworks. Addressing its sustainable development whether it be at the national level or the regional level. The Caribbean Region's smallness and vulnerability mean that it does not have the resources, neither human nor financial, to adopt such an approach. In this regard, there has been an emerging conviction that the Caribbean Region must link the separate Sustainable Development processes and address them in a coordinated and coherent manner (Singh, 2021).

The thinking behind regenerative development continues to evolve through project work and dialogue with diverse sustainability practitioners. Regenerative development, as defined by Gabel (2015) refers to the use of resources to improve a society's well-being in a way that builds the capacity of the support systems needed for future growth. As SDP

continues to undertake project implementation, consideration must extend far beyond siting, materials, and efficiency. The SDP must look at the place, its inhabitants, and the purpose—the whole living ecosystem—and proceed with work from that more humbling perspective. The SDP must ensure that the scheduling of projects and activities will not jeopardize the existing ecosystem or hinder it but rather support continuous development.

3. METHODOLOGICAL FRAMEWORK

3.1 Information sources

The first step in decision-making is gathering information. An information source is where you get your information from, and this can be in the form of a book, website, person, thing or place. Information sources are the various ways information is recorded for use by an individual or an organization. It is the means by which a person is informed about something, or knowledge is gained from a group of people, organization, or book. It can be from observations, people, speeches, documents or pictures, and can be in print, non-print and electronic media format (Ajuwon, 2011).

3.1.1 Primary sources

Primary sources of information are original materials on which other research studies are based. They represent original reporting on discoveries or events through first-hand accounts and information relevant to the event or discovery (University of Minnesota Crookston Library, 2015). They present information in its original form, not interpreted or condensed or evaluated by other writers for example journalistic reports, government documents, minutes of meetings and interviews (Ajuwon, 2011). For this project, several approaches will be used which are highlighted in Chart 1.

Chart 1 Primary sources of information for the Development of a Project Management Plan for the Sustainable Development Programme of CARICOM (Source: Ajuwon, 2011)

Print	Electronic	Others
Speeches	Internet	Novels
Journal articles	Email communications	Autobiographic writings
Proceedings of meetings &	Audio recordings of virtual	

Print	Electronic	Others
workshops	meetings	
Original documents (Lead Head reports & briefs to Heads)	Online print media on CARICOM website	
Organizational records (annual reports, Treaty of Charguramus, MEAs Conventions	Communications through social media (e.g. Facebook RSS and YouTube)	

3.1.2   Secondary sources

A secondary source of information is created by someone who did not have first-hand experience or did not participate in the event or research. Secondary sources describe, analyze, interpret, evaluate or discuss the evidence provided by a primary source. For example, the collection of data by an individual or agency for the purpose of a particular research or study.

The FGP will utilize journal articles, magazines, textbooks, websites, dictionaries and bibliographical research. For this project, all documentation related to the CARICOM Secretariat and the Sustainable Development Programme will be considered and revised with a particular focus on best practices identified regionally and internationally.

Chart 2 Information sources (Source: Author of the Study)

Objectives	Information sources	
	Primary	Secondary
1. To assess the project management maturity level of CARICOM's Sustainable Development Programme, which should give insight into the methodologies, approaches, strategies, and decision-making processes used for project management.	Face-to-face interviews and online surveys were conducted with key stakeholders that are internal and external to the Sustainable Development Programme. These stakeholders included co-executing agencies, Programme Manager, Senior Project Officer and Administrative staff. Official documents were requested from Head of Directorate, and these were reviewed.	The book entitled "Project Management Maturity Model (4th edition)" provided guidance on the methodology used. Other books, online articles, and peer reviewed journals were reviewed to extract pertinent information.
2. To develop templates of key project management knowledge areas for the scope, schedule, cost, quality, resource, communications, risk and stakeholder management plans for projects being	• Personal communication including emails, conversations, and interviews. • Project briefs/concept notes • Draft CARICOM Project Management Methodology • Project Cooperation Agreements; standardised guidelines; lessons learned,	• UCI-recommended Textbooks • Previous final graduation projects • Journal articles • Web research of PMI website • Ebsco host journal and book Web research

Objectives	Information sources	
	Primary	**Secondary**
implemented through CARICOM's Sustainable Development Programme.	- other government documents or reports etc. - Press releases from the Sustainable Development Programme - Project Implementation Plans and Logframe - Project Cooperation Agreements - Contracts - Lessons learned reports. - Semi-annual and annual project progress reports	- Relevant historical data and information - Assessment and reviews - Lecture notes
3. To apply templates to the Capacity Building Related to Multilateral Environmental Agreements Project as an example which outlines the main steps to be followed to improve project scope, cost and schedule	- Project Implementation Plans and Log frames - Project Cooperation Agreements - Contracts - Lessons learned reports. - Semi-annual and annual progress reports - Personal communication including emails, conversations	- UCI recommended textbooks. - Previous final graduation projects - Journal articles - Research articles from PMI website - Ebsco host journal and book Web research - Relevant historical

Objectives	Information sources	
	Primary	**Secondary**
implementation within the Sustainable Development Programme.	and interviews. ● Change control procedures; project closure guidelines, other CARICOM documents or reports etc.	data and information ● Assessment and reviews ● Lecture notes ● Conferences working papers
4. To provide recommendations for successful regenerative and sustainable development projects within the Sustainable Development Programme.	● Lecture notes ● Textbooks ● Previous final graduation projects ● Journal articles ● Mass communication from multiple mediums ● Relevant historical data and information	● Textbooks ● Journal articles ● Magazines and online company websites ● Commentaries ● Articles ● Previous research and project reports ● Annual reports for International Development Agencies

3.2   Research methods

The Concise Oxford English Dictionary defines research as "the systematic investigation into and study of materials and sources in order to establish facts and reach new conclusions" (Research, 2011, p. 1222). The same source defines the word "method" as "a particular procedure for accomplishing or approaching something" (Method, 2011, p. 899).

Research methods are particular procedures, strategies, processes, or techniques used to collect data or evidence to establish facts and reach new conclusions. Research can be qualitative, quantitative or a mixture of both methods. Booth (2020) states that qualitative research facilitates the interpretation and description of events to explore how or why things occur for a better understanding of phenomena, complex concepts, and social interactions. Quantitative research collects numerical data for statistical analysis to highlight patterns or relationships to determine how, what and when something happens. Mixed method design is a combination of qualitative and quantitative research design. "Mixed Methods help to triangulate the research findings by seeking convergence of data from qualitative and quantitative sources" (Canbean and Associates, 2019, p. 109).

In this FGP, quantitative and qualitative research elements will be used in the analytic and case study methods described in Chart 3 (Bowen, 2009; Morgan, 2022; Project Management Institute, 2017a).

3.2.1 Analytical Method

Analytical research method is a specific type of research that involves critical thinking skills and the evaluation of facts and information relative to the research being conducted to find the most relevant information (Valcarcel, 2017). The analytical method uses and analyzes facts or information that are already available to make a critical evaluation.

3.2.2 Quantitative Research Method

Quantitative research facilitates the collection of numerical data which can be analyzed using statistical techniques. Quantitative methods aim to find out information relating to how much, how many, to what extent and how often with regards to a particular research

question (Sagepub, 2013; Pfeiffer Library, 2020; Pedamkar, 2020). Other names for quantitative research are positivist, traditional, empirical, and experimental research. This research method is usually objective in nature and produces results that are independent of researchers' thoughts and feelings. This means that this research method can be very reliable, when compared to other methods. This research method usually incorporates other research methods, such as the collection of empirical data, data modelling, results evaluation, and scientific models (Sagepub, 2013; Pfeiffer Library, 2020; Pedamkar, 2020). Using this research method, the results of surveys and interviews were statistically analyzed to measure variables and the relationships between them. The data produced were used to produce tables, charts, and graphs to help achieve the research objectives.

3.2.3 Case Study Method

A case study is a research method used to generate an in-depth, multi-faceted understanding of a complex issue in its real-life context. The Sustainable Development Programme within the CARICOM Secretariat is being studied in depth and project management key knowledge areas will be applied in a controlled manner to improve the sustainability and regenerative processes of projects. In this FGP, a combination of analytical and case study methods will be used to develop the project management plan.

Chart 3 Research methods

Objectives	Research methods		
	Quantitative Method	Analytic Method	Case Study
1. To assess the project	This method was used to	The sources of information identified for this objective	

Objectives	Research methods		
	Quantitative Method	Analytic Method	Case Study
management maturity level of CARICOM's Sustainable Development Programme, which should give insight into the methodologies, approaches, strategies and decision-making processes used for project management.	analyze primary information collected through surveys and interviews.	were systematically analyzed to find relevant information, elicit meaning, gain understanding, and develop empirical knowledge. The analysis of sources will expand and track the change and development in the tools and techniques used for project charter development.	
2. To develop templates of key project management knowledge areas for the scope,		This method facilitates the collation of information or literature pertinent to the Sustainable Development Programme to evaluate the introduction of more	The data from project status and evaluation reports, records, briefs to Heads of Departments will be used as a source of insight. A detailed study of the

Objectives	Research methods		
	Quantitative Method	Analytic Method	Case Study
schedule, cost, quality, resource, communications, risk and stakeholder management plans, for projects being implemented through CARICOM's Sustainable Development Programme.		sustainable/regenerative scope management processes.	organization and projects implemented will be undertaken to provide information for the development of a scope, schedule, cost, quality, resource, communications, risk and stakeholder management plans.

Objectives	Research methods		
	Quantitative Method	Analytic Method	Case Study
3. To apply templates to the Capacity Building Related to Multilateral Environmental Agreements Project as an example, which outlines the main steps to be followed to improve project scope, cost and schedule implementation within the Sustainable Development Programme.		This method facilitates the collation of information or literature pertinent to the Sustainable Development Programme to evaluate the introduction of a more sustainable/regenerative Schedule Management Plan.	The data of project status and evaluation reports, records, lessons learned reports of the Project to date as well as other project implemented by CARICOM of will be used as a source of insight.

Objectives	Research methods		
	Quantitative Method	Analytic Method	Case Study
4. To provide recommendations for successful regenerative and sustainable development projects within the Sustainable Development Programme.		This method facilitates the collation of information or literature pertinent to the Sustainable Development Programme to evaluate the introduction of a more sustainable regenerative process.	The review of projects implemented through regenerative/sustainable development methods and case study research published was reviewed and used as sources of insight.

3.3   Tools

PMI (2017) describes a tool as a tangible item used to perform an activity to produce a result or a product. This FGP, in part, used communication, data gathering, analysis and representation tools ranging from templates to software to produce deliverables. A summary of these tools is compiled in Chart 4.

Chart 4 Tools (Source: Project Management Institute, 2017)

Objectives	Tools
1. To assess the project management maturity level of CARICOM's Sustainable Development Programme, which should give insight into the methodologies, approaches, strategies, and	● The Project Management Maturity Model was used to assess the project management maturity of the organization.

Objectives	Tools
decision-making processes used for project management.	● Semi-structured interviews were used to acquire information about project management maturity, methodologies, approaches, strategies, and decision-making processes within the organization. ● Document analysis or literature review of reports, and official/unofficial documents was carried out to give insight into the methodologies, approaches, strategies, and decision-making processes.
2. To develop templates of key project management knowledge areas for the scope, schedule, cost, quality, resource, communications, risk and stakeholder management plans for projects being implemented through the Sustainable Development Programme.	● Scope, Schedule, Cost, Quality, Resource, Communications, Risk Management Plan templates ● Microsoft Word, Project and Excel ● Work breakdown structure and dictionary template ● Decomposition ● Reserve analysis ● Expert judgement ● Checklist ● Stakeholder analysis ● Risk register

Objectives	Tools
3. To apply templates to the Capacity Building Related to Multilateral Environmental Agreements Project as an example, which outlines the main steps to be followed to improve project scope, cost and schedule implementation within the Sustainable Development Programme.	● Meetings ● Interviews ● Analytical techniques ● Responsibility matrix ● Communication tools (interpersonal skills, management skills) ● Resource mobilization matrix
4. To provide recommendations for successful regenerative and sustainable development projects within the Sustainable Development Programme.	● GPM-P5 Sustainability Management Plan ● Regenerative Development Mind Map

3.4   Assumptions and constraints

PMI defines an assumption as "a factor in the planning process considered to be true, real, or uncertain, without proof or demonstration" (Project Management Institute, 2016, p. 1). It also defines a constraint as "a limiting factor that affects the execution of a project, program, portfolio, or process" (Project Management Institute, 2016, p. 2). The assumptions and constraints considered for each specific objective established in the FGP are outlined in Chart 5.

Chart 5 Assumptions and Constraints (Source: Carboni et al, 2018; GPM, 2019; Muller, 2018; PMI, 2017; The Author, 2022)

Objectives	Assumptions	Constraints
1. To assess the project management maturity level of CARICOM's Sustainable Development Programme, which should give insight into the methodologies, approaches, strategies and decision-making processes used for project management.	● All the necessary information and documents needed will be readily available to execute the FGP. ● The CARICOM Secretariat will give the necessary approvals to provide and share project specific information in a timely manner and without any significant restriction to create the Project Management Plan. ● The researcher will be able to determine a suitable methodology to facilitate the assessment of the Sustainable Development Programme project maturity level. ● The methodology will be implemented fully for the success of projects to implemented within the Sustainable Development	● The time frame is limited and getting the internal organization approvals will need sufficient time. ● Low data/information availability. ● The quality of the assessment must meet CARICOM's expectations.

Objectives	Assumptions	Constraints
	Programme.	
2. To develop templates of key project management knowledge areas for the scope, schedule, cost, quality, resource, communications, risk and stakeholder management plans for projects being implemented through CARICOM's Sustainable Development Programme.	• The work necessary for the realization of this component of the management plan will be executed effectively with feedback from all relevant stakeholders. • It is assumed that the work within this plan will become institutionalized within the Sustainable Development Programme mandate.	• A substantial amount of work has to be collated in a short space of time.
3. To apply templates to the Capacity Building Related to Multilateral Environmental Agreements Project as an example, which outlines the main steps to be followed to improve project scope, cost and schedule implementation within the Sustainable Development Programme.	• The author has full comprehension of final graduation project requirements and access to all relevant information. • Has the required tools to complete the cost management plan. • The Accounts Department will be ready and able to provide all necessary financial records to facilitate the student in the	• Validation of costs with Accounts Department time consuming. • Incomplete information/low data availability.

Objectives	Assumptions	Constraints
	completion of this management plan. ● Cost management plan will be robust enough to maintain high-cost efficiency.	
4. To provide recommendations for successful regenerative and sustainable development projects within the Sustainable Development Programme.	● Time is sufficient to develop quality sustainable/regenerative recommendations. ● The relevant resource persons and documents for information are available.	● Insufficient detail in the information available. ● Difficulty retrieving the relevant information. ● Limited data/information.

3.5 Deliverables

A deliverable is "*any unique and verifiable product, result of capability to perform a service that is required to be produced to complete a process, phase, or project*" (Project Management Institute, 2017a, p. 704). The development of a Project Management Plan for CARICOM's Sustainable Development Programme is the major deliverable of this FGP. A summary of deliverables has been identified in Chart 6.

Chart 6 Deliverables (Source: PMI, 2017; GPM, 2019)

Objectives	Deliverables
1. To assess the project management maturity level of CARICOM's Sustainable	1.1 Completed project management maturity assessment.

Objectives	**Deliverables**
Development Programme of CARICOM, which should give insight into the methodologies, approaches, strategies and decision-making processes used for project management.	1.2 Charts showing analysis results.
2. To develop templates of key project management knowledge areas for the scope, schedule, cost, quality, resource, communications, risk and stakeholder management plans for projects being implemented through CARICOM's Sustainable Development Programme.	2.1 Scope Management Plan 2.2 Schedule Management Plan 2.3 Cost Management Plan 2.3.1 Cost baseline and funding requirements 2.4 Quality Management Plan 2.5 Resource Management Plan 2.6 Communications Management Action Plan 2.7 Risk Management Plan 2.7.1 Risk Register 2.8 Stakeholder Engagement Plan 2.8.1 Stakeholder Register 2.8.2 Stakeholder Map
3. To apply templates to the Capacity Building Related to Multilateral Environmental Agreements (ACP MEAs) Project as an example, which outlines the	3.1 Scope Management Plan for the ACP MEAs Project 3.2 Schedule Management Plan for the ACP MEAs Project

Objectives	Deliverables
main steps to be followed to improve project scope, cost and schedule implementation within the Sustainable Development Programme.	3.3 Cost Management Plan for the ACP MEAs Project
4. To provide recommendations for successful regenerative and sustainable development projects within the Sustainable Development Programme.	4.1 SDP Draft Sustainability Development Plan

4. RESULTS

4.1. The project management maturity level of CARICOM's Sustainable Development Programme

The project management maturity level of the Caribbean Community (CARICOM) Secretariat's Sustainable Development Programme (SDP-CCS) was assessed using the Project Management Maturity Model (PMMM) Strategic Planning for Project Management (KPM3) which was developed by Kerzner (2019). The model is useful for assessing the systems in place for PM within the SDP-CCS. It highlights improvement areas and continuous changes needed to project management processes (Kerzner, 2019) within the CCS infrastructure. The aim of utilizing Kerzner's project management maturity model is to develop the organizational capabilities and culture to incorporate project management practices into organizational processes and procedures (Kerzner, 2005). This model had the advantages of being flexible and easy to implement within any organizational structure while being easy to understand in real-life practice and allowing various management planning to evolve. Notwithstanding, the model has certain limitations as a generic model that will have limitations for complex projects and complex strategic management structures (MBA Knowledge Base, 2021).

Kerzner's (2019) model addresses various project management practices at five (5) different levels of maturity. The SDP-CCS was assessed using all levels of the PMMM as illustrated in **Figure 8**: Common Language, Common Process, Singular Methodology, Benchmarking, and Continuous Improvement. The assessment results provided recommended changes that needed to be made at all levels of management within the SDP-CCS. This was done through a simple survey delivered electronically and through face-to-

face conversations. For the purpose, this project, the PMMM was customized based on short-term expectations so that progress can be measured during a limited assessment interval. Additionally, the results were used along with key project management knowledge areas, and templates would be improved for tangible and intangible values.

Figure 7 The Five Levels of Project Management Maturity (Source: Kerzner, 2019)
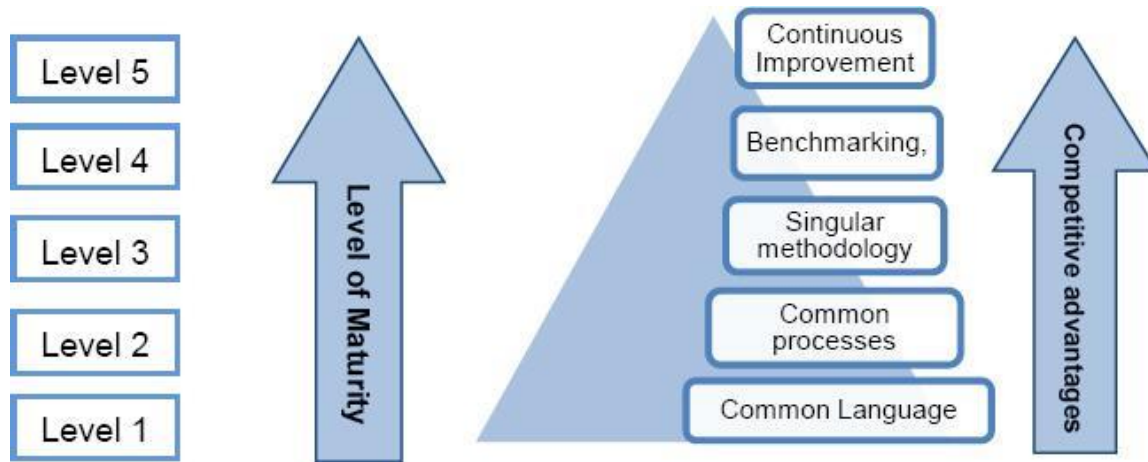
The levels of maturity used to assess SDP-CCS can be described as follows:

- Level 1 – This level is called the ***Common Language*** where organizations recognize the importance of project management and the need for understanding basic project management understanding of terminologies relating to project management strategies. Project management terminology from the PMBOK® Guide (2021) was used for this project. This model level aligns with various strategic considerations and includes prior information about further progress.

- Level 2 – ***Common Processes*** adopts various processes from previous successful projects. It is a standard process that applies planning and strategies to fulfil organizational needs. Projects managed through the SDP-CCS, and other project management principles and methodologies can be applied using common life-cycle

processes. These were considered to highlight successes and lessons learned that can be repeated in other projects.

- Level 3 - ***Singular Methodology*** combines all corporate methodologies with recognition of the synergistic effects to convert into a singular methodology. This process was analyzed through the CCS' project management methodology. This facilitated the identification of the benefits of the synergistic effect resulting from the combination of all methodologies. By using a single methodology instead of multiple methodologies, process control becomes easier. The goal is to understand how senior management levels maintain some degree of standardization and control over projects. The singular approach becomes a flexible approach where project managers can create their own methodology from existing forms, guidelines, templates, and checklists. Figure 10 illustrates the six characteristics that CCS/SDP should possess to highlight their maturity at this level.

Chart 7 Characteristics of Level 3 (Source: Kerzner, 2019)

Integrated processes	**CCS/SDP should recognize that multiple processes can be streamlined into a single integrated process**
Cultural support	CCS/SDP should create integrated processes through its corporate culture that supports a collaborative culture of project management approaches
Management support	Project management support is prevalent at all levels of management within the organization. . The support required to make the singular methodology work is well understood by management, and its visibility ensures efficient and effective project execution.

Informal project management	CCS/SDP prioritizes management support and a cooperative culture, relying on guidelines and checklists instead of rigid policies and procedures that generate unnecessary paperwork.
Training and education	With strong cultural support, CCS/SDP realizes both qualitative and quantitative financial benefits from project management education.
Behavioral excellence	CCS/SDP recognizes the importance of enhancing project management skills through behavior training programs.

- Level 4 – At the ***Benchmarking*** level it is recognized that process improvement is necessary to maintain a competitive advantage and should be performed continuously. Various benchmarks and reasons for their selections were highlighted for the SDP-CCS projects.

- Level 5 – ***Continuous Improvement*** level details what was summarized from the benchmarking level to enhance/improve projects. Through the evaluation of information obtained through benchmarking, it will be decided whether this information will enhance the use of project management processes for the SDP-CCS (Kerzner, 2019; MBA Knowledge Base, 2021).

Kerzner's Project Management Maturity Model (PMMM) can assign risk factors to various levels. As illustrated in Figure 9, the risk factors are categorized as low, medium, and high, with the impact accompanying the influence/alteration needed to the existing SDP-CCS culture. These risks have been defined as follows as follows:

- **Low risk** – no impact on SDP-CCS culture, the organization's culture is dynamic and readily accepts change;

- **Medium risk** – SDP-CCS recognizes that change is necessary but is unaware of the impacts of the change; and

- **High risk** – changes resulting from the implementation of project management processes will cause a change in SDP-CCS culture.

Figure 8 Degree of difficulty associated with each level of PMMM (Source: Kerzner, 2019)

Level	Description	Degree of difficulty
1	Common language	Medium
2	Common processes	Medium
3	Singular methodology	High
4	Benchmarking	Low
5	Continuous improvement	Low

To determine the project management maturity level in the knowledge areas of scope, schedule, cost, quality, resource, communications, risk and stakeholder management, staff interviews were conducted using a self-assessment survey with the help of PMMM (see Appendix 4 for the self-assessment survey checklist). The process also involved artifact collection and evaluation, which helped to provide context and validate many of the claims made during interviews to ensure accuracy. In assessing the project management maturity using the PMMM, it should be noted that the maturity level is assessed based on short-term expectations. This enables the measurement of progress at reasonable assessment intervals. The PMMM was customized for the organization to identify specific areas for improvement.

4.1.1. Level 1 - Common Language of SDP for PMMM

By   utilizing the key knowledge areas of project management based on the PMBOK
Guide (PMI, 2021) it is possible to determine the level of competency that the   SDP-CCS
possesses   project management. Level 1 carries a medium risk that could be as a result
of organisational restructuring, changes in roles and responsibilities, and changes in
priorities. A deficiency exists in some knowledge areas, with some pockets of project
management at different levels of knowledge.

Chart 8 Level 1 - Common Language of SDP for PMMM (Source: Kerzner, 2019)

Level 1 – Common Language			
Knowledge Areas	Degree of Difficulty		
	High	Medium	Low
Scope Management	🟥		
Schedule Management	🟥		
Cost Management	🟥		
Resource Management	🟥		
Quality Management	🟥		
Risk Management		🟫	
Communications Management			🟩
Stakeholder Management	🟥		

Note. Compiled by author.

4.1.2. Level 2 – Common Process Definition of SDP for PMMM

The SDP-CCS was assessed for its effective use of PM to develop processes and
methodologies. Having several employees certified in PM does not guarantee that PM is

being used effectively in the organization. There is the possibility that PM is being used but not in an effective way. Common methodologies and processes are needed so that managerial success on one project can be replicated in other projects. Additionally, certain behavior expectations of the organization's personnel are necessary for the repetitive execution of the methodology, recognizing the potential benefits of PM and the application of changes necessary to implement PM.

Chart 9 Level 2 - Common Processes of SDP for PMMM (Source: Kerzner, 2019)

Level 2 – Common Processes			
Life-cycle phases	Degree of Difficulty		
	High	Medium	Low
Maturity	🟥		
Growth	🟥		
Line Management		🟧	
Executive Management	🟥		
Embryonic			🟩

Note. Compiled by author.

4.1.3. Level 3 – Singular Methodology of SDP for PMMM

For SDP-CCS to fully embrace the concept of PM, some characteristics should be developed that recognizes the importance of synergies and process control through a singular methodology rather than multiple methodologies. In SDP-CCS, several project methodologies exist based on the funding agencies' requirements. Some degree of standardization and control over projects should be maintained at the senior management levels. As SDP-CCS PMMM develops, it is worth considering the flexibility of the

singular approach. Project managers can create their own methods from existing forms, guidelines, templates and checklists according to the requirements of the funders/sponsors. While the SDP-CSS shows some advancement, further efforts are necessary to recognize the significant contribution of project management to the organization's overall success.

Chart 10 Level 3 - Singular Methodology of SDP for PMMM (Source: Kerzner, 2019)

Level 3 – Singular Methodology			
Characteristics of Excellence	Degree of Difficulty		
	High	Medium	Low
Integrated Processes			🟩
Culture		🟧	
Management Support	🟥		
Training and Education	🟥		
Informal Project Management		🟧	
Behavioral Excellence		🟧	

Note. Compiled by author.

4.1.4. Level 4 – SDP Project Management Benchmarking for PMMM

Benchmarking SDP-CCS helps assess its ability to reach performance goals based on internal goals, regional standards, or performances of similar organizations and identify where to make improvements. The goal is to gain information that will help improve performance and the execution of processes. Quantitative benchmarking investigates improvements to the methodology and processes, which shows that some aspects are currently taking place. On the other hand, qualitative benchmarking looks at the application

of benchmarking and how the organization's culture implements the methodology for which some benchmarking is taking place which are marginally acceptable.

Chart 11 Level 4 - Benchmarking SDP for PMMM (Source: Kerzner, 2019)

Level 4 – Benchmarking			
Methodology & Processes	Degree of Difficulty		
	High	Medium	Low
Quantitative Benchmarking		▰	
Qualitative Benchmarking	▰		

Note. Compiled by author.

4.1.5. Level 5 – Continuous Improvement of SDP for PMMM

The application of project management methodologies in SDP-CCS will be an ongoing process of continuous improvement. This can be internally or externally driven by factors such as better use of project management software, a corporate culture that is more cooperative to project management, project management training, technology advancements, demands of projects funders/sponsors, and even political factors.

Chart 12 Level 5 - Continuous Improvement of SDP for PMMM

Level 5 – Continuous Improvement			
	Degree of Difficulty		
	High	Medium	Low
Existing process improvements		▰	
Integrated process improvements		▰	
Behavioral issues	▰		

Benchmarking	████		
Managerial issues	████		

Note. Compiled by author.

4.1.6. Stakeholder Management of SDP for PMMM

Stakeholder management is considered a critical skill that can affect the success of a project. Activities in this knowledge area include identifying stakeholders, analyzing and managing stakeholder expectations, addressing issues that affect stakeholders and putting strategies in place to ensure that stakeholder requirements are met. Components include stakeholder identification, stakeholder management planning, managing stakeholder engagement, and monitoring stakeholder engagement. There is no standardized plan or procedure to carry out stakeholder identification, analysis, and for managing their engagement at SDP-CCS. Stakeholder identification is mainly carried out when there is a need for engagement and feedback. Nevertheless, managing stakeholders' expectations and satisfaction has not been identified as a priority. Similarly, at SDP-CCS, stakeholder management planning is not standardized but is tailored to individual projects as needed. Chart 13 shows the maturity level of stakeholder management components.

Chart 13 Stakeholder Management Assessment of SDP for PMMM (Source: Kerzner, 2019)

Stakeholder Management	Project Management Maturity Levels				
	1	2	3	4	5
Stakeholder identification		✔			
Stakeholder management planning	✔				
Managing stakeholder engagement	✔				

Monitoring stakeholder engagement	✓				

Note. Compiled by author.

