UNIVERSIDAD PARA LA COOPERACION INTERNACIONAL
(UCI)

PROJECT MANAGEMANT PLAN FOR THE INTEGRATED MANAGEMENT OF PRODUCTION LANDSCAPES

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This Final Graduation Project was approved by the University as partial fulfillment of the requirements to opt for the Master in Project Management (MPM) Degree

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DEDICATION

I dedicate this work in the loving memory of my dear mom, Victoria Hernandez, who now is my guardian angel and whose unwavering love and guidance have been the cornerstone of my career. I am grateful and dedicate this to my dad, Francisco Ramon Hernandez for always believing in me and whose unconditional love and cheering inspires me to persevere during the most challenging times. I am eternally grateful and dedicate this to my loving and exceptional husband, Virginio Pop, who believes in me and whose unwavering support and patience has been my strength and motivation during this journey. You believed in me; this project is as much yours as it is mine and I dedicate it to our love and commitment. To my family for your never-ending love and support. This work is dedicated to each of you with a grateful heart.

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First and foremost, I give thanks to the Almighty God for giving me the knowledge, patience, divine guidance and strength to complete this Master's Program. I am grateful for the unwavering support and resources offered by the faculty, staff and administration. Special mention and gratitude to my Tutor Professor Roger Valverde for his patience, support and guidance during the development of this FGP.

My appreciation goes to the Organization of American States for awarding me a partial scholarship to pursue this master's degree in project management.

I also acknowledge my dedicated colleagues and friends for their encouragement and support that contributed to the success of this journey.

Finally, I must express my very profound gratitude to my family, especially to my husband, Virginio Pop, for the unconditional support and continuous encouragement throughout this program of studies.

ABSTRACT

The objective of this document is to develop a project management plan that will guide the successful execution of the “Integrated management of production landscapes in the Belize River Watershed” project. This project is aligned with international commitments such as the BONN Challenge, and nationally with the National Landscape Restoration Strategy 2022 -2030. Additionally, it will contribute towards achieving the Sustainable Development Goals (SDGs 1, 5, 6,8,13,15).

This project will provide the platform for interministerial and inter-sectoral collaboration and cooperation among government departments, non-governmental organizations, academia, and communities towards achieving an integrated landscape restoration that will not only benefit the Belize River Water Shed but will have an impact on the Belizean landscape.

The final product of this FGP is the project management plan that will guide the successful implementation of the IMPL project that will be developed based on the Project Management Institute principles and good practices in project management. The study is made up of the final deliverables which comprise the following management plans: scope, schedule, costs, quality, resources, communications, risk, procurement, and stakeholders. An additional chapter demonstrates how this study relates to regenerative development.

As a result of the project, it is evident that there is the need for an integrated approach towards landscape restoration; therefore, it is of utmost importance for the development of this project management plan to be able to achieve the success of the IMPL project.

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ABBREVIATIONS AND ACRONYMS

BRW – Belize River Watershed

FA – Financial Analyst

FAO – Food and Agriculture Organization of the United Nations

FD- Forest Department

FGP – Final Graduation Project

GEF – Global Environment Facility

GSPM – Global School of Project Management

IMPC – Integrated Management of Production Landscapes

IUCN – The International Union for Conservation of Nature

MSDCCDRM – Ministry of Sustainable Development, Climate Change and Disaster Risk Management

PA – Project Assistant

PD – Project Director

PFA – Project Finance Associate

PMBOK – Project Management Book of Knowledge

PMI – Project Management Institute

PM – Project Manager

PMP – Procurement Management Plan

PRODOC – Project Document

RFQ – Request for Quotation

SDGs – Sustainable Development Goals

TAC- Technical Advisory Committee

ToR – Terms of Reference

TPRA – Third Party Responsible Agreement

TPRPs – Third Party Responsible Partners

UCI – University for the International Cooperation

UNDP – United Nations Development Program

WBS – Work Breakdown Structure

EXECUTIVE SUMMARY

The Forest Department (FD) within the Ministry of Sustainable Development, Climate Change and Disaster Risk Management (MSDCCDRM) is the government department with the legal mandate for overseeing the use and protection of forests both on national and protected areas land. The ongoing national and international commitments that the GOB has signed, such as the BONN Challenge which aims to restore at a global level 150 million hectares of degraded and deforested landscape of which Belize will contribute 130,000 hectares, has prompted the Forest Department to expand its scope from only scaling of logs to a current programmatic approach in areas of monitoring, restoration and project management.

To support Belize in complying with both its national and international commitments, the FD has been working along with partners to seek funding from both national and international partners that would give the financial support for the implementation of specific activities. They have worked with donor agencies such as the World Bank, and The International Union for Conservation of Nature (IUCN), who have funded several projects that allowed the department to fulfill its mandate and international commitments. In 2023, the FD under the MSDCCDRM collaborated with GEF and the UNDP to execute a five-year project entitled "Integrated management of production landscapes to deliver multiple global environmental benefits (IMPL) project.

The FD currently has implemented several projects without any standardized approach due to lack of knowledge and expertise in project management. The team relied only on the project document (PRODOC) as the guide for the execution of the project. The IMLP project does not have a project management plan that can guide the project manager and the team to implement this project effectively and efficiently. In order to achieve the project deliverables within a timeframe and budget, a Project Management Plan was developed for the IMPL project. This guided the project manager and the team in the implementation of the project.

The general objective was to formulate a Project Management Plan that will guide the successful execution of the "Integrated management of production landscapes" project. The specific objectives were: 1 - to create a project charter that will formally authorize the development of the Project Management Plan and allow possible change control that may be required; 2 - to develop a comprehensive Scope Management Plan that establishes a clear and well-defined framework outlining all necessary processes to ensure successful delivery and completion of the project; 3 - to develop a Schedule Management Plan that will provide guidance to ensure the completion of the project within the defined timeframe; 4 - to formulate a cost management plan that defines the framework for managing and controlling the project's estimated costs and required resources and ensure that the project remain within the approved budget; 5 - to develop a Quality Management Plan that guarantees thorough documentation of all necessary information to effectively manage the project, spanning from the planning phase to the delivery stage; 6 - to create a Resource Management Plan that clearly outlines the strategies for acquiring necessary resources to ensure the effective and efficient utilization of resources within the project; 7 - to formulate

a Communication Management Plan that will establish how communication will be managed in the project to ensure that all stakeholders are adequately informed; 8 - to develop a Stakeholder Engagement Plan that identifies and documents the involvement and influence of the project stakeholders in the project; 9 - to create a Procurement Management Plan that will guide the project management unit on how to conduct a procurement process that will ensure transparency and accountability in the project; 10 - to develop a Risk Management Plan for the identification of potential problems before they occur and so that they may be managed to ensure that it doesn't hinder project implementation and success; and 11 - to formulate a Sustainable Management Plan to evaluate the relationship and impact of the project implementation and its deliverables in regenerative and sustainable development. The project aims to achieve the integration of sustainable practices, restore biodiversity, and create a regenerative ecosystem for the benefit of both people and the environment.

The methodology used for the research was the analytical and mixed method. These two were selected primarily because of the primary and secondary sources of information that were used. The information was gathered from already existing documents, such as the PRODOC for the IMPL, interviews with key stakeholders such as the project manager, and the responsible partners, and from websites and the PMBOK®Guide, 7th Edition (2021).

It was concluded that the project management plan developed for the Integration Management of Production Landscapes Project provides the FD, MSDCCDRM with a framework of good practices that the project team can adopt in the implementation of the project to ensure that the project goals are achieved within schedule and budget. As established in PMI (2017) this project management plan integrated the ten knowledge areas: Integration, Scope, Schedule, Cost, Quality, Resource, Communication, Risk, Procurement, Stakeholder Management plan, and Sustainable Development plan. It incorporated sustainability in most of its activities emphasizing the importance and impact that it will have in improving the environment, people and the economy.

It is recommended that the FD, MSDCCDRM, uses this document as a guide for the implementation of the IMPL Project and ensures that a project management plan be developed for each ongoing project to increase the success rate in project implementation. It is imperative for the project manager and the team to use this management plan as a living document that will constantly be reviewed, updated, and modified based on the current needs of the project. Finally, it is recommended to train the project team and stakeholders on conflict resolution and implement a grievance mechanism with the aim to improve trust and communication which are key elements that contribute towards the success of the project.

1. INTRODUCTION

This chapter aims to develop the Final Graduation Project (FGP): Project Management Plan for the "Integrated management of production landscapes," herein referred to as the IMPL project. This project management plan defines and establishes a structured and strategic framework that will guide the project management team in the implementation and successful completion of the project. The IMPL will support the Forest Department, Ministry of Sustainable Development, Climate Change and Disaster Risk Management, in the execution of the National Landscape Restoration Strategy 2022- 2030 that has recently been adopted by the Cabinet of Ministers as the guiding tool for landscape restoration in Belize. Furthermore, having a project management plan for the IMPL will contribute to the integrated approach where government, policies, civil society and communities will work jointly to improve the Belize River Watershed landscape.

1.1. Background

The Ministry of Sustainable Development, Climate Change and Disaster Risk Management (MSDCCDRM) is the government ministry with the responsibility for the administration and use of the country's natural resources, including forests on national lands and protected areas. It consists of several departments including the Forest Department who is the executing agency for the "Integrated management of production landscapes to deliver multiple global environmental benefits" project.

The Forest Act (1954) defines the legal mandate of the Forest Department (FD). The legislative and regulatory framework for FD's administration of the Forest sector include

the National Parks System Act (CAP 215); Forest Act (CAP 213) including Forest Rules (subsidiary) and Mangrove Regulations, and the Wildlife Protection Act (CAP 220) and (Hayman, 2019). It framework is signatory to several international obligations that affect the forest sector such as the Convention on International Trade in Endangered Species (1973), United Nations Convention on Biological Diversity (1992), RAMSAR Conventions on Wetlands (1971), United Nations Convention on Combating Desertification (1994), United Nations Framework Convention on Climate Change (1992), Sustainable Development Goals (2015) and most recently pledged to the Bonn Challenge in July 2021. The Bonn Challenge then served as the basis for the development of the National Landscape Restoration (NLRS) for Belize 2022-2030.

This project "Integrated management of production landscapes to deliver multiple global environmental benefits" funded by GEF and UNDP, officially launched in March 2023 with a duration of five years is the first project that will help the FD in achieving the goals of the NLRS. This project will use an integrated landscape/watershed approach that will facilitate combining sustainable production of key agricultural and forest products and conservation practices in productive landscapes. This project is a national implemented modality project, which signifies that it will be implemented by the Government of Belize following the already established policies and procedures.

The project manager understands the complexity, importance, and impact that the "project will have in the country; thus, the project manager will develop a project management plan that will guide the project team in its implementation. This project management plan will serve as a guiding tool starting with the planning, implementation,

and monitoring phases of the project to ensure that it achieves its objectives within the established timeline and budget.

1.2. Statement of the problem

The Belize River Watershed (BRW) is the largest watershed in the country of Belize. It is about 8,000 square kilometers and is the largest freshwater system in the country. It also contains a portion of the country's terrestrial corridors, the Central Belize Corridor, which provides connectivity to the Northern Biological Corridor and the Maya Golden Landscape. Despite much effort, this watershed currently faces numerous threats, such as land use change including deforestation, forest fragmentation, habit loss (resulting from land use changes), pollution, and others that are contributing to the loss in biodiversity, soil fertility, and poor water quality.

The underlying causes or the direct drivers that are contributing to the loss of biodiversity in the BRW are: market driven demand for products such as game meat and timber, conflicting government sector-specific policies, limited to non-existent Government incentives for livelihood diversification, culture, tradition, and limited capacity for enforcement. The indirect drivers are the national policies for economic growth, national poverty alleviation strategies, national and international market demand, delay in implementation of national frameworks, and inadequate national investment in natural resource management (National Biodiversity Office, 2016).

The project's Theory of Change is based on the premise that by strengthening the governance and financial structure for the conservation of biodiversity and ecosystem

services through sustainable land management (SLM)/water management in production landscapes, and enhancing the capacity of the Government of Belize to implement strategies for conservation and SLM/water management in production landscapes, Belize will be better positioned to mainstream biodiversity conservation and sustainable land/water management into production landscapes (UNDP, 2022). The expected outcomes of this project will greatly impact and improve the BRW landscape whilst improving the lives of the surrounding communities.

Currently, there is no project management plan for the IMPL project to guide the project manager and his/her team to implement this project efficiently and effectively.

1.3. Purpose

The main purpose of this Final Graduation Project (FGP) is to develop a project management plan (PMP) for the successful implementation of the “Integrated management of production landscapes to deliver multiple global environmental benefits” (IMPL) project. The objective for the development of this project management plan is to create a framework that will guide how the project will be implemented, monitored, and controlled during its execution. The plan will serve as the blueprint that will be used by the project manager and the project team to manage, track, and record the progress of the project. The PMP will present in detail the ten project management areas namely: integration, scope, schedule, cost, quality, resources, communications, risk, procurement, and stakeholder plans (PMI. 2017). The project team will also validate how the project can implement sustainable best practices, its linkage to both regenerative development and the Sustainable

Development Goals (SDGs), and the various document templates, reports, and processes that will be developed.

The research hypothesis for this project is that the development of the management plan will establish the best practices and processes that will greatly enhance the successful implementation of the IMPL project. Finally, this research will determine whether or not this hypothesis will be accepted or rejected.

The IMPL project is in its second year of implementation; however, due to delays in the disbursement of funds, the implementation of its activities has not commenced. Therefore, this PMP will greatly benefit the project manager and the team to re-strategize, address the identified risks, revise schedules, and carry out the project management activities effectively and efficiently for the achievement of the project goals. It is also expected that, upon efficient and effective implementation, the IMPL project will create the enabling environments through harmonization of policies for water and forest resources; thus, it will define clear roles and responsibilities within the government agencies, delivering multiple GEBs through sustainable production and improved value chains for key agricultural and forest products from the BRW and knowledge management and learning. The PMP will contribute to achieving the project's completion during the estimated time and within budget.

1.4. General objective

To formulate a Project Management Plan that will guide the successful execution of the "Integrated management of production landscapes to deliver multiple global environmental benefits" project.

1.5. Specific objectives

1. To create a project charter that will formally authorize the development of the Project Management Plan and allow possible change controls that may be required.
2. To develop a comprehensive Scope Management Plan that establishes a clear and well-defined framework outlining all necessary processes to ensure successful delivery and completion of the project.
3. To develop a Schedule Management Plan that will provide guidance to ensure the completion of the project within the defined timeframe.
4. To formulate a cost management plan that defines the framework for managing and controlling the project's estimated costs and required resources and ensure the project remains within the approved budget.
5. To develop a Quality Management Plan that guarantees, thorough documentation of all necessary information, an effective management of the project, spanning from the planning phase to the delivery stage.

6. To create a Resource Management Plan that clearly outlines the strategies for acquiring necessary resources to ensure the effective and efficient utilization of resources within the project.
7. To formulate a Communication Management Plan that will establish how communication will be managed to ensure that all stakeholders are adequately informed.
8. To develop a Risk Management Plan for the identification of potential problems before they occur and can be managed effectively to ensure that it does not hinder project implementation and success.
9. To create a Procurement Management Plan that will guide the project management unit on how to conduct procurement process that will ensure transparency and accountability in the project.
10. To develop a Stakeholder Engagement Plan that identifies and documents the involvement and influence of the project stakeholders in the project.
11. To formulate a Project Management Plan focused on regenerative development which aims to achieve the integration of sustainable practices, to restore biodiversity, and to create a regenerative ecosystem for the benefit of both people and the environment.

2.0 THEORETICAL FRAMEWORK

2.1 Company/Enterprise framework

2.1.1 Company/Enterprise background

The Forest Department, currently one of the oldest departments in the country, is under the Ministry of Sustainable Development, Climate Change and Disaster Risk Management. It was established in 1923 as the Forest Trust, and in 1954 it changed to the Forest Department (Hayman 2019). Over the years, the scope of the Forest Department has changed from forest exploitation and administration to biodiversity management and community forestry. Some of the Forest Department's significant activities are issuance and monitoring of short- and long-term forest licenses, monitoring of biodiversity, and forest cover loss, restoration practices, and networking.

As is the case with other government departments, the Forest Department has been improving its management and administration of staff to a more robust, strategic, programmatic, and decentralized system. It has Range Offices in four of the six districts and has expanded its network of programs from three to seven whose individual work plans are geared towards achieving the department's mission. Not only does this change allow the department to have a presence in more areas and improve in the implementation of its legal mandate, but also to strengthen its relationship with stakeholders and to provide improved customer service. The Forest Department is a governmental organization that continues to improve to meet the people's needs while ensuring the forest sector's improvement.

2.1.2 Mission and vision statements

The mission of the Forest Department is “The Forest Department is a competent regulatory agency, sustainably managing forest resources for the long-term benefit of the Belizean people”.

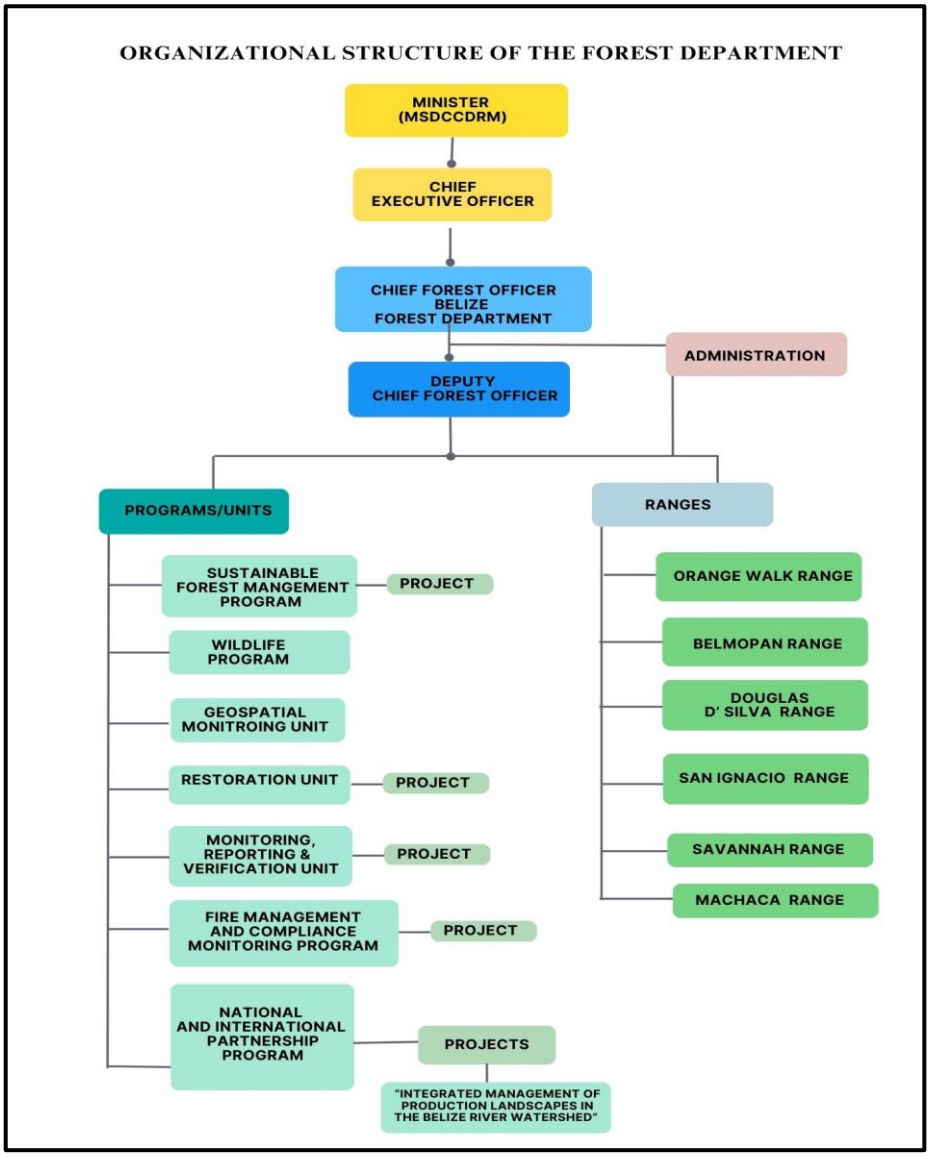
The vision of the Forest Department is: “A results-oriented Department that manages Belize’s forest resources, enabled by informed decision-making and highly motivated and competent staff, in collaboration with partners and stakeholders”.

2.1.3 Organizational structure

The Forest Department is one of the seven departments within the Ministry of Sustainable Development, Climate Change and Disaster Risk Management. Figure 1 shows the organizational structure of the Forest Department where it can be observed that it is led by the Chief Forest Officer with assistance from the Deputy Chief Forest Officer. The department is divided into programs and ranges. The programs and ranges are administrated and led by Forest Officers.

Figure 1

Organizational structure of the Forest Department



Note: Adapted from the *Government of Belize Forest Department Strategic Action Plan 2019-2023. (Hayman, 2018).* Own creation.

2.1.4 Products offered

The Belize Forest Department is a government department who is responsible for the sustainable use of the forest resources. The products offered by the department are classified as services to the public to ensure the protection and sustainability of biodiversity. The products, in this case, the services that each of the programs offer are specific products that are directly linked to the work they carry out in protection, monitoring, and enforcement. The following are the products or services offered by each of the respective programs:

- The wildlife program offers the services of the issuance of hunting licenses, dealers license, captive wildlife permits, scientific research/collection permits, import/export permit, human wildlife conflict program, rescue of injured wildlife.
- The Protected areas program offers services in the approval and issuance of camping permits and scientific research/collection permits.
- The sustainable forest management program issues and monitors forest licenses, both short and long term, petty permits, community forestry licenses, and import/export permits.
- The restoration desk offers guidance on restoration initiatives, records, measures, and reports on restoration efforts being undertaken at a national level.
- The law enforcement/wildland fire management unit offers the services of protection and combating of wildland fires through activities such as prescribed burns to reduce the fuel load, development of an early warning system, and the monitoring and prosecution of illegal activities such as illegal logging.