4.1.7. Overall SDP Project Management Maturity Level

In summary, SDP-CCS received a high-risk rating due to the potential impact of project management processes implementation on SDP-CCS culture. This rating was given because there are minimal established organizational processes and standards to hold project managers and team members accountable for their performance in key project management knowledge areas. Many activities are carried out in an uninformed and unplanned manner. Procurement Management was not assessed as the organization has a very high standard procurement process that is structured and controlled by qualified procurement officers and a Programme Manager. In evaluating the overall maturity level of SDP-CCS, it is important to consider that the highest degree of difficulty will reside with management level and their ability to approve the necessary changes needed. In this regard, the PMMM of SDP-CCS is rated at Level 1 – having developed the basic knowledge and common project management language in PM. The assessment results indicate the need for a PMP to be instituted. Research has shown that project management standards are key to increasing project management maturity in organizations that were assessed as being at a low level. Project Managers' consistent application of processes and methodologies are vital for success in project management. Also, the PMP can help SDP-CCS to move beyond the status quo to being a natural entity that facilitates project management templates for the entire organization. Thus, a PMP is key to adding value to SDP-CCS by developing the SDP-CCS capabilities and culture to incorporate project management practices into organizational processes and procedures (Kerzner, 2005).

4.2.   Scope Management Plan

4.2.1.   Project Scope Description

Project Scope Management ensures that projects contain only the work that is necessary to complete project deliverables successfully. This knowledge area includes processes for scope management planning, requirements collection, scope statement, development of the Work Breakdown Structure, scope validation, and scope change control.

The SDP currently does not develop scope management plans for projects. Scope is extrapolated through other documents which include the logical framework matrix. Requirements collection is carried out ad hoc, and there is no organizational standard for this. Technical requirements are usually collected through meetings with stakeholders, as needed, and this usually gives a general idea of the project outcomes or objectives.

Scope statements are not developed for projects, as required by the PMBOK, however, elements of scope statements are usually found in project implementation documents and agreements that give authority for project implementation. CCS's Resource Mobilisation and Technical Assistance (RMTA) Programme also provides guidance for developing detailed scope statements for the organization, but no specific template exists. There is no standard template for the development of Work Breakdown Structures (WBS) in the Department which leads to them not being developed. Nevertheless, other project documents, including logical framework matrix and work plans, contain important schedules and activities for project implementation. Scope validation is facilitated through the review of deliverables by internal staff members. There is a process for this, but it is

typically handled during the project's implementation. Monitoring of project status is typically executed, for specific projects, during biannual and annual reporting to funding agencies. However, there are currently no standard templates or organizational standards in place for controlling changes to project scope. Proposed changes to scope are submitted to the funding agency for approval but not documented by SDP/CCS before final decisions are made regarding their acceptance or rejection. For externally funded projects, an Executing Agency (EA) is usually used to facilitate any changes in the project scope.

Scope Management includes all the work involved in defining the project and its boundaries. In fact, the project scope describes the project's boundaries and specifies what it will and will not deliver. The scope is detailed in the Work Breakdown Structure (WBS).

The purpose of defining the scope is to ensure that the goals and objectives of projects are clearly described and documented. Each objective has a well-defined set of indicators that will be used to monitor the project's progress. This information is summarised in the Logical Framework Matrix and described in the Project Proposal. During the project planning phase, these tools are reviewed and refined as necessary.

The SDP will develop a Scope Management Plan which will be assessed — within three months — through the attainment of the following objectives:

i.   To prepare a concept note outlining the key steps in the process of creating a scope management plan that documents how project scope will be defined, validated, and controlled within the first 30 days.

ii. To conduct a stakeholder meeting to validate the preliminary description of the project and complete the preliminary process of determining, documenting, and managing stakeholder needs to meet the project's objectives within three months.

iii. To create a Work Breakdown Structure (WBS) of project deliverables into smaller components and present to stakeholders a comprehensive report to monitor the project to control scope and manage changes to the scope baseline.

iv. To formalize the acceptance of the completed SDP Scope Management Plan and process of monitoring the project to control scope and manage changes to the scope baselines at the end of three months' timeframe.

4.2.2. Project Deliverables and Acceptance Criteria

Chart 14 Project Deliverables and Acceptance Criteria (Source: Compiled by the Author)

Deliverables	Acceptance Criteria
Inception Report	Use of Standard English
	Coherent work plan for completion within allotted time frame
	Appropriate methodology
	Delivery within 30 days after the start of the proposal
	Proof of contact with designated focal points
	Submission as MS Word document with all diagrams, images, and corresponding supporting files
Stakeholder Meetings	Use of Standard English
	Use of agreed virtual platform.

Deliverables	**Acceptance Criteria**
	Validated through desk research, interviews, on-site review, and lessons learned reports.
	Complete list of information sources and contact information of all stakeholders
	Inclusion of relevant Executing Agencies, stakeholders, and representatives of SDP & CCS
	Active participation
	Feedback survey from participants
	Recording of proceedings
	Submission of document with all diagrams, images, and corresponding supporting documents
WBS	Use of Standard English
	Project Implementation Plan
	Project Documents
	Facilitation within two months after the start of the consultancy
	Submission as MS Word document with all diagrams, images, and corresponding supporting files
SDP Scope Management Plan	Means of Verification
	Project Implementation Arrangements
	List of Consultants/Experts to be hired for the project.
	Project Status Reports (semi-annual & annual)
	Submission as MS Word document with all diagrams, images, and corresponding supporting Excel files

Note. The data presented was compiled by the author as a sample for illustration of the template.

4.2.3. Work Breakdown Structure

The creation of a work breakdown structure (WBS) involves the subdivision of project deliverables and project work into smaller manageable work packages — using expertise from experience with similar projects to identify and analyze the deliverables, and decomposition to divide and subdivide the upper WBS levels into lower-level detailed components with unique identifiers (top-down approach). This unique identifier will also facilitate the structuring of hierarchical summation of costs, schedule, and resource information (Cockfield, 1987). Each descending level is indicative of an increasingly detailed definition of project objectives. Expertise is also required to verify that the deliverables' decomposition is appropriate. Ultimately, the WBS provides a framework of what must be delivered. The WBS template for projects developed within the SDP is clearly outlined in Figure 10, where the major deliverables are used as the second level of decomposition. This will be presented to key stakeholders for review and feedback as part of the *Concept Note*. It will outline the key steps of how the work will be executed along with a work plan and methodology. An audit trail of all work authorizations shall be maintained throughout any project as this documentation will facilitate effective internal communication and coordination.

Figure 9 Work Breakdown Structure to Assess Projects to be implemented by SDP

(Source: PMI, 2017; Compiled by Author)
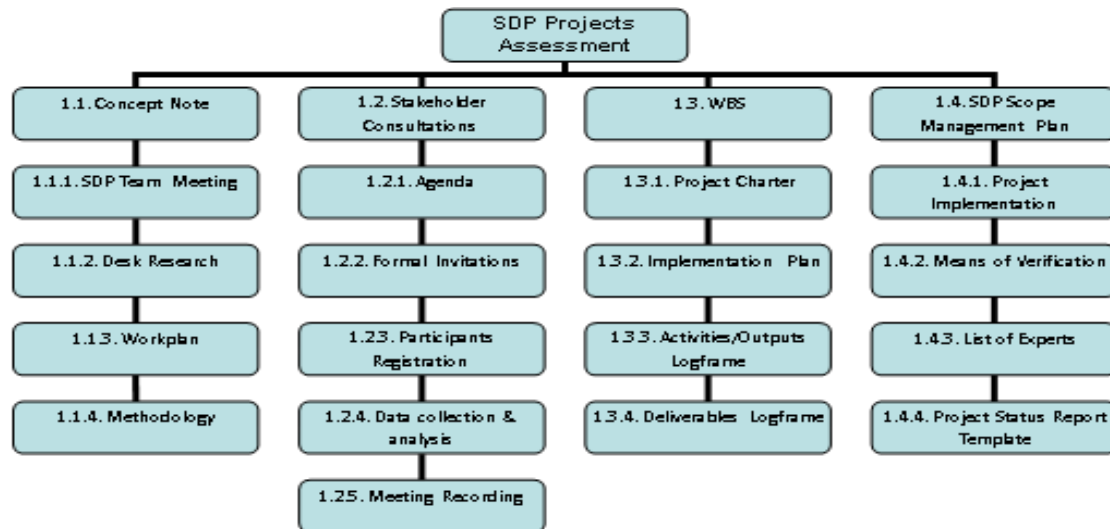
Note. The data presented was compiled by the author as a sample for illustration of the template.

4.2.4. Work Breakdown Structure Dictionary

A WBS dictionary "*provides deliverable, activity, scheduling and estimating information for each element in the WBS*" (Project Management Institute, 2019c, p. 40). This dictionary includes *inter alia* WBS code, description of work, assumptions and constraints, responsible individual/team/organization, schedule milestones, required resources, acceptance criteria, technical references, cost estimates etc. The schedule milestones and acceptance criteria are captured in Chart 14, so this dictionary will focus on the other elements.

Chart 15 WBS Dictionary (Source: Compiled by the Author)

WBS Code	Description of Work[1]	Assumptions & constraints	Required Resources	Technical References	Cost Estimates/US
1.1.	Prepare a concept note outlining the key steps in the process of how the work will be executed, a work plan, and a methodology within 30 days	● 30 days is sufficient time. ● Sub-activities will be executed within 30 days	● Laptop ● Internet ● MS Office	● Audit Reports from previous projects ● Terminal Evaluation Reports ● Mid-Term Review Reports from previous projects	$ 0
1.1.1.	Conduct internal meetings with the Sustainable Development Programme Team to discuss the proposal and receive recommendations and feedback	● Availability of focal points to schedule meetings ● Competing full-time work schedule	● Laptop ● Internet ● Microsoft Teams	● Project documents ● 1st draft Concept Note documents	
1.1.2	Conduct desk research. Review	● Availability of	● Phone	● Formal correspondence	

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[1]The description of work also provides insight into the individual requirements for the satisfaction of the activities need of the project.

WBS Code	Description of Work[1]	Assumptions & constraints	Required Resources	Technical References	Cost Estimates/US
	audits, evaluations, progress reports, and other relevant documents within 30 days of focal point meeting.	Government representatives to perform additional duties. ● Supervisors/Executive Management will approve time for active participation in assignment	● E-mail ● Laptop	from to Country Focal Points & Funding Agency	
1.1.3.	Create a workplan including task implementation timeline	● Schedule milestones will be maintained. ● Timely feedback will be provided by stakeholders	● Laptop ● Internet ● MS Office	● 2nd draft concept note. ● Minutes of internal meeting	
1.1.4	Develop suitable methodology for achievement of each	● Methodology and discussions and	● Technical expertise	● Evaluation reports ● Minutes of Meetings	

WBS Code	Description of Work[1]	Assumptions & constraints	Required Resources	Technical References	Cost Estimates/US
	objective	comprehensive enough to facilitate methodology selection	• Internet • Laptop • MS Office • Subject matter experts	• Reference documents from the Secretariat • Community's Strategic Plan	
1.2	Contact CARICOM Member States for nomination of technical focal points and schedule meetings to discuss the proposal and receive comments.	• Availability and willingness of stakeholders to be interviewed. • Accuracy of responses	• Technical expertise • Internet • Laptop • Microsoft Teams • Presentation on SDP Scope Management Plan	• Formal correspondence from focal points & key stakeholders including project funding agency. • Publicly accessible information and data • Technical reports from consultants on previous projects	$0

WBS Code	Description of Work[1]	Assumptions & constraints	Required Resources	Technical References	Cost Estimates/US
1.2.1. 1.2.2. 1.2.3. 1.2.4 1.2.5.	Develop and share meeting agenda along with a formal invitation to at least 2 representatives for all 17 Member States. Conduct participants' registration on a virtual platform, collect questionnaire responses, analyze survey and review meeting recordings.	● Availability and willingness of stakeholders to be interviewed. ● Accuracy of responses ● Differing time zones	● Technical expertise ● Laptop ● Microsoft Teams ● Electronic registration form & questionnaire ● Agenda	● Formal correspondence from focal points & key stakeholders including project funding agency. ● Publicly accessible information and data ● Technical reports from consultants on previous projects	$0
1.3.	Develop WBS for the project within three weeks of completion of stakeholder meetings.	● Competing full-time work schedules of SDP team to provide feedback. ● Schedule milestones will	● Laptop ● Internet ● Email ● Microsoft Project	● Consultation reports ● Minutes of meeting ● Technical reports from previous projects	$5000.00

WBS Code	Description of Work[1]	Assumptions & constraints	Required Resources	Technical References	Cost Estimates/US
		be maintained			
1.3.1	Develop Project Charter and submit to SDP Team for review and Executive Management for approval.	● Competing full-time work schedules of SDP team to provide feedback. ● Executive Management will approve Project Charter	● Laptop ● Email ● Internet	● Consultation reports ● Minutes of meeting ● Technical reports from previous projects ● Internal approval memo and justification	$0
1.3.2.	Draft Implementation Plan within two weeks of receiving approval of Project Charter	● Competing full-time work schedules of SDP team to provide feedback. ● Executive Management will approve Project Charter	● Laptop ● Email ● Internet ● Stakeholder register	● Minutes of meeting ● Literature review ● Survey analysis results ● Technical reports from previous projects ● Internal approval memo and justification	$5000

WBS Code	Description of Work[1]	Assumptions & constraints	Required Resources	Technical References	Cost Estimates/US
1.3.3. 1.3.4	Create activities/outputs, deliverables and submit to the SDP team for review and input and Executive Management for approval within three weeks of receipt of the approved project charter.	● All attendees can use the portal. ● All attendees will register by the deadline. ● Attendees will not object	● Laptop ● Internet ● Logframe	● Comparative studies ● Literature review ● Consultation reports	$10,000
1.4.	Present a comprehensive SDP Projects Development Plan three months after the start of the concept and SDP meeting.	● All information for completion of assessment tool will be available	● Laptop ● Internet ● MS Word ● Structure Diagnosis Report Template	● TOR ● Validated results of environmental data assessment tool	
1.4.1.	Propose project implementation arrangements including	● All information for completion of	● Laptop ● Email	● Validated results of environmental data	

WBS Code	Description of Work[1]	Assumptions & constraints	Required Resources	Technical References	Cost Estimates/US
	governance structure with implementing and executing agency.	assessment tool will be available	• Internet • MS Word & MS Excel	assessment tool • Meeting recording	
1.4.2. 1.4.3.	Propose relevant sources and means of verification and list of experts/consultants for each deliverable/output.	• Validated results of environmental data assessment tool cover all types of environmental data in Saint Lucia.	• Technical expertise • Laptop • Email • Internet • MS Word • MS Excel	• Validated results of environmental data assessment tool • Meeting recording • TOR	
1.4.4.	Develop templates for submission of project status reports to Executing Agency.	• Executed effectively with feedback from all relevant stakeholders. • Templates will become institutionalized within	• Technical expertise • Laptop • Email • Internet	• UCI recommended books. • PMBOK • Lecture notes	

WBS Code	Description of Work[1]	Assumptions & constraints	Required Resources	Technical References	Cost Estimates/US
		the Sustainable Development Programme mandate.	● MS Word ● MS Excel		

Note. The data presented was compiled by the author as a sample for illustration of the template.

4.2.5. Scope Reporting and Controlling Scope

SDP's projects' performance will be recorded and accumulated through semi-annual and annual progress reports which will comprise of the accumulation of progress information, data and deliverables in a structured format. These updates will be shared via email, virtual presentations to stakeholders, active participation in team meetings etc. This will facilitate review by various levels of authority to ensure the continued attainment of project objectives. In doing so, changes to the scope baseline will also be managed. The Project Manager will coordinate any requested changes and recommended corrective or preventative actions in real time through the *Perform Integrated Control p*rocess. Therefore, any changes to the scope will be made in conjunction with cost estimates, activity sequences, schedule dates, resource requirements, and/or analysis of risk response alternatives. This avoids scope creep or uncontrollable expansion of project scope without adjustments to other key aspects of the project. Every documented change request must be submitted to the EA for review and/or approval or rejection after due consideration of alternatives, schedule, and estimated cost impacts.

4.2.6. Validating Scope

Validation of scope involves the formal acceptance of completed project deliverables. It is performed in parallel with the control of quality to ensure deliverables are completed and corrected with specified quality requirements. Therefore, deliverables will be sent to the focal points for review and approval. Accepted deliverables will be formally signed off and approved by the Implementing Agency (IA). The Project Manager will document as proof of formal stakeholder acceptance of the project's deliverables. This documentation will also facilitate payments to consultants and serve as a record for auditing purposes. Any

completed deliverables that have not been formally accepted will also be documented with the reasons for non-acceptance of these deliverables. However, the onus is on the Project Manager to address these reasons and take the necessary action to ensure that deliverables are accepted. By way of illustration, the scope management plan was applied to a current project being implemented under Objective 3 of this FGP.

4.3.   Schedule Management Plan

Project schedule management refers to the use of process, tools and techniques to develop the project schedule, execute the project schedule and manage the schedule so as to ensure that the project is completed on time. Currently, the SDP has not yet implemented formal processes, standards, or guidelines for schedule management planning and control. Thus, schedule management plans are not developed for projects. Therefore, project schedules are defined in workplans, and implementation plans are developed for individual projects. There are also no processes, standards, or guidelines for activity definition. Activity definition is usually done on needs basis through the development of workplans for projects. The method of defining activities also varies from project to project. Once the schedule baseline is established, changes to the schedule must be managed through the project's integrate change control process. By way of illustration, the schedule management plan template was also applied to the current ACP MEAs Project being implemented by the author of this FGP under Objective 3.

4.3.1.   Schedule Model Development

The project schedule will be developed based on the Work Breakdown Structure (Figure 10) developed as part of the Scope Management Plan. It will be managed at the individual task level. Each task is reflected in the third level of the WBS. A dependency analysis will be used to determine the order in which the work must occur. The tasks, resources, associated activities, and durations will be entered into the project schedule software tool — Microsoft Project —with predecessor and successor tasks assigned at each activity level. The Project Manager will then ensure this schedule is technically correct, reasonable, and satisfies the three-month duration as per Section 4.2.1.3. Upon approval of this schedule,

the project will be baselined and put under configuration control. The schedule model illustrates the time phasing for execution of the scope of work (PMI, 2019). Monitoring Projects' Schedule is an ongoing task that is performed by the Project Manager, who must keep the progress of project implementation against the schedule baseline under constant review, report all variances, and plan the necessary actions to bring the project back on schedule. The Schedule Management Plan should include instructions on how to proceed when schedule variances occur.

4.3.2. Units of Measure and Level of Accuracy

As appropriate, the duration of tasks will be measured in terms of days, weeks and/or months. The level of accuracy is considered ± 10%. This is the acceptable range that will be used to determine realistic activity duration estimates and allow for contingencies.

4.3.3. Schedule Model Maintenance

Schedule Model Maintenance serves to update the status and record project progress in the schedule model during project execution. The Project Manager will report their work time and monthly progress using Microsoft Project. Any hired experts/consultants will also review the project status and provide monthly progress reports to the Contracting Authority via email or during progress meetings. This would be an expected submission to initiate payments as per contract agreements.

4.3.4. Schedule Control

The Critical Path Method (CPM) will be used to manage and control schedules, any project risks, and open/ongoing issues based on the progress information provided in the reporting period. The critical path determines the shortest possible project duration — the sequence

of activities that represents the longest path through the project. This critical path is usually characterized by zero total float. The total float or schedule flexibility is determined by the amount of time that the schedule activity can be delayed or extended from its early start date without delaying the project end date or exceeding a schedule constraint. This method also enables the calculation of free float — the amount of time an activity can be delayed without delaying the early start date of any of its successors or exceeding a schedule constraint. Understanding this helps distinguish between critical and non-critical tasks, which ultimately prevents time-frame issues and process bottlenecks.

4.3.5. Performance Metrics

The magnitude of the variation relative to the original schedule baseline will be assessed using schedule variance (SV), schedule performance index (SPI) and percent complete monthly in Microsoft Project. When SV is negative, and the SPI is less than 1.0, a performance review is required to identify the factors resulting in less work completion than planned.

4.3.6. Reporting Formats

On a quarterly basis, the Project Manager should generate an updated timeline and Tracking Gantt chart (Figure 11) from Microsoft Project for use in SDP Team meetings and presentation to the Member States Focal Points in the draft submission of deliverables. During these meetings, and as necessary, via email, the Project Manager will report schedule deviations and propose solutions for getting the schedule back on track if necessary. All schedule changes must go through the Integrated Change Control process. The CPM will be used to control and monitor the schedule.

Figure 10 Timeline & Tracking Gantt Charts (Source: Compiled by the Author)

Note: The data presented was compiled by the author using Microsoft Project

4.4.   Cost Management Plan

Project Cost Management encompasses activities for determining project budget and managing the budget to prevent cost overruns. Currently, SDP has no formal institutional requirements for cost management planning. The inputs of the Cost Management Plan will be based on preapproved financial resources and project approval requirements defined in the project charter. These include the schedule management plan, enterprise environmental factors such as current exchange rates for project costs sourced from more than one country and productivity differences in different parts of the world. Organisational process assets such as funders' financial controls procedures including *inter alia* standard contract provisions and required expenditure and disbursement reviews and formal cost estimating and budgeting-related policies, procedures and guidelines will also be key inputs.

The Cost Management Plan processes will include the activities necessary to develop a budget to meet requirements of any project that the SDP will implement. To prepare the budget, it is necessary to determine all the resource requirements of the project – human, material, and equipment and estimate their cost. These estimates generate the project budget, which is the project's cost baseline.

The technique used during this process is Bottom-up Estimating. It uses the WBS to estimate the value of each task and role to generate the project budget. This approach ensures that the Project Team has a clear understanding and can communicate to stakeholders, not only the budget of the entire project but the budget for each result. It also helps the Project Manager to control the project within the approved budget.

Failures in cost management can lead to spending on activities that are outside scope, overspending, misappropriation of funds, and ineligible expenditure. Together, these can have a detrimental effect on how stakeholders view the organization's project management proficiency.

The Cost Management Plan is also developed to define the levels of authority for changing the items in the budget; articulate how the budget will be controlled; the process for making budget changes; and how the budget will be updated.

4.4.1. Cost Estimation and Budget Determination

Cost estimates are usually expressed in United States Dollars (USD) as the standard operating procedure of CCS. The scope baseline, project schedule, lessons learned register, market conditions, exchange gain/loss, client's cost estimating policies and templates, and historical information were critical inputs into the estimation of costs. Only the final cost estimates will be shared with consultants in Terms of Reference (TOR) based on the deliverables in the second level of the work breakdown structure (Figure 11). Expert judgment, analogous and bottom-up estimating, alternatives analysis and decision-making were the tools and techniques used to determine project cost estimates. The cost estimate presented for each deliverable will include the direct labor, equipment, services, and other logistical costs required for consultancies. The level of precision, level of accuracy, and basis of estimates which provides the additional details to support the determination of final cost estimates, will be preapproved during the submission of budgets to EA. Parametric estimating will be used to determine the cost estimates at the activity level presented in the WBS Dictionary (Chart 16) in consideration of the fixed cost estimate and delivery time developed in TOR. Hence, each deliverable functions as a control account.

Chart 16 Summary Level Cost Estimates (Source: Compiled by the Author)

Deliverables	Cost Estimate/USD
Inception Report	5,000.00
Stakeholder Meetings	5,000.00
Preliminary version of WBS	5,000.00
Draft Scope Management Plan	5,000.00

Note. The data presented was compiled by the author as a sample for illustration of the template.

For example, the aggregation of estimated costs of control accounts in Chart 16 established an authorized cost baseline of USD20,000 against which project performance can be monitored and controlled. It is important to note that prior to authorization as the cost baseline, the Finance Officer within the CCS will approve the funding limit on the commitment of funds for each project or activity. This is an internal process of the CCS. The cost baseline represents the time-phased project budget — excluding any management reserve to which consultants are not privy. The cost baseline, in addition to the management reserve, constitutes the project budget. Total and periodic funding requirements were derived from the cost baseline. Therefore, payments will be made to consultants in instalments upon review and approval of satisfactory performance in each deliverable.

4.4.2. Control Costs

A fixed price contract is "*an agreement that sets the fee that will be paid for a defined scope of work regardless of the cost or effort to deliver it*" (Project Management Institute, 2017a, p. 707). The firm fixed price (FFP) contract is issued to consultants specifying the specific scope of work to be performed, including discrete deliverables and acceptance terms; the period of performance, including a start and end date and delivery dates for interim deliverables; and a

price with interim milestone payments. The FFP contract does not include incentives. Neither economic price adjustments nor reimbursements are facilitated in this contract. Although the consultants bear the execution risk, the well-known upfront scope of the project facilitates the tight management of the project and its risks for the execution of duties below the cost baseline to generate high profitability. The SDP-CSS must review and respond to deliverables on a fixed time schedule (normally a fourteen-day period) and be available for regular internal project reviews.

"*Managing a fixed-price project is three parts knowledge, two parts experience, and one part art*" (Lowden & Thornton, 2015, para. 3). The higher risk/reward profile of the FFP contract requires consultants to be familiar and have a clear understanding of project scope and the nature fixed-price work; changes to be processed as contract modifications; and employment of project management rigor and discipline. Therefore, consultants should promptly indicate — in writing— to a client when a requested change is out of scope or schedule and requires a contract modification. The contract, TOR, scope baseline, work breakdown structure, cost baseline, and project schedule should be referenced as often as needed to ensure the project remains within the scope of work and additional costs are not incurred.

To maintain the cost baseline throughout the project, the project status is monitored to update the project costs and manage changes to the cost baseline. Consultants are required to track the time devoted to projects to determine profit or loss. As stipulated in the schedule management plan, earned value analysis will be used to internally compare the performance measurement baseline to the actual cost performance. Every month, the magnitude of the variation relative to the

original cost baseline will be assessed using cost variance (CV), cost performance index (CPI), and percent complete in Microsoft Project. A negative CV and/or a CPI of less than 1.0 is unfavorable. Either of these results necessitates a financial review to identify the causes of cost overruns and implement mitigation measures. Unlike SV, CV does not improve as the contract nears completion. This work performance information at the control account level will be maintained in the consultants' internal work performance reports to enhance the execution of subsequent deliverables and similar projects.

Notably, the cost management plan was applied to an example of the current ACP-MEAs Project being implemented by the author of this FGP under Objective 3 to elaborate these processes.

4.5. Quality Management Plan

Quality management seeks to ensure customer satisfaction with the products that are developed through the project. This is facilitated by putting processes and procedures in place to ensure that product/service specifications meet customer requirements and are appropriate for the intended functions. Management's inclusion and participation in project processes is also key for quality management. Thus, management oversight is included as part of this component.

SDP has not instituted established standards, policies, or activities for project quality management planning. Consequently, quality management plans are not developed by the organization. Instead, quality standards are loosely defined in project implementation documents and agreements. In addition, the logical framework matrix submitted by the EA/funders provides insight into the quality standards that are expected from projects at an organizational level. This is usually agreed upon by signing a Project Cooperation Agreement (PCA). However, there is no established SDP procedure for quality assurance. Project management personnel tend to determine their own standards and provide day-to-day checks to ensure these standards are met. This would vary from project to project. Projects that are funded by implementing partners usually provide quality standards that must be adhered to by the project manager and team. During the implementation phase of projects, quality assurance activities include document reviews, inspections, and technical and financial monitoring to ensure that the project outcomes adhere to CCS Strategic Planning and Monitoring and Evaluation Unit's Guidelines as well as the Legal, Financial and Procurement Departments' Policies.

The purpose of this Quality Management Plan is to define roles, responsibilities, processes, methods, and standards for quality management. The quality management approach for the

project ensures that quality is planned for both goods and services. It should be noted that a mid-term review of the project's impact on Member States is required by the EA/funders, necessitating the inclusion of this plan in this overall execution plan. The Quality Management Plan describes the quality objectives, standards, control and assurance activities, roles and responsibilities, and quality tools.

4.5.1. Quality objectives

The first step is ensuring that mechanisms are in place to ensure quality throughout projects. The Quality Management Plan will include the following:

1. To develop a Quality Policy: The policy statement will address the quality expectations of projects. It is of utmost importance to establish who oversees any given project and a proper reporting chain would be established to ensure increased accountability while simultaneously ensuring the desired quality of products or services. This may also include specific personnel responsible for evaluating the specific quality requirements and recommending changes. Milestones will be clearly established, which includes procedures and expectations for reporting. The processes entailed will be clearly outlined. These will be accompanied by the resources needed to realize the milestones.

2. To ensure that SDP not only identifies a Project Manager and assigns the relevant staff to the project to ensure its success at the desired quality. While the program manager should have some input in the number of staff members needed to execute the project successfully, the organization should prioritize the staff allocation based on specific qualifications required for the expected role. This would also minimize the likelihood of the program manager executing other duties and being unable to monitor and report to the relevant parties effectively.

3. To complete Prioritization Matrices and apply the results to guide decision-making. This involves prioritizing stakeholders' requirements. This would make it easier for the Project Manager and the SDP team to determine the next steps when challenges arise during implementation.

4. To establish standards for projects. These will guide the project implementation process and provide the baseline information for the Quality Assurance process.

5. To establish technical specifications for the SDP Corporation must ensure that these are S.M.A.R.T with a Technical Performance Plan that includes parameters, goals and targets, and milestones.

4.5.2. Manage Quality

To ensure the effectiveness and quality of activities in meeting the needs of stakeholders and Member States, the SDP will conduct pre- and post-focal point meetings as part of its quality control process. Effective communication with stakeholders, both internally and externally with Member States, at all levels highlights the importance of product and service quality to ensure satisfactory functioning and full conformity to CCS and Member States requirements.