- The Geo-spatial Monitoring Unit monitors the loss of forest covers.
- The Monitoring, Reporting, and Verification Unit monitors and calculates green gas house emissions and carbon stock, and it updates the government on climate change matters.
- The National and International Partnership Program offers services to the department in project management, focal point on national and regional forums, monitoring, and reporting of the department's strategic plan. This FGP will develop the management plan for the "Integrated management of production landscapes in the Belize River Watershed" which is one of the projects that this program will be implementing. The FGP will guide the team to ensure the project is successfully implemented.

2.2 Project Management concepts

2.2.1 Project management principles

The principles of project management are not prescriptive in nature (PMBOK SEVENTH Edition, 2021, p. 21). These principles will differ based on the methodology or framework; however, they will provide guidance for the behavior of the persons involved in the project since they influence the performance domains to achieve the desired outcomes. The principles of project management are:

- Be a diligent, respectful, and caring steward.
- Create a collaborative team environment.
- Effectively engage with stakeholders.

- Focus on value.
- Recognize, evaluate, and respond to system interactions.
- Demonstrate leadership behaviors.
- Tailor based on context.
- Build quality into processes and deliverables.
- Navigate complexity.
- Optimize risk responses.
- Embrace adaptability and resiliency.
- Enable change to achieve the envisioned future state.

Note: Taken from the book, A Guide to the Project Management Body of Knowledge (PMBOK® Guide) (7th edition, PMI, 2021, p.23) , by PMI, 2021.

The principles that can be applied in the Final Graduation Project of the "Integrated management of production landscapes in the Belize River Watershed" are the following:

1. Stewardship: stewards act responsibly to ensure that activities are carried out with integrity, care, trustworthiness and compliance. The project manager can promote accountability and transparency in project activities and ensure that they are as in the approved workplan.

2. Create a collaborative team environment: project teams are often composed of a diverse set of individuals who possess a wide range of skills, knowledge and experience. Appreciating this diversity will promote an environment of collaboration that will greatly contribute to the success of this FGP.
3. Effectively engage with stakeholders: keeping stakeholders involved and constantly informed from the planning phase of the project to its implementation will greatly contribute to achieving the project's outcomes and achieve its desired impact.
4. Focus on value: As the project manager it is essential to understand the value that each stakeholder has in the project to ensure that it is reflected in the outcomes.
5. Recognize, evaluate, and respond to system interactions: This is a complex project with several responsible partners whose legal mandate on the resources vary. The project manager must be able to respond to the dynamic circumstances in a hollistic way to analyze how the activities from each responsible partner interacts with each other to achieve the project outcomes.
6. Demonstrate leadership behaviours: Good leadership behaviours promote communication, respect and trust among the team members. This is essential in guiding the team to implement and steer the project in achieving the desired outcomes and success.
7. Tailoring: Each project is unique with its own complexity and challenges. Tailoring gives the requisite flexibility to project managers to select the appropriate framework and apply adaptive project management. This will permit the project to

adapt to changing situations that may arise and still allow it to achieve the desired outputs.

8. Build quality into processes and deliverables: Quality is key in satisfying the sponsor and other stakeholders; thus, it is essential that this be built in from the planning stage to ensure that all requirements are met. Quality is one of the key acceptance criteria that will contribute to the success of the project.
9. Optimize risk response: A risk is an event that can occur and can have either a positive or negative effect. It is crucial for the project team to constantly evaluate the project and identify possible risks so that these can be mitigated before they affect the outcomes of the project. It is also important to understand that a potential risk may trigger or become a positive opportunity for the project.
10. Adaptability and resiliency: Projects are not often implemented as planned since there are always unprecedented challenges that may occur. Project managers should be able to adapt easily to changing situations. Adaptability and resiliency combined will allow the project managers to withstand adversity and bounce back rapidly and ensure that the project meets its objective.

2.2.2 Project management domains

A project performance domain is a group of related activities that are critical for the effective delivery of project outcomes (PMI, 2021). These domains are interactive, interrelated, and interdependent areas of focus that operate as an integrated system with the objective of achieving the desired project outcomes. Domains are guided by the principles of project management and are determined by factors such as the culture of the

organization, the project, deliverables, the project team, and stakeholders amongst others. These domains work simultaneously throughout the project and present broad areas of focus in which to demonstrate behaviour.

The Standard for Project Management and the PMBOK® Guide states that there are eight performance domains that are crucial for the project outcomes and the success of the project. The eight domains are: stakeholders, team, development approach and life cycle, planning, project work, delivery, measurement, and uncertainty (PMI, 2021).

The project performance domains that can be related to the Final Graduation Project (FGP) on the project management plan for the "Integrated management of production landscapes in the Belize River Watershed" are:

1. Stakeholder performance domain – Stakeholders are the center of any project, and they have the power to either support the project and ensure its proper implementation, or they can halt a project. This domain will address issues, activities, and relationships that the team must have with the project's stakeholders to ensure their engagement during the life of the project. It will promote a good working relationship, keep them constantly informed and will ensure that the project beneficiaries support the project. In summary, this domain will promote better stakeholder engagement and satisfaction.
2. Team performance domain- This domain fosters and creates the proper environment that will allow each team member to grow and become leaders. It will enhance team performance and collaboration. They will learn to work

together and become one unit seeking to achieve their maximum potential and to become a high-performing team that will contribute to the success of the project.

3. Development approach and life cycle performance domain – This domain will help the project team choose the proper methodology, for example, agile/kanban, waterfall or hybrid. It is about understanding the benefits and challenges of each approach and how these can be applied in the project.
4. Planning performance domain – Effective planning is one of the main factors that contribute toward the success of the project. This domain includes all the project planning activities that range from defining the scope and objectives to scheduling, budgeting and risk management throughout the life cycle of the project.
5. Project work performance domain – This performance domain will be used in the implementation phase of the project. It will guide the team and ensure that the daily activities are aligned to the project work plan. This will include the proper management of resources, coordination of tasks, completion of deliverables.
6. Delivery performance domain – This domain ensures that the project objectives and outputs are achieved. It is done throughout the project ensuring that the activities being implemented are aligned with the project objectives, outputs and remain within the approved budget.
7. Measurement performance domain – All projects need to assess their progress. This domain involves tracking, reviewing, and reporting of the project's

performance. The team clearly defines and establishes clear performance indicators that will be used to monitor the project's success and overall implementation.

8. Uncertainty performance domain – All projects have risks that may hinder their implementation and success. The uncertainty performance domain will permit the team to identify and manage the risks before they escalate and develop strategies on how to mitigate them to ensure that the project is successful.

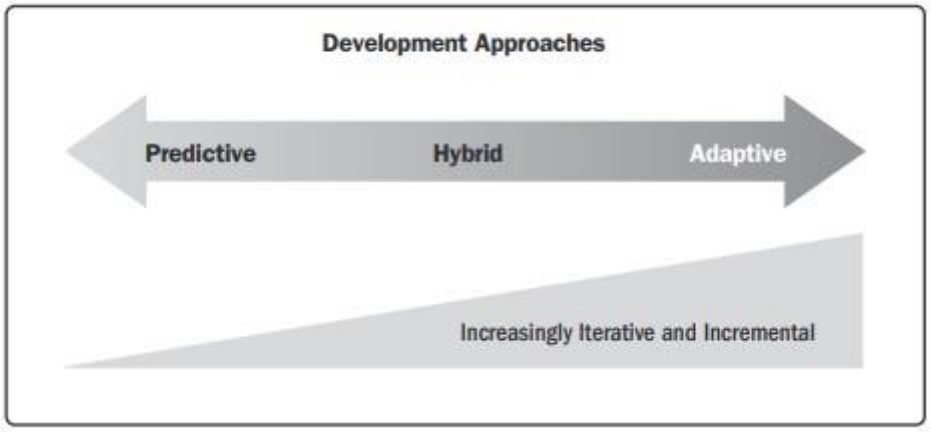
It can be stated that these eight domains are directly related to this FPG and in most occasions they will overlap with each other and guide the project team in achieving the desired outcomes, ultimately achieving the success of the project.

2.2.3 Predictive, adaptative and hybrid projects

Development approach is a method used to create and evolve the product, service, or result during the project life cycle, such as a predictive, iterative, incremental adaptive, or hybrid method (PMBOK Seventh Edition, 2017, p.33). Figure 2 shows the three most used approaches by organizations which are predictive, hybrid and adaptive. The type of development approach that will be used is dictated by the type of project, product or industry. In the case of this FPG project, the hybrid development approach is the most suitable one to use during the life cycle of the project.

Figure 2

Development Approaches Diagram

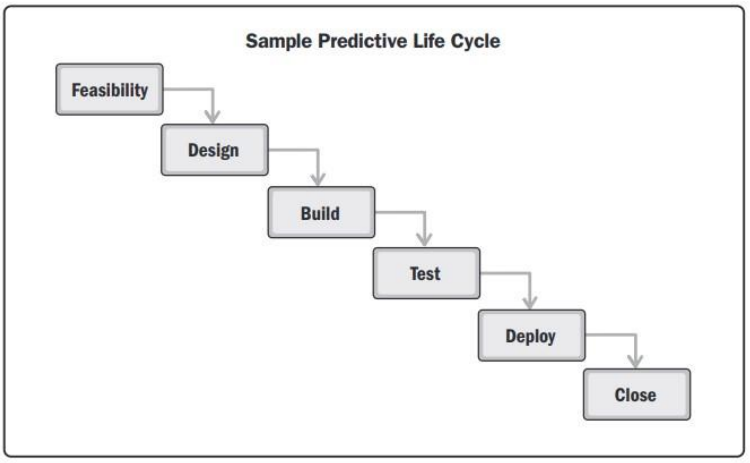


Note: Development Approach Diagram Reprinted from the book *Development Approaches Diagram: A Guide to the Project Management Body of Knowledge (PMBOK® Guide) (7th edition, p.35)*, by PMI, 2021. Copyright 2021, Project Management Institute, Inc. All rights reserved.

The predictive approach is useful when the project and product requirements can be defined, collected, and analyzed at the start of the project (PMBOK Seventh Edition, 2017, p.35). This method is also known as the waterfall approach and is applied when the results are clear, predictable and in environments of low uncertainty. In this approach the team knows exactly what will be done and the possibility of requiring changes will be minimal; therefore, it will allow the team to plan with a high level of certainty from the beginning to the end of the life cycle. Figure 3 shows the predictive lifestyle.

Figure 3

Predictive lifestyle approach



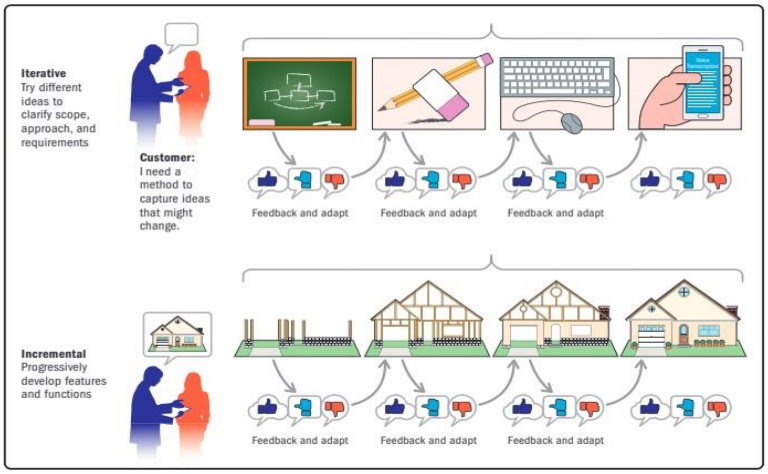
Note: Sample of Predictive Life Cycle Reprinted from the book, *Development Approaches Diagram: A Guide to the Project Management Body of Knowledge (PMBOK® Guide) (7th edition, p. 43)*, by PMI, 2021. Copyright 2021, Project Management Institute, Inc. All rights reserved.

The hybrid development approach is a combination of the adaptive and predictive approaches (PMBOK Seventh Edition, 2017, p.36). In this approach the elements of the project are separated into those that are well known, will use the predictive, and those that require evolution to adapt will use the adaptive lifecycle. This approach is useful when there is uncertainty or risk around the requirements or when the deliverables can be developed by several project teams. The hybrid development approach also incorporates iterative and incremental development strategies. The iterative approach is applied when clarifying requirements and finding solutions or options in the development of the product

and the incremental approach is used to produce a deliverable throughout a series of iterations as can be seen in Figure 3. In the case of FGP on the project management plan for the "Integrated management of production landscapes in the Belize River Watershed" the hybrid approach is the most useful because the outputs of the project will be achieved through the collaboration of several teams; additionally, both strategies will need to be implemented in several stages of the project.

Figure 4

Sample of a Hybrid Approach: Incremental and Iterative



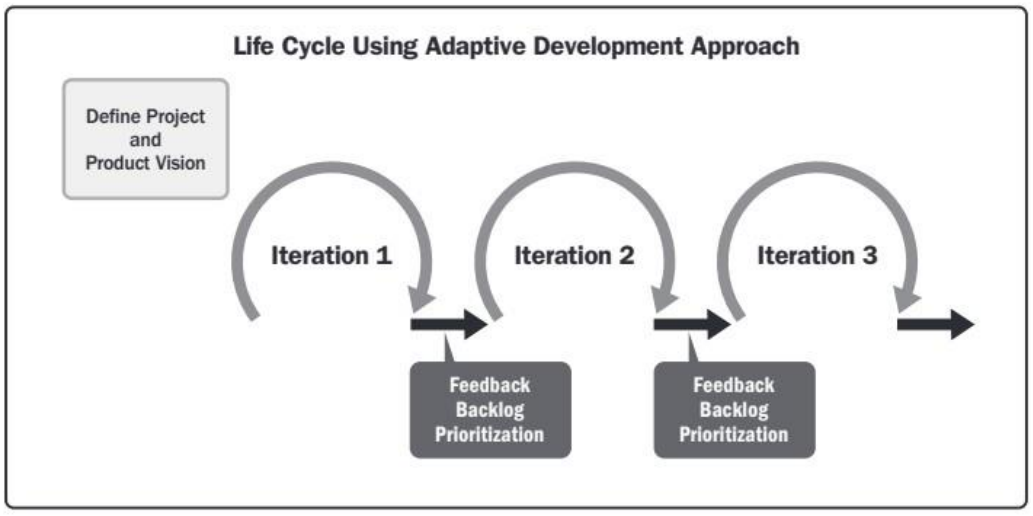
Note: Iterative and Incremental Development Reprinted from the book, *Development Approaches Diagram: A Guide to the Project Management Body of Knowledge (PMBOK® Guide) (7th edition, p. 37*), by PMI, 2021. Copyright 2021, Project Management Institute, Inc. All rights reserved.

The adaptive development approach is useful when requirements are subject to a high level of uncertainty and volatility and are likely to change throughout the project (PMBOK Seventh Edition, 2017, p.38).In this approach, a clear vision of what will be the

product is established from the start of the project; however, the requirements are refined, detailed, changed or replaced based on the customer feedback, the environment, or unexpected events. Figure 5 shows the life cycle using the adaptive development approach. This approach also uses both iterative, incremental development methods which means that the project is divided into iterations or sprints. During each iteration, products are developed, tested and refined for improvement. This method encourages constant customer feedback, and the identification of improvements needed before the final product is approved.

Figure 5

Sample of an Adaptive Development Approach



Note: Life Cycle Using Adaptive Development Approach Reprinted from the book, *Development Approaches Diagram: A Guide to the Project Management Body of Knowledge (PMBOK® Guide) (7th edition, p. 45*), by PMI, 2021.

2.2.4 Project management

Project management as stated in the PMBOK Guide Seventh Edition is “the application of knowledge, skills, tools, and techniques to project activities to meet project requirements. Project management refers to guiding the project work to deliver the intended outcomes. Project teams can achieve the outcomes using a broad range of approaches (e.g., predictive, hybrid, and adaptive” (p.4). There are several stages in the project management process, different types of approaches and tools that a project manager can use while managing the project. The overall objective of project management is to ensure that the outcomes of the project are achieved within the specific scope, schedule and budget.

The article “Project Management: What is project management?” states that project management is a process that allows project managers to plan, execute, track and complete projects with the help of a project team. To do so, they must use project management principles, skills, methodologies and tools to lead team members through each of the project management steps which are known as the project lifecycle. The article also highlights that project management is important because it helps organizations control all the moving parts of projects to bring them to a successful completion.

Project management is the practice of coordinating processes, tools, team members, and skills to deliver projects that meet goals and satisfy requirements (Atlassian). It further explains that project management empowers the project team to complete projects by rallying them around clear objectives, increasing transparency and visibility, streamlining communication, and establishing the project scope.

In essence, project management, as expressed by these three authors, should be a tool that each project manager needs to understand and implement. Regardless of the type of project, the processes are the same.

2.2.5 Project management knowledge areas and processes

The project management knowledge areas and processes will guide the development of this FGP project management plan. A knowledge area as described in the PMI is 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" (PMBOK Sixth Edition, 2017, p. 23). Each of these knowledge areas is managed by the project manager and the team throughout the life of the project. The following are the ten knowledge areas described in the PMBOK® Guide (Project Management Institute, 2017):

1. Project integration management: This is the first knowledge area which consists of the project manager coordinating tasks, resources, stakeholders, changes and project variables. The main output of this knowledge area is the project integration plan.
2. Project scope management: In this knowledge area, the scope management plan is developed to ensure that the project includes all the work required for a successful project completion.
3. Project schedule management: This is the knowledge area where project schedules are developed to track and monitor any progress made in the project. It establishes timelines for the completion of project activities. The main output is the Scope Management Plan.

4. Project Cost management: Includes all the processes involved in planning, estimating, budgeting, financing, funding, managing, and controlling costs so that the project can be completed within the approved budget (PMBOK Sixth Edition, 2017, p. 24). As the project activities are being implemented, the project manager will document and compare the actual cost of the project with the estimated cost. The output for this knowledge area is the Cost Management Plan.
5. Project quality management: This knowledge area includes the processes for incorporating the organization's quality policy regarding planning, managing, and controlling project and product quality requirements, to meet stakeholders' expectations (PMBOK Sixth Edition, 2017, p. 24). The output is the Quality Management Plan.
6. Project resource management: This knowledge area defines and establishes the processes needed to identify, acquire and manage all resources needed for the successful completion of the project.
7. Project communications management: Effective communication is critical for the success of a project since it ensures that all stakeholders are kept informed and have all the necessary information to make decisions. It encompasses various activities such as determining communication requirements, establishing communication channels, distribution of information and ensuring effective communication throughout the project lifecycle. The output of this knowledge area is the Communication Management Plan.

8. Project risk management: This knowledge area helps project teams identify risks before they occur and develop a plan to mitigate and decrease the impact of the negative risks. It also categorizes the risk based on the likelihood of it occurring and its probable impact. The output for this knowledge area is the Risk Management Plan.
9. Project procurement management: This knowledge area addresses the processes that must be followed to obtain goods and services required by the project. Effectively managing these procurement processes will ensure that the goods and services for the project are obtained in a timely and cost-effective manner. The output for this knowledge area is the Procurement Management Plan.
10. Project Stakeholder management: This knowledge area is focused on identifying and managing the interests, expectations, and influence of stakeholders throughout the lifecycle of the project. The main output of this knowledge area is the Project Stakeholder Management Plan.

The project management process group is a logical grouping of project management processes to achieve specific project objectives (PMBOK Sixth Edition, 2017, p. 23). These processes are independent of the project phase and work with the project management knowledge areas to implement the project. Figure 6 depicts the relationship between the areas of knowledge and the project management processes. The following are the five project management process groups:

- Initiating Process Group: These processes are performed to define a new project or a new phase of an existing project by obtaining authorization to start the project

(PMBOK Sixth Edition, 2017, p. 23). The main output of this phase is the project charter which is the formal document that recognizes the existence of the project and grants the written authorization to the project manager to commence working on the project.

- Planning Process Group: Those processes required to establish the scope of the project, refine the objectives, and define the course of action required to attain the objectives that the project has undertaken to achieve (PMBOK Sixth Edition, 2017, p. 23). In this process, the project team reviews the project objectives to ensure that the scope of the project will be able to deliver on the objectives. They also determine how the project will be implemented, managed, and monitored. The main outputs of this phase are the project management plans generated for each of the ten knowledge areas.
- Executing Process Group: The processes performed to complete the work defined in the project management plan to satisfy the project requirements (PMBOK Sixth Edition, 2017, p. 23). In this phase, the project team develops the respective work packages as per the work breakdown structure (WBS).
- Monitoring and Controlling Process Group: Those processes required to track, review and regulate the progress and performance of the project; it identifies areas where changes need to be implemented and initiates these changes (PMBOK Sixth Edition, 2017, p. 23). These processes are performed throughout the life cycle of the project.

- Closing Process Group: This is the last phase of the project where all processes are performed to formally complete or close the project, phase, or contract (PMBOK Sixth Edition, 2017, p. 23).

Figure 6

Project Management Process Diagram

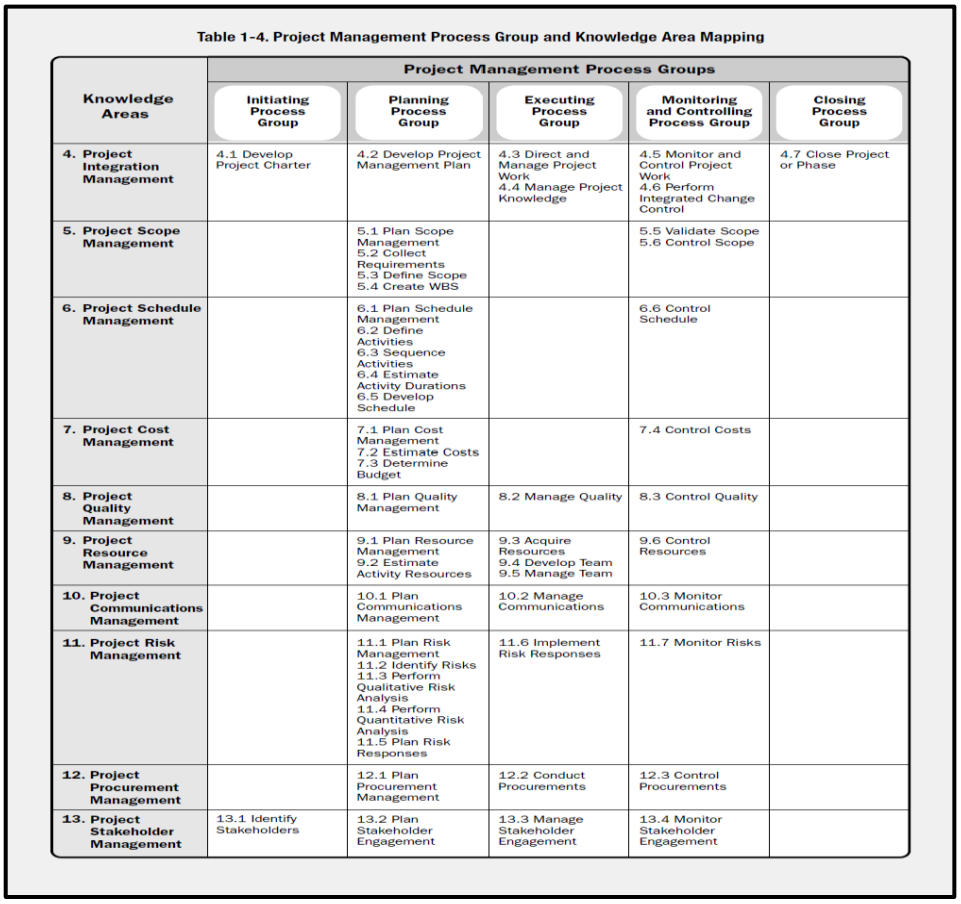


Table 1-4. Project Management Process Group and Knowledge Area Mapping

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. Project Management Process groups and Knowledge Area Mapping Reprinted from *A Guide to the Project Management Body of Knowledge PMBOK GUIDE* (SIXTH EDITION, p. 25) by Project Management Institute, Inc., 2017. All rights reserved.

2.2.6 Project life cycle

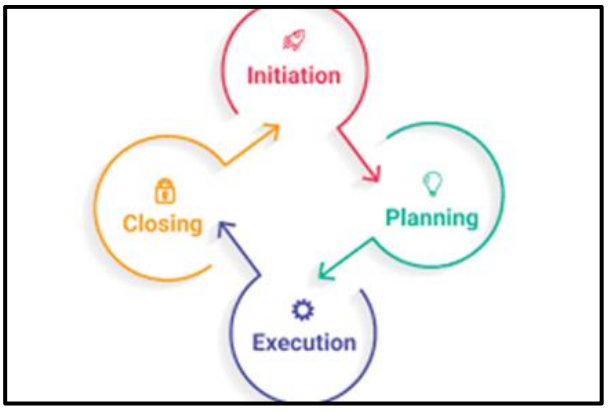
The project life cycle outlines the different stages which a project goes through from start to finish. Each one of these phases addresses the different needs of the project as it progresses. The five main stages are: initiation, planning, execution, monitoring and controlling and closure (Atlassian). He further states that the project management life cycle provides a structured plan for project managers to guide their projects to successful completion.

The article “What is the Project Life Cycle?” explains that all projects are different but they all have one thing in common, that is, they all go through the same cycle, known as the project life cycle, or project management lifecycle (Bridges, 2023).

The article “What is the Project Lifecycle?” states that the project lifecycle is the sequence of phases through which a project progresses (ADECA, 2020). The article mentions that the project lifecycle includes four phases namely: initiation, planning, execution and closure. The number of phases and sequence of the cycle may vary based on the company and the type of project; however, they must have a start and end within a given timeframe. Figure 7 shows the Project life cycle described by this article.

Figure 7

ADECA Project Life Cycle



Note: From "What is the Project Life Cycle? By ADEACA, 2023. Copyrights@2023ADECA Corp.

The project life cycle is also described as the series of phases that a project passes through from its start to its completion (PMBOK SEVENTH Edition, 2021, p. 245). The article "5 Phases of Project Management Life Cycle | Complete Guide" further states that project phases are smaller portions of a project that represent distinct goals or milestones in the larger project lifecycle (Good. L, 2023). Figure 8 shows the five phases of the lifecycle of the project which are: project initiation, project planning, project execution, project monitoring and control, and project closure. The following are the project phases as described by PMI, 2017:

Project initiation: This is the start of the project where information is gathered from key stakeholders. It defines the project vision, goals and objectives. The milestones and project timelines are clearly defined, and the potential risks are identified. This phase will

be completed in the development of the FGP project management plan for the “Integrated management of production landscapes in the Belize River Watershed” project.

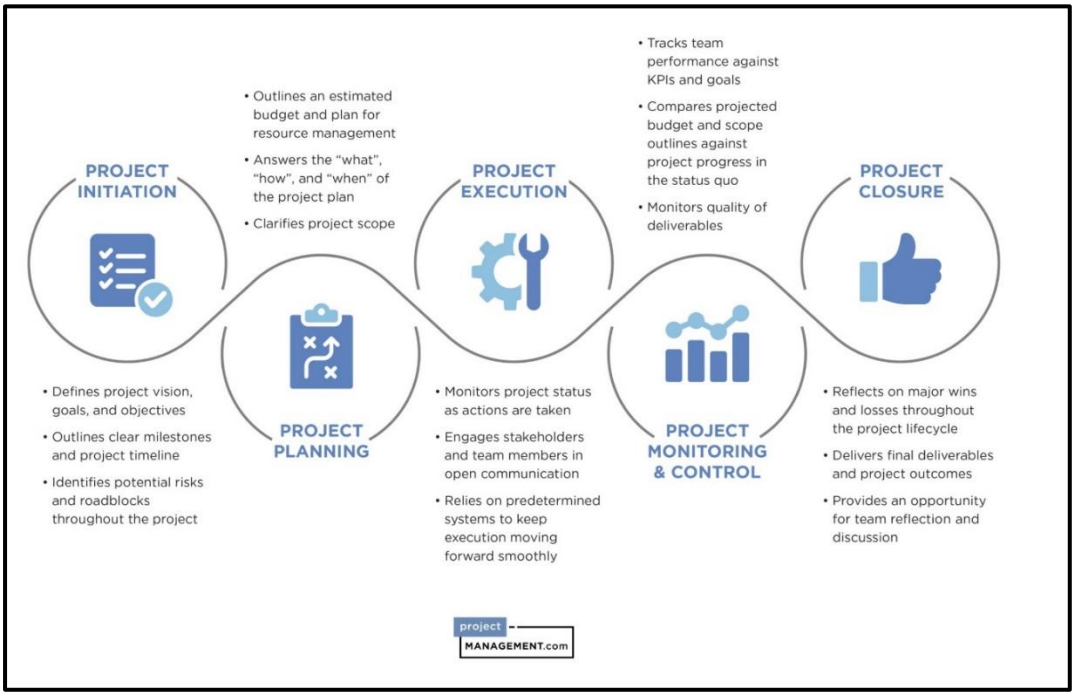
- Project Planning: In this second phase of the lifecycle of the project the scope is defined, the project plan is created, the budget baseline is established, and the roles and responsibilities are defined. This phase will also be completed in the development of the FGP project management plan for the “Integrated management of production landscapes in the Belize River Watershed” project.
- Project execution: In this phase the project team executes the activities as established in the approved project workplan. The project manager allocates resources and budget, coordinates and manages the team and schedule, and updates stakeholders.
- Project monitoring and control: This phase is directly linked with the execution phase since it monitors the project’s overall progress to determine whether the project objectives are being met and all planned activities are on track.
- Project closure: This is the last phase in the lifecycle of the project where all the activities in the project are completed. During this phase the project manager reports on the outcomes of the project and all project documents are submitted to donor agencies or sponsors.

At the Forest Department, there are several ongoing projects that are at the initiation stage as is this project, others are in the implementation or executing phase as well as the project monitoring and controlling phase. There is one project for which the department is

currently negotiating with the sponsors on how best to incorporate other sites into the project. The IMPL project is currently in its execution phase.

Figure 8

Project Management Life Cycle Phases



Notes: Copied from a website. *Project Management Life Cycle Phases (Source: 5 Phases of Project Management Life Cycle | Complete Guide by* Good L, *2023. November 9th*.

2.2.7 Company strategy, portfolios, programs and projects

Business strategy is the reason for the project and all needs are related to the strategy to achieve the value (PMBOK Seventh Edition, 2017, p.35). A project is a temporary endeavor undertaken to create a unique product, service, or result (PMBOK

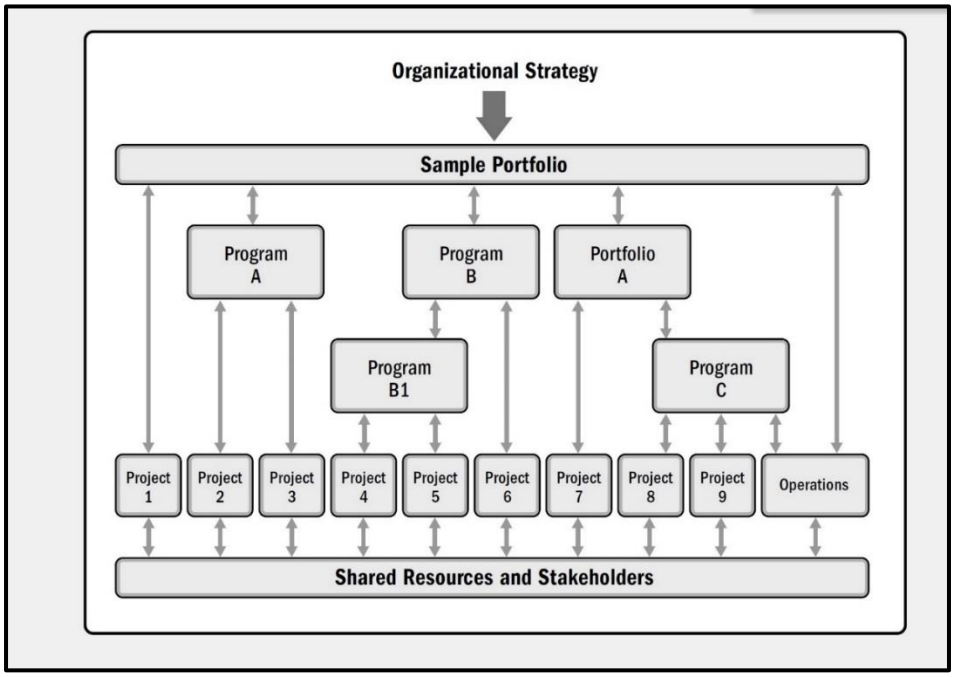
Seventh Edition, 2017, p.4). It further states that the temporary nature of projects indicates a beginning and an end to the project work or a phase of the project work. Projects can stand alone or be part of a program or portfolio. A program includes related projects, subsidiary programs, and program activities that are managed in a coordinated manner to obtain benefits not available from managing them individually. Portfolios are projects, programs, subsidiary portfolios, and operations managed as a group to achieve strategic objectives (PMBOK Seventh Edition, 2017, p.4).

It can be stated based on these definitions that a project has a specific product or deliverable, a timeframe, and it will strengthen a specific area for the organization. Programs, on the other hand, are composed of a series of projects that must be managed in sync with each other in order for the overall achievement of that specific objective, and portfolios are a collection of projects and programs managed in unison to achieve the company's strategic goal. Figure 8 shows the relationship that exists among portfolio, programs, and projects, and it shows how these contribute to the organizational strategy.

The Final Graduation Project (FGP) on the project management plan for the "Integrated management of production landscapes in the Belize River Watershed" is categorized as a project within the Forest Department, Ministry of Sustainable Development Climate Change and Disaster Risk Management, since it has a specific deliverable that will contribute to the mission of the department and ministry.

Figure 9

Portfolio, Program, and Projects



Note. Portfolio, Programs, Projects, and Operations Reprinted from *A Guide to the Project Management Body of Knowledge PMBOK GUIDE* (SIXTH EDITION, p.12) by Project Management Institute, Inc., 2017. All rights reserved.

2.3 Other applicable theory/concepts related to the project topic and context

2.3.1 Current situation of the problem or opportunity in study

The Belize River Watershed is the largest and most important watershed in Belize since it's the source of clean water for a large population. This watershed is currently experiencing habitat loss and fragmentation, unsustainable exploitation of forest resources, clearance of riparian vegetation, pollution, decline in soil fertility, and increased erosion resulting from the deforestation and land conversion from forested land to agriculture and

from farming on marginal lands, and increased vulnerability to climate change. Moreover, the conservation of biodiversity and Sustainable land/water management depends on various public agencies with overlapping functions, limiting opportunities for joint programming and enforcement (Integrated management of production landscapes to deliver multiple global Environmental benefits. n.d. p.15).

The project seeks to address the problem faced in the BRW by the mainstreaming of biodiversity conservation and sustainable land/water management into production landscapes in Belize. This objective will be achieved through a multifocal strategy with three interrelated outcomes aimed at creating an environment conducive to delivering multiple global environmental benefits (GEBs) through sustainable production and improved value chains for key agricultural and forest products from the Belize River watershed (BRW).

The project will address issues such as forest ecosystem fragmentation, biodiversity loss, and land degradation within production landscapes in the Belize River Watershed, focusing on preserving ecosystem remnants that serve as crucial biological corridors. Through a participatory approach ensuring equitable distribution of benefits among men and women; approximately 1,700 people will directly benefit from the project.

Key outcomes of the project include the establishment of 4,500 hectares (ha) of landscape management tools promoting connectivity between key biodiversity areas (KBAs) and forest remnants, sustainable agriculture covering 30,500 ha of landscapes with biodiversity benefits, and sustainable land management in production systems covering 15,000 ha. Additionally, the project aims to restore 750 ha of riparian forests and 300 ha of

groundwater recharge areas in key areas of the BRW, contributing to the stable presence of key indicator species such as jaguars, howler monkeys, white-lipped peccaries, and tapirs in forest patches/corridors of the production lands and KBAs.

Over a span of five years, the project, funded by the Global Environment Facility (GEF) with a total investment of USD $5,183,933 and supported by USD $75,000 from UNDP TRAC, will create opportunities for sustainable management of landscapes, preservation of biodiversity, and enhanced ecosystem resilience in Belize's production landscapes.

2.3.2 Previous research done for the topic in study

There have been several studies conducted at addressing land degradation in Belize; however, they have been done in isolation. The following are some of the studies/projects both at a national and regional level that can be used as inputs or references for this FGP.

- **Development of the National Landscape Restoration Strategy for Belize 2022-2030**: The most recent study conducted in Belize by the Forest Department was where it utilized the Restoration Opportunities Assessment Methodology (ROAM), which was developed by IUCN and the World Resources Institute (WRI), to identify and analyze degraded and deforested areas that are suitable for Functional Landscape Restoration (National Landscape Restoration Strategy for Belize 2022-2030, 2022).This strategy calls for intersectoral and comprehensive actions towards a green and blue economy, it provides a roadmap to guide conservation practices for different land uses, investments, and enabling frameworks adhering to national policies. The result of this study was the identification of priority areas that can be committed for restoration under the BONN Challenge pledge. This strategy has now been

endorsed by the Government of Belize and is the guiding document for landscape restoration actions.

- **Sustainable Development Plan for the Chiquibul-Mountain Pine Ridge-Caracol Complex, 2020**. The Chiquibul-Mountain Pine Ridge-Caracol Complex (CMCC) seeks to improve the management of the CMCC's ecosystems that will aid in water resource protection, biodiversity conservation, and land use planning within 2020-2035. The proposed activities will promote conservation development, halt further incursions into protected areas, promote sustainable agricultural practices such as agroforestry in buffer communities, promote the restoration of the stream setbacks, vegetation buffers, and bark beetle impacted areas. The CMSS aims at improving watershed conservation, fire management and sustainable timber management (National Landscape Restoration Strategy for Belize 2022-2030, 2022. p. 21). The baseline information and data gathered can tremendously assist in the development of this FGP project.

2.3.3 Other theory related to the topic in study

This project aligns closely with principles of regenerative development, which emphasizes fostering a positive relationship between society and the environment to achieve mutual benefits through the evolution and adaptation of systems to changing circumstances. The following are the areas that explain how these align:

- ❖ Biodiversity Conservation: By mainstreaming biodiversity conservation and sustainable land/water management into production landscapes, the project aims to restore and preserve ecosystems within the Belize River watershed. This aligns with regenerative development's focus on restoring and enhancing the health of natural ecosystems to support biodiversity and ecosystem services.

- Sustainable Agriculture and Land Management: The project promotes sustainable agriculture and land management practices in production landscapes, covering significant hectares of land. These practices aim to enhance soil health, water quality, and biodiversity while supporting productive agriculture.
- Community Participation and Equitable Benefits: The project adopts a participatory approach to ensure the equal distribution of benefits among men and women, directly involving approximately 1,700 people in the project. This approach aligns with regenerative development's emphasis on community engagement and empowerment, ensuring that local communities are involved in decision-making processes and benefit from sustainable development initiatives.
- Restoration of Riparian Forests and Groundwater Recharge Areas: By restoring riparian forests and groundwater recharge areas, the project contributes to enhancing ecosystem services such as water regulation and habitat provision. Regenerative development recognizes the importance of restoring and maintaining healthy riparian zones and water systems to support overall ecosystem resilience and human well-being.
- Preservation of Indicator Species and Biological Corridors: The project aims to maintain the stable presence of key indicator species like jaguars, howler monkeys, white-lipped peccaries, and tapirs within forest patches and corridors. Protecting these species and their habitats contributes to maintaining ecological balance and biodiversity. Regenerative development emphasizes the importance of preserving biodiversity and restoring habitats to support healthy ecosystems.

Overall, these project's goals and outcomes align with the principles of regenerative development by promoting sustainable land management, biodiversity conservation, community engagement, and the restoration of ecosystem services in Belize's production landscapes.

3.0 METHODOLOGICAL FRAMEWORK

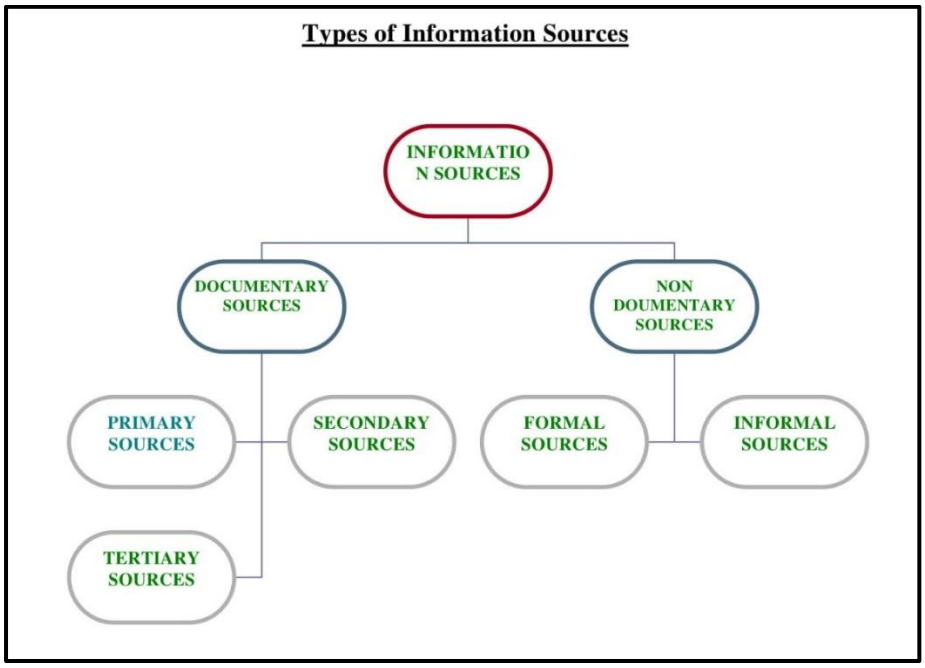
3.1 Information sources

Information sources refer to the origins or channels from which individuals obtain data, facts, knowledge, or insights (Ashikuzzaman, 2023). The article “Sources of Information” further states that these sources can be diverse and encompass various mediums and formats. Traditionally, sources of information include books, journals, newspapers, and other print media. However, with the advent of the digital age, information sources have expanded to include online platforms, databases, social media, audiovisual content and more. Any source which informs a person about a specific topic or provides knowledge to someone can be classified as an information source. The sources that are used depend on the research that is being conducted. Ashikuzzaman further states that sources of information can be classified into two main types as shown in Figure 10.

The University of Minnesota Crookston states that “sources of information or evidence are often categorized as primary, secondary, or tertiary material. These classifications are based on the originality of the material and the proximity of the source or origin. This informs the reader as to whether the author is reporting firsthand information or is conveying experiences and opinions, which are then considered secondhand information.

Figure 10

Type of Information Sources



Note: Type of Information source, Documentary (Source: Md. Ashikuzzaman December 23, 2023), retrieved from https://www.lisedunetwork.com/sources-of-information/

3.1.1 Primary sources

The University of Minnesota Crookston classifies primary sources as "records of events or evidence as they are first described or happened without any interpretation or commentary. This information is shown for the first time or are part of original materials on which other research is based. Primary sources display original thinking, report on new discoveries, or share fresh information".

The Williamette University Libraries defines primary sources as "created by those who have directly witnessed what they are describing; brings us as close as possible without being filtered, influenced or analyzed through interpretation".

The "Harvard Library: Library research guide for the history of science: introduction" further states that primary sources provide first-hand testimony or direct

evidence concerning a topic under investigation. It further explains that they are created by witnesses or recorders who experience the events or conditions being documented. They are characterized by their content, regardless of the format available. The primary sources are thesis, dissertations, memos, personal narratives, diaries, interviews, minutes of meetings, technical reports, letters, photographs, videos and correspondence.