Additionally, as part of the quality control process, submissions by consultants will be reviewed by the Technical Staff of SDP, selected experts, and Focal Points from Member States to assess conformity with quality requirements and through the detection and correction of any defects before deliverables are considered final and approved for payment. The time spent doing this will be reflected as appraisal costs and internal failure costs in cost management, respectively. The review process will take from one or two weeks to provide feedback on deliverables with

tracked changes and comments. If the SDP detects any defects, it may result in external failure costs such as rework and loss of potential future business, particularly if the defects persist.

The inception meeting, consultancy methodology or tools for training, meetings with the focal points and other key stakeholders, time to develop the deliverables and/or regional workshops constitute prevention costs to build quality deliverables. These provide evidence that managing quality is the responsibility of both the consultants, Project Manager, and the SDP team. If the scope, schedule, or cost baselines are significantly affected by any requested changes during the manage control process, then the requesting party should submit a change request for consideration through the Perform Integrated Change Control process.

Chart 17 Cost of Quality (Source: PMI, 2017)

Cost of Conformance	Prevention Costs	- Inception Meeting - Executing Agency, Focal Point meetings and consultations with key stakeholders - Time to develop deliverables right. - Regional workshops/consultations - Post workshop evaluations
	Appraisal Costs	- Project progress reports - Periodic performance reports complete with quality metrics. - Expert/technical review/inspections
Cost of Nonconformance	Internal Failure Costs	- Rework - Review of significant findings, covering findings for both internal and external quality audits

| | External Failure Costs | ● Warranty work |
| | | ● Poor quality submissions by consultants |

Note. **Adapted from *A Guide to the Project Management Body of Knowledge (PMBOK®* *Guide)* (6th ed., p. 283), by Project Management Institute, 2017, Project Management Institute, Inc. Copyright 2017 by Project Management Institute, Inc. Permission not sought.**

4.5.3. Quality Management Roles and Responsibilities

All members of the SDP team will play a role in quality management. The team must ensure that work is completed at an adequate level of quality, from individual work packages to the final project deliverable. Quality roles and responsibilities for the SDP is as follows:

Chart 18 Quality Management Roles and Responsibilities (Source: Compiled by the Author)

Role	Responsibilities
Project Sponsors, CCS Executive Management, SDP Programme Manager	● Responsible for approving all quality standards for the project. ● Reviews quality reports and assists in the resolution of escalated issues. ● Provides support for internal and external quality audits for the project if deemed necessary. ● Signs off authority on the final acceptance of the project deliverables. ● Provide overall leadership of quality management activities, including managing quality reviews and overseeing follow-on corrective actions. ● Provide oversight to the closure of corrective actions arising from quality reviews
Project Manager,	● Implements the Quality Management Plan to ensure all tasks,

Role	Responsibilities
Project Team, Senior Technical Officer, Administrative Support Staff	processes, and documentation are compliant with the plan. ● Responsible for quality management throughout the duration of the project ● Ensure team member compliance with quality management processes. ● Participate in quality management reviews as required. ● Provide oversight to the closure of corrective actions arising from quality reviews. ● Communicate quality standards to the project team and stakeholders. ● Schedule and perform evaluations of process quality assurance reviews. ● Escalate non-compliance issues to the Programme Manager.

Note. The data presented was compiled by the author as a sample for illustration of the template.

4.5.4. Quality Assurance

Performing quality assurance will improve the quality processes. Currently, project deliverables implemented by SDP are reviewed by the Project Support and Procurement Units. This process includes auditing the quality requirements as well as the result from quality control ensuring appropriate quality standard and operational definitions are used. The steps the SDP team would take to perform quality assurance are outlined below:

1. Establish goals and standards for each project that will enhance its quality. Subsequently, develop standards for each work activity to monitor the quality assurance of the work being executed.

2. Set procedures for the Project Teams to know and understand project performance. This would aid in developing robust quality assurance that is clearly outlined to team members.

3. SDP must establish communication and training procedures that are communicated and shared with team members. Moreover, training would be an essential step toward learning procedures and policies for quality assurance.

4. SDP implements standards and procedures agreed upon. For example, quality in the hiring process can be a start in the quest for quality assurance in projects.

5. Monitor and tweak the quality assurance as a continuous process that will always be monitored. Monitoring will assist in finding issues which will help to improve the overall project quality management.

4.5.5. Control Quality

According to PMI (2017), Quality management is all about identifying and following quality requirements, auditing the results of quality control measurements and, using quality measurements to control quality, recommending project changes if necessary. A template (Appendix 4) for quality assurance treats with prevention measures during project implementation and checks to verify that project staff, consultants and partners are following the established quality standards and processes. CCS's Project Support Unit will review and revise per the established guidelines. Specific reference will be paid to quality management standards for all stages of project management, the span of control in correcting any submissions not in compliance with expectations and documenting these cases to ensure proper systems are established to address these issues in future cases.

4.6.   Resource Management Plan

Resource management planning seeks to ensure that projects get all the resources they need and that these resources are managed successfully. Resources here refer to human and physical resources. Regarding human resources, resource management seeks to ensure that qualified personnel are hired for projects. Physical resources refer to hardware and software needed for effective project execution.

SDP does not have a resource management plan to assist in the assignment of project roles and resources. However, CCS has an Employee Handbook, which provides some guidance on the types of human resources needed and the skill sets required by project staff. Basic responsibilities are determined via terms of references that project managers develop. During project planning, internal consultations are held to determine the physical resources needed to execute project work. Therefore, SDP does not employ standardized organizational procedures for resource estimation in projects.

For projects that are funded by external organizations, human resource estimation is carried out and determined to some extent before the signing of project implementation agreements. Otherwise, the project manager estimates resources using their own methods. Guidance for resource acquisition is given by the Procurement Unit, which helps in the acquisition of experts to implement project activities. The CCS procurement manual also provides guidelines for acquiring resources. Procurement policies are also developed for most individual projects and outline standard procurement practices to be followed by the Project Manager. Internal staff members with the requisite skills are given the first opportunities to apply for vacancies when

acquiring new staff members. Otherwise, CCS goes through a standard recruitment process, shortlisting, interviews, and hiring. This plan aims to establish the processes utilized to identify, outsource, assign, and manage project resources. Through this plan, the project manager and the project team will have the resources required adequately assigned at the required time.

4.6.1. Resource Breakdown Structure

The Resource Breakdown Structure (RBS) is useful for organizing and communicating the project schedule data, including information on the use of resources, including the use of staff, labor, material, of equipment, and supplies. The RBS is linked to the WBS provided in Figure 11 to form a responsibility matrix to plan, monitor and control the work of SDP. The Projects team will use it for tracking project costs and can be aligned with CCS's accounting system.

Figure 11 Resource Breakdown Structure
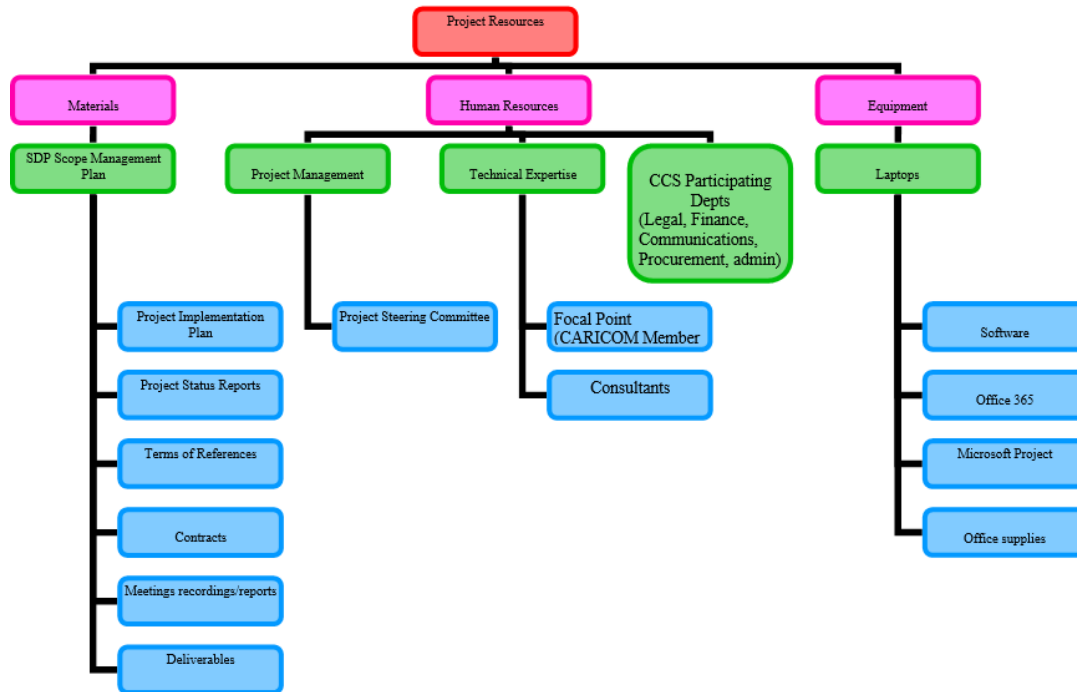
Note. The data presented was compiled by the author as a sample for illustration of the template.

4.6.2. Acquisition of Resources

4.6.2.1. Human Resources

The Human Resources for Projects were predetermined by the funding agency using a combination of expert judgment and analogous estimating. As per the terms and conditions of CCS Procurement, consultants can bid as individuals, firms, or a consortium to perform any obligations under the Contract.

4.6.2.2. Focal Points of CARICOM Member States

The successful implementation of projects within SDP calls for the establishment of Regional Committees (RC), which comprises Senior Environment Officials of Member States, Funding Agencies, CCS, SDP and the Project Team. The Committee, chaired by the Implementing Agency (CCS), will have responsibility for project oversight and overall guidance. The RC meets at least quarterly or according to the project's needs. Virtual teams will be utilized as much as possible as the availability of web-based meetings, audio and video conferencing has made virtual teams more feasible (PMBOK, 2017).

4.6.2.3. Consultants/Technical Experts

Consultants with at least five years relevant experience in environmentally related fields, or sustainable development management in Small Island Developing States will be hired through either Direct Award, Single Source, Restricted Tendering, Global Price Index or Consultant Qualification Selection (CQS) procedures. The expertise required for activities will be pre-identified based on experience, skills, qualifications, and the specific needs of each activity.

Figure 12 CCS Consultants hiring Procedure; Source: CCS Revised GPM, 2015

Flowchart: Hiring of Consultants
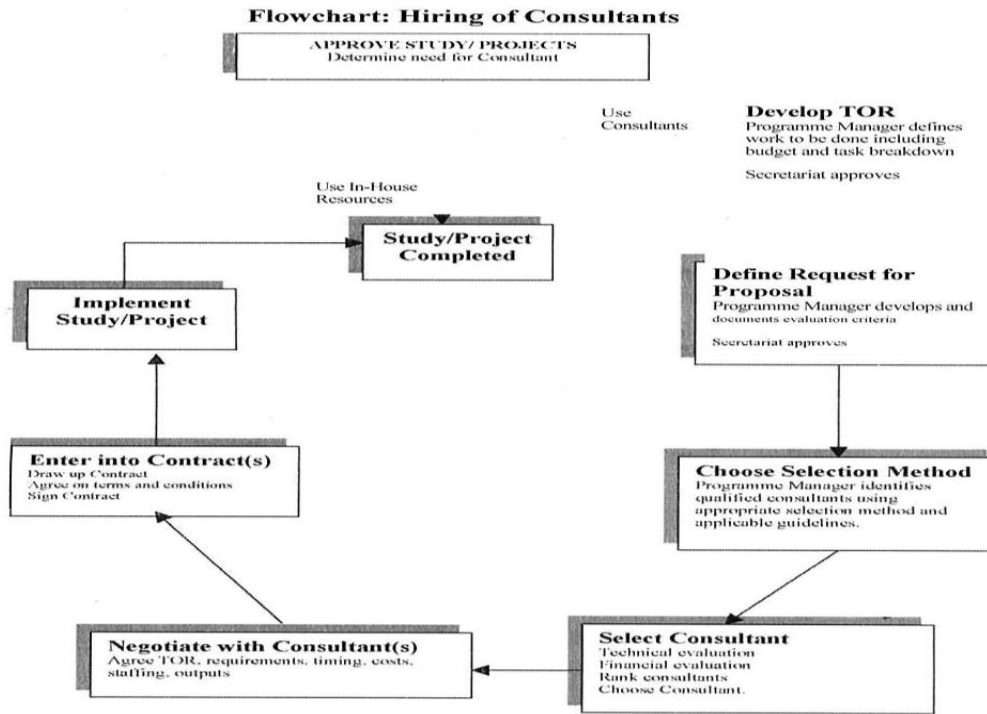
4.6.2.4. Equipment and Software

Figure 13 specifies the necessary equipment and software for each activity. Any additional equipment or software requirements are accounted for in the Project Management Plan's implementation. Consultants are responsible for providing their own equipment and software. On the other hand, the CCS, SDP, and Focal Points will have their respective employers provide the necessary equipment and software as in-kind contributions to the projects.

4.6.2.5. Materials

Access to these materials will be articulated in terms of references for operational guidelines for the RC, monitoring, and evaluation procedures for consultants, and reporting requirements for the Project team.

4.6.3. Roles and Responsibilities

Chart 19 Responsible, Accountable, Consult and Inform (RACI) Chart (Source: Compiled by the Author)

RACI Chart	**Human Resources**		
Activity	**Project Management**	**Technical Expertise**	**Focal Points**
1.1.1. SDP Team Meeting	R	A	I
1.1.2. Desk Research	R, A	C	C
1.1.3. Workplan	R	C	A
1.1.4. Methodology	A	R	I
1.2.1. Draft Agenda	I	R, A	C
1.2.2. Stakeholder Consultations	I	R, A	C
1.2.3. Participants Registration	I	R, A	C
1.2.4. Data collection and analysis	C	A	R
1.2.5. Meeting recording	A	R	C
1.3.1. Project Charter	R, A	C	C
1.3.2. Implementation Plan	A	I	R
1.3.3. Activities Log frame	R, A	I	I
1.3.4. Deliverables Log frame	R, A	I	I
1.4.1. Project Implementation Arrangements	A	R	C
1.4.2. Means of Verification	A	R	C
1.4.3. List of Experts	R	A	I
1.4.4. Project Status Report	R	C	C

Template			
	R= Responsible A= Accountable C= Consult I= Inform		

Note. The data presented was compiled by the author as a sample for illustration of the template.

There are responsibilities which must be performed by key stakeholders to ensure that the resources are effectively managed. Chart 20 depicts the roles and responsibilities for SDP projects.

Chart 20 Primary Stakeholders Role and Responsibilities (Source: Compiled by the Author)

Role	Responsibility
Project Sponsor	● Funds project execution ● Approves change control process. ● Approves final deliverables
CARICOM Secretariat	● Implementing Agency (IA) of the project on behalf of the Member States ● Establishment and housing of the project unit, chairmanship of the Steering Committee and oversight of the project in keeping the agreed work plan, budget and reporting tasks
Sustainable Development Team	● Manages scope, budget, and schedule. ● Coordinates collaboration with Senior Officials in Member States, partners and regional agencies ● Reviews and approves Terms of References ● Presents deliverables to Member States for endorsement. ● Monitors project execution

Project Team	● Project execution (all technical aspects of project implementation)
	● Planning, implementing, and monitoring of the Project.
	● Technical assistance, training, policy and advisory support services to enhance the capacity of CARICOM.
	● Building and strengthening partnerships with relevant stakeholders both within and out, for the benefit of CARICOM
	● Monitoring and reporting on the implementation of the project work programme
	● Organizing the RC meetings and serving as its secretariat
	● Overseeing consultants and project partner agencies
	● Raising the profile/level of importance and/or inclusion of Project and compliance within CARICOM's development agenda
	● Sharing of all achievements and products with all Member States
Technical experts/consultants	● Execution of relevant tasks to successfully deliver the project deliverables
Focal Points	● Provide overall guidance for the project implementation including work plan activities and indicators.
	● Provide guidance on the implementation of corrective actions resulting from setbacks in the execution of project activities.
	● Provide an enhanced mechanism to allow for synergies and coordination between project and other regional initiatives.
	● Sharing of all information, achievements, products and networking and use of capacity building tools with all relevant

	national stakeholders

Note. The data presented was compiled by the author as a sample for illustration of the template.

4.6.4. Resource Control

Consultants will provide and use their own equipment and software. Electronic copies of the materials will be uploaded to a shared folder to permit access when needed. The SDP, Project team and the Focal Points will use equipment and software provided by their respective employers. A combination of video and audio conferencing, email, and WhatsApp chat will be used to build a harmonious environment for team development and build rapport and confidence within the virtual team. Materials will be shared among the Human Resources via email. The SDP team must be kept on copy in email correspondence from/between the consultants and focal points to ensure everyone is kept abreast simultaneously. In the event that someone among the key stakeholders identified in Chart 20 is excluded from correspondence in error, then the email trail should be forwarded, and the contact information updated to avoid repeated errors.

4.6.5. Recognition Plan

Recognizing and rewarding desirable behavior will be done informally via email and chat; and formally through payment, recommendations, and references.

4.7. Communications Management Plan

4.7.1. Project Stakeholders

The Project Stakeholders are:

1) Sponsor
2) Consultants
3) Focal Points from all 17 CARICOM

    Member States
4) Regional environmental agencies
5) Policy Makers (Governments)

6) Potential partners
7) Public
8) Academia
9) Researchers
10) Civil Society
11) Environmental Advocates
12) Regional Integration Organisations
13) Private Sector

The internal stakeholders are (1) to (3) and the rest are external stakeholders. However, the primary stakeholders are (1) to (6), so this Communications Management Plan focuses on the information needs of these primary stakeholders in consideration of the available organizational assets and needs of this project.

4.7.2. Communication Model and Methods

SDP Projects will utilize an interactive communication model so receivers are expected to acknowledge and provide appropriate feedback/responses to confirm that communication has been successful. Cross-cultural communication is a critical part of Projects implemented by SDP. Therefore, both the sender's and receiver's current emotional state knowledge, background, personality, culture, biases, and time difference for various primary stakeholders may influence how the message is received and interpreted and may contribute to noise — interference or barriers — that can compromise the understanding of the message. Thus, a combination of

interactive, push and pull communication (Project Management Institute, 2017a) in the global language of English — via interpersonal and small group communication (Chart 21) — will be used to mitigate the impacts of this. Also, this combination of communication methods facilitates a degree of flexibility if the membership of the primary stakeholder community changes or their needs/expectations change.

Chart 21 Communication Methods and Artifacts (Source: PMI, 2017)

Type of Communication	Methods and Artifacts
Interactive	A. WhatsApp messages B. Videoconferencing C. Presentations D. Team briefings/ group meetings E. Consultation groups F. Phone conversations
Push	G. Email H. Draft deliverables I. Final deliverables J. Memos K. Letters to Agencies L. Reports
Pull	M. Knowledge repositories/ shared databases

Note. This key used to identify communication methods and artifacts will be used throughout this Communications Management Plan.

4.7.3. Communication Requirements

Chart 22 provides an overview of the communication artifacts and methods that will be used to transfer information among the primary stakeholders. Press releases, social media, and knowledge repositories will be used, at the discretion of or upon authorization from the client, to share information with selected secondary stakeholders in a subsequent phase of the Programme. Information will be shared with policymakers via official COTED meetings and regional integration organizations by extension. The expected frequency and mode for the distribution of required information is summarised in Chart 22 and 23.

Chart 22 Communication Between Stakeholders (Source: PMI, 2017)

Senders	Receivers			
	Sponsor	**Consultants**	**Focal Points**	**Policy Makers (Senior Officials/Ministerial)**
Sponsor		A, B, C, D, E, F, H, J, M	B, C, D, E, F, H, L	C, E, F, L
Consultants	A, B, C, D, E, F, H, I, J	A, B, D, E, G, H, I, J, M	A, B, C, D, G, H, I	E, F, G, H
Focal Points	B, C, D, H, M	A, B, C, D, G, H, I, M	A, D, G, H, I	B, C, D, E, F, G, H, K
Policy Makers (Senior Officials/Ministerial)		G, H, M	B, C, D, E, F, G, H, K, M	E, F, M

Note. Chart 21 key was used to identify communication methods and artifacts. The data presented was compiled by the author as a sample for illustration of the template.

Chart 23 Communications Matrix (Source: Compiled by the Author)

Type	Audience	Description	Frequency	Owner	Channels
Project Presentations Consultation groups Team briefings	Project Sponsor	Kick-off Meeting	Yearly	Project Manager	Meeting (virtual and in person) Emails Draft Deliverables
	Project Team	Regular communication throughout the project life cycle	As necessary		
	Focal Points	Regular communication throughout the project life cycle	Quarterly		
	Regional agencies	Updates on projects Expert input	As necessary	SDP Programme Manager	Meetings reports Emails Final Deliverables
	Senior Officials/Ministerial	Updates on projects Approvals	Semi annually	SDP Programme Manager	Meetings Emails Official Correspondence Official Reports
Project announcement	Focal Points	Milestones of project	As necessary	Project Manager	Press Releases, articles, social media posts

Type	Audience	Description	Frequency	Owner	Channels
Personal Communication Memos	Project Sponsor	Regular communication throughout the project life cycle	Monthly	Project Manager	Telephone calls Email Meetings Microsoft Teams/Conference calls
	Project Team	Updates on project status, issues, and milestones	Weekly	Project Manager	
	SDP	Updates on project status	As necessary	SDP Programme Manager	In person meetings
Reviews and Meetings Letter to agencies	Project Team	Updates on issues and review project status	Weekly	Project Manager	Telephone calls Email Meetings via Microsoft Teams
	Focal Points				
Reports	Project Team	Teams provide their status reports	Weekly	Project Manager	Emails and Meetings
	Focal Points	Provides status reports on work completed	Weekly	Project Manager	Email Meetings via Microsoft Teams
Visual/Audio Materials	Focal Points	To provide stories on user testing of product	As per deliverable schedule	Project Manager	In person Meetings

Type	Audience	Description	Frequency	Owner	Channels
Final Report	Project Sponsors	Complete project status	Once	Project Manager	Email & Meetings

Note. The data presented was compiled by the author as a sample for illustration of the template.

4.7.4. Constraints

The CCS and Funding Agency are entitled to all intellectual property and other proprietary rights regarding products, ideas, know-how, documents, and other materials the Consultants developed for the CCS under the contract, and which bear a direct relation to or are produced/prepared/collected in consequence of, or during, the performance of the contract.

Throughout the project life cycle, the project team will be responsible for identifying, tracking, and resolving any issues that may arise. This will be accomplished by utilizing the escalation model for communications issues and communicating with key decision-making stakeholders to reach a resolution. The project manager will maintain an issues log and assign a responsible owner for each issue.

The title rights, copyright, and all other intellectual property rights of whatsoever nature in any material produced, compiled, or prepared under Projects shall be vested exclusively in the CCS. Consultants must obtain written authorization from the CCS before disclosing any unpublished information made known to the Consultant during the performance of the services.

4.7.5. Updates to the Communications Management Plan

If there are significant negative schedule and cost variances, the methods of communication should be assessed for their effectiveness. The outcomes of this assessment in conjunction with the negative schedule and cost variances may highlight the need for adjustment,

action, or intervention on communication activities through the integrated change control process.

4.8. Risk Management Plan

Risk management will be a critical regular process to be used by the SDP. To minimize risks and their potential impact on the success of this project, risks will be identified and monitored throughout the project life cycle. Once the Project Manager has identified risks, qualitative analysis will be used to determine both the impact and the likelihood of the risks to determine the appropriate risk response. The PM is responsible for the overall project risk management and will monitor for any signs of risk triggers.

4.8.1. Plan Risk Management

To effectively manage risks, they must first be identified. Identifying risks is an iterative process, as new risks can arise during the project's life cycle. To identify potential risks, interviews were conducted with primary stakeholder groups and lessons learned reports from previous projects were reviewed. A qualitative risk analysis will then be performed by the PM to prioritize individual risks. The probability of occurrence of each risk was determined so that their impact could be assessed. The results were documented in the risk register.

4.8.2. Risk Management Process and Responsibilities

As part of the risk management process, roles and responsibilities are defined to ensure that risks are monitored, and appropriate action is taken. Chart 24 identifies the roles and responsibilities of key project team members as it relates to risk management.

Chart 24 Risk Management Roles and Responsibilities (Source: Compiled by Author)

Role	Responsibility
Project Sponsor	● Provides the framework and guidelines for the project risk management plan. ● Approves the risk management plan. ● Provides feedback on the risk management plan throughout the projects. ● Resolves issues which may be escalated by the project manager. ● Reviews reports on risk management. ● Provides support and guidance on risk management related matters
Project Manager	● Leads the development of the risk management plan. ● Conducts meetings to review risk management. ● Reviews risk management reports ● Reviews, approves or denies risk management change requests. ● Escalates risk management issues to the project sponsor when necessary
SDP Team	● Reports on project risk management. ● Attends risk management meetings. ● Submits requests for changes to the risk management plan when necessary.

Role	Responsibility
	● Escalates risk management issues to the project manager.
Risk Liaison	● CCS appointed formal liaison between a Programme or Project and the Risk Management function

Note. The data presented was compiled by the author as a sample for illustration of the template.

4.8.3. Identify Risks

Figure 14 details a Risk Breakdown Structure into main categories. Risks will then be assessed to maximize the potential impact of positive risks and minimize the potential impact of negative ones.

Figure 13 Risk Breakdown Structure (Source: PMI, 2017)

Note.
The data presented was compiled by the author as a sample for illustration of the template.

4.8.4.   Risk Probability and Impact

Chart 25 - Probability Scales (Source: PMI 2017)

Scale	Very Low	Low	Medium	High	Very High
Percentage Probability	<10%	10-30%	31-50%	51-70%	>70%
Probability Score	0.1	0.3	0.5	0.7	0.9

Note. Adapted from *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)* **(6th ed., p.407), by Project Management Institute, 2017, Project Management Institute, Inc. Copyright 2017.**

Chart 26 - Impact Scales (Source: PMI, 2017)

		+/- Impact on Project Objectives				
Scale		Negligible	Less than significant	Potentially significant	Significant	Very significant
Impact Score		0.1	0.3	0.5	0.7	0.9
Project Objectives	**Schedule**	1 to 5 days	6 to 10 days	11 to 20 days	21 to 30 days	>30 days
	Cost	<5% increase	5 - 10% increase	11- 20% increase	21-25% increase	>25% increase
	Scope	Barely noticeable scope change	Minor scope change	Major scope change	Scope reduction unacceptable to client	Extremely high scope change. Deliverables are effectively useless
	Quality	Minor impact on secondary functions	Minor impact on overall functionality	Some impact in key functional areas	Significant impact on overall functionality	Very significant impact on overall functionality

Note. Adapted from *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)* **(6th ed., p.407), by Project Management Institute, 2017, Project Management Institute, Inc. Copyright 2017.**

4.8.5. Perform Qualitative Risk Analysis

Once risks have been identified, they will then be analyzed qualitatively. A probability and impact scale will be utilized to accurately reflect the organization's and key stakeholders' risk appetite and thresholds.

The percentage probability of a risk will determine its probability score derived from Chart 27. Therefore, a risk with a percentage probability of less than 10% will be assigned a probability score of 0.1. The impact of a risk on the individual project objectives will determine its impact score from Chart 28. Therefore, a risk that will delay the schedule by 1 to 5 days (0.1); results in less than a 5% cost increase (0.1); produce a barely noticeable scope change (0.1); and have a minor impact on secondary functions (0.1) will be assigned an impact score of 0.1. Thus, its impact is negligible. However, if a risk delays a schedule by 6 to 10 days (0.3); results in a 11 to 20% cost increase (0.5); and produces a minor scope change (0.3) with a very significant impact on overall functionality (0.9), its impact score will be 0.5.

Chart 27 calculates the risk score by multiplying the probability score by the impact score. Thus, if the probability of the latter scenario is low (0.3), its risk score will be 0.15. This risk score is then used to determine the urgency of risk response planning from Chart 19. Each cell in Chart 27 has been given one of the five colors — red, orange, yellow, dark green, and light green. The colors represent the urgency of risk response planning and determine the reporting levels as described in Chart 27. The dark green color of the corresponding cell for the aforementioned risk indicates that the urgency of this risk is low, so it can be safely ignored.

Chart 27 – Probability and Impact Scale (Source: Vector Solutions, 2022)

		IMPACT				
		Highly likely	Likely	Maybe/some what likely	Not likely	Highly unlikely
	Scores	0.9	0.7	0.5	0.3	0.1
PROBABILITY	Significantly High — 0.9	0.81	0.63	0.45	0.27	0.09
	High — 0.7	0.63	0.49	0.35	0.21	0.07
	Moderate — 0.5	0.45	0.35	0.25	0.15	0.05
	Low — 0.3	0.27	0.21	0.15	0.09	0.03
	Minimum — 0.1	0.09	0.07	0.05	0.03	0.01

Note. **Adapted from *Levels of a Risk Matrix,* by Vector Solutions, 2022, (https://www.vectorsolutions.com/resources/blogs/levels-of-a-risk-matrix/). Copyright 2022 by Vector Solutions. Permission not sought.**

Chart 28 - Risk, Response Planning and Reporting Levels (Source: CCS, 2018)

Colour	Urgency of Risk	Risk Score	Response Planning and Reporting Levels
■	Significantly High	≥ 0.8	● Highest priority ● Prevention and mitigation strategies for very high risks must be framed in advance to prevent occurrence/mitigate their impacts at the earliest
■	High	$0.36 \leq x \leq 0.8$	● High risks must also be optimally addressed but are not prioritized as very

Colour	Urgency of Risk	Risk Score	Response Planning and Reporting Levels
			high risks ● The aim is to ensure that its impact is reduced to a level that is as minor as reasonably practicable.
■	Moderate	$0.21 < x \leq 0.35$	● Medium risks cannot be ignored ● Medium risks may be excluded from the initial risk management strategies but become increasingly significant as they arise
■	Low	$0.03 < x \leq 0.21$	● Can be safely ignored ● Most low and very low risks are nearly
■	Minimum	≤ 0.03	harmless ● May not require any mediation at all

Note. Adapted from the Draft Enterprise Risk Management Guidelines for the Caribbean Community Secretariat, 2018.

Chart 29 – SDP Risk Register (Source: Compiled by the Author)

RBS Code	Risk	Cause	Consequence	Probability	Impact	PxI	Owner	Strategy	Cost/USD
1	**TECHNICAL RISKS**								
1.1	Scope Definition	• Lack of a clear and detailed scope • Absence of a TOR • Poor operations and project management • Differing stakeholder opinions	• Scope creep • Poor estimation of financial and human resource requirements • Schedule and cost inefficiencies	0.1	0.9	0.09	• SDP • Project Manager • Consultants	• Implementation of a scope management plan • Clear definition of project scope in project charter which is referenced throughout project • Project implementation guided by an approved workplan, and methodology based on agreed project scope and TOR	TBD based on consultancy fees
1.2	Technology	• Economic and IT restrictions • Limited IT support	• Human resource constraints • Limited internet connectivity to conduct virtual	0.5	0.9	0.45	• SDP • Project Manager	• Scheduling of meetings • Use of other communication strategies • Establish clear and effective communication links	Incurred by SDP

RBS Code	Risk	Cause	Consequence	Probability	Impact	PxI	Owner	Strategy	Cost/USD
			meetings						
1.3	Technical expertise	● Limited review of draft reports and validation of information by Member States	● Human resource constraints to receive information ● No assigned duties of specific Technical Officers within Member States to service as Focal Points collection ● Time constraints to validate information and reports	0.7	0.9	0.63	● Project Manager ● SDP ● Consultants ● Focal Points	● Accommodation of multiple responses in assessment tool ● Workshop to validate assessment results ● Ensure detailed up-to-date documentation of project scope and progress	Incurred by SDP & Project budget
1.4	Data quality assurance			0.7	0.9	0.63	● SDP ● Project Manager ● Consultants ● Focal Points		
2	**MANAGEMENT RISKS**								
2.1	Communication	Poor team communication	● Ineffective	0.5	0.9	0.45	● Consultants	Implementation of robust	$ 500.00

RBS Code	Risk	Cause	Consequence	Probability	Impact	PxI	Owner	Strategy	Cost/USD
		due to time zone and cultural differences	communication • schedule delays				• Focal Points	communications management and stakeholder engagement plans	
2.2	Project Management	Lack of Project Management Professional/project management experience	• Loss of institutional memory • schedule delays low implementation rates	0.5	0.9	0.45	• Consultants	• Hire skilled project management personnel and experts • Project Personnel and consultants budgets should be negotiated effectively in keeping with current rates	$ 0.00
		Failure of a key stakeholder to perform duties	• Schedule delays • low implementation rates • poor financial and resource management	0.5	0.9	0.45			
2.3	Operations Management	High turnover of staff	• Loss of institutional memory • schedule delays • poor financial and	0.5	0.9	0.45	Client	• Assignment of CCS representative to provide technical support to projects (Finance, Legal, Procurement,	Incurred by the CCS based on officer's salary and number of

RBS Code	Risk	Cause	Consequence	Probability	Impact	PxI	Owner	Strategy	Cost/USD
			resource management ● poor quality assurance ● limited technical capacity ● low productivity ● ineffective communication					Administration) ● Building of a core information hub to ensure efficient handover to new team members ● Establishment of baseline communication standards to reinforce the exchange of information with colleagues	hours required
	Change in administration of Governments		● Decrease in governmental commitment	0.5	0.9	0.45	● CCS/SDP Focal Points	● CCS part of the negotiation process for projects and endorsement by Heads of Government ● Assignment of focal points from each Member State from inception of projects to sustain channels of communication	Incurred by CCS & SDP in-kind contribution from Governments

RBS Code	Risk	Cause	Consequence	Probability	Impact	PxI	Owner	Strategy	Cost/USD
3	**EXTERNAL RISKS**								
3.1	Communication	Poor team communication due to time zone and cultural differences	● Ineffective communication ● Schedule delays ● Poor quality assurance	0.5	0.9	0.45	● Project Manager ● Consultants ● Focal Points	Implementation of robust communications management and stakeholder engagement plans	$ 1500.00
3.2	Project Management	Voluntary withdrawal of funding from a Sponsor	● Loss of institutional memory ● Schedule delays ● Low implementation rates	0.5	0.9	0.45	● SDP ● Sponsor ● CCS	Project Corporation Agreement with CCS to establish terms of arrangements for projects	Contingency payment based on Project Agreement
		Failure of a Sponsor to perform duties and funding	● Low implementation rates ● Poor financial and resource management	0.5	0.9	0.45	● SDP ● Sponsor ● CCS		
3.3	Operations Management	Change in priorities of Project Sponsor	● schedule delays ● poor financial and	0.5	0.9	0.45	● Sponsor	Project Corporation Agreement with CCS to establish terms of	Contingency payment based

RBS Code	Risk	Cause	Consequence	Probability	Impact	PxI	Owner	Strategy	Cost/USD
			resource management ● ineffective communication					arrangements for projects	on Project Agreement
		Change in administration of Member States Governments	Decrease in governmental commitment	0.5	0.9	0.45	● CCS ● SDP ● Focal Points	● SDP negotiate projects with Heads of Government ● Assignment of focal points from the inception to sustain channels of communication	in-kind contributions from Governments

Note: The data presented was compiled by the author as a sample for illustration of the template.

4.8.6. Updates to the Risk Management Plan

If there are significant negative schedule and cost variances, the risk management strategies should be assessed for effectiveness. The outcomes of this assessment, in conjunction with the negative schedule and cost variances, may highlight the need for adjustment, action, or intervention on risk management strategies through the integrated change control process. Additionally, risks will continue to arise throughout the project, so the Project Risk Management processes should be conducted iteratively to track and address emergent risks per the defined risk thresholds. The results of these processes should be recorded in the risk register. In doing so, trends in qualitative and quantitative analyses will become more apparent to better inform the planning of risk responses.

4.9. Stakeholder Management Plan

The author currently has served as a Project Manager within SDP since 2020. Therefore, this FGP will identify and outline both the stakeholders and requirements for projects within SDP. These stakeholders and requirements will be analyzed and prioritized using the L Shape Matrix. The beneficiaries include:

- Ministerial Forum (Environment Ministers)

- CARICOM Countries

- Multilateral Environmental Agreements Secretariats

- CARICOM Parties to the Conventions

- Regional and sub-regional organizations

- NGOs (including women's organizations, youth groups, grassroots communities)

- Relevant academic institutions

- Private sector operators

4.9.1. Stakeholders

The target market for Projects includes all seventeen (17) Member States of the Caribbean Community. The primary target audience includes government agencies, MEAs focal points, Non-parties to the conventions, enforcement officers, customs and security judiciary, and private sector operators. The secondary target market includes NGOs/environmental groups, grassroots resource users including farmers, fishers, and other natural resource users, and academic institutions that can incorporate MEAs and negotiators training as part of the curriculum.

The key stakeholders are (1) Environment Ministers Forum (2) Government authorities and Senior Technical Officers; (3) CARICOM MEAs Negotiators; (5) Project collaborators,

including MEAs Convention Secretariats, Regional/international Partners, and technical experts (6) Regional Private Sector Operators (7) Designated National Authorities, Scientific Authorities and Enforcement Officers (Customs) and (8) non-governmental organizations including *inter alia* women's organizations, youth groups and local community groups.

4.9.2. Power-Interest Stakeholder Matrix

Chart 30 Power-interest Stakeholder Matrix (Source: UCI, 2022; Compiled by the Author)

High Power- Low Interest	High Power- High Interest
1. Project Sponsor	2. Implementing Agency
	3. CARICOM Secretariat
	4. Ministerial bodies (National Governments)
	5. MEAs focal points/Technical Focal Points
	6. Project collaborators (MEAs Conventions Secretariats, Regional/international partners)
	7. Enforcement Officers
	8. Regional private sector operators
Low Interest- Low Power	**High Interest- Low Power**
	9. NGOs (including women's organizations, youth groups, and grassroots communities)

Chart 31 Power-Interest Stakeholder Matrix Analysis and Comments (Source: Compiled by the Author)

Stakeholder	Comments
1. Sponsor	The Sponsor has high power because this organization is responsible for financing the project. They can decide to terminate funding based on poor earned value analysis. Apart from financial management, the Sponsor's interest in the Project is low.
2. Implementing Agency (IA)	The Implementing agency main roles as the overall coordinator and facilitator includes ensuring that the Sponsor's standards are met (technical, fiduciary, M&E). Therefore, it has both high interest and power.
3. Executing Agency (EA)	CARICOM Secretariat is the executing agency of the project on behalf of the Member States. Its primary responsibilities include the establishment and housing of the project unit, chairmanship of the Steering Committee, and oversight of the project in keeping the agreed work plan, budget, and reporting tasks. It also has both high interest and power.
4. Government Authorities/Focal Points	As a high-interest and high-power group, most government authorities and ministries also serve as focal points. Focal points are also technical experts and negotiators required to facilitate and report the State's compliance to Environmental Conventions and participation in Conference of Parties meetings and ensure the interest of Caribbean countries are incorporated.

5. Project collaborators (Conventions Secretariats, Regional/international partners)	These institutions were called upon to participate in planning, and coordination meetings and provide support to the negotiations, reporting initiatives supported by this project and Member States.
6. Enforcement Officers	These institutions will receive the relevant training required and participate in the data gathering exercises to support reporting for MEAs and the project.
7. Regional Private Sector Operators	The private sector is a high priority, high interest group that plays a critical role in ensuring compliance with environmental agreements and driving business development strategies in alignment with international standards.
8. NGOs and local community groups	The participation of non-governmental organizations and local community groups supports the creation of an enabling environment for compliance, enforcement and public participation in environmental agreements.

4.9.3. Plan Stakeholder Engagement

To ensure successful engagement with stakeholders it is necessary for SDP to tailor its approach to suit their unique needs, expectations, interests and potential impact. This should be incorporated into a comprehensive communications plan that maximizes support for each project from all. Since all primary stakeholders have high interest and high power, collaboration is essential. Therefore, all stakeholders will be informed and consulted through pragmatic collaboration. Chart 32 outlines the responsibilities, the direction of influence, and functional area of each stakeholder grouping.

Chart 32 – Stakeholder Register Matrix (Source: Compiled by the Author)

Stakeholders	Functional Area	Roles/Responsibilities	Main Expectations	Major Requirements	Direction of Influence	Impact	Interest	Power
Project Sponsor	Sponsorship	Investor	Adding value and decreasing environmental impacts	Funding to ensure successful completion of project within schedule, cost and scope requirements	Upward	High	High	High
Implementing Agency	Finance, Programme Management	Provide overall support for projects including funding.	Direct and indirect opportunities, minimize impacts	Successful completion of project within schedule, cost and scope requirements	Upward	High	High	High

Stakeholders	Functional Area	Roles/Responsibilities	Main Expectations	Major Requirements	Direction of Influence	Impact	Interest	Power
Executing Agency	Project Management, Administration Monitoring	General oversight of the project and all project management processes.	Project execution, monitoring, reporting, regular business opportunities, mitigate the effect operations may impact	Successful completion of project within schedule, cost and scope requirements. Engage stakeholders appropriately	Upward, Sideward	High	High	Med
Governments of Member States	Project Development, Monitoring, Evaluation, Validation	Review terms of reference for hiring consultants. Provide expertise to implement project activities, reporting, sensitization and	Environmental benefits, and opportunities	Provide expertise and stay within scope to ensure the success criteria is met for each deliverable and	Outward	Med	Med	Med

Stakeholders	Functional Area	Roles/Responsibilities	Main Expectations	Major Requirements	Direction of Influence	Impact	Interest	Power
		awareness.		local benefit.				
Project collaborators (Conventions Secretariats, regional agencies, international partners)	Technical	User, interest group, beneficiaries, reporting, education, sensitization, and awareness	Information sharing, opportunities	Access to information, collaboration and execution of activities	Outward	Med	High	Med
Enforcement Officers	Legal aspects	Essential service provider and beneficiary	Application of training and capacity building.	Following countries environmental guidelines in place through various legislations and policies	Outward	Low	Low	Med

Note. The data presented was compiled by the author as a sample for illustration of the template.

4.9.4. Monitor Stakeholder Engagement

In addition to managing stakeholder engagement, the SDP and the project team must ensure stakeholder relationships are monitored. Engagement strategies and plans will be modified during each project as needed. The Project Manager has the critical responsibility to track, review and regulate project progress and performance, identify areas where modifications are required and to perform the necessary corrective and preventative actions.

Stakeholder power and interest levels may fluctuate during the project life cycle. If this occurs, strategies for engaging them will need to be adjusted accordingly. Any modifications to the plan will undergo an integrated change control process that will be approved by the Executing Agency and Sponsors.

4.9.5. Stakeholder Prioritization

Prioritizing stakeholders will be necessary for projects with a large number of stakeholders, where the membership of the stakeholder community is changing frequently, or when the relationships between stakeholders and the project team or within the stakeholder community are complex (PMI, 2017). Chart 33 includes SDP stakeholder prioritization which includes the processes required to identify the people, groups, or organisations that may be impacted by or have an impact on projects. SDP Project team will need to work diligently to understand the stakeholders' expectations, interests, issues, risks, quality requirements, communication barriers, and conflicts. In this regard, this is another key area that must be included in the communications management plan.

Chart 33 Stakeholder Prioritization Matrix (Source: Compiled by the Author; Adapted from UCI, 2022)

Key: 10 - Much more important; 5 - More important; 1 - Equally important; 1/5 - Less important; 1/10 - Much less important

Stakeholder Prioritization	Sponsor	IA	EA	Government Authorities/Focal Points	Project Collaborators	Enforcement Officers	Regional Private Sector Operators	NGOs and local community groups	Row Total	Relative Dec. value
Sponsor		1	1	10	5	5	5	5	32	0.25
Implementing Agency	1		1	5	5	5	5	5	27	0.22
Executing Agency	1	1		5	1	5	1	1	15	0.12
Government Authorities/Focal Points	1/5	1/5	1/5		1	1	1/5	1	5	0.04
Project collaborators (Conventions Secretariats, Regional/international partners)	1/5	1	1	10		5	1	1	19.5	0.16
Enforcement Officers (Customs)	1/5	1/5	1/5	1	1/5		1	1/5	4.5	0.03

Regional Private Sector Operators	1/5	1/5	1/5	5	1	5		1	13.5	0.11
NGOs and local community groups	1/5	1/5	1/5	1	1/5	1	5		9	0.07
								Grand total	125.5	

Note. The data presented was compiled by the author as a sample for illustration of the template.

4.9.6. Updates to the Stakeholder Engagement Plan

If there are significant negative schedule and cost variances, the engagement methods should be assessed for their effectiveness. The outcomes of this assessment, in conjunction with the negative schedule and cost variances, may highlight the need for adjustment, action, or intervention in engagement activities through the integrated change control process.

4.10. Scope Management for the ACP MEAs Project

The ACP-MEAs Phase III project in the Caribbean Hub commenced on August 1,2020, with the signing of a Project Cooperation Agreement (PCA) Project ID:SB-014126.04, between the United Nations Environment Programme (UNEP) in Nairobi, and the Caribbean Community (CARICOM) Secretariat, in Georgetown, Guyana. The project is being implemented through a dedicated project unit, referred to as the Caribbean Hub, within the Sustainable Development Programme of the Economic Integration, Innovation and Development Directorate.

Scope management process is critical to defining the required work and ensuring that all of it is completed. As a result of a multitude of challenges, including the unprecedented impact of the COVID-19 crisis, it is imperative to adapt and make changes to project objectives, requirements, products, and activities. Thus, effective scope management is critical to achieving business success. As the Project Manager it is important to proactively plan and establish clear parameters for scope and implement effective strategies for managing and controlling it. Scope must be clearly defined and formally approved before project initiation. However, this action does not happen very often. In this case, changes were required as activities agreed from inception would not be required by the time the project had been formally approved. As the project manager, it is necessary to ensure that all the work is being completed aligns with the project management plan.

In this case, a project charter that assesses feasibility within given constraints at a high level would need to be elaborated. Once the project sponsor has signed off on the charter, detailed planning can commence. The project charter would include the following items:

1. Project Title and Description: What is the project?

2. Project Manager Assigned and Authority Level: Who is given authority to lead the project, and can they determine, manage, and approve changes to budget, schedule, documents, team members, etc.

3. Business Case: Why is the project being done?

4. Resources Preassigned: How many and what type of resources will be provided?

5. Stakeholders: Who will affect or be affected by the project?

6. Main requirements: Requirements related to both project and product scope.

7. Product Description/Deliverables: What specific product deliverables are wanted, and what will be the project's end result?

8. Assumptions: What is believed to be true or reliable in the situation?

9. Constraints: What factor(s) may limit our ability to deliver?

10. Measurable Project Objectives: The objectives must be measurable and align with the organization's strategic goals.

11. High-Level Project Risks: Potential threats and opportunities for the project.

12. Project Sponsor Authorizing the Project: name of the sponsor supporting the project.

The following WBS and Dictionary in Charts 34 and 35 supports project leaders, participants, and stakeholders in the development of a clear vision of the project outcomes. It provides the framework for all deliverables throughout the project life cycle.

Chart 34 – ACP MEAs Project WBS Dictionary (Source: ACP MEAS Brief, 2020)

WBS DICTIONARY	
Project Name: **Capacity Building related to MEAs in ACP Countries – Caribbean Hub (ACP MEAs Project)**	ACPMEAs
Control ID: SB-014126.04	
Work Package Name: **Component 1 - Enforcement, compliance with selected biodiversity and chemicals and waste conventions**	
Responsible Organisation: **CARICOM Secretariat, Sustainable Development Programme**	
Work package deliverable description: Strengthen and enhance the capacity of Caribbean ACP countries to effectively implement MEAs and related commitments in the chemicals and waste and biodiversity clusters of MEAs, thereby resulting in the sustained implementation of these clusters of MEAs. This will enable Caribbean countries to address the challenges associated with the sound management of chemicals and waste, and biodiversity, which continue to threaten these countries' environment and natural resources of these countries. The implementation of the action plan also contributed to the implementation of strategies for sustainable development.

Support and strengthen institutions and other stakeholders involved in the mainstreaming and implementation of MEAs in Caribbean ACP countries. These were to be achieved by enhancing the Secretariat's | Other comments: |

capacity to provide MEA-related services to member states and to support the synergistic implementation of MEAs in the biodiversity and chemicals and waste clusters of MEAs.	
Assumptions and Constraints: It is assumed that: - Quantifiable results and milestones can be assessed effectively with monitoring and evaluation - Impact indicators will differentiate the value of the project - Capacity to reduce biodiversity loss is more effective when biodiversity champions are identified and empowered Constraints: - Setting up of a data/information sharing platform - Visibility of actions and results requires investment in specialist skills and dedicated personnel to meet the requirements of visibility guidelines of donors and other development partners	Other comments:
Quality Metrics: - Simplified automated permit processes are developed in target countries (Antigua and Barbuda, The Bahamas, Belize, Cuba, Jamaica, Saint Lucia, St. Vincent and the Grenadines) - Increase in number of seizures of illegal wildlife resulting from automation of permit processes - National inventories for hazardous and other wastes are developed in priority countries	Other comments:

- Priority countries submit national reporting on safe removal of hazardous and other wastes, included newly listed PoPs - Training of competent regional/sub-regional authority identified by Caribbean countries on safe removal of mercury stockpile conducted in target countries; - Mercury disposal arrangements set up in target countries; (refurbish identified facilities for interim storage) - Technical support to countries to implement articles 4, 10, 11 of the Minamata convention provided through the BCRC - Caribbean Minamata focal points are capacitated with sound management of mercury and mercury added products	
Resources Assigned: - Human resources: three consultancy firms, communications expert, training expert, environmental management expert, project management team - Material resources: office stationery, laptop computers, information booklets, usb devices, branded promotional items - Financial resources: USD80,000	Other comments:
- Approval received from stakeholders by August 2020 - Mobilisation for the Project Manager to start by January 2020 - Preparation of workplan and log frame to be completed by March 2020 - Start consultancies by September 2020 (official start)	Other comments:

- First inception meeting of nominated Focal Points for MEAs by November 2020 - First consultancy and training by the end January 2021 - First regional workshop conducted March 2021 - Validation exercise and approval of consultancy report by June 2021 - Second consultancy and training commenced September 2021 - First in person training session conducted October 2021 - Second virtual training session conducted by November 2021 - Training assessment conducted by December 2021 - Acceptance of close off report and assessment results by end of January 2022	
Approved by: _____ Date: _____	

Chart 35 – ACP MEAs Project Work Breakdown Structure (Source: Compiled by Author)
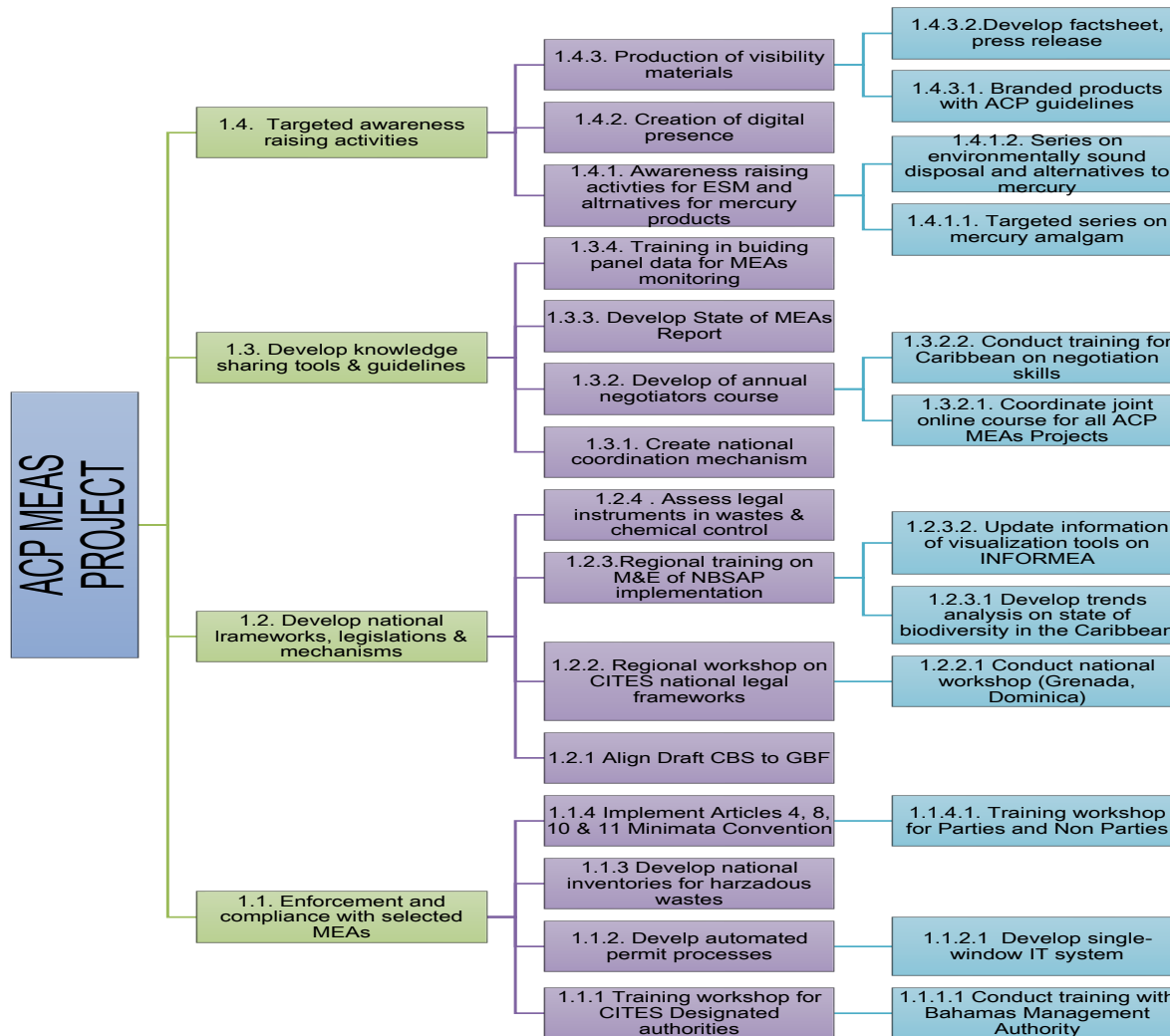
4.11. Schedule Management for the ACP MEAs Project

4.11.1. Process description and importance

To make a real difference in the efforts geared toward enforcing environmental treaties within the Caribbean region, the Schedule Management Plan must be prioritized. The plan is crucial ensure that the project management team stays on track through each stage of the project's life cycle by carefully recording and controlling the time spent by staff on tasks. The effectiveness of the Schedule Management Plan is determined by the six (6) iterative processes that, once defined at a high level, are redefined to allow for sufficient detailing of the tasks to be executed. The level of detailing would be proportionate to the perceived risks and their associated activities. For optimal results, it is therefore recommended to encourage full participation from the project team, who will be responsible for executing the tasks, to obtain their valuable input. This would allow for a realistic representation of the sequencing of activities and their estimated duration times.

As referenced earlier, there are six (6) Schedule Management Processes that can be utilized to monitor project progress: (1)Plan Schedule Management; (2) Define Activities; (3) Sequence Activities; (4) Estimate Activity Resources; (5) Estimate Activity Duration; (6) Develop and Control Schedule.

These processes are iterative and, based on the project needs to be elaborated accordingly throughout the different phases. The critical path method and the critical chain – examples of the vast number of tools and techniques available to the project management team to effectively manage the project. These processes would help to establish the best method for

developing proper scheduling methodologies and ensure efficient progress monitoring. Chart 36 lists the different processes, their aims, and their intended purpose.

Chart 36 Schedule Management Processes

Process	Purpose
Plan Schedule Management	Is performed throughout the different successive stages of its natural life cycle by recording and controlling time spent by staff on tasks. Policies, procedures, and documents for developing, managing, executing and control of the schedules are established here.
Define Activities	Identify the specific tasks needed to be done in order to produce the deliverables. The process must be detailed to estimate resources and time required for completion. The establishment of the Work Breakdown Schedule provides the high-level tasks and breaks them down into high-level deliverables.
Sequence Activities	To arrange activities according to their dependencies that may be internal or external.
Estimate Activity Resources	To make an estimate of the resources required to complete each activity in an orderly manner. It also describes who will do the work. The project management team would need to be knowledgeable about resource availability and the capability.
Estimate Activity Duration	Estimate the amount of effort required for the activities after which the duration is calculated. The end results would be a relatively

	accurate estimation of the duration of the project.
(a) Develop Schedule	At this stage, most of the data would have been acquired to assist in developing the schedule. The capabilities of the available resources would also determine what planning diagrams would be used that would present the most relevant information.
(b) Control Schedule	Used to monitor changes to the schedule baseline. Projects are controlled by maintaining the established baselines to reflect the true status. The project management team would have been planning the work in the previous 5 processes, it is however, at this stage that the team would verify if the plan stabled is working.

4.11.2. Main Stakeholders Involved

The stakeholder mapping exercise conducted in section 4.9 identified the most relevant institutions, within the context of the implementation of proposed project interventions, the expected outputs to be produced, and the anticipated outcomes. Chart 37 summarizes the key institutional stakeholders, their relevance to prioritized project intervention areas and project implementation, and their perceived level of influence on project implementation.

Chart 37 Stakeholders, roles, and perceived level of influence (Source: Compiled by Author)

Institution	Relevance to Prioritized Project Intervention Areas and Project Implementation	Perceived Level of Influence on Project Implementation	Roles in Project Implementation
European Commission & OACP Secretariat	Overall facilitator and donor of the project	High	Gathering of stakeholders, reflect on lessons learnt and possible recommendations for the future.
UNEP	Entrusted by its donors with resources that can be allocated for programmes and projects and is accountable to its donors and its governing body for the proper management of these funds.	High	Convening of annual PSC meetings including preparation of background documents logistics and bringing together all relevant stakeholders; regular submission of narrative and financial reports on the execution of the Programme; responsible for financial administration of the programme.
Project Steering Committee	Participate in meetings to develop suggestions for better implementation of the project in all three ACP regions	Medium	Review the status of implementation of the project, impacts made, lessons learned; Discuss the workplan and budget from all partners and confirm any modifications, considering and delays and approve the same, including the budgets associated;

Institution	Relevance to Prioritized Project Intervention Areas and Project Implementation	Perceived Level of Influence on Project Implementation	Roles in Project Implementation
			identify strategic priorities and cross-cutting issues the project focuses on and provide inputs; Discuss means of enhancing the visibility and outreach of the project
CARICOM Secretariat	Lead Implementation Agency of the project on behalf of Member States: overall coordination of project.	High	Establishment and housing of the project unit, chairmanship of the Regional Steering Committee and project oversight in keeping the agreed work plan, budget and reporting tasks.
Sustainable Development Programme	Lead on the execution of all aspects of the project; planning, implementing and monitoring of the Caribbean Hub;	High	Providing technical assistance, training, policy and advisory support services to enhance the capacity of Caribbean ACP countries to implement their obligations under MEAs.
Senior Officials/Ministers of Environment	Lead review and revision of environmental policies and plans; allow for synergies and	Medium	Overall guidance for the project implementation including work plan activities and indicators; guidance on

Institution	Relevance to Prioritized Project Intervention Areas and Project Implementation	Perceived Level of Influence on Project Implementation	Roles in Project Implementation
	coordination between this project and other regional capacity building projects in the Caribbean		the implementation of corrective actions resulting from setbacks in the execution of project activities; exchange of ideas, strategies to meet the obligations under MEAs and to ensure that the project is helping to advance the Region's development agenda; and Sharing of all information, achievements, products and networking and use of capacity building tools with all relevant national stakeholders.
MEAs Focal Points in ACP Countries	Lead review and revision of environmental policies and plans; allow for synergies and coordination between this project and other regional capacity building projects in the Caribbean.	Medium	Overall guidance for the project implementation including work plan activities and indicators; guidance on the implementation of corrective actions resulting from setbacks in the execution of project activities; exchange of ideas, strategies to meet the obligations under MEAs and to ensure that the project is helping to

Institution	Relevance to Prioritized Project Intervention Areas and Project Implementation	Perceived Level of Influence on Project Implement ation	Roles in Project Implementation
			advance the Region's development agenda; and Sharing of all information, achievements, products and networking and use of capacity building tools with all.
MEAs Secretariats	Technical knowledge to support implementation of MEAs	Low	Facilitate training sessions and provide technical expertise in MEAs capacity building at the national levels
Regional and International Agencies	Participate in the implementation of components mainly to promote the mainstreaming in the project's activities and outcomes according to the Environment Policies.	Low	Technical knowledge to support national implementation of MEAs.
Academia	Support implementation of activities related to capacity building, education and expert knowledge.	Low	Technical knowledge to support national implementation of MEAs.