The primary information sources used in the FGP are the following:

- Interviews
- Status reports,
- Minutes of meetings
- Letters
- The project document for the Integrated management of production landscapes to deliver multiple global environmental benefits (IMPL) developed by the United Nations Development Program.

3.1.2 Secondary sources

The University of Minnesota Crookston defines secondary sources as "these sources offer an analysis or restatement of primary sources. They often try to describe or explain primary sources. They tend to be works which summarize, interpret, reorganize, or otherwise provide an added value to a primary source.

The Williamette University Libraries defines secondary sources as those that "are not evidence but are useful sources of different experts' views of the primary sources; are published works that list their sources of information which can be then used to locate additional information for your research".

A secondary information source is a source that did not have a first-hand experience of the event that occurred. Examples of secondary sources are textbooks, books and articles that interpret review research works, histories, biographies, reviews of law and legislation,

commentaries. The sources of information that will be used in this FGP are listed in Chart 1.

Chart 1

Information sources

Objectives	**Information sources**	
	Primary	**Secondary**
To create a project charter that will formally authorize the development of the Project Management and allow possible change control that may be required.	- Minutes of Meetings - Personal interviews with stakeholders - FGP Project Charter Template	-PMBOK®Guide Seventh Edition (2021) -Websites -Project Management Institute (PMI)
To develop a comprehensive Scope Management Plan that establishes a clear and well-defined framework outlining all necessary processes to ensure successful delivery and completion of the project.	-Minutes of meetings -Interviews with the Project Board, Implementing partners, Technical Advisory Committee -IMPL Project document -Lessons learnt	-Project Management Body of Knowledge, PMBOK GUIDE, Sixth Edition, 2017 -Websites -Lecture presentation notes
To develop a Schedule Management Plan that will provide guidance to ensure the completion of the project within the defined timeframe.	-Interview with the Project Manager and procurement officer -IMPL Project document	-PMBOK®Guide 7th edition (2021) -PMI database -Lecture presentation notes

Objectives	**Information Sources**	
	Primary	**Secondary**
To formulate a cost management plan that defines the framework for managing and controlling the project's estimated costs and required resources to ensure that the project remains within the approved budget.	-Interview with the Project Manager and Third-Party Responsible Partners, project director and other external stakeholder -IMPL Project document -Lessons learnt from similar projects.	-PMBOK®Guide 7th edition (2021) -PMI database -Internet -Lecture presentation notes
To develop a Quality Management Plan that guarantees thorough documentation of all necessary information to effectively manage the project spanning from the planning phase to the delivery stage.	-Interview with the Project Manager and other external stakeholders, -IMPL Project document -Lessons learnt from similar projects.	-PMBOK®Guide 7th edition (2021) -PMI database -Internet
To create a resource management plan that clearly outlines the strategies for acquiring necessary resources to ensure the effective and efficient utilization of resources within the project.	-Interview with the Project Manager -IMPL Project document -Lessons learnt from similar projects.	-PMBOK®Guide 7th edition (2021) -Websites -Journal articles

Objectives	**Information Sources**	
	Primary	**Secondary**
To formulate a Communication Management Plan that will establish how communication will be managed in the project to ensure that all stakeholders are adequately informed.	-Interview with the Project Manager -IMPL Project document -Lessons learnt from similar projects.	-PMBOK®Guide 7th edition (2021) -PMI database -Websites
To develop a Risk Management Plan for the identification of potential problems before they occur and can be managed in the project to ensure it doesn't hinder the project's implementation and success.	-Interview with the Project Manager, Third-Party Responsible Partners, and other external stakeholders. -IMPL Project document	PMBOK®Guide 7th edition (2021). -PMI database -Internet -Journal articles
To create a Procurement Management Plan that will guide the project management unit on how to conduct procurement process that will ensure transparency and accountability in the project	Interview with the Project Manager and the Project Associate -Interview with the procurement officer and Finance Officer -IMPL Project document -Lessons learnt from similar projects.	-PMBOK®Guide 7th edition (2021) -Web research -PMI database

Objectives	**Information Sources**	
	Primary	**Secondary**
To develop a Stakeholder Engagement Plan that identifies and documents the involvement and influence of the project stakeholders in the project.	-Interview with the Project Manager and Third-Party Responsible Partners, and external stakeholder, -IMPL Project document	-PMBOK®Guide 7th edition (2021) -PMI database
To formulate a Project Management Plan focused on regenerative development which aims to achieve the integration of sustainable practices, restore biodiversity, and create a regenerative ecosystem for the benefit of both people and the environment.	-IMPL Project document	-The GPM Reference Guide

Source: Author of the study

3.2 Research methods

It is important to define in addition to the information sources, the research methods that will be used to collect and analyze data throughout this project. The University of Newcastle Library Guides defines research methods as “strategies, processes or techniques

utilized in the collection of data or evidence for analysis in order to uncover new information or create better understanding of a topic". It also states that there are different types of research methods which use different tools for data collection.

The University of Essex further explains that there is the qualitative, quantitative, and mixed research method. It is important for the researcher to have a clear understanding of the project before selecting the research method for the project. The type of research method that will be used depends on the type of data that is available, the mode of collecting the data, and stakeholders involved. In the case of this FGP, the analytical method will be used since it entails the revision of data and information that is readily available, and the mixed method as can be seen in Chart 2.

3.2.1 Analytical method

Analytical research is a specific type of research that involves critical thinking skills and the evaluation of facts and information relative to the research being conducted (Staff writer, 2023). The article "Research Methodology – An Introduction" further explains that in analytical research, the researcher must use facts or information already available and analyze these to make a critical evaluation of the material. This FGP will mostly be based on this research method to develop the project management plan for the ILMP.

3.2.2 Qualitative method

The University of Newcastle Library guides states that qualitative research "gathers data about lived experiences, emotions or behaviors, and the meanings individuals attach to them. It assists in enabling researchers to gain a better understanding of complex concepts,

social interactions, or cultural phenomena. This type of research is useful in the exploration of how or why things have occurred, interpreting events, and describing actions.

3.2.3 Quantitative method

Quantitative research as stated by the University of Newcastle Library Guides states that this method of research gathers numerical data which can be ranked, measured or categorized through statistical analysis. It assists with uncovering patterns or relationships, and for generalizing. This type of research is useful for finding out how many, how much, how often, or to what extent.

3.2.4 Mixed method

Mixed method research integrates both qualitative and quantitative research. It provides a holistic approach combing and analyzing the statistical data with deeper contextualized insights. Using the mixed method also enables triangulation or verification of the data from two sources (University of Newcastle Library Guides).

Chart 2

Research methods

Objectives	**Research methods**	
	Analytical	**Mixed Method**
To create a project charter that will formally authorize the development of the Project Management and allow possible change control that may be required.	Available data and information were obtained from the primary and secondary sources identified in Chart 1.	Information was gathered from historical data, interviews, experts, etc..

Objectives	**Research methods**	
	Analytical	**Mixed Method**
To develop a comprehensive Scope Management Plan that establishes a clear and well-defined framework outlining all necessary processes to ensure successful delivery and completion of the project.	Available data and information were obtained from the primary and secondary sources identified in Chart 1 to create the components of the scope management plan.	
To develop a Schedule Management Plan that will provide guidance to ensure the completion of the project within the defined timeframe.	The information available from the secondary information sources was used to establish timelines for the activities and elaborate the schedule management plan.	Information gathered from experts and historical data on similar activities in the project were used to estimate activity durations to develop the schedule management plan.
To formulate a cost management plan that defines the framework for managing and controlling the project's estimated costs and required resources to ensure that the project remains within the approved budget.	The information was obtained from both the primary and secondary sources of information in Chart 1 to develop the components of the cost management plan.	Data gathered will be analyzed and used to determine the cost management plan.

Objectives	**Research methods**	
	Analytical	**Mixed Method**
To develop a Quality Management Plan that guarantees thorough documentation of all necessary information to effectively manage the project, spanning from the planning phase to the delivery stage.	Information was used from the sources identified in Chart 1 to develop the components of the quality management plan.	Data was collected, analyzed, and used to determine the required quality of the project.
To create a Resource Management Plan that clearly outlines the strategies for acquiring necessary resources to ensure the effective and efficient utilization of resources within the project.	Information available will be used from the sources identified in Chart 1 to develop the components of the resource management plan.	Data was collected, analyzed using the appropriate data collection tools, and used to determine the resources needed to implement the resource project.
To formulate a Communication Management Plan that will establish how communication will be managed in the project to ensure that all stakeholders are adequately informed.	Information available will be used from the sources identified in Chart 1 to develop the components of the communication management plan.	Data was collected and analyzed using the appropriate data collection tools to identify the key stakeholders for the development of the communication management plan.

Objectives	**Research methods**	
	Analytical	**Mixed Method**
To develop a Risk Management Plan for the identification of potential problems before they occur and can be managed in the project to ensure that it doesn't hinder the project's implementation and success.	The sources identified in Chart 1 were used to create the components of the risk management plan.	The qualitative method was used to gather information from experts and other key stakeholders to analyze and plan how to address the risks.
To create a Procurement Management Plan that will guide the project management unit on how to conduct procurement process that will ensure transparency and accountability in the project.	The sources identified in Chart 1 were used to identify reliable sources and the processes required for the development of the procurement management plan.	This method was used to gather data and, analyzed using the appropriate data collection and analytical tools to develop the components of the procurement management plan.
To develop a Stakeholder Engagement Plan that identifies and documents the involvement and influence of the project stakeholders in the project.	The analytical method was applied by using the information from the sources identified in Chart 1 to create the components of the stakeholder management plan.	Data was collected and analyzed using the appropriate data collection tools to identify the key stakeholders for the development of the stakeholder management plan.

Objectives	Research methods	
	Analytical	**Mixed Method**
To formulate a project management plan focused on regenerative development which aims to achieve the integration of sustainable practices, restore biodiversity, and create a regenerative ecosystem for the benefit of both people and the environment in the project.	The sources identified in Chart 1 were used to create the components of the regenerative development plan.	

Source: Author of the study

3.3 Tools

The PMI defines a tool as something tangible, such as a template or software program, used in performing an activity to produce a product or result (Project Management Institute, 2017, p.725). The article "Techniques for Project Managers" further states that project management tools and techniques make planning and managing projects easier and more effective (Landau, 2022). He further states that the following are some of the tools that every project manager should know to control their projects and steer them to success: Gantt charts, work breakdown structure, project network diagrams, Kanban boards, risk matrix, timesheets, project dashboards, project reports. The tools used to gather information on each objective of this FGP are listed in Chart 3 below.

Chart 3

Tools

Objectives	**Tools**
To create a project charter that will formally authorize the development of the Project Management and allow possible change control that may be required.	- Brainstorming - Meetings - Expert judgement - Charter template
To develop a comprehensive Scope Management Plan that establishes a clear and well-defined framework outlining all necessary processes to ensure successful delivery and completion of the project.	- Expert judgement - Meetings - Scope management plan template - Requirements management plan template - Data analysis - Interviews - Benchmarking - Document analysis - Required traceability matrix template - WBS generator
To develop a Schedule Management Plan that will provide guidance to ensure the completion of the project within the defined timeframe.	-Expert judgement - Meetings - Interviews - Decomposition - Gantt Chart - Microsoft Project 2016 - Data analysis - Bottom – up estimating - Microsoft Excel

Objectives	Tools
To formulate a cost management plan that defines the framework for managing and controlling the project's estimated costs and required resources to ensure that the project remains within the approved budget.	- Expert judgement - Meetings - Interviews - Cost management plan template - Microsoft Project 2016 - Cost aggregation - Historical information review - Data analysis - Forecasting
To develop a Quality Management Plan that guarantees thorough documentation of all necessary information to effectively manage the project, spanning from the planning phase to the delivery stage.	- Expert judgement - Cost of quality - Meetings - Quality management template - Checklist - Audits - Data representation: histograms, flowcharts, affinity diagrams - Questionnaires - Inspections - Approved change request review templates.
To create a Resource Management Plan that clearly outlines the strategies for acquiring necessary resources to ensure the effective and efficient utilization of resources within the project.	- Expert judgement - Meetings - Organizational hierarchical charts - Negotiation - Personnel team assessment templates - Virtual teams - Project performance appraisals

Objectives	Tools
To formulate a Communication Management Plan that will establish how communication will be managed in the project to ensure that all stakeholders are adequately informed.	- Meetings – virtual and face to face - Expert judgement - Communication requirements analysis - Communications methods - Communication management plan template - Status reports - Electronic communications: email, web conferencing, websites - Stakeholder matrix
To develop a Risk Management Plan for the identification of potential problems before they occur and can be managed in the project to ensure it doesn't hinder the project's implementation and success.	- Expert judgement - Meetings - Stakeholder analysis - Risk Management Template - Desktop/Literature Review - Historical data/documents - Probability and Impact Matrix - Risk log - Risk response plan
To create a Procurement Management Plan that will guide the project management unit on how to conduct a procurement process that will ensure transparency and accountability in the project.	- Expert judgment - Market research - Procurement management plan template - Bidder Conferences - Proposal evaluation criteria templates - Proposal template – procurement - Terms of reference - Evaluation report template - Negotiation- Contract templates

Objectives	Tools
	Procurement performance review templates - Inspection and audits
To develop a Stakeholder Engagement Plan that identifies and documents the involvement and influence of the project stakeholders in the project.	- Expert judgement - Stakeholder analysis - Stakeholders register template - Meetings - Power /interest grid - Power/influence grid - Stakeholder management plan template - Stakeholder assessment matrix - Communication methods - Issue log template - Change request template - Project performance reporting templates
To formulate a Project Management Plan focused on regenerative development which aims to achieve the integration of sustainable practices, restore biodiversity, and create a regenerative ecosystem for the benefit of both people and the environment.	- Expert judgement - P5 analysis template - Meetings

Source: Author of the study

3.4 Assumptions and constraints

The Cambridge Dictionary defines “assumption” as something that you accept as true without question or proof, and defines “constraint” as something that limits the range of a person’s action or freedom. PMI further states that an assumption can be defined as “a factor in the planning process that is considered true, real, or certain, without proof or demonstration (Project Management Institute, 2021, p. 235), and a constraint as “a limiting factor that affects the execution of a project, program, portfolio, or process (Project Management Institute, 2021, p. 237). It is crucial for project teams to identify the assumptions and constraints since these can become risks that can have an impact on the project. The assumptions and constraints considered for each specific objective of the FGP are outlined in Chart 4 below.

Chart 2

Assumptions and constraints

Objectives	**Assumptions**	**Constraints**
To create a project charter that will formally authorize the development of the Project Management and allow possible change control that may be required.	All resources will be available to develop the FGP.	Unavailability of information due to poor documentation.
To develop a comprehensive Scope Management Plan that establishes a clear and well-defined framework outlining all necessary processes to ensure successful delivery and completion of the project.	It is assumed that the implementing agency, in this case the Forest Department, and the Third-Party Responsible partners are supportive and collaborative in facilitating and participating in meetings to gather the information needed to develop the scope management plan. It is assumed that the scope management plan includes all the activities identified by the stakeholders, and both the project management team and the stakeholders agree on the scope of the project.	Poor understanding of the needs of the stakeholders or vice-versa may cause changes in the scope of the project, which can result in delays and cost overruns which will have a direct impact on the budget and the project.

Objectives	Assumptions	Constraints
	It is assumed that the scope management plan identifies all the work required.	
To develop a Schedule Management Plan that will provide guidance to ensure the completion of the project within the defined timeframe.	It is expected that implementing partners will be able to deliver tasks as per agreed timelines. It is assumed that the project team will complete the project milestones according to the schedule.	Implementing partners do not complete the work on the given schedule, causing a delay in activities that are dependent on those results.
To formulate a cost management plan that defines the framework for managing and controlling the project's estimated costs and required resources to ensure that the project remains within the approved budget.	It is assumed that the budget developed will be detailed and realistic. All activities were budgeted. The project will be completed within the approved budget.	The budget required for the implementation of the activities must not exceed the available budgets.
To develop a Quality Management Plan that guarantees thorough documentation of all necessary information to effectively manage the project spanning from the planning phase to the delivery stage.	The quality management plan will identify all the quality requirements of the project. It is assumed that the project scope remains stable and that major changes will not occur that will impact the quality requirements.	The sponsor may not be satisfied with the quality of the product, in this case, consultancies and will not want to accept the end product.

Objectives	Assumptions	Constraints
	It is assumed that suppliers will meet the specified standards.	
To create a Resource Management Plan that clearly outlines the strategies for acquiring necessary resources to ensure the effective and efficient utilization of resources within the project.	It is expected that the resources management plan will include all resources: human, equipment, materials or any other resource needed to complete the project.	The resources needed may not be readily available in the country.
To formulate a Communication Management Plan that will establish how communication will be managed in the project to ensure that all stakeholders are adequately informed.	It is assumed that the project manager, project team, and all relevant stakeholders fully understand the project and its deliverables. The communication methods will be effective in maintaining clear and open channels of communication with the stakeholders.	There are existing rules or polices for communication that may not align with those from the project. Not all stakeholders are acquainted with the use of modern technology for communication.
To develop a Risk Management Plan for the identification of potential problems before they occur and can be managed in the project to ensure that they do not hinder the project's implementation and success.	It is assumed that all risks have been identified and categorized. And a risk response has been developed. The risk log will constantly be revised by the project team.	Unforeseen risks such as environmental events (hurricanes, fires) may occur during the project

Objectives	Assumptions	Constraints
		that can greatly impact the project schedule and budget.
To create a Procurement Management Plan that will guide the project management unit on how to conduct a procurement process that will ensure transparency and accountability in the project.	It is assumed that a robust procurement plan will be developed that will highlight both national and international procurement processes. It is assumed that there are clear, established, and recognized procurement guidelines by the government. It is also assumed that there are no conflicting procurement guidelines between those of the project sponsor and the executing entity which will cause a delay in procurement.	Delays in shipment and availability of goods and services will impact project delivery. The approval process for procurement is lengthy; thus, purchasing of materials and supplies will be delayed and affect the project schedule.
To develop a Stakeholder Engagement Plan that identifies and documents the involvement and influence of the project stakeholders in the project.	It is assumed that all stakeholders will be involved and will maintain their level of interest and collaboration in the project.	Stakeholders might lose interest during the lifecycle of the project.

Objectives	Assumptions	Constraints
	It is assumed that all stakeholders are identified, involved, and kept informed throughout the project.	
To formulate a Project Management Plan focused on regenerative development which aims to achieve the integration of sustainable practices, restore biodiversity, and create a regenerative ecosystem for the benefit of both people and the environment.	It is assumed that the project activities will contribute to achieving the sustainable development goals, and will have a positive impact on the people and the environment.	The project team is not familiar with and does not understand the P5 Impact Analysis results.

Source: Author of the Study

3.5 Deliverables

A deliverable can be defined as any unique and verifiable product, result, or capability to perform a service that is required to be produced to complete a process, phase, or project (Project Management Institute, 2021, p. 239). The Cambridge Dictionary further describes “deliverable” as something that can be provided or achieved as a result of a process. The article “What is a Project Deliverable? Definition, Examples & More” states that projects produce deliverables, which are simply the results of project activities (Malsam, 2023). The deliverables considered for each specific objective of the FGP are outlined in Chart 5 below.

Chart 5

Deliverables

Objectives	Deliverables
To create a project charter that will formally authorize the development of the Project Management and allow possible change control that may be required.	- FGP Project Charter - Theoretical Framework - Methodological Framework
To develop a comprehensive Scope Management Plan that establishes a clear and well-defined framework outlining all necessary processes to ensure successful delivery and completion of the project.	- Scope Management Plan - Scope statement - Traceability requirement matrix - WBS & its dictionary
To develop a Schedule Management Plan that will provide guidance to ensure the completion of the project within the defined timeframe.	- Schedule Management Plan - Gantt Chart - List of responsible personnel
To formulate a cost management plan that defines the framework for managing and controlling the project's estimated costs and required resources to ensure that the project remains within the approved budget.	- Cost Management Plan - Budget - Cash flow - Curve "s"
To develop a Quality Management Plan that guarantees thorough documentation of all necessary information to effectively manage the project, spanning from the planning phase to the delivery stage.	- Quality Management Plan - Standard checklists - Guidelines
To create a Resource Management Plan that clearly outlines the strategies for acquiring necessary resources to ensure the effective and efficient utilization of resources within the project.	- Resource Management Plan - List of resource needed - Organizational hierarchical chart - Appraisal forms

Objectives	Deliverables
To formulate a Communication Management Plan that will establish how communication will be managed in the project to ensure that all stakeholders are adequately informed.	- Communication Management Plan - Status reports - Organogram
To develop a Stakeholder Engagement Plan that identifies and documents the involvement and influence of the project stakeholders in the project.	- Stakeholders register - Stakeholder Engagement Plan - Stakeholder assessment matrix
To create a Procurement Management Plan that will guide the project management unit on how to conduct a procurement process that will ensure transparency and accountability in the project.	- Procurement Management Plan - Proposal Evaluation Criteria - Terms of Reference - Contract Templates
To develop a Risk Management Plan for the identification of potential problems before they occur and can be managed in the project to ensure that they do not hinder the project's implementation and success.	- Risk Management Plan - Risk Log - Monitoring Plan
To formulate a Project Management Plan focused on regenerative development which aims to achieve the integration of sustainable practices, restore biodiversity, and create a regenerative ecosystem for the benefit of both people and the environment.	- P5 Impact Analysis Report - Report on its contribution on the SDGs

Source: Author of the Study

4 RESULTS

4.1 Integration Management Plan

4.1.1 Integration Management

This section will include the project charter, develop the project management plan, direct and manage project tasks, manage project knowledge, monitor and control project tasks, perform integration change management, and project closure.

4.1.2 Develop Project Charter

The project charter detailed in Chart 6 contains general information about the IMPL project. The charter includes the estimated start and end dates, general and specific objectives, a brief description of the service and/or product, and an explanation of how the project's product or deliverables will help accomplish the project's objectives. It will also include an overview of the projects' assumptions, risks and constraints that will guide the project team on how to prevent or address them to prevent possible disruptions or changes in the project's life cycle. Additionally, the charter will also include a list of the project milestones and its respective stakeholders.