Institution	Relevance to Prioritized Project Intervention Areas and Project Implementation	Perceived Level of Influence on Project Implementation	Roles in Project Implementation
NGOs, CSOs	Support the implementation of activities related to sustainable development, conservation, and protection of the natural environment.	Low	Key role in organizing the participation of local communities in biodiversity based on their experience in community education and awareness on natural resource management, and identifying local knowledge on the environment

Note. Compiled by the author.

4.11.3. Tools and techniques to be used on the schedule management plan

The SDP team is allowed to utilize the various tools and techniques designed for the different processes to their advantage depending on the specific needs of the project. Chart 38 highlights some of the tools and techniques that may help to achieve a successful outcome. A few are highlighted below to demonstrate how they could be incorporated into the project.

Chart 38 Tools and Techniques to plot Schedule Management Plan (Source: PMI, 2017)

Process	Tool and Techniques
Plan Schedule Management	● Expert Judgement ● Analytical Techniques ● Meetings
Define Activities	● Decomposition

	● Rolling Wave Planning ● Expert Judgement
Sequence Activities	● Precedence diagram method (PDM) ● Dependency Determination ● Leads and Lags
Estimate Activity Resources	● Expert Judgement ● Alternative Analysis ● Published Estimating Data ● Bottom-up Estimating ● Management Software
Estimate Activity Duration	● Expert Judgement ● Analogous Estimating ● Parametric Estimating ● Three-Point Estimating ● Group Decision-Making Techniques ● Reserve Analysis
(a) Develop Schedule (b) Control Schedule	● Schedule Network Analysis ● Critical Path Method ● Critical Chain Method ● Resource Optimization Techniques ● Leads and Lags ● Schedule Compression ● Scheduling Tool ● Modelling Techniques ● Project Management Software

The project is funded by the European Union through UNEP therefore, specific standards for monitoring and control and reporting must be observed and maintained to remain in good standing with the agency and for proper accounting. Therefore, the project would implore qualified consultants and working groups. Their knowledge, skills, and training will be used to view and generate data and apply the best possible solution to environmental problems using their expert judgments. The application of the three-point estimating would assist in risk management and mitigation. Stakeholder participation is also seen as an integral part of success; thus, the scheduling of meetings through the development of a proper communication management plan should ensure their involvement.

One such tool that the project has developed is a semi-annual and annual progress report that stipulates the requirements, their due dates, and the responsible entity. To assist with forecasting report generating and general tracking of the project progress, the project would also utilize Microsoft Projects as a Project Management Information System (PMIS). The PMIS would be able to highlight areas such as the Work Breakdown Structure, allow the project to establish its Leads and Lags, generate the predecessors and successors that would lead to establish the Critical Path Method.

4.11.4. Activity list, sequencing, and required resources

To develop the schedule, the project sought to define the activities, sequence them in the correct order, estimate the resources needed, and estimate the time it will take to complete the tasks.

The project management team has used their expert judgment from past successes and lessons learned to establish all activities. The activities are broken down into work packages, framed in the Work Breakdown Structure, that would highlight the various deliverables necessary to make the project a success. Therefore, the project proposes the implementation of four (4) components and thirteen (13) outcomes and based on the four (4) components identified, they would be further broken down into corresponding actionable items aligned with the thirteen (13) outcomes. The framework would be presented in the following section Chart 39.

The Activity list would reflect the scope of the work and is established from the identified components along with their attributes that describe all the activities to be done, which also helps in the sequencing. The four (4) components implore a multi-pronged approach through an all-social effort that promotes the sustainable management of the environment in critical areas. Based on the assumptions made and the work plan activities, the project was then able to determine and generate "Terms of Reference draft a procurement plan, etc., guided by the capacity and availability of resources.

4.11.5. Activity list chart including coding, activity name, predecessors/successors list, activities duration

Chart 39 – Coding and related activities to plot Project duration (Source: ACP MEAS Project Log frame, 2020)

ID	Activity	Further Details (where necessary)	Resource Requirements	Implementation Schedule (Year)				Predecessor	Successor
				1	2	3	4		
Component 1.1: Enforcement and compliance with selected MEAs									
WBS 1.1.1	Training workshops for CITES Designated Authorities in electronic control/management permits		1. Single window IT-based system	▓					1.1.2
			2. Experts/consultants to develop training program	▓					
			3. Administrative support to conduct a workshop in the Bahamas	▓					
			4. Training assessment survey		▓				
			5. Training report		▓				
WBS 1.1.2	Develop automated permit processes		1. Legal Consultant Firm with Multi-sectoral Specializations	▓				1.1.1	
			2. National Country Consultation Process		▓	▓			
			3. Legislative review and approval process			▓			

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ID	Activity	Further Details (where necessary)	Resource Requirements	Implementation Schedule (Year)				Predecessor	Successor
				1	2	3	4		
			4. Publish adopted regulations in Government Gazette			▓			
WBS 1.1.3	Develop national inventories for hazardous wastes		1. Country consultations		▓				
			2. Data collection			▓			
			3. National reports			▓			
			4. Validation exercise with Member States			▓			
			5. Publish & disseminate reports				▓		
WBS 1.1.4	Implement Articles 4, 8, 10 & 11 of the Minamata Convention		1.Needs Assessment Survey		▓	▓		1.1.3	
			2. Training Manual			▓	▓		
Component 1.2: Develop national frameworks, legislations & mechanisms									
WBS 1.2.1	Align Draft Caribbean Biodiversity Strategy to Global Biodiversity Framework		1. Procurement of regional Consultant	▓					
			2. Consultations with stakeholders	▓					

ID	Activity	Further Details (where necessary)	Resource Requirements	Implementation Schedule (Year)				Predecessor	Successor
				1	2	3	4		
				▓					
			3. Field research and literature review	▓	▓				
			4. Virtual validation consultation		▓	▓	▓		
			5. Updated Report		▓	▓	▓		
WBS 1.2.2	Regional workshop on CITES national legal frameworks		1. Conduct meeting with CITES Secretariat	▓					
			2. Develop workshop concept note and agenda	▓					
			3. Conduct meeting with Grenada and Dominica CITES Focal Points	▓					
			4. Administrative support to conduct workshops in 2 countries		▓				
			5. Workshop documents and report	▓					
			6. Training conducted by CITES Secretariat in legislative frameworks for CITES	▓	▓				

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ID	Activity	Further Details (where necessary)	Resource Requirements	Implementation Schedule (Year)				Predecessor	Successor
				1	2	3	4		
WBS 1.2.3.	Regional training on M&E of NBSAP implementation		1. Procurement of Consultant	▓				1.2.2	
			2. Conduct inception meeting		▓	▓	▓		
			3. Training action plan	▓	▓				
			4. Training manual	▓	▓				
			5. Administrative and logistical support to conduct training sessions in selected country		▓				
WBS 1.2.4	Assess legal instruments in wastes & chemical control		1. Procurement of consultant	▓	▓				
			2. Desk research		▓				
			3. National consultations		▓	▓			
			4. Assessment report	▓	▓				
Component 1.3: Develop knowledge-sharing tools, guidelines and mechanisms									

ID	Activity	Further Details (where necessary)	Resource Requirements	Implementation Schedule (Year)				Predecessor	Successor
				1	2	3	4		
WBS 1.3.1	Create national coordination mechanisms for plastics waste management		1. Knowledge Management Tools (data depository, social media platform and project account, interactive project website)	▓					
			2. Integrated monitoring platform to generate cross-data reports for plastics waste management in the Caribbean	▓					
			3. Regional meeting of practitioners	▓	▓	▓	▓		
			4. Procurement of consultant to develop practitioner's handbook on ESM of Plastics Waste Management in the Caribbean	▓	▓	▓	▓		
WBS 1.3.2	Develop State of MEAs Report		1. Procurement of Consultant	▓	▓	▓	▓		
			2. Workplan and inception meeting report	▓	▓	▓	▓		
			3. Review of state of MEAs in the Caribbean	▓	▓	▓	▓		
Component 1.4: Targeted awareness raising activities									

ID	Activity	Further Details (where necessary)	Resource Requirements	Implementation Schedule (Year)				Predecessor	Successor
				1	2	3	4		
WBS 1.4.1	Awareness raising activities for ESM and alternatives for mercury products		1. Procurement of Communications firm to develop audio-visual series on ESM for mercury products	▓	▓	▓	▓		
WBS 1.4.2	Creation of Digital presence		1. Website and social media updates	▓	▓	▓	▓		
WBS 1.4.3	Production of visibility materials		1. Project fact sheet and quarterly press release	▓	▓	▓	▓		

Note. The table's work plan highlights how the four components of the project would be achieved in the estimated 4-yr duration.

4.11.6. Duration Estimates

The PMBOK Guide (2017) indicates that the process requires an estimation of work effort and available resources needed to complete an activity. The accuracy of this process improves if done using the WBS. This process is essential in validating the estimates, preventing padding, formulating a reserve, and limiting assumptions made during estimating that can be recorded for later review. Three methods of Estimating Activity Durations within a project exist: 1) Analogous Estimating, 2) Parametric Estimating, and 3) Three-Point Estimating or Reserve Analysis.

Due to the nature of the project, the three-point estimating method is used to estimate the project's duration. The project has various components with activities that overlap, which is why it is best to state estimates in a range using three-point estimates. Providing an estimate allows for potential variations and helps determine an expected range of activity. With the three-point estimate, an optimistic estimate, pessimistic estimate, and most likely estimate (monthly) for each activity for Components 1 to 4 is provided. The average duration needed to complete all activities within each component is applied using PERT analysis of the three estimates in Chart 40.

Chart 40 – Duration estimates for improving the ACP MEAs Project (Source: Compiled by the Author)

Project Name: Capacity building related to MEAs In ACP Countries (ACP MEAs Project)					
	Optimistic estimate (month)	Pessimistic estimate (month)	Most likely estimate(month)	Total	Average
Component 1.1: Enforcement and compliance with selected MEAs (all activities within the WBS)	18	21	20	59	19.7
Component 1.2: Develop national frameworks, legislations and mechanisms (all activities within the WBS)	15	20	15	50	16.6
Component 1.3: Develop knowledge sharing tools, guidelines and mechanisms (all activities within the WBS)	14	15	11	40	13.33
Component 1.4 Targeted awareness raising activities (all activities within the WBS)	12	15	11	38	12.6
Duration of the project (# month)					*62.3
Duration of the project in Year				4	

Note. **Based on the result obtained by using the three-point estimating method, the whole duration of the project is estimated to be 62 months/5 years including management reserve.**

4.11.7. Reserve analysis including justification

Projects must have a reserve to accommodate risks if there are any remaining risks after the risk management activities are completed. We cannot transfer or mitigate all project risks. If there are risks, then reserves are needed to accommodate them to minimize the impacts of risks when they occur.

Reserve analysis is being used to make a complete and thorough determination of the exact features of all components to maintain and manage the projects better. After the Estimate Activity Resource and Durations process, the estimated cost and/or schedule might still run the risk of being changed. Reserve analysis helps to accommodate these risks to minimize their impacts by establishing a schedule duration of all estimated costs, the budget and all funds allocated to the project.

Two types of reserves must be considered during reserve analysis:

4.11.8. Contingency reserve

The contingency reserve refers to the amount of funds or other financial resources required for known risks to act as a buffer. Therefore, the delay which resulted from the COVID-19 pandemic caused project interventions as most training was scheduled to take place in countries. Due to travel restrictions, these activities were rescheduled to 2022. Legislative processes may be slow and extend beyond the project's life with planned regulatory reforms not getting formally enacted/adopted by the end of the project. Because of these risks, this will cause activity completion delays of six months or more as a contingency reserve is needed. The project and the Department of Sustainable Development will ensure proper due diligence and timely presentation of proposals to the appropriate levels and decision-makers

in Government. The contingency reserves will be the estimated duration within the schedule baseline, allocated for the risks of delays in conducting workshops.

4.11.9. Management reserve

The management reserve is the amount of the project budget reserved for unforeseen work that is within the project's scope. The project manager adds the management reserve to the cost baseline resulting in the total project budget. For this project 12% USD361,917.84 is withheld by the funding agency as the management reserve. Every project is impacted by unidentified risks; therefore, the management reserve protects the project from risks that have not been identified.

4.11.10. Project Schedule and Critical Path

The ACP MEAs schedule was developed for planning, executing, monitoring/controlling and communicating the delivery of the scope to the stakeholders. This was important for the project's success, as it enabled the project manager to keep the project on track, set realistic timeframes, assign resources appropriately and manage the quality in decreasing error of the product/service to be delivered.

The Critical Path Method or CPM is an algorithm for scheduling all the project activities, taking the values like the duration (time) for each activity to be completed, the dependencies between the activities, and their logical endpoints, such as milestones or project deliverables, into consideration. Based on these values, the CPM, as illustrated in Figure 16 which, calculated the longest path of planned activities to the logical endpoint of the project and the earliest and latest date each activity can start and finish, without making

the project longer. This process will determine the activities that are "critical", and which have a "float" (lag time) to deliver the project successful.

Figure 14 - ACP MEAs Project Schedule & Critical Path in Microsoft Project (Source: Compiled by Author)

ID	WBS	Task Name	Duration	Start	Finish
1	1.1	Component 1.1 Enforcement and compliance with selected MEAs	588 days?	Thu 7/1/21	Sat 9/30/23
2	1.1.1	Training workshops for CITES Designated authorities in electronic control/management	588 days	Thu 7/1/21	Sat 9/30/23
3	1.1.1.1	Conduct training on electronic control permits in Bahamas	5 days	Mon 9/11/23	Fri 9/15/23
4	1.1.2	Develop automated permit processes	566 days	Thu 7/1/21	Thu 8/31/23
5	1.1.2.1	Develop single-window IT system	566 days	Thu 7/1/21	Thu 8/31/23
6	1.1.3	Develop national inventories for harzadous wastes	238 days	Fri 1/1/21	Tue 11/30/2:
7	1.1.3.1	Submit draft inventories for validation	28 days	Thu 9/30/21	Mon 11/8/21
8	1.1.4	Implement Articles 4, 8, 10 & 11 of the Minamata Convention	129 days?	Mon 1/3/22	Thu 6/30/22
9	1.1.4.1	Conduct virtual training on Articles 4, 8, 10 & 11	10 days	Mon 4/11/22	Fri 4/22/22
10	1.2	Component 1.2 Develop national frameworks, legislations & mechanisms	411 days?	Mon 1/3/22	Mon 7/31/23
11	1.2.1	Align Draft CBS to GBF	126 days	Mon 1/3/22	Mon 6/27/22
12	1.2.1.1	Submit draft CBD for endorsement	107 days	Mon 1/3/22	Tue 5/31/22
13	1.2.2	Regional workshop on CITES national framework	109 days?	Wed 6/1/22	Mon 10/31/2
14	1.2.2.1	Conduct national workshops in Dominica & Gre	10 days	Mon 10/10/2	Fri 10/21/22
15	1.2.3	Regional training on M&E of NBSAPs implement:	93 days?	Fri 10/21/22	Tue 2/28/23

Project: ACP Project Schedule
Date: Tue 5/23/23

Task		Manual Summary Rollup		Critical	
Split		Manual Summary		Critical Split	
Milestone	◆	Start-only	⊏	Late	
Summary		Finish-only	⊐	Baseline	
Project Summary		External Tasks		Baseline Milestone	◇
Inactive Task		External Milestone	◇	Baseline Summary	
Inactive Milestone	◇	Deadline	↓	Progress	
Inactive Summary		Path Predecessor Milestone Task	◆	Manual Progress	
Manual Task		Path Predecessor Summary Task		Slack	
Duration-only		Path Predecessor Normal Task			

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ID	WBS	Task Name	Duration	Start	Finish
16	1.2.3.1	Develop trends analysis on State of Biodiversity in the Caribbean	51 days	Fri 10/21/22	Fri 12/30/22
17	1.2.3.2	Conduct regional training on M&E of NBSAPs implementation (virtually)	5 days	Mon 1/23/23	Fri 1/27/23
18	1.2.3.3	Update information of visualization tools on INFORMEA	23 days	Mon 1/1/24	Wed 1/31/24
19	1.2.4	Assess legal instruments in wastes & chemicals control	109 days	Wed 3/1/23	Mon 7/31/23
20	1.2.4.1	Conduct validation consultation on legal instruments in wastes & chemicals control assessment	7 days	Mon 5/15/23	Tue 5/23/23
21	1.3	Component 1.3 Develop knowledge sharing tools & guidelines	804 days?	Fri 10/1/21	Wed 10/30/24
22	1.3.1	Create national coordination mechanims	216 days	Fri 1/1/21	Fri 10/29/21
23	1.3.1.1	Conduct virtual meeting to present ToR for coordination mechanism	3 days	Thu 9/30/21	Mon 10/4/21
24	1.3.2	Develop annual negotiators course	804 days?	Fri 10/1/21	Wed 10/30/2
25	1.3.2.1	Coordinate joint online course for all ACP Proje	500 days	Fri 10/1/21	Thu 8/31/23
26	1.3.2.2	Conduct regional training for CARICOM negotia	21 days	Fri 9/1/23	Fri 9/29/23
27	1.3.3	Develop State of the MEAs Report	152 days?	Thu 6/1/23	Fri 12/29/23
28	1.3.3.1	Present draft report to Member States for endorsement	16 days	Mon 10/2/23	Mon 10/23/23

Legend:

Task	Manual Summary Rollup	Critical
Split	Manual Summary	Critical Split
Milestone	Start-only	Late
Summary	Finish-only	Baseline
Project Summary	External Tasks	Baseline Milestone
Inactive Task	External Milestone	Baseline Summary
Inactive Milestone	Deadline	Progress
Inactive Summary	Path Predecessor Milestone Task	Manual Progress
Manual Task	Path Predecessor Summary Task	Slack
Duration-only	Path Predecessor Normal Task	

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ID	WBS	Task Name	Duration	Start	Finish	Timeline
29	1.3.4	**Conduct training on building panel data for MEAs monitoring**	50 days?	Mon 10/23/23	Fri 12/29/23	
30	1.3.4.1	Submit training assessment report	10 days	Mon 12/4/23	Fri 12/15/23	
31	1.4	**Component 1.4 Targeted awareness raising activiti**	587 days?	Sat 1/1/22	Sun 3/31/24	
32	1.4.1	**Awareness raising activities for environmentally sound management and alternatives for mercury products**	130 days?	Sat 1/1/22	Thu 6/30/22	
33	1.4.1.1	Targeted audio-visual series on mercury amalg	65 days	Sat 1/1/22	Thu 3/31/22	
34	1.4.1.2	Audio-visual series on environmentally sound disposal and alternatives to mercury added products	66 days	Thu 3/31/22	Thu 6/30/22	
35	1.4.2	**Creation of digital presence**	587 days?	Sat 1/1/22	Sun 3/31/24	
36	1.4.2.1	Produce branded products with ACP guidelines	130 days	Sat 1/1/22	Thu 6/30/22	
37	1.4.2.2	Develop project fact sheets and quarterly press release	565 days	Sat 1/1/22	Thu 2/29/24	

Timeline header: 2020 (H1 H2), 2021 (H1 H2), 2022 (H1 H2), 2023 (H1 H2), 2024 (H1 H2), 2025 (H1)

Legend:
Task		Manual Summary Rollup		Critical	
Split		Manual Summary		Critical Split	
Milestone	◆	Start-only	⊏	Late	
Summary		Finish-only	⊐	Baseline	
Project Summary		External Tasks		Baseline Milestone	◇
Inactive Task		External Milestone	◇	Baseline Summary	
Inactive Milestone	◇	Deadline	↓	Progress	
Inactive Summary		Path Predecessor Milestone Task	◆	Manual Progress	
Manual Task		Path Predecessor Summary Task		Slack	
Duration-only		Path Predecessor Normal Task			

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Note. **The critical path is automatically generated in the Microsoft Project programme.**

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4.11.11. Control Schedule Process

According to the PMBOK (2017), control schedule is the process of monitoring the project status to update the project schedule and managing changes to the schedule baseline. This process is important because the schedule baseline is maintained throughout the project. The control schedule is carried out throughout the project. The control schedule process is part of the controlling and monitoring process group. The project's proposed activities build on the existing baseline conditions and seek to drive those additional steps and processes required to achieve incremental results.

As in the previous process, the "Control of Schedule" provides us with various methods to keep the project on track. In keeping with the policies of the EU and UNEP, the project would incorporate S.M.A.R.T indicators for each expected outcome, means of verification, ands mid-term and end-of-project targets along with the key deliverables and benchmarks. The project would also utilize different technologies, such as surveys and focus groups. Consulting with the Legal Department of CCS and hiring specialized experts as consultants will ensure that all rules and regulations are followed throughout the project's life cycle. These experts would provide technical input, assist with revisions and approvals, and ensure that all necessary documentation is in place to ensure compliance. In this area of knowledge management, an integrated monitoring platform would be developed to generate cross-data reports so that all local, regional, and international commitments are recognized. In addition, it would enable systems of networking for the transfer of knowledge and skills training in areas identified for opportunities. The project's impact would be far-reaching and would continue even after the close phase. A Communications Strategy would be

developed to inform stakeholders of the benefits of the project and its impact on the region's sustainable development.

4.11.12. Schedule change management process

The Regional Steering Committee (RSC) ensures that resources are balanced, and priorities are aligned in accordance with the Project Results Framework. As a result, the conclusions and recommendations produced by the RSC will be used to modify implementation strategies, annual work plans, and resource allocation budgets and, when necessary, to adjust the Project Result Framework in consultation with the UNEP and the PSC. This committee will meet either physically or virtually every six months.

Changes that would impact the baseline would be logged, analyzed and prioritized and, if deemed necessary, the resulting changes may be implemented. For this reason, the project proposes a five-step Change Control Process:

1. Initiation - A change is requested

2. Assessment - The change is evaluated

3. Analysis - Change is approved or denied

4. Implementation - The change is implemented

5. Closure - The change request is closed

The change log template would be developed to assist in the streamlining of the documentation for ease of access and use as the project intends to operate within scope, minimize insecurities and keep up to date on the advancement in tools and technologies that would bring it to a successful fruition.

4.12. Cost Management Plan for the ACP MEAs Project

The organization has received USD1.455,002 million in financing from the European Union to implement a 4-year Action for Capacity Building related to MEAs project. UNEP has been entrusted with resources that can be allocated for programmes and projects and is accountable to its donors and its governing body for the proper management of these funds. This is in accordance with the UNEP Medium-Term Strategy 2014-2017 and Programme of Work 2014-2015 which makes such resources available for cooperation.

Planning cost management should have occurred early in the project during the planning stages to ensure the process was as efficient and coordinated as possible. Notwithstanding, this template can be used as a main output of the process "Cost Management Plan", which is a part of the project management plan. The cost management plan will help in the planning, structuring, and controlling of project costs and contains information about the processes, tools and techniques to be used for cost management (PMI, 2017). The cost management plan also establishes the units of measure, level of precision, level of accuracy, control thresholds, reporting formats, organizational procedure links and rules of performance measurement, all of which are needed for effective cost management (Roseke, 2016).

4.12.1. Main Stakeholders Involved

The main stakeholders involved in cost management are:
- Project Executing Agency - The United Nations Environment Program (UN Environment) is the European Commission assigned agency for this project with fiduciary responsibility, responsibility for the approval of project budget, technical

guidance and oversight of project outputs, approval of Project Implementation Reports (PIRs), and participation in the project's superior governance structure.

● Project Executing Agency – The Caribbean Community (CARICOM) Secretariat performs the role of executing agency. Established a Project Coordinating Unit (PCU) to oversee day-to-day project execution. The PCU was locally based and responsible for the fiduciary oversight and reporting of the project, including technical and financial reporting to the Implementing Agency

● Project Coordinator - Developed the cost management plan

● The Project Steering Committee: Members of the Project Executing Committee, UNEP, Governments of CARICOM and representatives of regional agencies executing similar projects to provide overall guidance for the project implementation including work plan activities and indicators.

4.12.2. Tools and techniques to be used on the cost management plan

Chart 41 Tools Used on The Cost Management Plan (Source: PMI, 2017; adapted by the Author)

Tools and techniques	Description
Expert Judgement	● To revise and/or update Draft Caribbean Biodiversity Strategy ● Conduct national consultation processes at national and regional levels ● To assess legal and regulatory framework for automated permit processes ● To provide recommendations and strategies to

Tools and techniques	Description
	implement the Minamata Convention
National Consultations/meetings	● To identify main project products to be disseminated and socialized among key target stakeholders. ● To build a baseline, identify capacity-building needs, and propose tailor-made training and workshops for dissemination of main project products, considering the gender and rights-based approach. ● To systematize the strategy results and identify main topics to follow up on.
Training workshops, postgraduate training	● Carry out workshops and other interventions to build and enhance the capacity of authorities ● Design and validate a training manual that includes a training methodology for the implementation of the Biodiversity and Chemicals and Waste Conventions ● Design and validate a technical manual on M&E of NBSAP implementation ● Design a training manual on automated permits ● Design a technical manual on ESM of Plastics Management in the Caribbean ● Carry out workshops and other interventions to build/enhance the capacity of relevant stakeholders
State of MEAs & Baseline data	● Design and carry out at least 3 training of trainers for

Tools and techniques	Description
collection training	regional organizations and relevant stakeholders to build capacity on monitoring, which includes: identification and prioritization of baseline needs, indicators, data collection, data management, analysis and interpretation. ● Design materials and select existing guidelines to be used in the trainings. ● Collect information to build a baseline on the status of biodiversity in areas of intervention ● Develop recommendations for conservation strategies and monitoring of indicative species.
Financing	● Develop a financial mechanisms program based on existing programs and new options to provide farmers access to markets, micro-loans and marketing of products.

Note. The tools and techniques will adapt to the project requirement of the project.

4.12.3. Activity cost estimates

Cost Estimates are quantitative assessments of the probable cost required to complete project work. This would include contingency amounts to account for risks and reserves for unplanned work such as costing for labour, material, equipment services, information technology, indirect costs, etc. (PMBOK Guide, 2017) . Chart 42 gives the costing for every activity listed in the WBS. As a result, the project manager, as the one responsible for

determining the project funding requirements, reduces cost uncertainties and builds confidence in the project.

The amount and type of additional details supporting the cost estimate vary by application based on requirements. All supporting documentation should provide a clear and complete picture of how the cost estimate was derived. Supporting detail for the activity cost estimates should include:

- Description of the schedule activity's project scope of work
- Documentation of the basis for the estimate (i.e., how it was developed)
- Documentation of any assumptions made
- Documentation of any constraints
- Indication of the range of possible estimates

Though it may not be considered an exact science since prices may fluctuate and resources may become unavailable, the project manager makes certain assumptions, based on the facts before them, thus allowing them to make the best decision by identifying the risks. Although changes may arise, once a formal request is done through the Change Control Process and once changes are approved through the Cost Estimating process, then the cost management plan component of the project management plan is updated as they would have an impact the management of costs and the likely impacts may be mitigated (PMBOK Guide, 2017). The result is that the established budget ensures the project's successful completion.

Chart 42 – ACP MEAs Project estimated cost of each activity included in the WBS (Source: Compiled by Author)

WBS	Activities	Resource	Direct Costs	Indirect Costs	Reserve	Estimate	Method	Assumptions	Additional Information	Range	Confidence Level
1.1.1.1	Conduct traing on electronic control/management permits	Bahams CITES Management Authority	$ 65,000.00	$ 20,000.00	$ 6,500.00	$ 85,072.00	Parametric	Government of Bahams prioritizes policy formulation and regulatory reform as an essential first step for controlling permits.	Number of national participants attending workshop	$58,000 - $72,000	76.41
1.1.2.1	Develop single window IT system	UNCTAD/CITES Secretariat	$ 150,000.00	$ -	$ 15,000.00	$ 150,072.00	Expert Judgement		Financial contributions from the CITES Secretariat	$14,000 - $15,000	99.95
1.1.4.1	Training workshop for Parties and non Parties to the Minamata Convention	Technical Officers from 17 CARICOM countries	$ 85,000.00	$ 20,000.00	$ 8,500.00	$ 105,072.00	Delphi technique			$100,000 - $150,,000	80.90
1.2.2.1	Conduct national workshops on frameworks, legislations and mechanisms for implementing CITES convention	CITES focal points in Grenada & Dominica	$ 35,000.00	$ 8,000.00	$ 3,500.00	$ 43,072.00	Delphi Tecnique	Stakeholders and decision-makers are receptive to incorporating project results into policy formulation processes and value the importance of inter-institutional coordination for policy success		$35000 - $45,000	81.26
1.2.3.1	Develop trends analysis on state of biodiversity in the Caribbean	Regional consultant	$ 35,000.00	$ 8,000.00	$ 3,500.00	$ 43,072.00	Expert Judgement	Key institutional project stakeholders fully embrace the outputs of the project and institutionalize required processes and strategies		$35000 - $45,000	81.26
1.2.3.2	Update information of visualization tools on INFORMEA	UNEP, Regional consultant	$ 17,000.00	$ 3,000.00	$ 1,700.00	$ 20,072.00	Expert Judgement		Data available and compiled for upload to website	$17,000 - $21,000	84.70
1.3.2.1	Coordinate joint online course for all ACP Projects	Focal Points/Government Representatives from all ACP Countries	$ 42,000.00	$ -	$ 4,200.00	$ 42,072.00	Delphi Tecnique			$55,000 - $83,000	99.83
1.3.2.2	Conduct training of MEAs negotiators	CARICOM Negotiators	$ 90,000.00	$ 27,000.00	$ 9,000.00	$ 117,072.00	Expert Judgement	Key institutional project stakeholders fully embrace the outputs of the project and institutionalize required processes and strategies		$28,000 - $82,000	76.88
1.4.1.1	Targeted audio visual series on mercury amalgam	Communications Consultant	$ 35,000.00	$ -	$ 3,500.00	$ 35,072.00	Parametric			$12,000 - $13,000	99.79
1.4.1.2	Audio visual series on ESM and alternatives to mercury	Communications Consultant	$ 35,000.00	$ -	$ 3,500.00	$ 35,072.00	Parametric			$12,000 - $13,000	99.79
1.4.3.1	Paraphanila products branded with project logos	Project Unit	$ 11,000.00	$ 5,000.00	$ 1,100.00	$ 16,072.00	Parametric			$6,000 - $12,000	68.44
1.4.3.2	Develop project fact sheet and quarterly press release	Project Unit	$ 7,000.00	$ 2,720.00	$ 700.00	$ 9,792.00	Analogous			$2720 - $6000	71.49
4.1.1.1	Project Management cost	Implementing Agency	$ 455,166.00		$ 45,516.00	$ 455,238.00	Analogous			$92000 - $92,000	99.98
	Total		$ 1,062,166.00	$ 93,720.00	$ 106,216.60	$ 1,156,822.00					91.82

Contingency	15%
	$ 159,324.90
Management reserve	12%
	$138,818.64

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4.12.4. Project Budget

The Project Budget includes all the funds authorized to execute the budget to complete the project during the 4-year period with specific results. To create the budget, the activity costs estimates are accumulated to work package estimates, which are then accumulated to control account costs and ultimately to project costs.

4.12.5. Project Budget Chart

Chart 43 provides an overview of the project budget based on the estimated cost per activity including the contingency reserve and the management reserve.

Cost baseline = Cost Estimates + Contingency reserve

Project Budget = Cost Baseline + Management reserve.

As previously stated in Chapter 4.16, a contingency reserve and management reserve were incorporated into the project. The contingency reserve is the amount of funds or other financial resources required for known risks to act as a buffer. The contingency reserve of 15% was estimated within the schedule baseline and allocated for the risks of possible delays with the land tenure approval. The management reserve is the amount of the project budget reserved for unforeseen work that is within the project's scope. The project manager adds the management reserve to the cost baseline resulting in the total project budget. For this project, 12% is withheld by the funding agency as the management reserve. Notably, it was estimated that USD1,390,357.36 is needed to complete the project. That includes costs of procurement of consultants, travel, and operating costs.

# Chart 43 – ACP MEAs Project Budget Chart (Source: Compiled by Author)

WBS	Activities	Resource	Activity cost	WBS	Workpackage	Estimate	code subcomp.	subcomponent	Estimate	code	component	Estimate
1.1.1.1	Conduct traing on electronic control/management permits	Bahams CITES Management Authority	$ 65,000.00	1.1.1	Training workshop for CITES Designated authorities	$ 85,072						
1.1.2.1	Develop single window IT system	ACYCUDA/CITES Secretariat	$ 150,000.00	1.1.2	Develop automated permit process	$ 150,072	Enforcement and compliance with selected MEAs				Enforcement and compliance with selected MEAs	
1.1.4.1	Training workshop for Parties and non Parties to the Minamata Convention	Technical Officers from 17 CARICOM countries	$ 85,000.00	1.1.4	Implement Articles 4, 8, 10 & 11 of Minamata	$ 105,072		1.1	$ 340,216	1		$ 340,216
1.2.2.1	Conduct national workshops on frameworks, legislations and mechanisms for implementing CITES convention	CITES focal points in Grenada & Dominica	$ 35,000.00	1.2.2	Regional workshop on CITES national legal frameworks	$ 43,072							
1.2.3.1	Develop trends analysis on state of biodiversity in the Caribbean	Regional consultant	$ 35,000.00		Regional training on M&E of NBSAP	$ 43,072	National frameworks, legislations and mechanisms				Develop national frameworks, legislations & mechanisms	
1.2.3.2	Update information of visualization tools on INFORMEA	UNEP, Regional consultant	$ 17,000.00	1.2.3		$ 20,072		1.2	$ 106,216	2		$ 106,216
1.3.2.1	Coordinate joint online course for all ACP Projects	Points/Government Representatives from all ACP Countries	$ 42,000.00		Develop annual negotiators course	$ 20,072	Knowledge sharing tools and guidelines				Develop knowledge sharing tools & guidelines	
1.3.2.2	Conduct training of MEAs negotiators	CARICOM Negotiators	$ 90,000.00	1.3.2		$ 117,072		1.3	$ 137,144	3		$ 137,144
1.4.1.1	Targeted audio visual series on mercury amalgam	Communications Consultant	$ 35,000.00		Awareness raising activites for ESM and alternatives for mercury	$ 12,072							
1.4.1.2	Audio visual series on ESM and alternatives to mercury	Communications Consultant	$ 35,000.00	1.4.1		$ 12,072							
1.4.3.1	Paraphanila products branded with project logos	Project Unit	$ 11,000.00		Production of visiblity materials	$ 11,072	Targeted awareness raising activities				Targeted awareness raising activities	
1.4.3.2	Develop project fact sheet and quarterly press release	Project Unit	$ 7,000.00	1.4.3		$ 5,512		1.4	$ 40,728	4		$ 40,728
4.1.1.1	Project Management cost	Implementing Agency	$ 455,166.00			$ 455,166			$ 455,166	5		$ 455,166
	Project Estimates		$ 1,062,166.00			$ 1,079,470.00			$ 1,079,470			$ 1,079,470

Contingency reserve 15%	$ 161,920.50
Cost Baseline	$1,241,390.50
Management reserve 12%	$ 148,966.86
Project Budget	$1,390,357.36

4.12.6. Cost Baseline (S-Curve)

The S-Curve Figure represents the Cost Baseline of the project. Based on the estimated costs of the work packages and the contingency reserve applicable the cost baseline was derived. The S-Curve was calculated utilizing the work packages and the contingency reserve.

Figure 15 – ACP MEAs Project S-Curve (Compiled by Author)
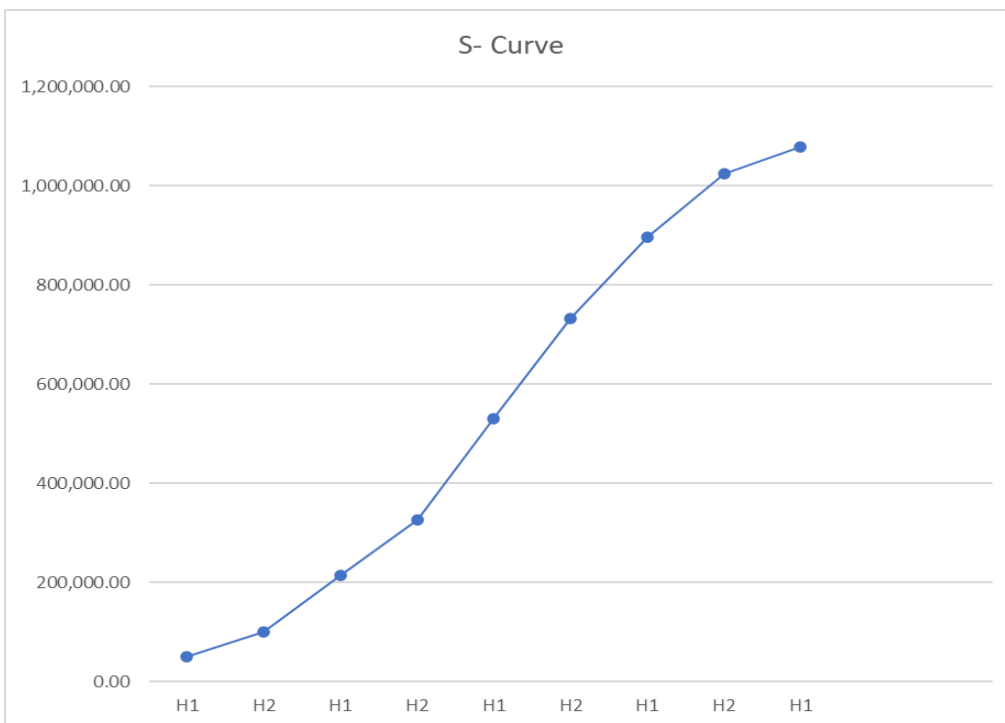
4.12.7. Cost control procedure

As a key component of Cost Management, this area is critical in ensuring that all aspects of the project are executed within the assigned budget, at the acceptable range and in a responsible manner that prevents cost overruns. This usually happens through a Perform Integrated Change Control Process as designed by the project team. Cost control essentially

guides cost management by ensuring that changes to the budget are done using the right procedures and approved formats.

In an effort to ensure the successful implementation of this project, the following critical steps will be taken to control the project's budget:

1. Establishing a cost baseline - as shown in the S Curve, this cost baseline is reflective of the estimated cost of the project in relation to the duration of the project. This will allow the team to determine and monitor the budget associated with each project activity.

2. Formalizing performance review meetings - this will take the format of regular team meetings whereby key personnel such as the Finance Officer and Project Manager will be required to provide monthly reports on expenditures incurred by the project. This approach will help build accountability and responsibility among the team, especially since the quality of reporting will reflect their performance.

3. Adopting performance measurement - using earned value measurement as an accounting approach to measuring cost performance will enable the team to identify variances in the cost baseline and take the necessary corrective actions to ensure that the project is meeting its goal. Earned Value measurement is among the project performance measurement techniques that integrates scope, time and cost data, a useful tool for project leads.

4. Utilizing project change control - given that any changes in scope will ultimately affect changes in project cost and schedule, change control systems will be properly incorporated/outlined to guide the project team. Change control systems will outline

precisely what actions will be taken in response to inevitable occurrences which may affect the project deliverables.

4.12.8. Cost change management process description

The cost change management process relates to the procedures required to make changes to the cost baseline. These may be incorporated into the Integrated change control system to coordinate changes across the project. The following cost change management process will be encouraged and applied to this project:

1. **Receive or identify the cost change request** - this can be done in the form of oral, written, or electronic methods from the relevant project stakeholders. Performance review meetings can also allow for such requests.

2. **Review cost change request** - the project manager will be responsible for evaluating the need for the requested change to determine its feasibility based on the project's status. The evaluation will also help determine the implications for the project if they are accepted or altogether rejected. Furthermore, this step will ensure that the proposed changes are communicated to the project sponsor or other key stakeholders with significant power and interest in the project. At this stage, the most suitable recommendations will be made to relevant project authorities at this stage.

3. **Approve cost change request**- this stage will rely on the feasibility of the requested cost change. It will determine whether the change request is approved or rejected based on the recommendations. Consideration will be given to its overall impact on the project, particularly its schedule, quality and scope as outlined in the initial project description.

4. **Implement and close cost change request-** the requested cost change is scheduled and performed as well as the requester is informed of the implementation in this phase. If rejected, the cost change request will be closed and filed; however, if accepted, the project's budget will be adjusted to reflect the approved changes.

4.12.9. Earned Value Management (EVM)

Earned Value Management (EVM) is a management methodology for integrating scope, schedule, and resources; for objectively measuring project performance and progress; and for forecasting project outcome (PMI, 2011). It provides management with tools and techniques to adjust the 'triple constraint' within a project as EVM gives validity and effectiveness to use of the Cost and Schedule baseline to understand the project's performance.

For the EVM calculations, three scenarios will be highlighted, namely at 25%, 50% and 75% of the project duration. The project started on January 2020 and has a planned duration of 4 years (the end date is May 2024). The following periods could be retrieved by using the Gantt chart as earlier applied. Chart 44 gives an overview of the period when the scenarios will take place.

Chart 44 – Overview of EVM scenarios (Source: Compiled by Author)

Task Name	Duration	Start	Finish
Scenario 1(Q4 2020)	365 days	Mon 1/1/20	Thu 12/31/20
Scenario 2 (Q4 2021)	731 days	Mon 1/1/20	Thu 06/30/22
Scenario 3 (Q4 2022)	1096 days	Mon 1/1/20	Thu 06/30/23

Note. Corresponds to the indicated scenarios at 30%, 50% and 70%.

4.12.9.1. First Scenario (30%)

This scenario takes place at the 1.5-year marker or equivalent to 30% of the total project duration, which is 4 years. Scenario one (1) considers the impact of the COVID-19 pandemic, which had a significant delay in its progress. Below Chart 45 provides the project's Planned Value (PV) for all activities at this point, the Earned Value (EV) of these activities and finally the Actual Cost (AC) of these activities.

Chart 45 Project progress at the 30% mark to determine EV, cost and time forecasts (Source: Compiled by Author)

Components	PV	Progress (%)	EV	AC
1.1-1.4	$411,872.00	30%	$162,862.80	$162,862.80

Note. The table corresponds with a period of 1 ½ years into the project duration thus the figures are calculated using that baseline.

Figure 16 – Progress at the 30% mark (Source: Compiled by Author)
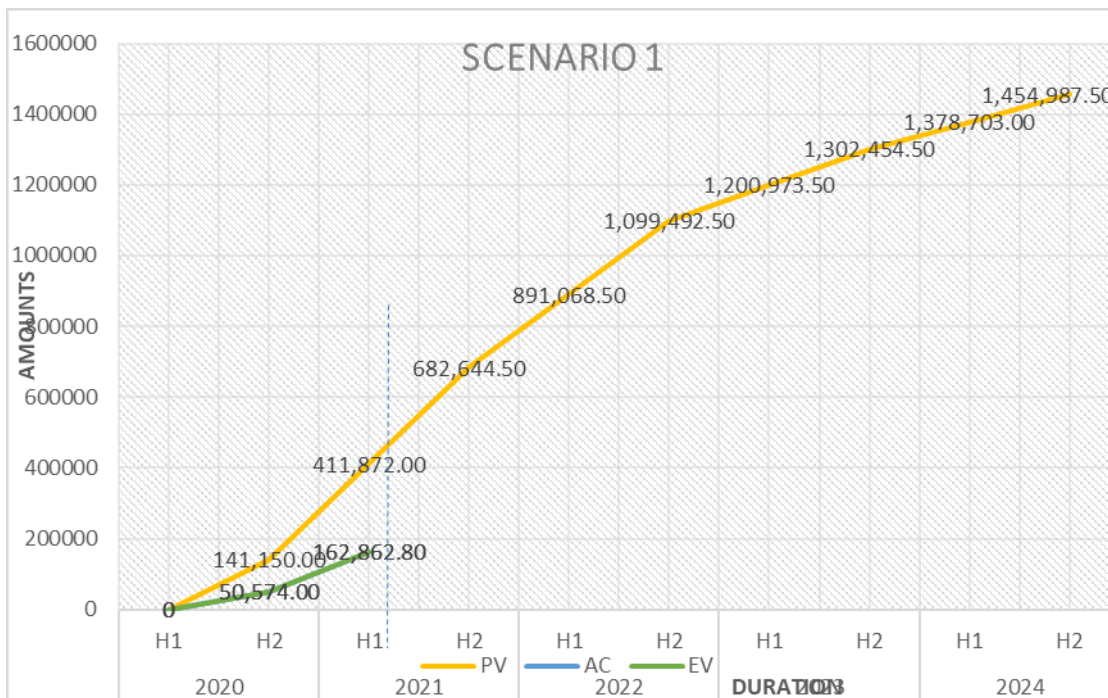
Note. The figure corresponds with a period of 1 ½ years into the project duration.

4.12.9.2. Schedule variance status – SV calculation

To determine the project status in terms of time/schedule, at the 30% milestone, compare the relative positions of the EV and the PV. In terms of time/schedule we have the following: SV=EV-PV = \$162,862.80-\$411,872 = -\$249,009.20

The PV is greater than the EV, the project is delayed, which means that the project has not advanced as quickly as originally planned. Additionally, the SV is less than zero it is a negative result, which indicates that at the 30% milestone the project was very behind schedule.

4.12.9.3. Cost variance status – CV calculation

In terms of cost, we have the following:

CV=EV-AC = \$162,862.80-162,862.80= \$0

The CV is equal to zero which indicates that the project cost is exactly as planned for its current (30%) status.

4.12.9.4. Schedule Performance Index (SPI) calculation

The next analysis will be the performance indexes. The schedule performance index SPI, can be calculated as follows:

SPI=EV/PV = \$162,862.80/\$411,872= 0.4.

A SPI of less than 1 is a negative result, which indicates that the project is delayed. This analysis is consistent with our previous qualitative analysis and the variance analysis – SV.

4.12.9.5.   Cost Performance Index (CPI) calculation

The cost performance index (CPI) can be calculated as follows:

CPI=EV/AC = $162,862.80/162862.80 = 0

Since the CPI is less than one, it indicates that the project is spending more than planned for its current progress.

4.12.9.6.   Project duration forecast calculation

To determine the project duration forecast, the time estimate at completion (EACt) will be calculated using the following formula: EACt = (BAC/SPI) / (BAC/months)

The Baseline Schedule at Completion is 54 months (SAC), provided that the SPI at the current time is 0.4, this will entail that the total estimated time based on these actual costs will be EACt= SAC/SPI = 54 months/0.4 = 135 months. The answer indicates that an additional 81 months is needed to achieve all deliverables.

4.12.9.7.   Total cost forecast calculation

EAC1 = BAC/CPI = $1,126,742 /0 = $0

With this analysis, immediate measures must be implemented improve its cost efficiency for the remainder of the project.

4.12.9.8.   Integral analysis of Scenario (30%)

Based on the earned value calculations done above, it can be interpreted that the schedule variance at the 30% scenario was a negative number which shows that the project is behind schedule by the end of the last quarter in 2020. However, the cost variance shows that the

project budget has not run over. Notwithstanding, the project is delayed and spending more than its current progress. This indicates that a significant increase in time performance is needed to keep on schedule as well as immediate measures to improve cost efficiency for the remainder of the project. In summary, the 30% scenario shows the project was not on schedule but being executed at a cost that did not exceed the budget. The Project Manager incorporated immediate measures to improve cost and time efficiency during the second year of implementation.

4.12.9.9.   Second Scenario (50%)

The second scenario takes place at the 2 1/2 years mark or equivalent to 50% of the total project duration, the calculated period takes place in quarter 4 which is 31 December 2021. Scenario two (2) also considers the impact of the COVID-19 pandemic which had a significant delay in its progress and would also reflect the positive strides made on the road to recovery. Below Chart 46 provides the project's PV for all activities at this point, the EV of these activities and finally, the AC of these activities.

Chart 46 – Project progress at the 50% mark to determine EV, cost and time forecasts (Source: Compiled by Author)

Components	PV	Progress (%)	EV	AC
1.1-1.4	$891,068.50	50%	$489,567.96	$489,567.96

Note. The table corresponds with a period of 2 ½ years into the project duration thus the figures are calculated using that baseline.

Figure 17 - Progress at the 50% mark
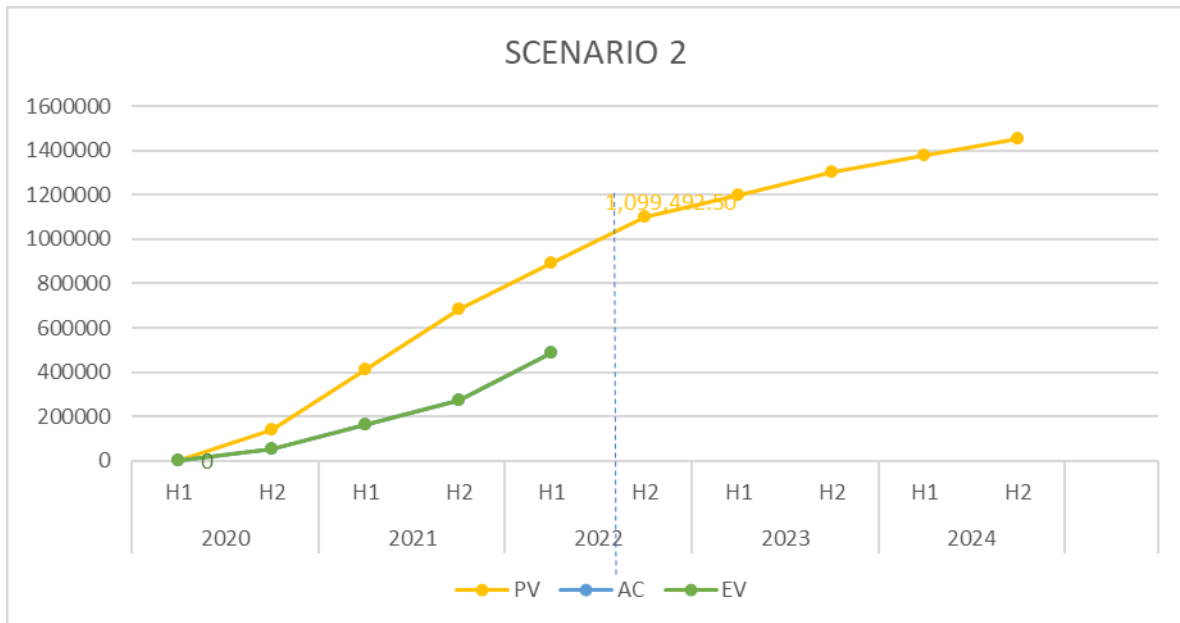
Note: The figure corresponds with a period of 2 ½ years into the project duration.

4.12.9.10. Schedule variance status – SV calculations

SV=EV-PV = $ 489,567.96 - $891,068.50 = -$401,500.54. This is an indication that at the period stipulated the project was still behind schedule.

4.12.9.11. Cost variance status – CV calculation

CV=EV-AC = $ 489,567.96 - $489,567.96 = $0. As the trend continues, the figure shown also suggests that the project is still operating on budget.

4.12.9.12. Schedule Performance Index (SPI) calculation

SPI=EV/PV = $489,567.96 / $891,068.50 = 0.55. This is another indicator that suggests the project is delayed as the figure is less than 0 and is thus represented as a negative value.

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4.12.9.13. Cost Performance Index (CPI) calculation

CPI=EV/AC = $489,567.96 / $489,567.96 = 0. The figure is less than 1 which is an indicator that the project is not spending enough of the budget as was planned. However, it also suggests that with proper planning and a realignment of strategies, the effort would increase the possibility of the cost increasing to be exactly as planned. Therefore, at the 50% mark and if trends persist, the Complete Performance Index (TCPI) would tell us cost-wise how to improve with the established budget. Hence, TCI =(BAC-EV)/(BAC-AC) = ($1,126,742 - $489,567.96) / ($1,126,742 - $489,567.96) = 0. Performance would need to significantly improve for the remaining work to be completed on schedule.

4.12.9.14. Project duration forecast calculation

EACt(BAC/SPI)/(BAC/mos)   OR   EACt=   months/SPI   =   ($1,126,742/0.55.)   / ($1,126,742/54) = 98 months. At the time of the analysis the project is still behind schedule at the 50% mark. Therefore, the calculations suggest that current trends will set the project to be completed in 98 months which is an additional 44 months required to complete all activities.

4.12.9.15. Total cost forecast calculation

EAC=AC+BAC-EV. The travel regulations because of the COVID-19 pandemic continued to impact the project's cost as many of the activities requiring travel which contributed to a large percent of the budget. This would be reflected throughout the duration of the project. However, efforts would be made to get the project back on track. $489,567.96 + 1,126,742 - $489,567.96 = $1,126,742. Using the forecast, there would not be a cost overrun, but a no-cost extension can be requested from the Executing Agency.

4.12.9.16. Integral analysis of the scenario

The project has utilized the "Percent Complete" method to show work completed at a specific period, which in this case is the 50% mark. in measuring the project performance. The calculations suggest that the project is behind schedule but not costing more than was previously budgeted for. In realigning strategies with relevant mitigating policies, the project needs at least a 1-point range to get back on schedule. If this cannot be done, it is expected that the project would be completed in approximately 8 years rather than 2 ½ years which was previously anticipated with consideration of a no-cost extension by the 75% scenario.

4.12.9.17. Third Scenario (70%)

The third scenario at 70% takes place at Quarter 2 of 2023. The planned duration is 54 months as such 70% mark would bring the project to the 38.7 months target. This scenario considers that the project has endured the pandemic and that the project management is taking the necessary measures to bring the project back on target.

Chart 47 – Project progress at 70% mark to determine EV, cost and time forecasts (Source: Compiled by Author)

Components	PV	Progress (%)	EV	AC
1.1-1.4	$1,200,973.50	70%	$979,124.47	$877,643.47

Note. The table corresponds with a period of 3.5 years (38.7 months) into the project duration thus the figures are calculated using that baseline.

Figure 18 – Progress at the 70% mark
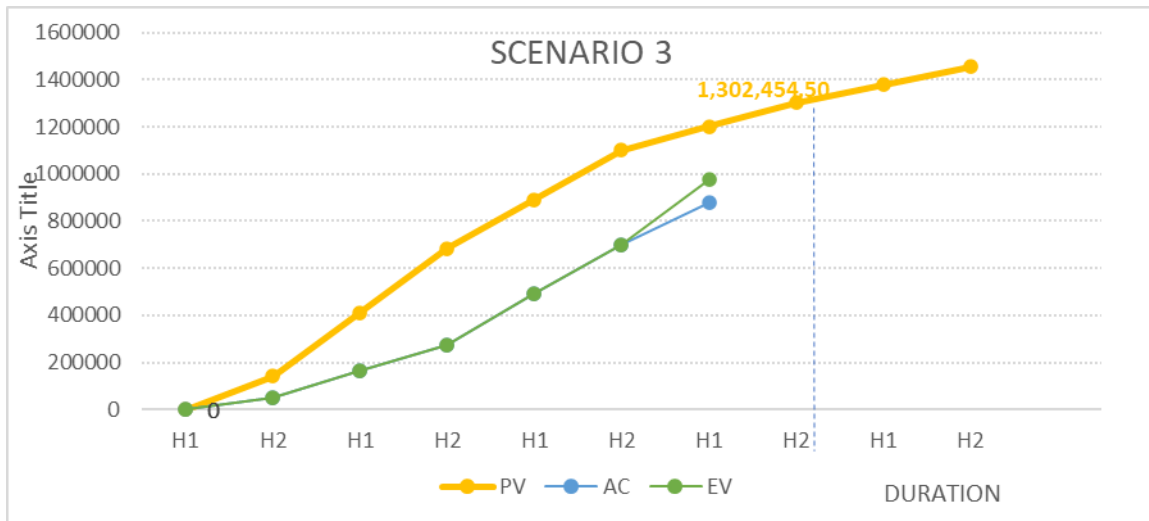
4.12.9.18. Schedule variance analysis – SV calculations

SV=EV-PV, therefore the SV at 70% duration will be SV= \$979,124.47-\$1,200,973.50 = - \$221,849.03. The negative amount indicates that the project is still behind schedule.

4.12.9.19. Cost variance status – CV calculation

CV=EV-AC, therefore the CV = \$979,124.47 - \$877,643.47 = \$101,481 indicates the project is still operating under budget and spending less than originally planned.

4.12.9.20. Schedule Performance Index (SPI) calculation

SPI= EV/PV = 979,124.47/1,200,973.50 = 0.82. As the SPI is still less than 1, the project is 18% behind the planned schedule.

4.12.9.21. Cost Performance Index (CPI) calculation

CPI= EV/AC = 979,124.47/877,643.47=1.11, which is more than 1 and indicates that the project is performing on budget at the 70% scenario.

4.12.9.22. Project duration forecast calculation

In forecasting the project duration based on the AC and EV at the Baseline Schedule at Completion is 54 months (SAC), with the SPI at the current time is 0.82, this will entail that the total estimated time based on this actual cost will be TEAC= SAC/SPI = 54 months/0.82 = 65.85 months. The project will be extended with 11.85 months on the current rate of expenditure in costs and schedule of works.

4.12.9.23. Total cost forecast calculation

EAC=AC+BAC-EV= $877,643.47 + $1,126,742 - $979,124.47 = $1,025,261. The difference between EAC (Estimated Actual Cost at completion) and the Baseline budget at Completion (BAC) coincides with the CV calculated at the 70% mark of $101,481 seen as being under budget.