The IMPL project implementing partners along with the project sponsor have estimated that the budget to complete the IMPL project is USD $5,183,933.00, and the time needed for its full implementation is five years.

The executing party, in this case the Chief Executive Officer of the MSDCCDRM, and the project sponsor must review, agree, and sign the project charter. The signing of the project charter indicates that the project sponsor commits to providing the approved

funding and support to the project. The signing by the CEO signifies the commitment to execute the project.

The project team will use the templates for the Lessons Learned Register and the Change Request Forms presented in this section.

Chart 6.

Project Charter

PROJECT CHARTER	
Date	**Project Title**
March 7th, 2024	Integrated management of production landscapes
Knowledge areas/processes	**Application area (industry or sector)**
Knowledge areas: project integration management, project scope management, project schedule management, project cost management, project quality management, project resource management, project communications management, project stakeholder management, project procurement management, project risk management. **Processes:** Initiating, Planning, Executing, Monitoring, and Controlling	Environment
Start date	**End date**
February 2023	**January 2028**
Project Objectives (General and Specific)	
General Objective:	

To mainstream biodiversity conservation and sustainable land/water management into production landscapes in Belize.

Specific objectives:

- To contribute to the reduction in loss of biodiversity and degradation of production landscapes in Belize.
- To reverse fragmentation of forest ecosystems, biodiversity loss, and land degradation within the production landscapes in the BRW with ecosystem remnants that are highly important in their role as biological corridors.
- To deliver GEBs using a participatory approach that ensures the equal distribution of benefits among men and women, with 1,700 people directly benefiting from the project.
- To promote connectivity between key biodiversity areas (KBAs) and forest remnants in production landscapes.

Project justification/purpose

The Belize River Watershed currently faces numerous threats including habitat loss, unsustainable exploitation of forest resources, clearing of riparian vegetation, pollution, soil fertility decline, and increased erosion due to deforestation and conversion of forested land to agriculture. The transition from farming on marginal lands adds to these challenges, heightening vulnerability to climate change. Complicating matters, biodiversity and sustainable land/water management rely on various public agencies with overlapping functions, which hinder coordinated efforts for joint programming and enforcement. Integrated management of production landscapes is essential to deliver multiple global environmental benefits.

The project aims to tackle challenges like forest ecosystem fragmentation, biodiversity loss, and land degradation in the Belize River Watershed. It specifically

targets the preservation of ecosystem remnants functioning as vital biological corridors. Using a participatory approach ensures fair distribution of benefits between men and women.

To curb this situation, the government of Belize has developed several policies, such as, the Agroforestry Policy, and strategies such as the National Landscape Restoration Strategy and projects.

Project product or services – key deliverables:

The project has four main deliverables:

- The main deliverables under component number one are: developing an enabling environment (policies, financial mechanisms, and building institutional capacities) to deliver multiple Global Environmental Benefits through sustainable management of production landscapes in the BRW.
- The deliverable under component two is to deliver multiple GEBs through sustainable production and improved key agricultural and forest products in the BRW.
- The deliverables under component three is systematizing best practices and lessons learned about biodiversity, conservation, and sustainable land and water management in production landscapes in the BRW

Assumptions

- The budget allocated for the project is sufficient for its successful completion.
- The political will exists to implement the legal and policy reforms needed for mainstreaming biodiversity and promoting integrated watershed management and SLM production landscapes.
- National institutions will have the capacity for effective planning, implementation, monitoring, and enforcement.
- Producers will actively be engaged in implementing sustainable production practices, and using LMTS will contribute to biodiversity conservation and SLM

- ❖ Markets will exist for sustainable products.
- ❖ Climate change and variability will be within normal ranges and the project outcomes will not be affected.

Constraints

- ❖ Project team fails to engage all relevant stakeholders.
- ❖ Landowners do not fully understand the importance of SLM; thus, they are reluctant to incorporate best practices in their farms.
- ❖ The project needs to be implemented within the specified budget and timeframe.
- ❖ There have been changes in the different agencies; therefore, current staff are not familiar with the project's concept, and give limited support to implementation. The area is very prone to flooding and other natural disasters such as fires.

Preliminary Risks

- ❖ Lack of understanding and cooperation among the implementing partners may cause a delay in the implementation of activities.
- ❖ Lack of commitment from third party responsible partners to implement the project.
- ❖ The procurement process is lengthier than expected, causing a delay in project implementation.
- ❖ Project team fails to engage all respective stakeholders to adopt improved practices.
- ❖ Limited implementation capacity constraints of the government due to staff limitations.
- ❖ Extreme climatic events, such as hurricanes, tropical storms, droughts, wildfires, may jeopardize the restoration and other biodiversity initiatives.
- ❖ Changes to the use of lands and resources by landowners.

Budget

FINANCING PLAN

GEF Trust Fund	USD 5,108,933

UNDP TRAC Resources	USD 75,000
Total Budget administered by UNDP	**USD 5,183,933**
PARALLEL CO-FINANCING	
UNDP	USD 500,000
Ministry of Natural Resources	USD 548,000
Ministry of Sustainable Development, Climate Change and Disaster Risk Management	USD 1,955,000
University of Belize Environment Research Institute	USD 1,296,754
Friends for Conservation and Development	USD 345,000
Santander Sugar Group	USD 15,000,000
Total Co-financing	**USD 19,644,574**
Grand-Total Project Financing	**USD 24,828,507**

Project Milestones

Activity	**Dates**
Project Document Signature	**March 2023**
Inception Workshop	**March 2023**
Signing of Third-Party Responsible Agreements	**June 2023**
Disbursement of funds	**July 2023 and every quarter thereafter for the next 5 years.**
PIR Reports	**2024, 2025**
Mid-term Review	**January 2026**
Terminal Evaluation	**October 2027**
Closure of project	**January 2028**

Project Stakeholders (Direct and Indirect Stakeholders)

Direct Stakeholders:

- Project Sponsor
- Project Manager

<table>
<tr><td colspan="2">

Ministry of Sustainable Development, Climate Change and Disaster Risk Management
Forest Department
Hydrology Department, Ministry of Natural Resources.
Agriculture Department, Ministry of Agriculture and Food Security
Belize Livestock Producers Association
Friends for Conservation and Development
National Biodiversity Office
Department of Environment
Communities
Farmers

Indirect Stakeholders:

University of Belize
Communities
Women’s Group
Other Government agencies

</td></tr>
<tr><td>Project Manager: Yanira Pop</td><td>Signature:</td></tr>
<tr><td>Project Director:</td><td>Signature</td></tr>
<tr><td>Project Sponsor:</td><td>Signature:</td></tr>
</table>

Source: The author of the study

4.1.3 Project Management Plan

The PMBOK 6th Edition (2017) defines the project management plan as the document that describes how the project will be executed, monitored, and controlled.

a. **Change Control:** To control and monitor the project progress in a very organized manner; all change requests will be recorded on a Change Request Form as can be

seen in Chart 7. This change request form must clearly state and describe the type of change request that is required. This control is done to keep proper documentation and record all approvals needed by the sponsor. It is important to highlight that Change Requests may be done at two different levels: an inside-the-scope change and the outside-the-scope change.

The inside-the-scope change request involves small corrections to the existing requirement and has little impact on the cost or schedule and does not have an impact on the project goals or budget. These requests are changes in tasks that have been included in the project, for example, the implementation of activities from year two of the project to year one of the project as per the established project timeline. This request is submitted to the project manager for its revision and input then submitted to the project board for its approval. These changes will only require the signature of the Project Manager, Project Director, Project Board Chair.

The outside the scope change requests are those that are not included, take time to implement and will have a greater impact on various aspects of the project. In most cases these changes will have a direct impact on the objectives and goals of the project. An example of this is when request for the re-purposing of funds from one component to another or on certain occasions where changes must be made due to external factors such as the acceptance of a community in the project implementation. These changes will need approval from both the Project Board and the Project Sponsor since they are outside of the project scope and may have a direct impact on the project deliverables. As can be seen in Chart 7 this request will

require the three approvals: Project Manager, Project Director, Project Board Chair and Project Sponsor.

Chart 7.

Change Request Form

CHANGE REQUEST FORM		
Type of Change Request: 1. Inside-the scope 2. Outside-the-scope		
Change Description		
Project Name:	**Change Name:**	**Number**
Requested By:	**Contact:**	**Date:**
Description Change:		
Reason for Change:		
Priority (Circle One): 1. High 2. Medium 3. Low		
Impact on Deliverables:		
Impact of NOT Responding to Change (and Reason Why):		
Date Needed:	**Approval of Request:**	**Date:**
CHANGE IMPACT		
Tasks/Scope Affected:		
Cost Evaluation		
Risk Evaluation		
Quality Evaluation		
Additional Resources:		
Duration:		
Additional Effort:		
Impact on Deadline:		
Alternative and Recommendations:		
Comments:		
SIGN OFFS		
Circle One: 1. Accepted 2. Deferred 3. Rejected 4. More Info Requested		
Comments:		
Project Manager Signature:		**Date:**
Project Director Signature:		**Date:**
Project Board Chair Signature:		**Date:**
Project Sponsor Signature:		**Date:**

Source: Project Manager: Change Request Form. (2023, September).

b. Lessons Learned Register

The project manager, as part of her responsibility, is expected to update the Lessons Learned Register that will document all newly acquired knowledge and experiences from the planning to the completion phase of the IMPL project. These records will guide the implementation of other projects and can be used for decision making by sponsors and other project teams with the objective to prevent the occurrence of similar situations. The Lessons Learned Register includes the name of the project, project manager, the project sponsor, the estimated project budget and the actual project cost, the estimated project start and end dates, and the actual end date. The Lessons Learned will be recorded and described according to the process involved, the deliverables produced, any problems encountered, their solutions, additional resources needed and responsible actors. Chart 8 below depicts the template that will be used as the Lessons Learned Register for the IMPL Project.

Chart 8.

Lessons Learned Register

Project Name:								
Project Sponsor:					**Project Manager:**			
Estimated project start date:		**Estimated Project end date:**			**Actual project end date:**		**Delay:**	
Estimated budget:		**Final project cost:**			**Variation**			
Lessons learned								
No.	**WIN or ISSUE**	**Describe what happened**	**What was the Impact**	**Solution or Action Taken**	**Time**	**Additional Cost**	**Resources Needed**	**Responsible**
1.								
2.								

Source: Project Manager, 2023. Modified by the author.

c. Project Closure

Project closure is a critical phase in project management that involves completing all project activities, obtaining stakeholder acceptance, and formally closing the project. The project closure process for the IMPL Project is:

1. Final Deliverable Verification by component.
2. Quality Assurance Review by UNDP.
3. Regulatory Compliance Check
4. Financial Closure
5. Documentation Completion
6. Lessons Learned Review
7. Project Closeout Report
8. Equipment and Asset Handover
9. Archiving of Project Documentation
10. Closure of Project Accounts
11. Post-Project Evaluation
12. Formal project closure event

4.2. Scope Management Plan

4.2.1 Introduction

The Scope Management Plan is defined as a “component of the project management plan that describes how the scope will be defined, developed, monitored, and controlled” (PMI, 2021). This Scope Management Plan provides the scope framework for the

Integrated management of production landscapes to deliver multiple global environmental benefits (IMPL) project in such a manner that it will ensure that it can finish within schedule and budget. It documents the scope management approach, roles and responsibilities based on the project scope, scope definition, scope baseline, verification and scope change, and control mechanism. This plan also documents the Requirements Management Plan.

The objective of the IMPL project is to mainstream biodiversity conservation and sustainable land/water management into production landscapes in Belize. This objective will be achieved through three project components: (1) Enabling environment (policies, financial mechanisms, and institutional capacities) for delivering multiple global environmental benefits (GEBs) through the sustainable management of production landscapes; (2) Delivering multiple GEBs through sustainable production and improved value chains for key agricultural and forest products from the Belize River Watershed (BRW); and (3) Knowledge management and learning. The project objective is in line with the Global Environmental Facility (GEF) objective to reverse fragmentation of forest ecosystems, biodiversity loss, and land degradation within production landscapes in the BRW as well as with UNDP Strategic Plan Output 1.3: Solutions developed at national and sub-national levels for sustainable management of natural resources, ecosystem services, chemicals and waste.

4.2.2 Collect Requirements

The collect requirements process includes gathering and documenting stakeholder needs and expectations to define the project scope. This process involves identifying both

the functional and non-functional requirements, documenting them in a clear and comprehensive manner, and gaining support among stakeholders on these requirements. The main outputs of the collect requirements are the requirements documentation and the requirements traceability matrix, which help the project manager to understand the relationship between the requirements, and enable the project manager to track the project requirements from the start of implementation to validation. The requirements traceability matrix is used throughout the IMPL project as can be seen in Chart 9.

Chart 9.

Requirement Traceability Matrix (Source: Author of the study)

ID	Requirements Description	Business Needs, Opportunities, Goals, Objectives	Project Objectives	Verification	Priority
R1	Signing of Third-Party Responsible Agreement	Authorization to act as Implementing partners and get funds disbursed.	To ensure project deliverables are obtained.	Signed TPRA between MSDCCDRM and TPRA partners.	High
R2	Project Team to have experience in project management	Prevent delays in project implementation.	To ensure successful project delivery	Completed	High
R3	Stakeholder Participation	To ensure stakeholder buy in for the IMPL Project.	Adoption of best practices.	Active participation in sessions and workshops.	Medium

ID	Requirements Description	Business Needs, Opportunities, Goals, Objectives	Project Objectives	Verification	Priority
R4	Project Budget Management	Cost control and efficiency.		Budget Review and Approval	High
R5	Communication Plan	To keep all stakeholders informed about the project.	Decision making	Fast feedback on documents.	High

Source: Author of the study

4.2.3 Scope Management Approach

This project is defined through the Scope Statement, Work Breakdown Structure (WBS), and the WBS Dictionary.

The responsible entity for the scope management of the IMPL project is the Project Board, also referred to as the Project Steering Committee. It comprises representatives from the Ministry of Sustainable Development Climate Change and Disaster Risk Management (MSDCCDRM), United Nations Development Program (UNDP), Ministry of Economic Development, Ministry of Natural Resources (MNR), Ministry of Rural Development, the University of Belize, Galen University, Forest Department, Department of Agriculture, Hydrology Unit, Department of Environment, Friends for Conservation and Development (FCD), the Protected Areas Conservation Trust (PACT). It was unanimously voted that a

representative from the Technical Advisory Committee will also form part of the project board.

The Technical Advisory Committee (TAC) is a group that has specialized knowledge and skills, and it advises on direct interventions within the project. The TAC makes recommendations and/or provides key information and materials to the project manager and the project board. It is composed of representatives from the Forest Department, Friends for Conservation and Development, Ministry of Agriculture, Ministry of Natural Resources, National Biodiversity Office, UB-ERI; Belize Livestock Producers Association (BLPA), Department of Environment, and Sustainable Development.

4.2.4 Roles and Responsibilities

A team composed of individuals with different levels of expertise is responsible for the successful management of the project scope. Chart 10 below defines the roles and responsibilities of the key stakeholders that will ensure that only the approved project activities are done and completed within the project scope, schedule and budget.

Chart 10

Scope Management Roles and Responsibilities

Role	**Description of Responsibility**
Project Sponsor	Provide financial resources Approve or deny change order requests Propose scope changes
Implementing Partner	-Responsible and accountable for executing the project.

Role	Description of Responsibility
Implementing Partner	-Project planning, coordination, management, monitoring, evaluation and reporting. -Risk Management - Procurement of goods and services, including human resources.
Implementing Partner	- Financial management, including overseeing financial expenditures against project budgets. - Approving and signing the multiyear workplan. - Approving and signing the combined delivery report at the end of the year. - Signing the financial report or the funding authorization and certificate of expenditure.
Third Party Responsible Partners	Same responsibilities as the Implementing Partner.
Project Board	- Serve as the Change Control Board. - Provide over all guidance and direction to the project, ensuring that it remain within any specified constraints. - Address project issues as raised by the project manager. - Provide guidance on new project risks and approve possible mitigation and management actions to address specific risks. - Agree on project manager's tolerances as required, within the parameters set by UNDP-GEF, and provide

Role	Description of Responsibility
Project Board	- direction and advice for exceptional situations when the project manager's tolerances are exceeded. - Advise on major and minor amendments to the project within the parameters set by UNDP-GEF. - Ensure coordination between various donor and government-funded projects and programs. - Ensure coordination with various government agencies and their participation in project activities. - Track and monitor co-financing for this project. - Review the project progress, assess performance, and appraise the Annual Work Plan for the following year. - Appraise the annual project implementation report, including the quality assessment rating report. - Address project level grievances. Ensure commitment of human resources to support project implementation, arbitrating any issues within the project - Address project-level grievances. - Review combined delivery reports prior to certification by the implementing partner. - Provide direction and recommendations to ensure that the agreed deliverables are produced satisfactorily according to plans. - Approve the project Inception Report, Mid-term Review and Terminal Evaluation reports, and corresponding management responses.

Role	Description of Responsibility
Project Board	- Review the final project report package during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up. - Ensure highest levels of transparency and take all measures to avoid any real or perceived conflicts of interest.
Project Manager	-Ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints time and cost. - Provide direction and guidance to the project team(s)/responsible party(ies). - Liaise with Project Board to assure overall direction and integrity of the project. Identify and obtain support and advice required for the management, planning and control of the project. Responsible for project administration. - Capture lessons learned during project implementation. -Manage requests for the provision of financial resources by UNDP, through advance of funds, direct payments or reimbursement using the fund authorization and certificate of expenditures. - Monitor financial resources and accounting to ensure the accuracy and reliability of financial reports. Prepare and submit financial reports to UNDP on a quarterly basis.

Role	Description of Responsibility
Project Manager	- Manage and monitor the project risks initially identified and submit new risks to the project board for consideration and decision on possible actions if required; update the status of these risks by maintaining the project risks log. - Prepare the annual workplan for the following year and update the Atlas Project Management module if external access is made available. - Prepare the GEF PIR and submit the final report to the Project Board. - Based on the GEF PIR and the Project Board review, prepare the AWP for the following year. - Ensure that the mid-term review process is undertaken as per the UNDP guidance and submit the final MTR report to the Project Board. - Identify follow-on actions and submit them for consideration to the Project Board. Ensure that the terminal evaluation process is undertaken as per the UNDP guidance and submit the final TE report to the Project Board.
Project Director	-Represents the Implementing Partner. - Has an overall accountability for the project. - Responsible for supervising the project activities. - Chairs the Project Board. - Provides overall management of the project.
Project Management Team (PMU)	-Assists the Project Manager with the daily management of project activities.

Role	Description of Responsibility
Project Management Team (PMU)	- Directed by the Project Manager. - Operational planning, managing and executing the project activities. - Coordinating the management of financial resources and procurement. - Preparing reports and proposals for adaptive management of the project, if required. - Promote inter-institutional synergies. - Dissemination of project results.
Technical Advisory Committee (TAC)	- Make recommendations and/or provide key information and materials to the project manager and the board.
Stakeholders	-Receive project deliverables and associated benefits.

Source: Author of the study

4.2.5 Scope Definition

The scope for the IMPL Project was defined through a comprehensive requirements collection process that was carried out by UNDP (the responsible partner) and the MSDCCDR (Implementing partner/executing agency).

4.2.6 Scope Baseline

The Scope baseline of a project not only ensures that the project remains within schedule and budget, but it also gives guidance on the steps needed to obtain the deliverables. The Scope Baseline for the IMPL Project is the approved specific version of

the detailed project scope statement, work breakdown structure (WBS) and its WBS dictionary.

- **Project Scope Statement**

The project scope statement breaks down the full scope of the project which includes the description of the project scope, major deliverables, constraints, and exclusion, assumption, and acceptance criteria. These key elements are described as follows:

- **Project Scope Description**

The IMPL Project aims to mainstream biodiversity conservation and sustainable land/water management into production landscapes in Belize. This project will be implemented in the Belize River Watershed and will be accomplished through four main project components.

Component 1: Enabling Environment

- Output 1.1 Revised and harmonized policies and legislation
- Output 1.2 Improved monitoring and enforcement of legislation.
- Output 1.3 Diversified financial incentives developed and established.
- Output 1.4: Expanded information management systems.
- Output 1.5: Multi-tiered training program.

Component 2: Delivering multiple GEBs.

- Output 2.1: Landscape management tools in priority areas.
- Output 2.2: “Water Master Plan for the BRW
- Output 2.3: At least two incentives to promote sustainable agriculture and forest production piloted.

- Output 2.4: Gender responsive extension work program.
- Output 2.5: Business management capacity of producers (including women) to implement sustainable practices improved through targeted training and technical support for agrobusiness development and private and cooperative support services.
- Output 2.6: Awareness program for producers, technicians, and government officials in the production sector (agriculture, tourism, forestry, and urban development and industry), builds capacity to sustain and maintain the environmental and socioeconomic benefits of sustainable production practices and the availability of financial incentives and facilitate on-going implementation.
- Output 2.7: Participatory monitoring program assesses the delivery of GEBs: biodiversity conservation and integrated watershed management to improve hydrological functions and agro-ecosystem productivity.
- Output 2.8: "Micro-granting scheme with provides direct incentives/ investments to local communities participating in riparian restoration, conservation".

Component 3: Knowledge Management and Learning.

- **Output 3.1 Gender responsive programs**
- **Output 3.2 Experiences, best practices lessons learnt**

Component 4: Project Management

- **Output 4.1: Adaptive Project Management**
- **Output 4.2: UNDP Administration**

❖ **Project Acceptance Criteria**

The following requirements must be met for the project to be accepted as complete:

1. All the work captured in the Scope baseline is completed within budget and timeline.

❖ **Project Exclusions**

The Scope of the project does not include any activity that does not assist in the accomplishment of the project outcomes.

❖ **Project Constraints**

The project should not exceed UDS $5,108,933. In addition, the project duration should not exceed five (5) years to substantial completion and six (6) months after the three years for the final closure.

❖ **Project Assumptions**

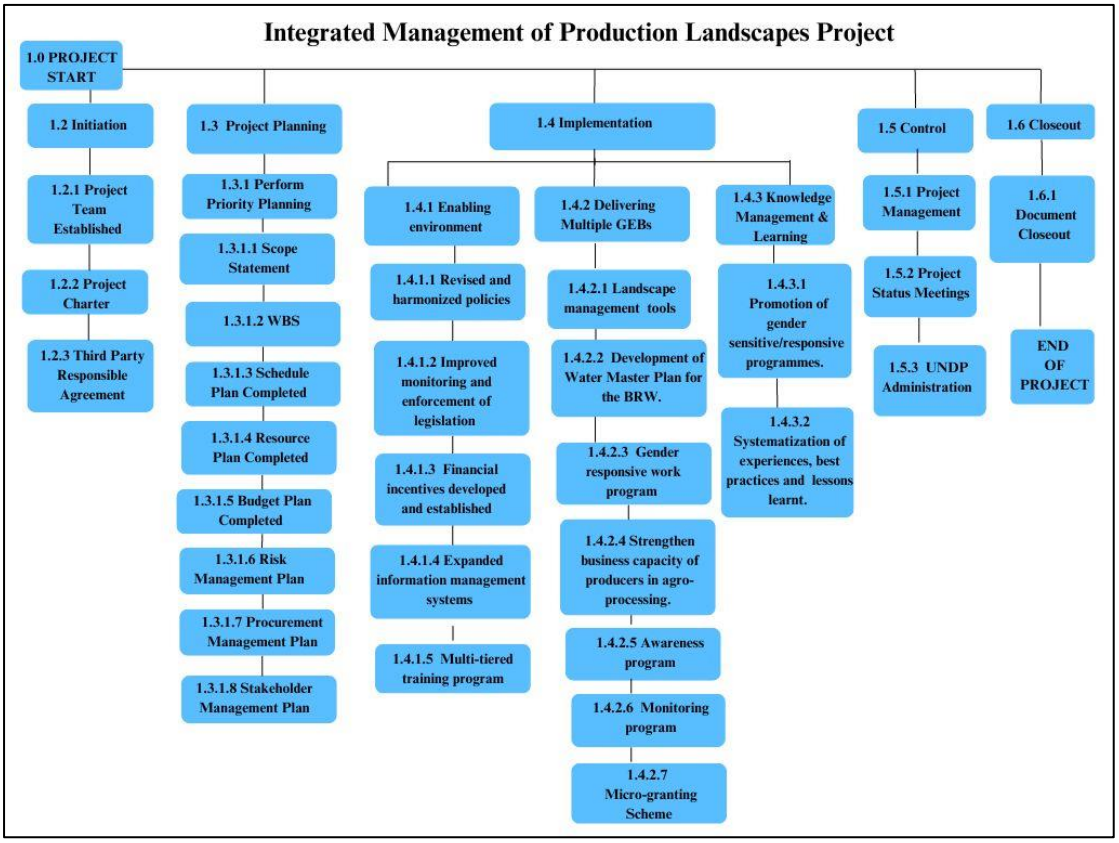
1. **Budget:** It is assumed that the funds available are sufficient to execute all the project activities to achieve the project goals.
2. **Work Force:** It is assumed that there are enough skilled workers and consultants that are competent for the project's required activities.
3. **Schedule:** It is assumed that the project will be completed in the fifth year, with an additional six (6) months allocated for financial closure.
4. **Planning:**
    - It is assumed that the Ministry of Finance and the Contractor General will approve the contracts for the required contractual services.
    - Project board members can attend meetings to participate and make crucial decisions.

4.2.7 Work Breakdown Structure (WBS)

The WBS has been created to decompose the project into smaller, more manageable components that will allow the stakeholders to clearly understand the scope of the work required for the successful completion of the project. It also provides a hierarchical structure that organizes project tasks and deliverables in a logical manner that will allow the project manager and the project team to allocate resources, assign responsibilities and track the progress of the project. The following is the WBS for the IMPL Project:

Figure 11.

WBS: IMPL Project



Source: The author of the Study

WBS Dictionary

The WBS Dictionary is a complement to the WBS that conveys detailed information about each component and is one of the three pillars that support project scope management (Lopez, 2021). The following WBS Dictionary will list details of the tasks, activities, work description, dependencies and resources needed. This will help the Project Manager develop a detailed schedule baseline.

Chart 11

WBS Dictionary

WBS	Task Name	Description of Work	Resource Names
0	**ILMP Project**		
	ILMP		
1	ILMP Project Start		
1.2	**Initiation**		
1.2.1	Project Team Established	The selection and contracting of the Project Team and the meeting kickoff held.	PD
1.2.2	Project Charter Developed	Creation and approval of the project charter.	PM, PMU
1.2.3	Signed Third Party Responsible Agreement (TPRA)	Development and approval of the TPRA	PM, Legal Advisor
1.3	**Project Planning**		
1.3.1	**Perform Priority Planning**		
1.3.1.1	Scope Statement	Define Scope and objectives.	PM
1.3.1.2	WBS	Development of a work breakdown structure (WBS)	PM, PFA
1.3.1.3	Schedule Plan Completed	Development of the Schedule Plan	PM, PFA, TPRP
1.3.1.4	Resource Plan Completed	Development of the Resource Plan	PM, PFA, TPRPs
1.3.1.5	Budget Plan Completed	Development of the Budget for the approved project activities.	TPRPs, PFA, PM
1.3.1.6	Risk Management Plan Completed	Development of the Risk Management Plan	PM, PFA, PMU
1.3.1.7	Procurement Management Plan Completed	Development of the Procurement Management Plan	PM, PMU
1.3.1.8	Stakeholder Management Plan Completed	Development of the Stakeholder Management Plan	PM, PMU
1.4	**Implementation**		**PM, PMU, TPRP**
1.4.1	**Enabling Environments**		

WBS	Task Name	Description of Work	Resource Names
1.4.1.1	**Revised, harmonized policies**		
1.4.1.1.1	Clarification of agencies mandates	Revision of water legislation through a consultancy	PM, TPRP, TAC, Consultant
1.4.1.1.2	National coordinating effort defined and enabled.	Establishment of a national water task force	PM, TRRP, Consultant
1.4.1.1.3	Development and strengthening of protocols for inter-institutional co-ordination	Development and contracting of a consultant for the development of the protocols	Consultant, TPRP
1.4.1.2	**Improved monitoring and enforcement of legislation**		
1.4.1.2.1	Participatory awareness enforcement strategy	Development of a communication awareness strategy	TPRP, PM, Communication Strategist (CS)
1.4.1.2.2	Sensitization for communities/stakeholders	Development of a communication awareness strategy	CS, TPRP, PM
1.4.1.2.3	Workshops for the revision of water legislations and regulations.	Create workshops based on availability of the communities	TPRP, PM, CS
1.4.1.2.4	Equipment and infrastructure	Identification and procurement of necessary equipment	PM, PFA, TPRP, PO
1.4.1.2.5	Training program developed	Development of training modules based on the household surveys	TPRP, Consultant
1.4.1.2.6	Community-based monitoring program	Design and implementation of the monitoring program	PM, TPRP
1.4.1.2.7	Routine surveys for environmental compliance	Co-ordinate joint patrols and monitoring activities in the BRW	TPRP,
1.4.1.3	**Financial incentives developed and established**		
1.4.1.3.1	Technical Assistance of Financial Strategist (FS)	Development of a ToR, contract and hiring of the financial strategist.	PM, PMU

WBS	Task Name	Description of Work	Resource Names
1.4.1.3.2	Design of incentive program	Development and approval of an incentive program	FS, PM
1.4.1.3.3	Amendments to existing strategies, programs, policies and legislation	Desktop review, consultations and presentation of proposed amendments	Legal advisor (LA), TPRP
1.4.1.3.4	Socialization of the financial incentives program	Conduct community sessions to present the financial incentives program	CS, FA, TPRP
1.4.1.4	**Expanded information management systems**		
1.4.1.4.1	Adoption of "environmental" KPI	Creation and adoption of the environmental KPI to support gender disaggregated data	Consultant, TPRP, PM, FA
1.4.1.4.2	Establishment of protocols for data gathering, collecting, storing and validating	Creation, consultation of proposed protocols for data gathering, collecting, storing and validating	Consultant, TPRP, PM
1.4.1.4.3	Expand capabilities of the National Statistics System	Conduct capacity building sessions with relevant stakeholders	Consultant, PM
1.4.1.4.4	Training of personnel in information collection, management and sharing	Development of a training guide and schedule.	Consultant, PM
1.4.1.5	**Multi-tiered training program**		
1.4.1.5.1	Needs assessment	Consultancy to identify the communities' needs in planning, monitoring and enforcement.	Consultant, PM, TPRP
1.4.1.5.2	Capacity Building	Support to national staff and BRW stakeholders in capacity building opportunities	PM, Consultant, TPRP
1.4.2	**Delivering multiple GEBs**		
1.4.2.1	**Landscape management tools**		
1.4.2.1.1	Conservation agreements developed and signed	Development, consultation signing and implementation of voluntary conservation agreements	Consultant, PM, TPRP
1.4.2.1.2	Rehabilitation and management strategies implemented	Establishment of nurseries and emergency seed banks.	Consultant, PM, TPRPs, Stakeholders

WBS	Task Name	Description of Work	Resource Names
1.4.2.1.3	Riparian forest restoration strategy implemented	Design and implement a forest restoration strategy in the BRW	Consultant, TPRP, PM
1.4.2.1.4	Forest protection strategy implemented	Design and implement a forest protection strategy in the BRW	TPRP, Consultant
1.4.2.1.5	Equipment, infrastructure and training	Equip field-based centers and train personnel on the use of innovative equipment	Consultant, TPRP, PM, PO
1.4.2.1.6	Grazing reform/pasture management program	Develop the pasture management program and conduct training with key stakeholders	TPRP, Consultant,
1.4.2.1.7	Establish an emergency seed bank	Procure materials and establish an emergency seed bank	TPRP, Consultant
1.4.2.1.8	Expand and equip the National use of Earth Observation Platform	Procure equipment and provide training for improved land use change monitoring	Consultant, TPRP, PO
1.4.2.2	**Development of Water Master Plan for the BRW.**		
1.4.2.2.1	Consultancy for the Master Plan for the BRW	Development of ToR, hiring of consultant	Consultant, TPRP, PM
1.4.2.2.2	Socialization for the Master Plan for the BRW	Conduct validation sessions and public awareness to disseminate the BRW Master Plan	Consultant, TPRP, PM
1.4.2.3	**Gender responsive work program**		
1.4.2.3.1	Support extension work program	Hiring of extension officers to support the farmers	TPRP, PM, Consultant
1.4.2.3.2	Green value chains	Development and application of 2 commodity sectors and their application of green value chains	TRRP, PM, Consultant
1.4.2.3.3	Update farmer field school curriculum	Revision, updating and socialization of the farmer field school	TPRP, Consultant, Stakeholders
1.4.2.3.4	Community outreach	Support to community outreach	TPRP, PMU, CS
1.4.2.3.5	Knowledge exchange on value chains	Develop exchange of experience sessions for value chain actors	Consultant, Stakeholders

WBS	Task Name	Description of Work	Resource Names
1.4.2.3.6	Training and development of farmers and exchange programs	Conduct small farmer field schools	Consultant, Stakeholders, PMU
1.4.2.4	**Strengthen business capacity of producers in agro-processing.**		
1.4.2.4.1	UNDP's Global Green Commodity Program	Support of 2 BRW products in UNDP'S Green Commodity Program	Consultant, PM, TPRP
1.4.2.4.2	Establishment of a small agro-processing facility	Design and construction of small agro-processing facility.	PM, TPRP, PO
1.4.2.4.3	Participation in knowledge exchange programs	Participation in south-south exchange program	TPRP, PM, PO
1.4.2.4.4	Development of 6 business/strategic plans	Support the BRW groups in the development of the business plans	FA, TPRP, PMU
1.4.2.5	**Awareness program**		
1.4.2.5.1	Development of community awareness/outreach program	Development of a community awareness program for producers, technicians, GOB officials to build capacity on biodiversity conservation and financial incentives.	CS, Stakeholder
1.4.2.5.1	Implementation of community awareness/outreach program.	Implement community awareness program for producers, technicians GOB officials to through their participation in capacity building initiatives	CS, TPRP
1.4.2.6	**Monitoring program**		
1.4.2.6.1	Equipment for monitoring	Procure basic equipment to communities for monitoring	FA, PO, TPRP
1.4.2.6.2	Training for monitoring of GEBs	Identification of participants	Consultant, PMU
1.4.2.6.3	Community outreach	Support community outreach program	TPRP, PMU, CS
1.4.2.7	**Micro-granting Scheme**		
1.4.2.7.1	Development of Micro-granting Scheme	Develop a micro-granting scheme that will outline the process and eligibility of farmers to access these funds that will be used for climate smart activities.	FA, PM, TPRP
1.4.2.7.2	Implementation of micro-granting scheme	Disbursement of the micro-grants to eligible applicants.	FA, PMU, TPRP

WBS	Task Name	Description of Work	Resource Names
1.4.3	**Knowledge Management and Learning**		
1.4.3.1	**Gender sensitive/responsive programs**		
1.4.3.1.1	Updating of implementation of the Gender Mainstreaming Plan	Conduct consultations for the updating of the plan	Consultant, PM, TPRP
1.4.3.1.2	Validation of the Gender Mainstreaming Plan	Conduct validation sessions for the adoption of the gender mainstreaming plan by all parties	Consultant, PM, Stakeholders
1.4.3.2	**Systematization of experiences, best practices and lessons learnt.**		
1.4.3.2.1	Participation in global/regional forums and conferences	Increase project visibility through the participation in forums	PM, TPRPs
1.4.3.2.2	Systematization of the project	Development of a ToR, contracting of a consultant and conduct systematization of the project	PM, Consultant
1.4.3.2.3	Conduct M&E of the project	Develop ToR, Hire M&E Expert to develop M&E Report.	PM, Consultant
1.5	**Control**		
1.5.1	Project Management	Manage the entire project from planning to closure	PM, PMU, PD, UNDP
1.5.2	Project Status Meetings	Creation of “Minutes of Meetings”, socialization and approval from respective members	PM, PMU, PD
1.5.3	UNDP Administration	Ensure that the IMPL Project is implemented as per UNDP and GOB standards	UNDP
1.6	**Closeout**		
1.6.1	Document Closeout	Submission of all final reports	Consultant, All

(Source: Author of the study)

4.2.8 Validate Scope

The Project Manager has the immediate responsibility to do the first verification of the project deliverables against the original scope as defined in the project scope statement, WBS and WBS Dictionary throughout the project's lifecycle. Once it has passed through this first tier of verification, the Project Manager will present the deliverables to the Project Director and then call a project board meeting to present it to the Project Board for final approval. All persons who have reviewed and approved the deliverables will sign a project deliverable acceptance document.

4.2.9 Control Scope

The control scope process involves monitoring the project's scope and managing changes to the scope baseline. For the successful completion of the IMPL Project the following procedures will be implemented:

i. The scope of work will be controlled by the Project Manager and the Project Team. They will utilize the WBS Dictionary as a guide and ensure that only the work that has been prescribed in the WBS Dictionary is performed and that the defined deliverables are obtained.

ii. The Project Director will oversee the Project Manager and the PMU Team to ensure that they abide by this scope control process and that its progress be reported accordingly.

iii. The Change Request Process will be followed and presented using the Change Request Forms and assessed to ensure that the impact does not greatly affect the schedule and budget.

iv. Constant communication with stakeholders will be conducted on any proposed changes or adjustments to the project scope, and necessary approvals will be obtained from the Project Director and the Project Board.

4.2.10 Scope Change

Any member of the PSC or the project team can request project scope change throughout the project lifecycle. This will be formally submitted through a scope change template to the Project Manager. The Project Manager will then review the request and make an estimation of the impact that these proposed changes will have on the budget and timeframes. He will then submit the proposed request forms and evaluations to the Project Director for discussion. Then it will be presented to the Project Board. It is important to highlight that approval of changes can only be approved through the Project Board. In certain cases, if the changes requested strongly impact the outcomes, timelines, and budgets, these also need to be submitted to the Sponsor, in this case UNDP, for their approval.

4.3. Schedule Management Plan

4.3.1 Introduction

The PMBOK Guide 7th edition defines the Schedule Management Plan as a component of the project or program management plan that establishes the criteria and the activities for developing, monitoring, and controlling the schedule. This plan will define the approach that the project team will use to create, monitor and manage changes after the

baseline schedule has been approved to ensure that the project stays on track with its schedule, budget and milestones.

4.3.2 Schedule Management Approach

The Schedule Management Plan will be created using as the basis the outlined WBS structure along with knowledge gained from past projects and expert judgement. The initial steps will entail a revision of the work packages to ensure that there is alignment with the project objectives. Subsequently, activities are sequenced according to logical dependencies and estimates for duration. Activity sequencing is used to determine the order of the work packages and to assign the relationships between the project activities. Resource estimation is used to assign resources to the work packages for the activity to be completed within the schedule. In this case the IMPL Project schedule management plan will be reviewed by the project team and presented to the Project Board for their revision, input and approval.

4.3.3 Define Activities

Define Activities is the process of identifying and documenting the specific actions to be performed to produce the project deliverables (PMI,2017, p.183). This is the process where the project manager and the project team will breakdown the project deliverables into smaller, manageable activities creating a realistic and achievable project schedule. These activities are typically defined at a level of detail that allows for accurate estimation of resources, duration and dependencies. This process helps to ensure that all necessary work is identified and organized effectively, laying the baseline for subsequent project planning activities, such as sequencing, resource allocation and scheduling. For the IMPL Project the expert knowledge and past experiences guided the project team in defining the

activities. The outputs of this process were an activity list and a milestone list. The milestone list identifies specific project milestones for the IMPL project such as start date, end day, key deliverables. Chart 12 presents the IMPL Project milestones and Chart 13 presents the Activity List.

Chart 12

Milestone List

Milestone Name	**Estimated End Date**
Project Start	March 9, 2023
Approved Project Charter	March 22, 2023
Project Inception Workshop (kick-off meeting)	June 2023
Signing of Third-Party Responsible Agreements	May 31, 2023
Project Implementation	August 23, 2023
Acceptance of Deliverables	May 1, 2028
Project End	January 31, 2028

Source: Author of the study

Chart 13

Activity List

WBS	Task Name	Duration	Start Date	End Date	Predecessors	Resource Names	Milestones
0	**ILMP PROJECT**	**240 wks**					
	IMPL	**240 wks**					
1	**IMPL Project Start**	**0**	March 9, 2023				
1.2	**Initiation**	14 wks	March 9, 2023	June 14, 2023	2		Yes
1.2.1	Project Team Established	10 wks	March 9, 2023	May 17, 2023	2SF	Project Director (PD)	No
1.2.2	Project Charter Developed	2 wks	May 18, 2023	May 31, 2023	4	Project Management Unit (PMU), Project Manager (PM)	No
1.2.3	Signed Third Party Responsible Agreement	2 wks	June 1, 2023	June 14, 2023	5	Legal Advisor, PM	Yes
1.3	**Project Planning**	11 wks	June 15, 2023	August 30, 2023	3,5		Yes
1.3.1	**Perform Priority Planning**	11 wks	June 15, 2023	August 30, 2023	4		No
1.3.1.1	Scope Statement	1 wks	June 15 2023	June 21, 2023	5	PM	No
1.3.1.2	WBS	1 wk	June 22, 2023	June 28, 2023	9	PM, Project Finance Associate	

WBS	Task Name	Duration	Start Date	End Date	Predecessors	Resource Names	Milestones
1.3.1.3	Schedule Plan Completed	1 wk	June 29, 2023	July 5, 2023	10	PM, PFA, TPRP	
1.3.1.4	Resource Plan Completed	1 wk	July 6, 2023	July 12, 2023	11	PM, PFA, TPRP	
1.3.1.5	Budget Plan Completed	1 wk	July 13, 2023	July 19, 2023	12	TPRP, PFA, PM	
1.3.1.6	Risk Management Plan Completed	1 wk	July 20, 2023	July 26, 2023	13	PM, PFA, PMU	
1.3.1.7	Procurement Management Plan Completed	4 wks	July 27, 2023	August 23, 2023	14	PM, PMU	
1.3.1.8	Stakeholder Management Plan	1 wk	August 24, 2023	August 30, 2023	15	PM, PMU	
1.4	**Implementation**	**200 wks**	**August 31, 2023**	**December 23, 2027**	**16**		
1.4.1	**Enabling environments**	**200 wks**	**August 31, 2023**	**December 23, 2027**	**6,16**		
1.4.1.1	**Revised, harmonized policies**	**200 wks.**	**August 31, 2023**	**December 23, 2027**	**16**		
1.4.1.1.1	Clarification of agencies mandates	12 wks.	August 31, 2023	November 22, 2023	16	PM, TPRP, TAC, Consultant	
1.4.1.1.2	National coordinating effort defined and enabled	180 wks	August 31, 2023	August 5, 2027	16SS	PM, TPRP, Consultant	
1.4.1.1.3	Development and strengthening of protocols for inter-institutional co-ordination	20 wks.	August 6, 2027	December 23, 2027	21	Consultant, TPRP	
1.4.1.2	**Improved monitoring and enforcement of legislation**	**168 wks.**	**August 31, 2023**	**September 16, 2027**	**16**		