4.12.9.24. Integral analysis of the scenario

Based on the calculations carried out at the mark of 70% the negative schedule variance means that the project will remain behind by the end of June 2023. Nonetheless, despite the delay in schedule, the project is currently running under its original budget and, with an additional 11.85 months, should complete all activities with a cost overrun of only $101, 481 if the current performance continues. However, the Project Manager (the author of the FGP) can realign the strategies and do a re-estimation of works to be done and has already received an approval of a no-cost extension of one year.

4.13. Validation of the FGP in the Field of Regenerative and Sustainable Development

The Caribbean Community's (CARICOM) strategic plan is to be integrated, inclusive and resilient, driven by knowledge, excellence, innovation, and productivity. Mainstreaming all aspects of sustainable development, including the environmental, economic, social and technological dimensions, will deepen integration and build resilience. Sustainable Development in Communities. Carboni et al (2018, p. 141) "refers to the potential for local communities, (examples: towns, countries and regional governments) to benefit themselves, society, and the environment by becoming more sustainable". Utilizing ISO 37101:2016 guidelines for Sustainable Development in communities will provide guidance to improve the contributions, performance, outcomes, and management of the Sustainable Development Programme of CARICOM to its Member States and regional community.

Figure 19 Core values of the Sustainable Development Programme

Unity/togetherness: We commit to work towards a robust and inclusive Community, to create an environment where all citizens work together to preserve the gains of regional integration and address current and future challenges of economic recovery, growth, and sustainable human and social development.

Equity: We emphasize the reach of services and benefits to all citizens and other stakeholders across the Community.

Integrity: We practice a consistent commitment to honesty, trustworthiness and morally correct in relationships and operations.

People centeredness: We emphasize the pivotal role of the peoples of the Community at all levels and in all spheres of endeavour to embrace regional integration and the benefits it continues to offer for all citizens.

Performance driven results focused: We emphasize the importance of targeted results and institutional strengthening goals.

Good governance: We have an abiding respect for human rights, the rule and law, and take action to ensure social and economic justice for the people of the Community

Good environmental management: We are committed to good and sustainable environmental management, responsible consumption, and the protection of the Region's natural assets across all sectors of development

There is growing pressure on project managers to demonstrate the value of their projects to the funding agencies. However, many projects lack a robust process for realizing value and ensuring sustainability. To ensure sustainability, organisations undertaking projects must set strategic and operational plans that will add to the project's sustainability. From the author's experience, the projects are being considered as a way towards sustainable development and emphasize that sustainability in projects is being recognized as part of

programmatic operations within the organization. Project governance is a very important component of the project's framework (Musawir et al, 2017). As such, the project steering committee functions with great responsibility. Additionally, the internal governance structure of the organization forms a collective governance framework at different levels to support the projects. Through this process, project governance broadly supervises the project processes and their intended deliverables.

The effects of the project execution and maintenance of a Project Management Plan for the Sustainable Development Programme favors the commitment of Member States to develop programs aligned to the Community Strategic Plan for the achievement of regional outcomes and the Sustainable Development Goals (SDGs) set up the United Nations. All Member States of CARICOM subscribe to the seventeen (17) SDGs. These goals provide an outline for social and economic policy within Member States and, to a great extent reflect the desired outcomes for the Community. In the very recent COVID-19 pandemic environment, achieving the international and regional mandates presents significant new and emerging challenges, taking into consideration the increasing high debt burden of Member States, which impacts their ability to provide social goods and services for their population equitably. The application and use of the Project Management Plan for the Sustainable Development Programme will reengineer the way it carries out its duties, to strategically deliver its work programmes, strengthen its capacity to achieve goals effectively and efficiently.

The values depicted in Figure 20 are reflective of most of the dimensions of regenerative development as outlined by Muller (2018) which recommends a holistic approach that

emphasizes the interactions of more than one component. Article 40 of the Rio+20 Declaration called for "*holistic and integrated approaches to sustainable development that will guide humanity to live in harmony with nature and lead to efforts to restore the health and integrity of the Earth's ecosystem*". Article 76(c) underscores "*the importance of interlinkages among key issues and challenges and the need for a systematic approach to them at all relevant levels*" (United Nations, 2012).

Figure 20 Implementing Regenerative Development; (Source: UCI, 2019)
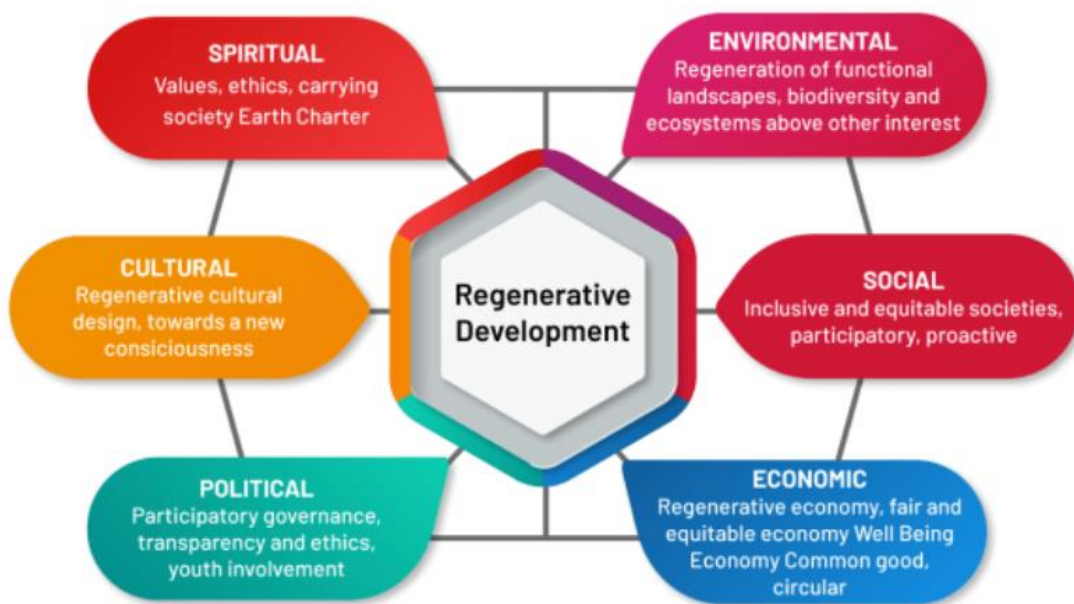
The P5 standard for sustainability will support the alignment of projects with the organization's core values and goals for sustainability by focusing on the potential impacts of projects activities, results and outcomes (GPM Global, 2019). Additionally reinforcing the need for a holistic approach integrating the six processes of regenerative development as highlighted in Figure 22.

Figure 21 PRiSMTM Projects integrating sustainable methods (Source: GPM Global, 2019)
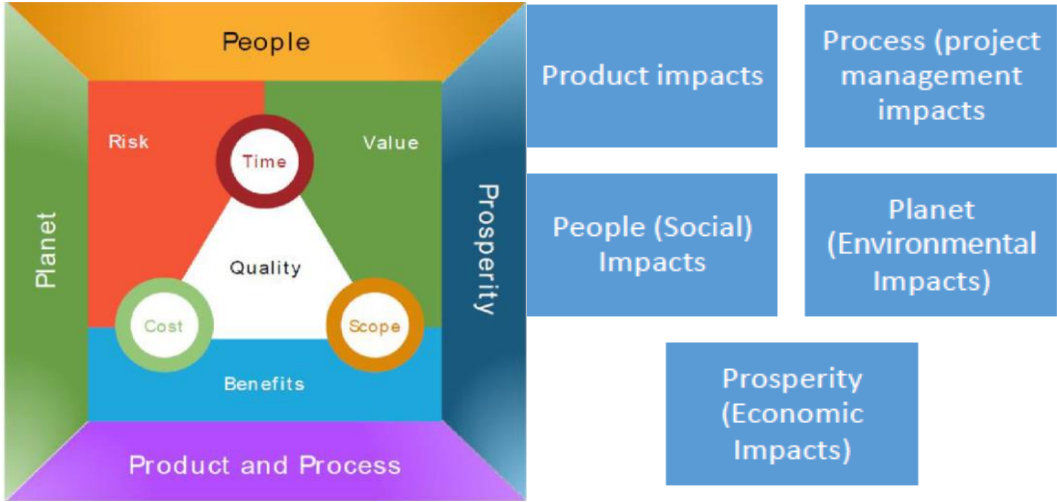
4.13.1 GPM Sustainability Management Plan

There is growing pressure on project managers to demonstrate the value of their projects to the funding agencies. However, many projects lack a robust process for realizing value and ensuring sustainability. To ensure sustainability organisations undertaking projects must set strategic and operational plans that will add to the project's sustainability. Projects implemented within the SDP are being considered as a way towards sustainable development and emphasizes that sustainability in projects is being recognized as part of programmatic operations within the organization. Project governance is a very important component of the project's framework (Musawir et al, 2017). As such, project steering committee function with great responsibility. Additionally, the internal governance structure of the organization forms a collective governance framework at different levels to support the projects. A Sustainability Management Plan as proposed by Carboni et al.

(2019) addresses various subjects that should be addressed in projects to achieve true sustainability.

The GPM P5^{TM} Standard provides guidance on what to measure, what the SDP requires and how to integrate P5 into project activities. P5 serves as the sustainability framework on which the PRiSM ^{TM} methodology is built and leverages ISO standards, the GRI Standards and the UN Global Compact Ten Principles. CARICOM Secretariat can prepare sustainability reports that utilize the P5^{TM} Standard to provide greater transparency in the organization by including information on projects that complement the existing method for reporting. A Draft Sustainability Management Plan (Appendix 7) has been developed for the CCS-SDP. This will be submitted to the Programme Manager for further revision and updates before finalization.

4.13.2 Benefits of the integration of a Regenerative-Sustainability Approach

Stakeholder outcomes

Support from the project sponsor for the project to be successfully implemented and completed while achieving the Sustainable Development Goals (SDGs) and reaching specific targets. The overall objective is to contribute to the achievement of the SDGs through the attainment of environmental sustainability in CARICOM countries. The SDP will promote the strengthening of institutions and coordination for facilitating the achievement of nine of the seventeenth SDGs illustrated in Figure 23. Facilitate the project's contact with grassroots associations, vulnerable groups, and civil society stakeholders in different socio-economic conditions.

Figure 22 Sustainable Development Goals (Source: United Nations, 2015)

Social outcomes

Projects implemented by the SDP addresses the people (social) category of sustainability concerns that may have on individuals and society. These includes training and education, diversity and equal opportunity and local/national development. Capacity building is at the core of projects implemented by SDP. The priority is to provide assistance to Member States at the national and regional levels. Activities will be identified in consultation with national focal points and Senior Policy Officials with oversight for environmental management. For example, the ACP MEAs Project follows a train-the-trainers approach to maximize impact and disseminate the demonstration of progress and results to better inform decision makers and society at large to encourage them to select more suitable conservation methods.

Environmental outcomes

The *GPM P5™ Standard for Sustainability in Project Management* provides a useful checklist of topics that target the overall objectives of SDP to take action towards implementing an enabling environment. These include implementing policy frameworks for

ensuring the long-term sustainability of project outcomes; sustainable procurement practices and contracts that include environmental, economic and social impact of products or services as a factor in all purchasing decisions (GPM, 2023).

5. CONCLUSIONS

Prioritizing good environmental management and protecting the region's natural assets in all sectors of development remains a core value of the Community, as identified in the Community Strategic Plan. To achieve these objectives, the Sustainable Development Programme (SDP), the environmental arm of the Caribbean Community (CARICOM) Secretariat is recognized as critical to success. By implementing PMI standards at the core of the SDP, efficiency will be optimized, collaboration and communication will be improved, performance and risk will be monitored, and the work programme will be strengthened, placing people at the centre of development.

Nevertheless, the SDP does not have a PMP, and this has resulted project activities being implemented in an extemporized manner without the use of established project management processes. This results in projects being unable to keep within constraints related to the project scope, schedule, and budget. For this reason, this FGP was tasked with the main objective which is to develop a proposal for the establishment of a Project Management Plan in accordance with PMI standards within SDP.

5.1 As part of objective 1, a Project Management Maturity (PMMM) assessment of SDP. The PMMM model by Kerzner (2019) utilized the ten knowledge areas of the PMBOK (2017) to analyze the organization's project maturity and present five levels of maturity which shows the level of advancement of the organization being assessed. SDP was assessed as being high in terms of the degree of difficulty in applying project management processes. This rating was given based on the minimal established project management processes and standards to hold project management

team members accountable for their performance in key knowledge areas. Procurement Management was not accessed as the organization has very high standard processes or operation within this Department that applies to the entire organization. The highest degree of difficulty will be executive management's ability to approve and apply the necessary project management processes.

5.2 The project management plan and templates will serve as a guide for the execution of projects within the Sustainable Development Programme by its current Project Unit and future project staff within the Department. The templates outline how the project will be carried out, monitored, and managed from the initiation phase to the final product. Effective project management will be assured through the development of eight subsidiary plans to ensure overall project success.

5.2.1 The scope management plan detailed the work breakdown structure that must be decomposed into smaller manageable work packages to be executed as a part of the audit trail, controlling scope creep and validation of scope for all work authorizations throughout any project.

5.2.2 Along with the scope management Plan, the schedule management plan also formalized the standards to be expected by SDP in planning and controlling and developing workplans for SDP projects. Microsoft Project is an effective tool to be used to schedule tasks, resources, activities and durations of projects that project teams can share and utilize through Gantt Charts.

5.2.3 The cost management plan was based on preapproved financial resources. Thus, it was critical to estimate and control the project budget. Various tools such as estimating, cost controls and cost management procedures can be used. These

were applied in an example of a current project being implemented under objective 3. Failure to undertake cost management can lead to overspending on activities and ineligible expenditures that can affect the organization's reputation to manage projects effectively.

5.2.4   To ensure SDP projects' outcomes meet stakeholder expectations. Projects implemented by SDP are mostly funder projects; therefore, the roles, responsibilities, processes, methods and standards of quality approach must be planned for goods and services according to the organization as well as the funding agency requirements. These are usually stipulated with the signing of a Project Cooperation Agreement. Establishing standards for projects guides the implementation process and provides baseline information for the quality assurance, control and costs.

5.2.5   The resource management plan outlined the processes of identifying, acquiring, and managing project resources. Like the cost management plan, these resources are predetermined by the funding agency using a combination of expert judgment and analogous estimating. The proper acquisition of resources was guided by the useful organization of information through a resource breakdown structure. This tool was helpful in also tracking project costs and scheduling and communicating with relevant stakeholders.

5.2.6   The communications management plan outlined the expected frequency and modes of communication among identified stakeholders to ensure effective communications during the project life cycle. The objective of the plan is to leverage the most effective communications tools and strategies to obtain

stakeholder buy-in and engagement at all levels, to meet the information needs of each stakeholder.

5.2.7   A risk management plan was developed to prepare for uncontrollable and unexpected events. This plan will be utilized for managing both known and unknown risks in the execution of projects within SDP.

5.2.8   It is essential for SDP to develop approaches to engage stakeholders based on needs, expectations, interests and potential impacts. The stakeholder management plan was created to identify key stakeholders needed for projects. The SDP has a large Member State constituent across 17 countries, including regional and international agencies and academic institutions in the Caribbean. Therefore, the plan will define how stakeholder engagement will be planned, prioritized, managed, and monitored for projects.

5.3 The author of this FGP currently serves as the Project Coordinator for the ACP MEAs Project currently implemented under SDP. Applying the PMP templates for the project was an example that outlines the main steps to be followed to improve project scope, cost and time implementation with the SDP.

5.3.1   The importance of the Project Charter as part of the project planning process was reiterated using this example. Significant changes to the project were highlighted because of the impact of the COVID-19 pandemic to the project, which required scope, cost and schedule changes. In this case, the scope should have been clearly defined and formally approved before the project commenced to ensure that work being completed is part of the project management plan. The WBS and WBS Dictionary will significantly assist the project coordinator in

having a clear vision of the expected outcomes and framework for delivering the project activities.

5.3.2 Another impact factor is the schedule management of the ACP MEAs Project. Despite the delays with implement, the successful project completion within time required a high level of detailing of tasks to be executed within the 4-year plan. Different processes of schedule management, tools, techniques and resources can be applied according to purpose and best suited for different stages of the project lifecycle. Stakeholders also influence the implementation and interventions of the project their relevance to the project must be prioritized according to their level of influence and roles. The three-point estimating method was used to provide a more realistic duration period for project implementation. The estimated 62 months/5 years coincides with the project duration calculation figures illustrated under the Cost Management Plan. Additionally, to ensure project success, the Project Coordinator must keep the project on track, set a realistic timeframe and assign resources appropriately while incorporating S.M.A.R.T indicators. Thus, the Critical Path Method algorithm for scheduling provided an illustration of the process needed to deliver the project successfully.

5.3.3 As reiterated above, it is important that the project activities are properly scheduled, and the execution of the activities are properly monitored and controlled for the remainder of the project. Changes must have proper risk management to ensure a timely delivery. However, based on the cost estimates, the project will incur time delay and budget overrun. It will be important to document any constraints and provide a range of estimates for approval by the

Executing Agency and Project Steering Committee. Different tools and techniques were applied in cost estimation to ensure the estimations were sound and justified. The importance of having a contingency and management reserve was highlighted. By utilizing the earned value analysis, the Project Manager was able to ascertain the extent to which the project could be executed successfully or unsuccessfully. The three scenarios provided the basis for understanding the levels at which unplanned risks could affect the deliverables and what contingency plans will be needed to be put in place immediately to mitigate any shortfalls in the assigned budget.

5.4 The initiative by the European Commission through UNEP highlights the changing nature of project management and the shift away from the traditional and linear thinking of the past. The goal of SDP is to continue to adopt a sustainability ethos that not only considers time, budget, and scope but adopts the holistic approach that project implementation does not come at the expense of the planet and its limited resources. The Sustainability Management Plan proposed addressed various subjects that should address projects achieving true sustainability and contribute to improving sustainability performance.

6. RECOMMENDATIONS

The following recommendations are directed to the Programme Manager of the Sustainable Development Programme - the Department responsible for implementing environment-related projects.

6.1 It is recommended that the Sustainable Development Programme implement projects according to best practices defined by the PMBOK® *Guide* to enhance the chances of success of projects in delivering the expected organizational values and results. An organization-wide proposal that is results-based should be presented to the Executive Management Committee,for all programmes and projects, with established best practices for international project management standards. A uniformed policy regarding the accountability of the Secretariat's project managers will help to achieve standardization and consistent implementation of work methods.

6.2 The Project Management Life Cycle, according to PMI (2017), is achieved with groups of processes (initiating, planning, executing, controlling and closing) that the SDP should initiate a version of this lifecycle in the project stages (proposal and technical execution) that the Secretariat currently recognizes. Consistent implementation of work methods is the endgame of a standardization agenda that must be undertaken in order to improve project success.

6.3 A formal request be submitted to the Executing Agency for the ACP MEAs Project with justifications for the one-year extension of the project. Immediate coordination of efforts with the Project Steering Committee to implement a performance management system to acquire and implement mitigative measures.

6.4 Revise and update the Draft Sustainability Management Plan for the SDP to submit for approval to help implement and track sustainability goals in a holistic manner.

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8. APPENDICES

Appendix 1: FGP Charter

<table>
<tr><td colspan="2" align="center">PROJECT CHARTER

FINAL GRADUATION PROJECT</td></tr>
<tr><td>Name</td><td>Project Name:</td></tr>
<tr><td>Teshia Yowanade Jn Baptiste</td><td>The Development of a Project Management Plan for the Sustainable Development Programme of the Caribbean Community (CARICOM) Secretariat.</td></tr>
<tr><td>Knowledge Areas / Processes</td><td>Application Area (Sector / Activity)</td></tr>
<tr><td>Knowledge areas

Scope, Schedule, Cost, Quality, Resource, Communications, Risk, Stakeholder

Process groups

Initiating, Planning, Executing Controlling</td><td>Environment and Sustainable Development</td></tr>
<tr><td>Student signature</td><td>Name and Signature of Graduation Seminar Facilitator</td></tr>
<tr><td></td><td>Roger Valverde Jimenez</td></tr>
<tr><td colspan="2">Date of Charter approval</td></tr>
<tr><td colspan="2"></td></tr>
<tr><td>Start date</td><td>Finish date</td></tr>
<tr><td>March 13, 2023</td><td>June 02, 2023</td></tr>
<tr><td colspan="2">Research question</td></tr>
</table>

What key knowledge areas and processes should be applied to projects within the Sustainable Management Programme that comply with the strategic management plan of CARICOM?

Research hypothesis

Is it possible to build a project management plan for the Sustainable Development Programme using key project management knowledge areas to enhance the sustainability of projects in CARICOM?

General objective:

To create a project management plan, in accordance with the standards of the Project Management Institute, to develop, outline, execute and control projects within the Sustainable Development Programme of CARICOM.

Specific objectives:

1. To assess the project management maturity level of CARICOM's Sustainable Development Programme of CARICOM to which should give insights into the methodologies, approaches, strategies and decision-making processes used for project management.

2. To develop templates of key project management knowledge areas for the scope, schedule, cost, quality, resource, communications, risk and stakeholder management plans for projects implemented through the CARICOM Sustainable Development Program.

3. To apply templates to the Capacity Building Related to Multilateral Environmental Agreements (ACP MEAs) Project as an example which outlines the main steps to be followed to improve project scope, cost and time implementation within the Sustainable Development Programme.

To provide recommendations for scope, cost and time for successful regenerative and sustainable development projects within the Sustainable Development Programme.

Project purpose or justification:

The Caribbean Community (CARICOM) region cannot adopt a siloed approach to addressing its sustainable development at the national or regional levels. The region's smallness and vulnerability mean that it does not have the resources, human or financial, to adopt such an approach. In this

regard, there has been an emerging conviction that the region must link the separate Sustainable Development processes and address them in a coordinated and coherent manner. In assessing potential measures to address the persistent challenges to achieving sustainable development a series of recommendations to regional institutions, development banks and the international intergovernmental organizations have been provided. Some of the proposed measures include:

- Capacity strengthening for development;
- Support for the use and institutionalization of appropriate tools for science-based sustainable natural resources management; and
- Increased support to Caribbean SIDS to address the health, agricultural and food challenges in the Caribbean.

Financing contributions of over USD 1.5 million are received from developed countries and international donor agencies to finance the implementation of 4-year Capacity Building projects within the Sustainable Development Programme.

A situational analysis and future projections conducted to contextualize both the region and the Secretariat's ability to address environmental vulnerability and to enhance its path towards Sustainable Development have identified *inter alia* the following strengths, weaknesses, opportunities and threats.

S – Work programs that place people at the center of development

W- Resource mobilization infrastructure focussed primarily on economic integration which means that Programme Managers/Technical Staff in the other areas also must mobilize resources to advance critical activities prioritised by Stakeholders

O - Technology and digital resources exist to bring the Community closer together

T - Lack of a clear, modern and vibrant communication strategy for the Community

The development of a Project Management Plan using PMI standards must be optimized to outline, increase efficiency, improve collaboration, performance, sustainability, communication, monitor

risks and control projects within the Sustainable Development Programme of CARICOM

General objective:

To create a project management plan, in accordance with the standards of the Project Management Institute, to develop, outline, execute and control projects within the Sustainable Development Programme of CARICOM.

Specific objectives:

4. To assess the project management maturity level of CARICOM's Sustainable Development Programme of CARICOM to which should give insights into the methodologies, approaches, strategies and decision-making processes used for project management.

5. To develop templates of key project management knowledge areas for the scope, schedule, cost, quality, resource, communications, risk and stakeholder management plans for projects implemented through the CARICOM Sustainable Development Program.

6. To apply templates to the Capacity Building Related to Multilateral Environmental Agreements (ACP MEAs) Project as an example which outlines the main steps to be followed to improve project scope, cost and time implementation within the Sustainable Development Programme.

To provide recommendations for scope, cost and time for successful regenerative and sustainable development projects within the Sustainable Development Programme.

Project Work Breakdown Structure

1. Graduation Seminar

    1.1. FGP Deliverables

    1.1.1. Charter

    1.1.2. WBS

    1.1.3. Chapter I – Introduction

    1.1.4. Chapter II - Theoretical Framework

    1.1.5. Chapter III - Methodological Framework

2.7. Chapter VIII – Bibliography

2.8. Chapter IX - Appendices

2.9. Tutor Approval for reading

3. Reading by reviewers

    3.1. Reviewers' assignment request

    3.1.1. Assignment of two reviewers

    3.1.2. Communication with reviewers

    3.1.3. Submission of FGP to reviewers

    3.2. Reviewers work

    3.2.1. Reviewer 1

        3.2.1.1.   Reviewer 1 reading of FGP

        3.2.1.2.   Reviewer 1 report

    3.2.2. Reviewer 2

        3.2.2.1.   Reviewer 2 reading of FGP

        3.2.2.2.   Reviewer 2 report

4. Adjustments and modifications

    4.1. Submission of report to Reviewers 1 & 2

    4.2. Update FGP

    4.3. Second review by Reviewers 1 & 2

5. Presentation to Board of Examiners

    5.1. Final review by Board of Examiners

    5.2. FGP final grade report

Project Budget

FGP budget is $0.00 as there is currently no cost to activities during the twelve (12) weeks period.

Project planning and development assumptions

1. It is assumed that all the necessary information and documents needed will be readily available to execute the FGP.

2. It is assumed that the CARICOM Secretariat will give the necessary approvals to provide and share project-specific information in a timely manner and without any significant restriction to create the Project Management Plan.

3. It is assumed that the project scope will not be changed in the short to medium term.

4. The student is assumed to fully comprehend the final graduation project requirements.

5. It is assumed that a proper support system will be made available to student by university staff.

6. It is assumed that the student will be in good health to complete assignment within scope and time.

Project Constraints

1. Time: Due to time constraints, this project's scope would be reduced solely to meet this academic endeavor. Further research will continue beyond the submission date.

2. Cost: The student has no budget allowance; however, should it become necessary to access research or published materials on websites that require paying a fee for access to materials.

3. Resources: As the only project manager undertaking this project management plan, there is a limited human resource to complete the FGP this may lead to quality and time/schedule constraints

Project development risks

1. If feedback from reviewers/supervisor is delayed, the student will have insufficient time to provide quality revisions.

2. If student has emergencies beyond control e.g., conflicts of full-time work schedule as a project coordinator with travel duties, deliverables may be rushed to meet deadlines.

3. The approval required for the Charter may be delayed based on internal procedures of the

CARICOM Secretariat, this may the delay the final submission of the FGP.	

4. If the schedule for milestones completion is not followed, the project management plan may not be completed within the allocated period.

5. If permission and access to the required information is hindered in any way during the research period, that might impact the delivery time and subsequent quality of the project.

Main Project Milestones

Deliverable	State Date	Finish estimated date
Tutor	**March 13, 2023**	**June 02, 2023**
Tutor Assignment	March 13, 2023	March 13, 2023
Communication with Tutor	March 13, 2023	June 02, 2023
Submission of Signed Charter	March 20, 2023	March 26, 2023
Submission of Chapter IV – Development Process	March 27, 2023	March 31, 2023
Submission of Project Management Maturity Assessment	April 1, 2023	April 07, 2023
Submission of Templates for key knowledge areas	April 8, 2022	April 23, 2023
Tutor Review	April 24, 2023	April 30, 2023
Apply Templates to ACP MEAs Project (scope, cost and time)	May 1, 2023	May 7, 2023
Validation of the FGP in the field of Regenerative	May 8, 2023	May 12, 2023

and Sustainable Development Report		
Submission of Chapter V – Conclusion	May 13, 2023	May 27, 2023
Submission of Chapter VI – Recommendations	May 13, 2023	May 27, 2023
Tutor Review	May 28, 2023	June 3, 2023
Readership	June 5, 2023	July 3, 2023
Adjustment and modifications	July 3, 2023	July 13, 2023
Board of examiners evaluation		

Theoretical framework

At present, there is no enterprise-wide project management structure in the Secretariat. Neither is there an enterprise wide standard for the management of projects. The Resource Mobilisation and Technical Assistance (RMTA) Programme undertakes some elements of project management, but it lacks the power and authority to make decisions or enforce project management standards. Projects are generally implemented by the technical Programmes. Though the persons in these Programmes may have the technical expertise in their various disciplines, many of them are not trained in the discipline of Project Management. This has become a concern, as the Secretariat seeks to professionalise project management and improve the Project Management Maturity of the organisation.

Some of the issues affecting project management in the CCS include Technical Officers not easily identifying and responding to the early warning signs that a project is in trouble; contracts not being

effectively managed; deliverables from Consultants not being reviewed on a timely basis; the length of the procurement process; failure to prepare for implementation; and failure to observe timelines. The Project Management Plan seeks to address these, among other issues, by developing project management procedures and templates that are based on best practice and internationals standards, while being customised to the SDP. This PMP can be used by all persons implementing projects. The PMP will outline what should be done to manage the project throughout the Project Life Cycle - that is, Initiation, Planning, Execution, Monitoring and Control and Closeout phases.