WBS	Task Name	Duration	Start Date	End Date	Predecessors	Resource Names	Milestones
1.4.1.2.1	Participatory awareness enforcement strategy	24 wks	August 31, 2023	June 26, 2024	16	TPRP, PM, Communication Strategist (CS)	
1.4.1.2.2	Sensitization for communities/stakeholders	150 wks	June 27, 2024	June 24, 2027	24	CS, TPRP, PM	
1.4.1.2.3	Workshops for the revision of water legislation and regulations.	12 wks	June 25, 2027	September 16, 2027	25	CS, TPRP, PM	
1.4.1.2.4	Equipment and infrastructure	55 wks	August 31, 2023	February 12, 2025	16	PM, PFA, Procurement Officer (PO), TPRPs	
1.4.1.2.5	Training program developed	54 wks.	June 27, 2024	July 23, 2025	24	TPRP, Consultant	
1.4.1.2.6	Community-based monitoring program	92 wks	July 24, 2025	May 27, 2027	28	PM, TPRP	
1.4.1.2.7	Routine surveys for environmental compliance	50 wks	July 24, 2025	July 22, 2026	29SS	TPRP	
1.4.1.3	**Financial incentives developed and established**	200 wks.	**August 31, 2023**	**December 23, 2027**	6		
1.4.1.3.1	Technical Assistance of Financial Strategist (FS)	176 wks.	August 31, 2023	July 8, 2027	16	PM, PMU	
1.4.1.3.2	Design of incentive program	12 wks.	July 9, 2027	September, 2027	32	FS, PM	
1.4.1.3.3	Amendments to existing strategies, programs, policies and legislation.	12 wks.	October 1, 2027	December 23, 2027	33	Legal advisor (LA), TPRP	

WBS	Task Name	Duration	Start Date	End Date	Predecessors	Resource Names	Milestones
1.4.1.3.4	Socialization of the financial incentives program	12 wks.	October 1, 2027	December 23, 2027	33	CS, FA, TPRP	
1.4.1.4	**Expanded information management systems**	**132 wks**	**August 31, 2023**	**August 19, 2026**	**6**		
1.4.1.4.1	Adoption of "environmental" KPI	36 wks.	August 31, 2023	September 18, 2024	16	Consultant, TPRP, PMC, FA	
1.4.1.4.2	Establish protocols for data gathering, collecting, storing and validating	36 wks.	August 31, 2023	September 18, 2024	16	Consultant, TPRP, PM	
1.4.1.4.3	Expand capabilities of the National Statistics System	48 wks.	September 19, 2024	September 3, 2025	38	Consultant, PM	
1.4.1.4.4	Training of personnel in information collection, management and sharing	48 wks.	September 4, 2025	August 19, 2026	39	Consultant, PM	
1.4.1.5	**Multi-tiered training program**	**160 wks.**	**August 31, 2023**	**March 18, 2027**	**6**		
1.4.1.5.1	Needs assessment	24 wks.	August 31, 2023	June 26, 2024	24SS	Consultant, PM, TPRP	
1.4.1.5.2	Capacity Building	136 wks.	June 27, 2024	March 18, 2027	42	Consultant, PM, TPRP	
1.4.2	**Delivering multiple GEBs**	**200 wks.**	**August 31, 2023**	**December 23, 2027**	**6,16**		**Yes**
1.4.2.1	**Landscape management tools**	**200 wks.**	**August 31, 2023**	**December 23, 2027**	**6**		
1.4.2.1.1	Conservation agreements developed and signed	112 wks.	August 23, 2023	April 1, 2026	6	Consultant, PM, TPRP	

WBS	Task Name	Duration	Start Date	End Date	Predecessors	Resource Names	Milestones
1.4.2.1.2	Rehabilitation and management strategies implemented	60 wks.	August 31, 2023	March 19, 2025	46SS	Consultant, PM, Stakeholders.	
1.4.2.1.3	Riparian forest restoration strategy implemented	36 wks.	August 31, 2023	September 18, 2024,	46SS	Consultant, TPRS, PM	
1.4.2.1.4	Forest protection strategy implemented	48 wks.	April 2, 2026	March 18, 2027	46	Consultant, TPRP, PM	
1.4.2.1.5	Equipment, infrastructure and training	153 wks.	September 12, 2023	February 9, 2027	46SS	Consultant, TPRP, PM, PO	
1.4.2.1.6	Grazing reform/pasture management program	48 wks.	April 2, 2026	March 18, 2027	46	TPRP, Consultant	
1.4.2.1.7	Establish an emergency seed bank	48 wks.	April 2, 2026	March 18, 2027	46	TPRP, Consultant	
1.4.2.1.8	Expand and equip the National use of Earth Observation Platform	200 wks.	August 31, 2023	December 23, 2027	16	Consultant, TPRP, PO	
1.4.2.2	**Development of Water Master Plan for the BRW.**	**108 wks.**	**July 16, 2024**	**September 7, 2026**	**6**		
1.4.2.2.1	Consultancy for the Master Plan for the BRW	96 wks.	July 16, 2024	June 15, 2026	20	Consultant, TPRP, PM	
1.4.2.2.2	Socialization for the Master Plan for the BRW	12 wks.	June 16, 2026	September 7, 2026	55	Consultant, TPRP, PM	
1.4.2.3	**Gender responsive work program**	**174 wks.**	**June 27, 2024**	**December 9, 2027**	**16**		
1.4.2.3.1	Support extension work program	170 wks.	June 27, 2024	November 11, 2027	42	TPRP, PM, Consultant	

WBS	Task Name	Duration	Start Date	End Date	Predecessors	Resource Names	Milestones
1.4.2.3.2	Green value chains	84 wks.	June 27, 2024	March 4, 2026	58SS	Consultant, TPRP, PM	
1.4.2.3.3	Update farmer field school curriculum	24 wks.	June 27, 2024	December 11, 2024	42,5	TPRP, Consultant, Stakeholders	
1.4.2.3.4	Community outreach	150 wks.	December 12, 2024	December 9, 2027	60	TPRP, PMU, Communication Specialist	
1.4.2.3.5	Knowledge exchange capacity building value chain actors	36 wks.	March 5, 2026	November 11, 2026	59	Consultant, Stakeholders	
1.4.2.3.6	Training and development of farmers and exchange programs	168 wks.	June 27, 2024	October 28, 2027	58SS	Consultant, Stakeholders, PMU	
1.4.2.4	**Strengthen business capacity of producers in agro-processing**	**150 wks.**	**June 27, 2024**	**June 24, 2027**	**6**		**Yes**
1.4.2.4.1	UNDP's Global Green Commodity Program	48 wks.	April 7, 2025	March 20, 2026	47	Consultant, PM, TPRP	
1.4.2.4.2	Establishment of a small agro-processing facility	36 wks.	March 23, 2026	November 27, 2026	48,6	PM, TPRP, PO	
1.4.2.4.3	Participation in knowledge exchange programs	150 wks.	June 27, 2024	June 24, 2027	43SS	TPRP, PM, PO	
1.4.2.4.4	Development of 6 business/strategic plans	48 wks.	April 2, 2026	March 18, 2027	46	Financial Analyst, TPRP, PMU	
1.4.2.5	**Awareness program**	**160 wks.**	**June 3, 2024**	**August 9, 2027**	**6**		**Yes**

WBS	Task Name	Duration	Start Date	End Date	Predecessors	Resource Names	Milestones
1.4.2.5.1	Development of community awareness/outreach program	24 wks.	June 3, 2024	November 15, 2024	16	Communication Specialist, Stakeholders	
1.4.2.5.2	Implementation of community awareness/outreach program	136 wks.	November 18, 2024	August 9, 2027	70	TPRP, Communication Specialist	
1.4.2.6	**Monitoring program**	**166 wks.**	**July 1, 2024**	**October 18, 2027**	**6**		
1.4.2.6.1	Equipment for monitoring	36 wks.	July 1, 2024	March 21, 2025	6	Financial Analyst, PO, TPRP	
1.4.2.6.2	Training for monitoring of GEBs	93 wks.	March 24, 2025	February 1, 2027	73	Consultant, PMU	
1.4.2.6.3	Community outreach	130 wks.	March 24, 2025	October 18, 2027	74SS	TPRP, PMU, Communication Specialist	
1.4.2.7	**Micro-granting Scheme**	**168 wks.**	**July 1, 2024**	**November 1, 2027**	**6**		
1.4.2.7.1	Development of micro-granting scheme	36 wks.	July 1, 2024	March 21, 2025	6	Financial analyst, PM, TPRP	
1.4.2.7.2	Implementation of micro-granting scheme	132 wks.	March 24, 2025	November 1, 2027	77	Financial analyst, PMU, TPRP	
1.4.3	**Knowledge Management and Learning**	**191.4 wks.**	**August 31, 2023**	**October 25, 2027**	**6,16**		**YES**

WBS	Task Name	Duration	Start Date	End Date	Predecessors	Resource Names	Milestones
1.4.3.1	**Gender sensitive/responsive programs**	**72 wks.**	**July 2, 2024**	**December 1, 2025**	**6**		
1.4.3.1.1	Updating of implementation of the Gender Mainstreaming Plan	48 wks.	July 2, 2024	June 16, 2025	6	Consultant, PM, TPRP	
1.4.3.1.2	Validation of the gender mainstreaming plan	24 wks.	June 17, 2025	December 1, 2025	81	Consultant, Stakeholders	
1.4.3.2	**Systematization of experiences, best practices and lessons learnt**	**191.4 wks.**	**August 31, 2023**	**Novmber 25, 2027**	**6**		Yes
1.4.3.2.1	Participation in global/regional forums and conferences	185 wks.	September 15, 2023	September 24, 2027	6	PM, TPRPs,	
1.4.3.2.2	Systematization of the project	42 wks.	January 5, 2027	October 25, 2027	6	PM, Consultant	
1.4.3.2.3	Conduct M&E of the project	72 wks.	August 31, 2023	June 11, 2025	16	PM, Consultant	
1.5	**Control**	**240 wks.**	**March 9, 2023**	**April 6, 2028**	**3SS**		
1.5.1	Project Management	240 wks.	March 9, 2023	April 6, 2028	4SS	PM, PMU,, UNDP	No
1.5.2	Project Status Meetings	226wks.	March 14, 2023	January 4, 2028	4SS	PM, PMU, PD	No
1.5.3	UNDP Administration	240 wks.	March 9, 2023	April 6, 2028	88SS	UNDP	No
1.6	**Closeout**	**3.6 wks.**	**March 14, 2028**	**April 6, 2028**	**89**		
1.6.1	Document Closeout	3.6 wks.	March 14, 2028	April 6, 2028	89	Consultant	No
	End of project	0 wks.	April 6, 2028	April 6, 2028	3,7,1		Yes

Source: Author of the study

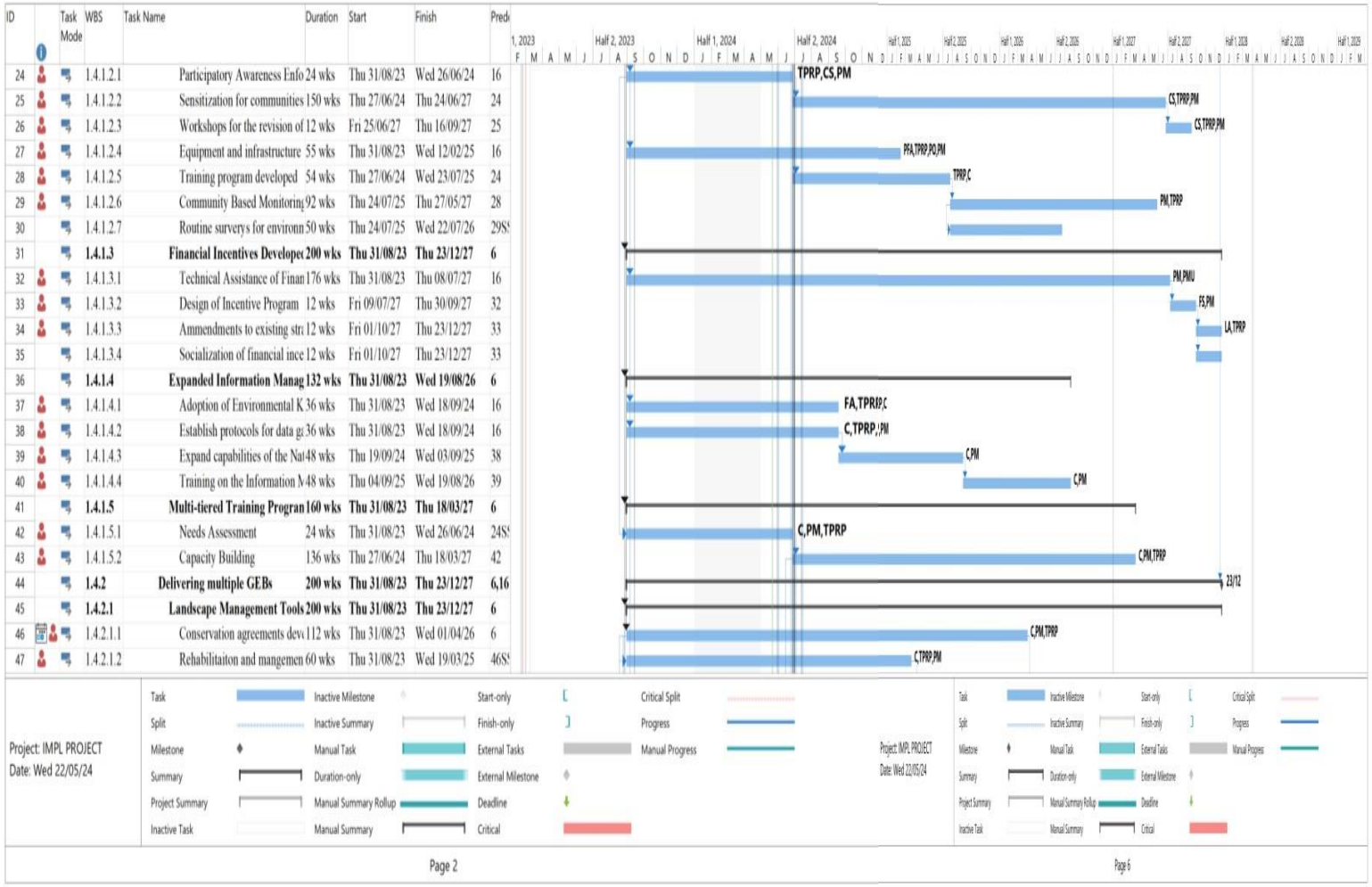
Source: Author of the study

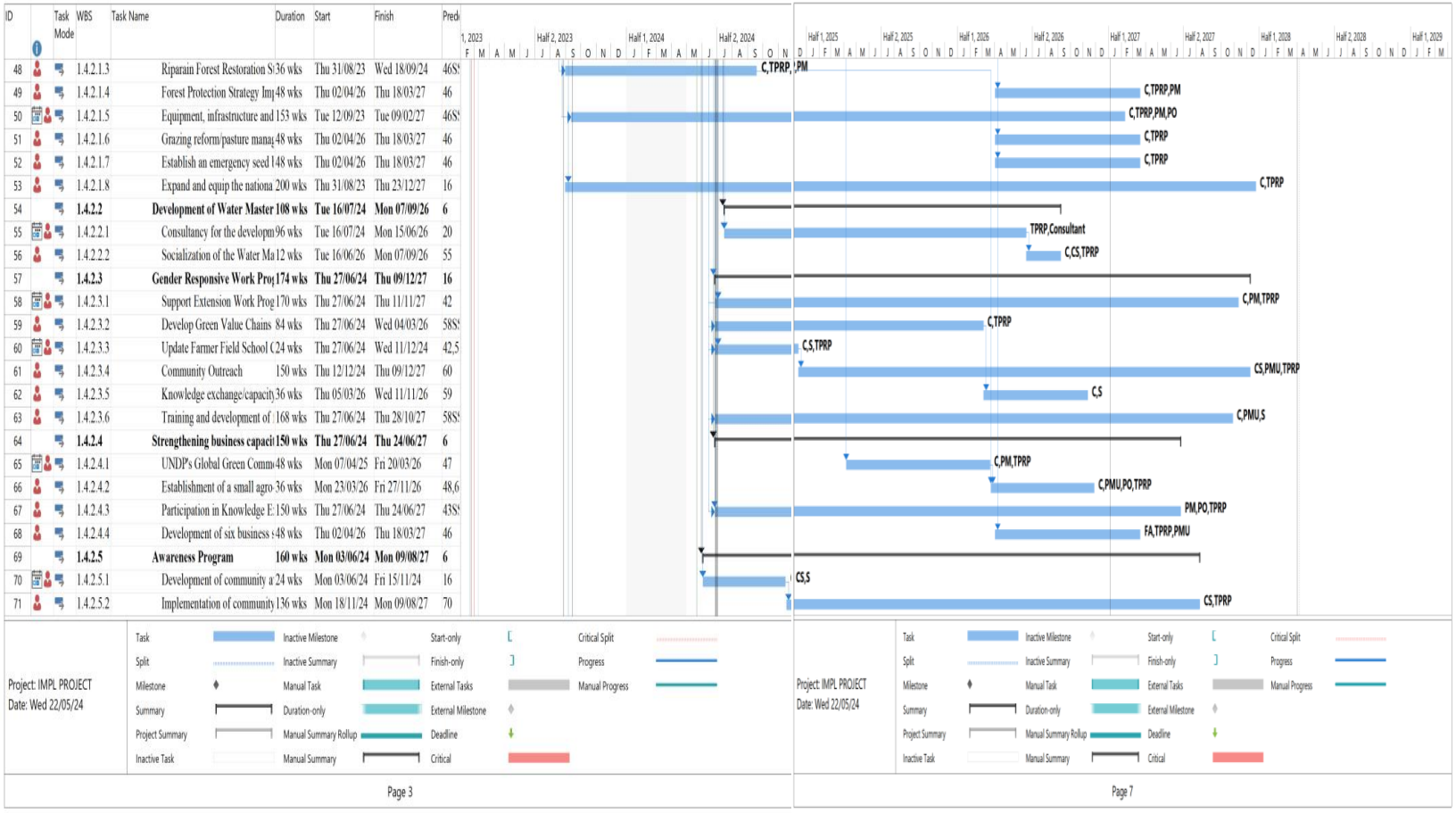
4.3.4 Sequence Activities

The sequence activities involve identifying and arranging project activities in the right order to achieve the project objectives. This activity will greatly contribute to the success of the IMPL Project since it will establish a logical relationship between the tasks. A visual representation of the project schedule network diagram was developed using Microsoft Project 2019 as shown in Figure 12. This diagram also highlights the critical path for the project.

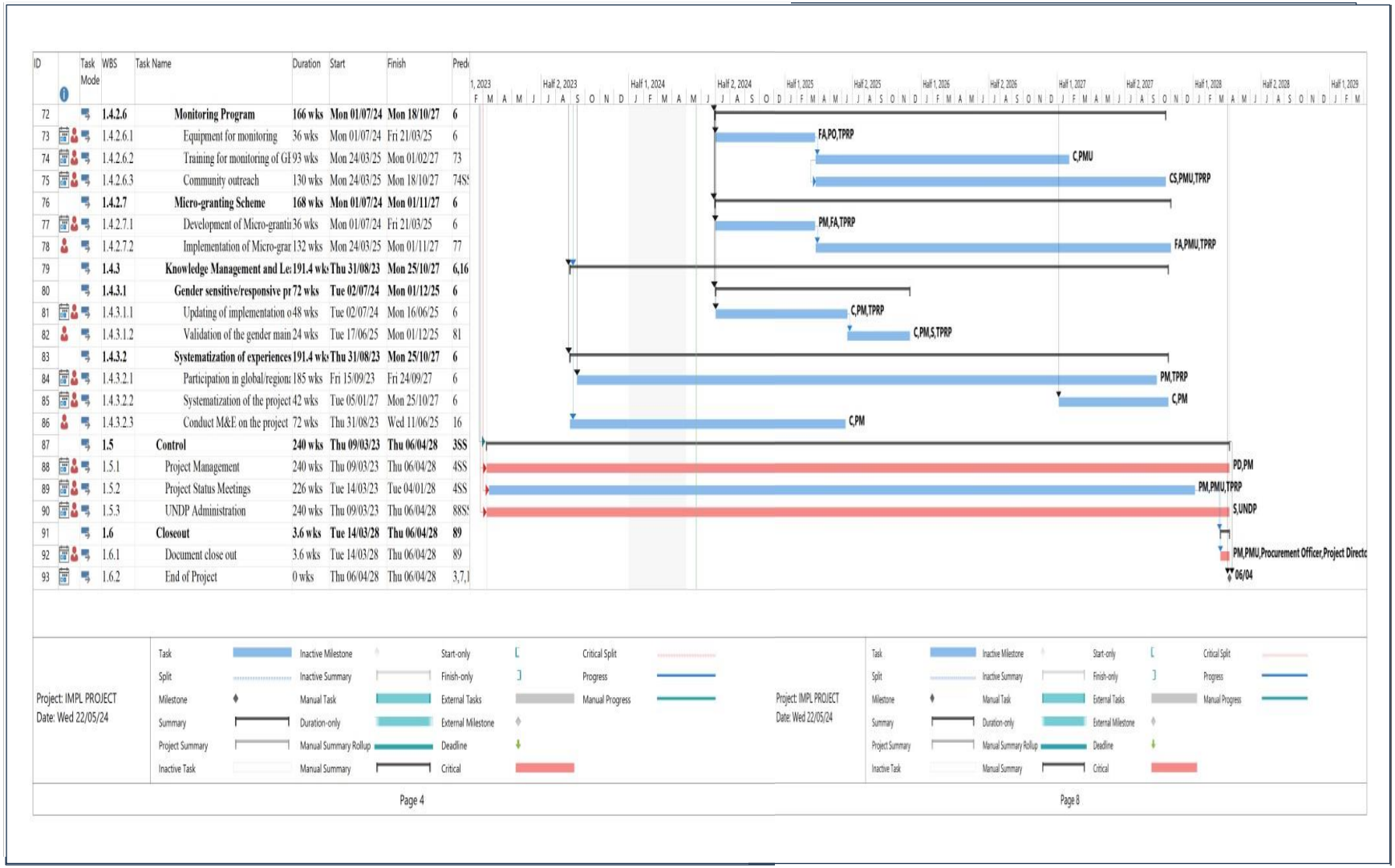
Figure 12.