Conceptual Framework

Project management, sustainable development, regenerative development, initiation, planning, monitoring and control
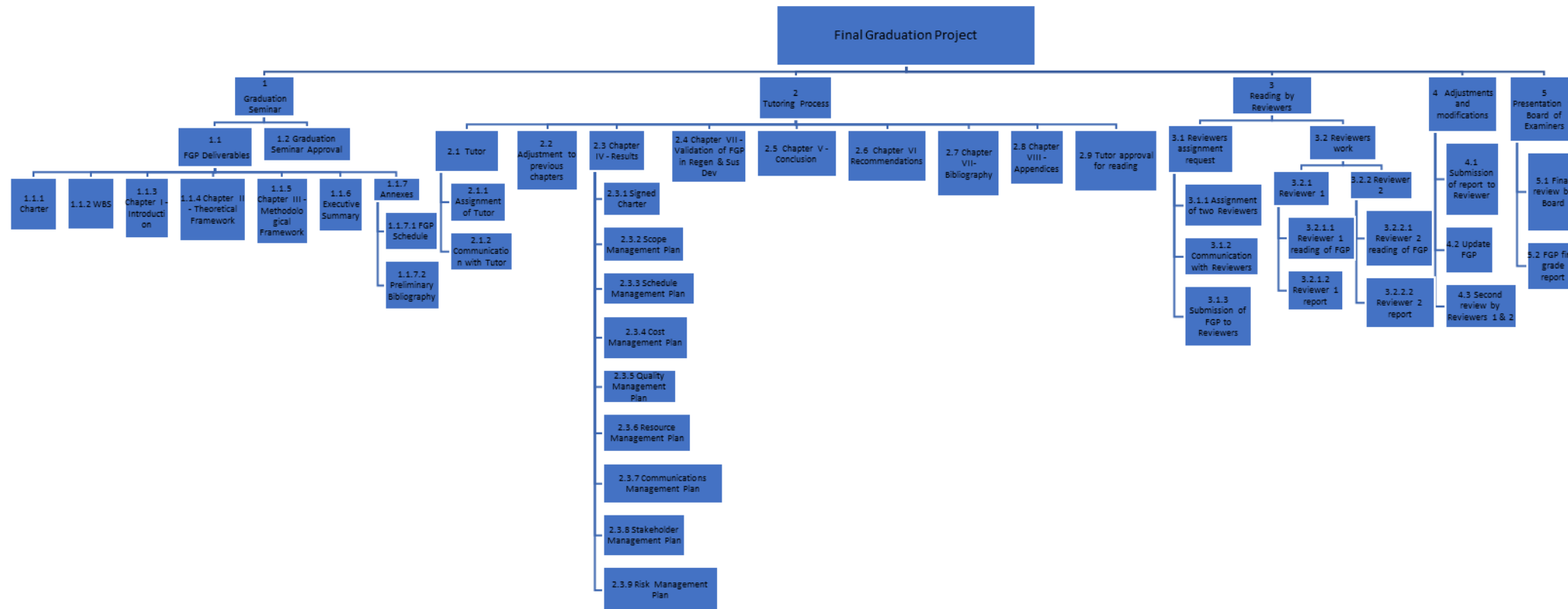
Methodological Framework

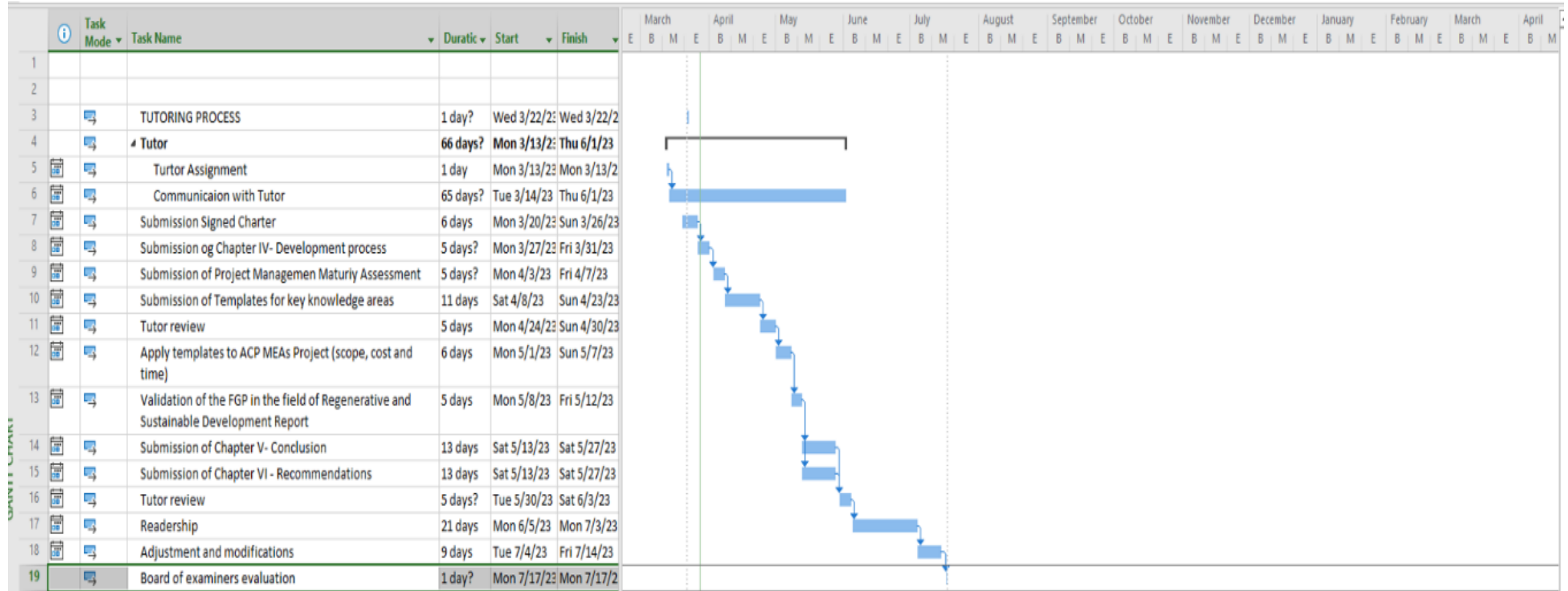| Objective	Name of deliverable	Information sources	Research method	Tools	Restrictions
1.	To assess the project management maturity level	Face to face interviews, review of official documents	Quantitative, analytic methods	Project Management Maturity Model, semi structured interviews, literature review and document analysis	Timeframe limited for interviews, quality of assessment meeting CARICOM's expectations
2.	To develop templates of	Project agreement and	Case study, analytic	Scope Management	Collation of information in

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	key project management knowledge areas	log frame, lessons learned reports, progress reports, personal communication, historical information & guidelines		Plan template WBS MSWord	short timeframe
3.	To apply templates to the Capacity Building Related to MEAs Project (ACP MEAs) scope, time and cost	Project implementation plans & log frame, progress reports, textbooks, journal articles	Analytic Case Study	Schedule Management Plan template MS Project & Microsoft Excel	Limited data/information
4.	To develop a validation of regenerative and sustainable development report	Lecture notes, textbooks, journal articles, magazines and company websites, commentaries,	Analytic Case Study	GPM-P5 Impact Analysis template	Limited material to categorize regenerative in a Caribbean context, limited research/data

		relevant historical data/information			

Validation of the work in the field of the regenerative and sustainable development					

To advance with the implementation of regenerative and sustainable development, a P5 impact analysis will be developed as part of the Project Implementation Plan for the Sustainable Development Programme at CARICOM. This integrates holistic (environmental, economic and social) sustainability concepts with project management practices. The P5 standard will support the alignment of projects with the organization's goals for sustainability by focusing on the potential impacts of projects activities, results and outcomes (GPM Global, 2019). Additionally reinforcing the need for a holistic approach integrating the six processes of regenerative development. The FGP will provide a model for project management that moves beyond its traditional focus of time, cost and scope and placing emphasis on delivering the objectives of the Sustainable Development Programme of CARICOM while maintaining a lifecycle focus. The indicators of success of the FGP to a regenerative and sustainable development process includes:

1. Adoption of principles that projects being implemented do not have a negative impact on the planet and its limited resources.

2. Projects implemented incorporate greater efforts to address each project's social and environmental impacts for future generations to regenerate and sustain.

3. A more well-rounded view of the impacts and value of projects

Project Manager: Teshia Jn Baptiste	**Signature:**
Authorized by:	**Signature:**

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Appendix 2: FGP WBS

Appendix 3: FGP Schedule

	ⓘ	Task Mode	Task Name	Duration	Start	Finish
1						
2						
3		🖫	TUTORING PROCESS	1 day?	Wed 3/22/2:	Wed 3/22/2
4		🖫	◢ Tutor	66 days?	Mon 3/13/2:	Thu 6/1/23
5	🖩	🖫	Turtor Assignment	1 day	Mon 3/13/23	Mon 3/13/2
6	🖩	🖫	Communicaion with Tutor	65 days?	Tue 3/14/23	Thu 6/1/23
7	🖩	🖫	Submission Signed Charter	6 days	Mon 3/20/23	Sun 3/26/1
8	🖩	🖫	Submission og Chapter IV- Development process	5 days?	Mon 3/27/23	Fri 3/31/23
9	🖩	🖫	Submission of Project Managemen Maturiy Assessment	5 days?	Mon 4/3/23	Fri 4/7/23
10	🖩	🖫	Submission of Templates for key knowledge areas	11 days	Sat 4/8/23	Sun 4/23/23
11	🖩	🖫	Tutor review	5 days	Mon 4/24/23	Sun 4/30/23
12	🖩	🖫	Apply templates to ACP MEAs Project (scope, cost and time)	6 days	Mon 5/1/23	Sun 5/7/23
13	🖩	🖫	Validation of the FGP in the field of Regenerative and Sustainable Development Report	5 days	Mon 5/8/23	Fri 5/12/23
14	🖩	🖫	Submission of Chapter V- Conclusion	13 days	Sat 5/13/23	Sat 5/27/23
15	🖩	🖫	Submission of Chapter VI - Recommendations	13 days	Sat 5/13/23	Sat 5/27/23
16	🖩	🖫	Tutor review	5 days?	Tue 5/30/23	Sat 6/3/23
17	🖩	🖫	Readership	21 days	Mon 6/5/23	Mon 7/3/23
18	🖩	🖫	Adjustment and modifications	9 days	Tue 7/4/23	Fri 7/14/23
19		🖫	Board of examiners evaluation	1 day?	Mon 7/17/23	Mon 7/17/2

Appendix 4: Other relevant information

Appendix 4.1: Project Management Maturity Survey

Survey Instrument
This survey is being undertaken as part of a research project to "Develop a Project Management Plan for the Sustainable Development Programme of the CARICOM Secretariat being carried out by Teshia Jn Baptiste in partial fulfilment of the Master of Project Management at the Universidad para la Cooperacion Internacional (UCI).

Specifically, the project aims to determine the project management maturity level of the Sustainable Development Programme using the Project Management Maturity Model.

The procedure involves filling out the survey, which will take approximately 20 minutes. The survey will be confidential, and the responses will only be used for scholarly purposes. If you have any questions about the survey, or the study, please contact Teshia Jn Baptiste @ 592-600-4538 or by sending an email to teshiajnbaptiste@gmail.com
Required

1.Designation
○ Senior Management
○ Project Officer
○ Programme Management
○ Administrative Support
○ Project Coordinator/Manager

2.How long have you worked at the CARICOM Secretariat?
○ less than 1 year
○ 2 - 3 years
○ 4-5 years
○ more than 5 years

3.What is the highest level of education that you have attained?
○ High School Diploma
○ Associate degree
○ Bachelor
○ Masters
○ PhD

4.How would you define organisation maturity?

5.Do you have any formal training in project management?

○ Yes
○ No

6.If yes, what level of project management training have you undertaken?
○ Certificate course
○ Diploma
○ PMP Certification
○ Master's degree in project management
○

7.Do have any experience in managing projects?
○ Yes
○ No

8.If you have answered yes to the above, how much experience do you have?
○ less than 1 year
○ 2-3 years
○ 4-5 years
○ more than 5 years
Required

Level 1 - Common Language
For each question, there is only **one** correct answer

9.A comprehensive definition of scope management would be:

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○ Managing a project in terms of its objectives through all life-cycle phases and processes

○ Approval of the scope baseline

○ Approval of the detailed project charter

○ The processes required to ensure that the project includes all the work required to complete the project successfully

10.The most common types of schedules include all but one of the following

○ Project network diagrams with date information added

○ Resource-leveling heuristics

○ Bar charts

○ Milestones

11.The most cost-effective means of determining the cost of a project is to price out the:

○ Work breakdown structure (WBS)

○ Linear responsibility chart

○ Project charter

○ Scope statement

12.Future events or outcomes that are favourable are called:

○ Risks

○ Opportunities

○ Surprises

○ Contingencies

13.A risk is noted by having a cause and:

○ If it occurs, it only has a negative effect on the project's objectives

○ A known unknown

○ If it occurs, it has a consequence

○ A constraint

14.In general, differences between and among project stakeholders should be resolved in favor of the:

○ Donor agency

○ Performing organization

○ Functional manager

○ Stakeholders

15.The difference between the EV (earned value) and the PV (planned value) is referred to as:

○ The schedule variance

○ The cost variance

○ The estimate of completion

○ The actual cost of the work performed

16.Good project objectives must be:

○ General rather than specific

○ Established without considering resource constraints

○ Realistic and attainable

○ Measurable, intangible and verifiable

17.For effective communication, the message should be oriented to:

○ The initiator

○ The receiver

○ The management styles

○ The organisation cultures

18.Common factors that may constrain how the project team is organized include all but one of the following:

○ The structure of the performing organization

○ Preferences of the team

○ Expected staff assignments

○ Responsibility Assignment Matrix

19.Quality often is confused with grade. This means that:

○ Low quality is always a problem, but low grade may not be a problem

○ Low grade is always a problem, along with low quality

○ Quality is defined as a category or rank, with entities having the same functional use but different technical characteristics

○ Grade is defined as the total characteristics of an entity that bear on its ability to satisfy stated or implied needs

20.If you want to describe where the project now stands, you should:

○ Prepare an estimate to complete

○ Prepare an earned value analysis

○ Prepare a status report

○ Prepare a progress report

21.Activities with zero-time duration are referred to as:

○ Critical path activities
○ Noncritical path activities
○ Slack time activities
○ Dummies

22.The overall intentions and directions of an organization with regard to quality is the purpose of:

○ The total quality management movement
○ The quality assurance process
○ The quality planning process
○ The organization's quality policy

23.Are established standards used to identify and analyze stakeholders for monitoring and controlling stakeholder engagement?

○ Yes
○ No

24.Are processes employed continuously for communicating with stakeholders?

○ Yes
○ No

Required
Level 2 - Common Processes

25.Select the answer you feel is correct.

	-3 Strongly Disagree	-2 Disagree	-1 Slightly disagree	0 No opinion	+1 Slightly agree	+2 Agree	+3 Strongly agree
My organisation recognizes the need for project management. This need is recognized at all levels of management, including senior management.	○	○	○	○	○	○	○
My organisation has a system in place to manage both cost and schedule. The system reports variances from planned targets	○	○	○	○	○	○	○
My organisation has recognized the benefits that are possible from implementing project management. These benefits have been recognized at all levels of management, including senior management	○	○	○	○	○	○	○
My organisation or Directorate has a well-definable project management methodology using life-cycle phases	○	○	○	○	○	○	○
Our executives visibly support project management through executive presentations and correspondence, and by occasionally attending project team meetings/briefings	○	○	○	○	○	○	○
Our managers totally and visibly support the project management process	○	○	○	○	○	○	○
My organisaiton is doing everything possible to minimize creeping scope (i.e. scope changes) on our projects	○	○	○	○	○	○	○
The executives in my organisation have a good understanding of the principles of project management	○	○	○	○	○	○	○
My organisation has selected one or more project management software packages to be used as the project tracking system	○	○	○	○	○	○	○
My organisation views and treats project	○	○	○	○	○	○	○

management as a profession rather than a part-time assignment
Required

Level 3 - Singular Methodology
Please pick one and only one answer per question
26. On what percentage of your projects do you use the principles of risk management?

○ 0%

○ 5-10%

○ 25-50%

○ 50-70%

○ 75-100%

27. The risk management methodology in my organisation is:

○ Non-existent

○ More informal than formal

○ Based on a structured methodology supported by policies and procedures

○ Based on a structured methodology supported by policies, procedures and standardized forms to be completed

28. My organisation conducts internal training courses on:

○ Morality and ethics within the organisation

○ Morality and ethics in dealing with stakeholders

○ Good business practices

○ All of the above

○ None of the above

○ At least two of the first three

29. Our culture seems to be based on:

○ Policies

○ Procedures (including forms to be filled out)

○ Policies and procedures

○ Guidelines

○ Policies, procedures and guidelines

30. Our organisational structure is:

○ Traditional (i.e. it is predominantly vertical)

○ A strong matrix (i.e. project manager provides most of the technical direction)

○ A weak matrix (i.e. project manager provides most of the technical direction)

○ We use collocated teams

○ I do not know what the structure is: management changes on a regular basis.

31. In the culture within my organisation, the person most likely to be held accountable for the ultimate technical integrity of the final deliverable is/are:

○ The assigned employees

○ The project manager

○ The Programme Manager

○ Senior Management

○ The whole team

32. My organisation believes that:

○ Project management is a part time job.

○ Project management is a profession.

○ Project management is a profession, and we should become certified as project management professions, but at our own expense

○ Project management is a profession, and my organisation pays for our training to become certified as project management professionals.

33. My organisation believes that training should be:

○ Performed at the request of employees.

○ Performed to satisfy a short-term need.

○ Performed to satisfy both long- and short term needs.

○ Performed only if there exists a return on investment on training dollars.

34. In my organisation, employees are promoted to management because:

○ They are technical experts.

○ They demonstrate the administrative skills of a professional manager.

○ They know how to make sound business decisions.

○ They are at the top of their pay grade.

○ Our rank-and-file pool is over its numerical upper limits.

35.During project planning, most of our activities are accomplished using:

○ Policies

○ Procedures

○ Guidelines

○ Checklists

○ None of the above

36.The skills that will probably be most important for my organisation's project managers as we move into the 21st century is:

○ Technical knowledge and leadership

○ Risk management and knowledge of the business

○ Integration skills and risk management

○ Integration skills and knowledge of the business

○ Communication skills and technical understanding

37.Our project managers are encouraged to:

○ Take risks.

○ Take risks upon approval by senior management.

○ Take risks upon approval by project sponsors.

○ Avoid risks.

Required

Level 4 - Benchmarking

Please answer each question as honestly as possible. Select the answer you feel is correct, not the answer you believe the question is seeking out.

38.Select the answer you feel is correct.

	-3 Strongly Disagree	-2 Disagree	-1 Slightly disagree	0 No opinion	+1 Slightly agree	+2 Agree	+3 Strongly agree
Our benchmarking studies have found organisations with better impact analysis during scope change control.	○	○	○	○	○	○	○
Our benchmarking studies have found that companies are performing risk management by analyzing detailed level of the work breakdown structure (WBS)	○	○	○	○	○	○	○
Our benchmarking studies investigate how to obtain increased loyalty/usage of our project management methodology	○	○	○	○	○	○	○
Our benchmarking efforts have found other organisations that are performing resource-constraints analyses	○	○	○	○	○	○	○
Our benchmarking efforts look at the way other organisations involve their stakeholders during risk-management activities	○	○	○	○	○	○	○
Our benchmarking efforts look at software enhancements through internal upgrades	○	○	○	○	○	○	○
Our benchmarking efforts look at the way other companies use enhancement projects as part of scope change management	○	○	○	○	○	○	○
Our benchmarking efforts seek out other organisations' use of corporate resource models	○	○	○	○	○	○	○

Required

Level 5 - Continuous Improvement

Answer the following questions based on continuous improvement changes over the past 12 months only. Select the answer you feel is correct.

39.Select the answer you feel is correct.

	-3 Strongly Disagree	-2 Disagree	-1 Slightly disagree	0 No opinion	+1 Slightly agree	+2 Agree	+3 Strongly agree
We have made software enhancements in our methodology	○	○	○	○	○	○	○
We have made improvements that allowed us to speed up the integration of activities	○	○	○	○	○	○	○
We have purchased software that allowed us to eliminate some of our reports and documentation	○	○	○	○	○	○	○
Change in our working conductions (i.e., facilities, environment) have allowed us	○	○	○	○	○	○	○

	-3 Strongly Disagree	-2 Disagree	-1 Slightly disagree	0 No opinion	+1 Slightly agree	+2 Agree	+3 Strongly agree
to streamline our methodologies (i.e paperwork reduction)							
Changes in organisational behaviour have resulted in changes to our methodology	○	○	○	○	○	○	○
Management support has improved to the point where we now need fewer gates and checkpoints in our methodology	○	○	○	○	○	○	○
Our culture is a cooperative culture to the point where informal rather than formal project management can be used, and changes have been made to the informal project management system	○	○	○	○	○	○	○
Changes in power and authority have resulted in looser methodology (i.e. guidelines rather than policies and procedures)	○	○	○	○	○	○	○
We have changed the way we communication with our stakeholders	○	○	○	○	○	○	○

Appendix 4.2: Quality Management Template

Project Title: _____   **Date Prepared:** _____

Quality Roles and Responsibilities:

Role: Describe the roles needed	**Responsibilities:** Describe the responsibilities associated with each role
1.	1.
2.	2.
3.	3.
4.	4.

Quality Assurance Approach:

Describe the processes, procedures, methods, tools and techniques that will be used in performing quality assurance activities[2]

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[2] A Quality Audit is an example of a quality assurance procedure.

Quality Control Approach:

Describe the processes, procedures, methods, tools, and techniques that will be used in performing quality control activities.
Such techniques could be:
Cause and Effect Diagrams (Ishikawa)
Pareto chart
Histogram

The outputs of the quality control process are:
Quality Control Measurements
Change Request for recommended corrective actions.
Documented lessons learned

Quality Improvement Approach:

Describe the processes, procedures, methods, tools and techniques that will be used in performing quality improvement activities.

Appendix 5 - CCS Risk Probability Criteria

Source: Draft Enterprise Risk Management Guidelines for the Caribbean Community Secretariat, 2018

Probability	Description*
Highly unlikely	Almost certain **not** to occur during a five-year period or during the life of a project, whichever is shorter.
Not likely	Probably will not occur during a five-year period or during the life of a project, whichever is shorter.
Maybe/ somewhat likely	May occur/ possibility of occurrence/ will occur to some extent during a five-year period or during the life of a project, whichever is shorter.
Likely	Probably will occur during a five-year period or during the life of a project, whichever is

shorter.

Highly likely	Almost certain to occur during a five-year period or during the life of a project, whichever is shorter.

CCS Risk Impact Criteria. Source: Draft Enterprise Risk Management Guidelines for the Caribbean Community Secretariat, 2018

Risk Impact	Definition
Minimum	Would probably not affect the achievement of objectives or project implementation.
Low	Would cause minor problems or delays in the achievement of objectives or project implementation.
Moderate	Would trigger some noticeable problems or delays in the achievement of objectives or project implementation.
High	Would cause significant problems or delays in the achievement of objectives or project implementation.
Significantly High	Would **prevent** achievement of objectives or project implementation.

Appendix 6 – Draft Sustainability Management Plan Template; Source: Green Project Management (GPM), 2019

Draft Sustainability Management Plan

ACP MEAs Project
Sustainable Development Programme – CARICOM Secretariat

Draft Sustainability Management Plan

ACP MEAs Project
Sustainable Development Programme – CARICOM Secretariat

Contents

Current Version Approval *(version 3.0)*			
Role	**Name**	**Signature**	**Date**
Project Sponsor	UNEP		
Project Manager	Teshia Jn Baptiste		

Purpose

This purpose of this document is to help ensure that we (the Project Team members) manage this project in a sustainable way. It provides a framework for Project Sustainability by describing our approach, our roles and responsibilities, our budgeting, and our reporting practices. This Sustainability Management Plan (SMP) will help support our commitment to economic growth, environmental protection, and social accountability.

Approach

Planning for sustainability management will be done by completing this document along with a P5 Impact Analysis.

Identifying sustainability impacts will include:

- A block of time during the Discovery Phase of the PRiSM Project Lifecycle for team members to work together to complete the P5™ Impact Assessment (P5IA) included in Section 7.
- Time will be reserved during the first team meeting of each month to focus on reviewing sustainability impacts.
- Key performance indicators (KPIs; see below) for relevant topics from P5 will be documented.

Responding to sustainability impacts will include:

- Implementing responses to all items with a high positive or negative impact score.
- Avoidance of unacceptable impacts.
- Keeping this Project Sustainability Management Plan current throughout the project.
- Inclusion of "sustainability impact updates" as an agenda item for each team meeting.
- Integrating sustainability risk and opportunity management with overall project risk and opportunity management.
- Provide a framework for setting and reviewing SMP targets; are documented, implemented, maintained and communicated to the SDP team.
- Make the SMP available to all interested and affected stakeholders; and are reviewed periodically to remain relevant and approach to the organisation's SMP.

Reviewing sustainability impacts will include:

- Staff hiring, training, annual appraisal and performance review, in line with the corporate competencies and competency models.

- Design competencies and competency models to define the skills, knowledge and attributes that make organizations and individuals successful.

- Once competencies are identified, people with these competencies can be recruited and where necessary trained and developed. This builds an organization of successful colleagues who are capable of delivering business goals and execute strategy.

- Measure achievements against the desired business goals within their roles. At the same time, competencies provide the link between organizational vision, behaviors, outputs and results and are the foundation for recruitment, selection, performance management, development and succession planning.

Roles and Responsibilities

The Project Manager shall:

- Incorporate the resources and time required to execute the Sustainability Management Plan in the project budget and schedule.

- Develop, distribute, and implement this Sustainability Management Plan.

- Develop and update the P5 Impact Analysis (P5IA) with the support of the Project Team and include it in the project plan.

- Coordinate with the Response Owners to implement responses identified in the P5IA.

- Update the lessons learned database at the end of each project phase.

- Provide a report to the function or office that is responsible for sustainability reporting.

The Project Team shall:

- Identify sustainability impacts and describe them in the prescribed formats.

- Assess the impact of sustainability-related actions on project success criteria.

- Perform the impact response actions assigned.

- Meet on a regular basis to discuss the impacts and discuss response actions.

Sustainability Impact Owner responsibilities include:

- Develop and/or update the assigned risk response strategy.

- Monitor the risk assigned and inform PM of any changes to probability or impact.

- Monitor the risk trigger and risk cues and inform the PM as appropriate.

Budget

The budget for this project will include the following items related to project sustainability management:

- Certified Project Management personnel
- Project Management Certification training
- Terms of References for procurement processes
- Consultant(s) monthly reports
- Annual sustainability progress reports
- Annual audit reports

Key Performance Indicators

P5 Domain	Lens	Category	Element	Key Performance Indicator	Metric
People	Labor practices and decent work	Employment and Staffing	Adequate human resources for projects	Employee KPIs	Measure performance of project activities or processes on semiannual and annual basis
		Training and development	Skills gaps and development needs of project team members	Specific professional training activities are envisaged within projects	
	Society and Stakeholders	Stakeholders support		Stakeholder success indicators	Relevance across specific groups to achieve project goals
		Policy compliance			
		Protection of local communities and indigenous peoples			
	Ethical behavior	Procurement practices			Measure milestones
Planet	Transport	Local procurement			Measure milestones
		Travel			
		Logistics			

P5 Domain	Lens	Category	Element	Key Performance Indicator	Metric
		Digital communication			
	Land, water air	Biodiversity			
		CO2 emissions			
Prosperity	Economic stimulation	Indirect benefits			

Reviews and Reporting

Meetings for the purpose of discussing and making decisions on project sustainability will be held quarterly. The initial sustainability management actions shall occur during the development of the initial project plan. A full review and update of the P5 Impact Analysis (P5IA, see Section 8 below) will occur at the beginning of each subsequent phase of the project. The following forms will be used for documenting risk management activities:

- SDP Risk Register
- Risk Assessment Form

P5 Impact Analysis

The P5 Impact Analysis (P5IA) for this project is an integral part of this Sustainability Management Plan. It can be found here:

- GPM-P5_1_P5 Impact Analysis template

Version Control

Document Version Control			
Version	**Date Approved**	**Approved by**	**Summary of Changes**
1	June 2 2023	Teshia Jn Baptiste	Draft to be reviewed by SDP Team

Document Distribution Control			
Number	**Responsible Owner**	**Location of Copy**	**Format**
Master	Programme Manager		

Document Distribution Control			
Number	**Responsible Owner**	**Location of Copy**	**Format**
1	Project Coordinator		
2	Project Management Unit		

Template Version Control			
Version	**Date Approved**	**Approved by**	**Summary of Changes**
3.0			

Appendix 7: Philological Dictum

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30 May 2023

María Fernanda Ibarra López
Tutor
Final Graduation Project (FGP)
Master's in Project Management (MPM)
Universidad para la Cooperación Internacional (UCI)
San José, Costa Rica

Re: Philological Review of Final Graduation Project entitled, 'The Development of a Project Management Plan for the Sustainable Development Programme of the Caribbean Community (CARICOM), submitted by Teshia Yowanade Jn Baptiste in partial fulfilment of the requirements of the Master's in Project Management (MPM)

Dear Ms. Lopez,

After careful review, I have determined that Ms. Jn Baptiste's Final Graduation Project meets the required literary and linguistic standards for a Masters-level student. I am pleased to confirm that she has made the necessary corrections per my recommendations. I want to take a moment to express my congratulations to Ms. Jn Baptiste on this remarkable achievement. I was thoroughly impressed with the quality of her work. It is clear that a lot of effort and dedication went into this project. I wish her all the best in her future endeavours.

Sincerely,

Taluah Girard.

Taluah Girard (B.A.(Hons) Applied Modern Languages, MPM)
Communications Specialist