IMPL Project Schedule (Gantt Chart)


ID
Task Mode
WBS
Task Name
Duration
Start
Finish
Pred
24 1.4.1.2.1 Participatory Awareness Enfo 24 wks Thu 31/08/23 Wed 26/06/24 16
25 1.4.1.2.2 Sensitization for communities 150 wks Thu 27/06/24 Thu 24/06/27 24
26 1.4.1.2.3 Workshops for the revision of 12 wks Fri 25/06/27 Thu 16/09/27 25
27 1.4.1.2.4 Equipment and infrastructure 55 wks Thu 31/08/23 Wed 12/02/25 16
28 1.4.1.2.5 Training program developed 54 wks Thu 27/06/24 Wed 23/07/25 24
29 1.4.1.2.6 Community Based Monitorin 92 wks Thu 24/07/25 Thu 27/05/27 28
30 1.4.1.2.7 Routine surverys for environn 50 wks Thu 24/07/25 Wed 22/07/26 29S
31 1.4.1.3 Financial Incentives Develope 200 wks Thu 31/08/23 Thu 23/12/27 6
32 1.4.1.3.1 Technical Assistance of Finan 176 wks Thu 31/08/23 Thu 08/07/27 16
33 1.4.1.3.2 Design of Incentive Program 12 wks Fri 09/07/27 Thu 30/09/27 32
34 1.4.1.3.3 Ammendments to existing str 12 wks Fri 01/10/27 Thu 23/12/27 33
35 1.4.1.3.4 Socialization of financial ince 12 wks Fri 01/10/27 Thu 23/12/27 33
36 1.4.1.4 Expanded Information Manag 132 wks Thu 31/08/23 Wed 19/08/26 6
37 1.4.1.4.1 Adoption of Environmental K 36 wks Thu 31/08/23 Wed 18/09/24 16
38 1.4.1.4.2 Establish protocols for data g 36 wks Thu 31/08/23 Wed 18/09/24 16
39 1.4.1.4.3 Expand capabilities of the Nat 48 wks Thu 19/09/24 Wed 03/09/25 38
40 1.4.1.4.4 Training on the Information M 48 wks Thu 04/09/25 Wed 19/08/26 39
41 1.4.1.5 Multi-tiered Training Progran 160 wks Thu 31/08/23 Thu 18/03/27 6
42 1.4.1.5.1 Needs Assessment 24 wks Thu 31/08/23 Wed 26/06/24 24S
43 1.4.1.5.2 Capacity Building 136 wks Thu 27/06/24 Thu 18/03/27 42
44 1.4.2 Delivering multiple GEBs 200 wks Thu 31/08/23 Thu 23/12/27 6,16
45 1.4.2.1 Landscape Management Tools 200 wks Thu 31/08/23 Thu 23/12/27 6
46 1.4.2.1.1 Conservation agreements dev 112 wks Thu 31/08/23 Wed 01/04/26 6
47 1.4.2.1.2 Rehabilitaiton and mangemen 60 wks Thu 31/08/23 Wed 19/03/25 46S
Half 1, 2023
Half 2, 2023
Half 1, 2024
Half 2, 2024
TPRP,CS,PM
CS,TPRP,PM
CS,TPRP,PM
PFA,TPRP,PO,PM
TPRP,C
PM,TPRP
PM,PMU
FS,PM
LA,TPRP
FA,TPRP,C
C,TPRP,,PM
C,PM
C,PM
C,PM,TPRP
C,PM,TPRP
23/12
C,PM,TPRP
C,TPRP,PM
Project: IMPL PROJECT
Date: Wed 22/05/24
Task
Split
Milestone
Summary
Project Summary
Inactive Task
Inactive Milestone
Inactive Summary
Manual Task
Duration-only
Manual Summary Rollup
Manual Summary
Start-only
Finish-only
External Tasks
External Milestone
Deadline
Critical
Critical Split
Progress
Manual Progress
Page 2
Page 6



ID	Task Mode	WBS	Task Name	Duration	Start	Finish	Predecessors
48		1.4.2.1.3	Riparain Forest Restoration S	136 wks	Thu 31/08/23	Wed 18/09/24	46SS
49		1.4.2.1.4	Forest Protection Strategy Im	48 wks	Thu 02/04/26	Thu 18/03/27	46
50		1.4.2.1.5	Equipment, infrastructure and	153 wks	Tue 12/09/23	Tue 09/02/27	46SS
51		1.4.2.1.6	Grazing reform/pasture manag	48 wks	Thu 02/04/26	Thu 18/03/27	46
52		1.4.2.1.7	Establish an emergency seed b	48 wks	Thu 02/04/26	Thu 18/03/27	46
53		1.4.2.1.8	Expand and equip the nationa	200 wks	Thu 31/08/23	Thu 23/12/27	16
54		**1.4.2.2**	**Development of Water Master**	**108 wks**	**Tue 16/07/24**	**Mon 07/09/26**	**6**
55		1.4.2.2.1	Consultancy for the developm	96 wks	Tue 16/07/24	Mon 15/06/26	20
56		1.4.2.2.2	Socialization of the Water Ma	12 wks	Tue 16/06/26	Mon 07/09/26	55
57		**1.4.2.3**	**Gender Responsive Work Proj**	**174 wks**	**Thu 27/06/24**	**Thu 09/12/27**	**16**
58		1.4.2.3.1	Support Extension Work Prog	170 wks	Thu 27/06/24	Thu 11/11/27	42
59		1.4.2.3.2	Develop Green Value Chains	84 wks	Thu 27/06/24	Wed 04/03/26	58SS
60		1.4.2.3.3	Update Farmer Field School C	24 wks	Thu 27/06/24	Wed 11/12/24	42,5
61		1.4.2.3.4	Community Outreach	150 wks	Thu 12/12/24	Thu 09/12/27	60
62		1.4.2.3.5	Knowledge exchange/capacity	36 wks	Thu 05/03/26	Wed 11/11/26	59
63		1.4.2.3.6	Training and development of	168 wks	Thu 27/06/24	Thu 28/10/27	58SS
64		**1.4.2.4**	**Strengthening business capaci**	**150 wks**	**Thu 27/06/24**	**Thu 24/06/27**	**6**
65		1.4.2.4.1	UNDP's Global Green Comm	48 wks	Mon 07/04/25	Fri 20/03/26	47
66		1.4.2.4.2	Establishment of a small agro	36 wks	Mon 23/03/26	Fri 27/11/26	48,6
67		1.4.2.4.3	Participation in Knowledge E	150 wks	Thu 27/06/24	Thu 24/06/27	43SS
68		1.4.2.4.4	Development of six business	48 wks	Thu 02/04/26	Thu 18/03/27	46
69		**1.4.2.5**	**Awareness Program**	**160 wks**	**Mon 03/06/24**	**Mon 09/08/27**	**6**
70		1.4.2.5.1	Development of community a	24 wks	Mon 03/06/24	Fri 15/11/24	16
71		1.4.2.5.2	Implementation of community	136 wks	Mon 18/11/24	Mon 09/08/27	70



Source: Author of the study

4.3.5 Estimate Activity Durations

In estimating the duration of the activities for the IMPL project, the tools of expert judgement and information from past projects were used to make educated estimates. The BRW, which is the project site is an area always susceptible to flooding, fires and hurricanes; therefore, in order to enhance the accuracy of the estimated time, it was crucial to consult with the experts in agriculture, forestry, and others involved in biodiversity monitoring. This can be seen in Chart 15 where the critical path can be seen for the entire project.

4.3.6 Develop Schedule

According to PMI (2017, P. 205), the Develop Schedule process involves analyzing activity sequences, durations, resource requirements, and schedule constraints to create a detailed project schedule. The Schedule for the IMPL Project was created using Microsoft Project 2019. The Project Schedule is shown in Chart 15 IMPL Project Schedule (Gantt Chart)

4.3.7 Control Schedule

Control Schedule is the process of monitoring the status of the project to update schedule and managing changes to the schedule baseline (PMI, 2017, p. 222). The Project Manager is responsible for performing the schedule updates/reviews and communicating these to the Project Director. The project schedule for the IMPL Project will be monitored to ensure a successful completion using the following guidelines:

a. Regular Monitoring and Reporting: the project Schedule is reviewed and updated on a weekly basis or when new information is obtained, added or deleted from the Schedule.
b. Change Control Process: if any project team member determines that a change to the Schedule is necessary, the Project Manager and the project team will meet, discuss, assess and evaluate the change. The project team also evaluates the impact that this change will have on the schedule and project. Once the evaluation is finalized and the change is necessary, then a change request is submitted and the process to obtain its approval is initiated.

4.4. Cost Management Plan

4.4.1 Introduction

The Cost Management Plan is a critical aspect of project management that defines how the project costs will be estimated, budgeted, managed, and controlled throughout the project lifecycle. The Project Manager will be responsible for managing and reporting on the project's cost throughout the duration of the project. He will be responsible for producing a monthly expenditure report that will be sent to the Project Director. At each quarterly Project Board Meeting, the Project Manager will present a detailed expenditure report as well as a proposed budget for the following quarter. Additionally, the Project Manager is also responsible for the preparation of the Cost Management Plan and the Cost Baseline.

4.4.2 Estimate Cost

The Estimates of the costs for the IMPL Project will be done through the work packages that were created as shown in Chart 14. These estimates were obtained using expert judgement, and lessons learnt from other projects. They will be reviewed and updated as the project enters its implementation phase. The Project Manager is responsible for sending monthly financial reports through E-mail to the Project Board (PB). The Project Manager and the Project Associate will have quarterly meetings with both the TPRPs and the PB to present and review the project's cost performance and present the following quarters proposed budget. The Project Manager is responsible for the overall accounting of the project, which includes cost deviations and reporting it to the Sponsor.

Chart 14.

IMPL Cost Estimate Activity

WBS	Task Name	Activity	Cost Estimates (USD)
0	**IMPL Project**		$5,108,933
	IMPL		
1	IMPL Project Start		
1.2	**Initiation**		**$0.00**
1.2.1	Project Team Established		
		Selection of Project Team	$0.00
		Contracting of Project Team	$0.00
		Project Meeting Kickoff	$0.00
1.2.2	Project Charter		$0.00
1.2.3	Signed Third Party Responsible Agreement	Internal revision by Legal Counsel, Ministry of Finance and Contractor General	$0.00
1.3	**Project Planning**		**$ 0.00**
1.3.1	**Perform Priority Planning**		$0.00
1.3.1.1	Scope Statement		$0.00
1.3.1.2	WBS		$0.00

1.3.1.3	Schedule Plan Completed		$0.00
1.3.1.4	Resource Plan Completed		$0.00
1.3.1.5	Budget Plan Completed		$0.00
1.3.1.6	Risk Management Plan Completed		$0.00
1.3.1.7	Procurement Management Plan Completed		$0.00
1.3.1.8	Stakeholder Management Plan		$0.00
1.4	**Implementation**		
		Inception Workshops with all TPRPs and key stakeholders for the presentation of the project and proposed workplans.	$5000.00
1.4.1	**Enabling environments**		
1.4.1.1	**Revised, harmonized policies**		
1.4.1.1.1	Clarification of agencies mandates	Contracting of a Legal/policy expert to conduct a comprehensive assessment of current policies.	$65,000.00
		Workshop for the development and signing of an enforcement agreement between MSDCCDRM and MNR	$4500.00
1.4.1.1.2	National coordinating framework for IWM defined and enabled	Consultancy: Governance and Institutional Analysis of the IWM related agencies.	$20,000.00
		Capacity building and resource support to the IWM interagency committee meetings	$60,000.00
		Institutional Development Specialist to review the management structures within NIWRA	$22,500.00
		Consultancy: Revision of the NIWRA legislation and other legislations to ensure alignment with integrated water resource management.	$22,500

		Consultancy: Watershed Management Expert to develop an IWM Strategy and plan for the BRW.	$30,000
1.4.1.1.3	Development and strengthening of protocols for inter-institutional co-ordination to enforce norms and establish penalties to the loss of forest cover.	Hiring of a Legal/Policy Expert to review existing enforcement protocols (Yr. 1 & 2)	$20,000.00
		Hiring of a Legal/Policy Expert to review existing enforcement protocols (Yr. 1 & 2)	$17,500.00
		Short term consultancy to analyze current interagency task force and make recommendations to improve the current framework.	$5,000.00
		Establishment of a national water task force.	$2,500.00
1.4.1.2	**Improved monitoring and enforcement of legislation**		
1.4.1.2.1	Participatory awareness enforcement strategy	Hiring of a Communication Expert for the development of the enforcement awareness strategy	$25,000.00
1.4.1.2.2	Sensitization for communities/stakeholders	Consultancy: Development of community outreach program.	$10,000.00
		Community sensitization sessions.	$50,000.00
1.4.1.2.3	Workshops for the revision of water, air legislations and regulations.	Workshop facilitator	$5,000.00
		Honorarium to workshop presenters	$3,750.00
		Conduct workshop (venue, food, transportation).	$11,000.00

1.4.1.2.4	Equipment and infrastructure	Field gear for 100 personnel to support the National Monitoring Forest System (shirts, pants, boots, 10 gps)	$25,000.00
		Purchase of 2 mules with spare tire.	$70,000.00
1.4.1.2.5	Training program developed on data analysis.	Consultancy for the development of a training module in GIS analysis and other restoration tracking tools	$3,200.00
		Scholarships on data analysis	$49,950.00
		Capacity building for resource managers on spatial analysis data	$30,000.00
		Hardware and software to support capacity building	$25,000.00
		Purchase of computers (12)	$36,000.00
		Purchase of server/databases (3)	$16,500.00
		Purchase of data gathering software and licenses	$7,500.00
1.4.1.2.6	Community-based monitoring program	Consultancy: Contracting of an Environmental Monitoring Expert to design community-based monitoring program	$30,000.00
		Legal expert to design model voluntary agreements.	$15,000.00
		Community consultations	$10,000.00
		Hiring of a socioeconomic/Biodiversity expert to define the baselines for the voluntary agreements.	$15,000.00
1.4.1.2.7	Routine surveys for environmental compliance	Purchase of equipment: gps, trailers, drones,	$25,000.00
		Purchase of rations for the field teams.	$5,000.00
1.4.1.3	**Financial incentives developed and established**		

1.4.1.3.1	Technical assistance of a Financial Strategist	Hiring of a Finance Strategist to guide the development of the incentive program.	$60,000.00
1.4.1.3.2	Design of incentive program	Hiring of a Natural Resources Economics Expert to design the incentive program	$75,000.00
		Short term technical assistance to support the financial strategist	$25,000.00
1.4.1.3.3	Amendments to existing strategies, programs, policies and legislation	Consultancy – Revision of existing strategy, policy, legislation and propose amendments	$22,500.00
1.4.1.3.4	Socialization of the financial incentives program	Hiring of a Social Marketing Specialist for the socialization of the financial incentives program	$15,000.00
1.4.1.4	**Expanded information management systems**		
1.4.1.4.1	Adoption of "environmental" KPI	Consultancy: Contracting of Environmental Monitoring Expert to identify relevant KPIs with gender targets	$30,000.00
		Design of a community-based program for the consistent tracking and public reporting of water resource and biodiversity in the region	$12,500.00
		Development of a “white paper” to present to Cabinet.	$5,000.00
		Workshop for the socialization of the environmental KPI	$5,000.00
		Workshop for the SDG/GSDS/KPI alignment	$5,000.00
1.4.1.4.2	Establish protocols for data gathering, collecting, storing and validating.	Hiring of an Environmental Monitoring Expert.	$30,000.00
		Training workshops on data collection, input, storage and transaction management	$5,000.00

1.4.1.4.3	Expand capabilities of the National Statistics System	Procurement of Geospatial applications for HV	$30,000.00
1.4.1.4.4	Training on the information management system		$5000.00
1.4.1.5	**Multi-tiered training program**		
1.4.1.5.1	Needs assessment	Consultancy for the development of a Capacity Needs Assessment.	$25,000.00
1.4.1.5.2	Capacity Building	Participation in training events for information sharing, capacity building, stakeholder engagement.	$62,500.00
1.4.2	**Delivering multiple GEBs**		
1.4.2.1	**Landscape management tools**		
1.4.2.1.1	Conservation agreements developed and signed	Hiring of a Legal Advisor to establish the conservation agreements. (for 2 yrs.)	$90,000.00
		Consultation workshops for the development of conservation agreements	$10,000.00
		Review sessions for the monitoring of the conservation agreements	$6,000.00
1.4.2.1.2	Rehabilitation and management strategies implemented	Establishment of nurseries (4) (labor)	$50,000.00
		Hiring of an Agronomist to support the establishment and maintenance of nursery	$48,000.00
		Hiring of Field Officers (2 Foresters, 2 extension staff) to support nursery establishment and maintenance	$144,000.00
1.4.2.1.3	Riparian forest restoration strategy implemented	Hiring of a Riparian Engineer to develop and implement the riparian forest	$45,000.00

		restoration strategy for the BRW	
		Purchase of two 4x4 vehicles	$70,000.00
1,4.2.1.4	Forest protection strategy implemented	Hiring of a Forest Expert to conduct an assessment of forestry resources in the BRW	$60,000.00
		Development of a forest protection strategy for the BRW	$30,000.00
1.4.2.15	Equipment, infrastructure and training	Purchase of equipment: Global Navigation Satellite System (GNSS) (20 units)	$40,000.00
1.4.2.1.6	Grazing reform/pasture management program	Institutional Contract for the development of watershed grazing reform and pasture management	$50,000.00
1.4.2.1.7	Establish an emergency seed bank	Technical Assistance to establish the emergency seedbank.	$150,000.00
1.4.2.1.8	Expand and equip the National use of Earth Observation Platform	Hire two Geospatial Monitoring Officers	$75,000.00
1.4.2.2	**Development of Water Master Plan for the BRW.**		
1.4.2.2.1	Consultancy for the Master Plan for the BRW	Consultancy: Hiring of a Consultancy Firm to develop the Master Plan for the BRW	$90,000.00
		Consultancy: Develop the water balance and map critical groundwater recharge areas of the BRW	$157,500.00
		Consultancy: Firm for the development of a pricing strategy for the IWRM for the equitable distribution and costs of households in the BRW	$25,000.00
		Procurement of equipment: acoustic doppler profiler, flow gauges	$94,000.00

1.4.2.2.2	Socialization for the Master Plan for the BRW	Community Meetings, Media Appearances	$5000.00
1.4.2.3	**Gender responsive work program**		
1.4.2.3.1	Support extension work program	Short Term Technical Expertise for TPRPs	$136,000.00
1.4.2.3.2	Green value chains	Technical Assistance to support the transformation of 2 commodity sectors through their development and application of green value chain	$45,000.00
1.4.2.3.3	Update farmer field school curriculum	Training and development of farmers within field school	$20,000.00
		Hiring of a driver to support field activities	$15,000.00
1.4.2.3.4	Community outreach	Support to community meetings, procurement of promotional items, media rounds	$60,000.00
1.4.2.3.5	Knowledge exchange capacity building value chain actors	Workshops for knowledge exchange/capacity development for value chain actors	$20,000.00
1.4.2.3.6	Training and development of farmers and exchange programs	Capacity building session for farmers through the exchange of experiences	$31,350.00
1.4.2.4	**Strengthen business capacity of producers in agro-processing**		
1.4.2.4.1	UNDP's Global Green Commodity Program	Support for the entry of 2 BRW products within UNDP's Global Green Commodity Program	$75,000.00
1.4.2.4.2	Establishment of a small agro-processing facility	Materials and goods for the establishment of the small agro-processing facility	$60,000.00
1.4.2.4.3	Participation in knowledge exchange programs	South-South Exchange Program to support capacity development	$60,000.00
1.4.2.4.4	Development of 6 business/strategic plans	Consultancy: Firm to develop six	$150,000.00

		Business/Strategic Plans for BRW groups	
1.4.2.5	**Awareness program**		
1.4.2.5.1	Development of community awareness/outreach program	Hiring of 2 community outreach/training officers	$57,600.00
1.4.2.5.2	Implementation of community awareness/outreach program	Venue, food and materials	$20,000.00
1.4.2.6	**Monitoring program**		
1.4.2.6.1	Equipment for monitoring	Purchase of equipment for community-based monitoring	$55,000.00
1.4.2.6.2	Training for monitoring of GEBs	Purchase of training materials	$20,000.00
1.4.2.6.3	Community outreach	Support to community outreach (food, venue, facilitator, transportation)	$30,000.00
1.4.2.7	**Micro-granting Scheme**		
1.4.2.7.1	Development of micro-granting scheme	Hiring of the Coordinator for the micro-grants program	$90,000.00
1.4.2.7.2	Implementation of micro-granting scheme	Micro/low value grants for community monitoring including equipment and supplies	$35,000.00
		Micro/low value grants to provide direct incentives to local communities to implement riparian restoration, conservation agreements and sustainable land management practices	$300,000.00
1.4.3	**Knowledge Management and Learning**		
1.4.3.1	**Gender sensitive/responsive programs**		
1.4.3.1.1	Updating of the Gender Mainstreaming Plan	Consultancy for the updating of the gender mainstreaming plan	$20,000.00

1.4.3.1.2	Validation of the Gender Mainstreaming Plan	Validation sessions with stakeholders	$5,000.00
1.4.3.2	**Systematization of experiences, best practices and lessons learnt**		
1.4.3.2.1	Participation in global/regional forums and conferences	Participation in regional forums to promote the project	$40,000.00
		Participation in conferences to promote project visibility.	$30,000.00
		Development of publications and media products to promote project visibility.	$40,000.00
1.4.3.2.2	Systematization of the project	Mid-term project review	$25,000.00
		Terminal project evaluation	$40,000.00
		Hiring of a Knowledge Management Consultant to undertake the systematization of the project at mid-point and at the end of the project	$22,500.00
1.4.3.2.3	Conduct M&E of the project.	Hire M&E and Safeguards Expert to support with the monitoring, and periodic update of the GEF core indicators	$64,000.00
		External NIM audits	$20,000.00
1.5	**Control**		
1.5.1	Project Management	Salary for Project Manager	$150,000.00
		Salary for Project Finance Associate	$75,000.00
		Procurement Services	$33,283.00
1.5.2	Project Status Meetings		
		Board Meetings: venue, food, etc.	$15,000.00
1.5.3	UNDP Administration		
		Conduct Third Party spot checks	$25,000.00
1.6	**Closeout**		
1.6.1	Document Closeout		$0.00
	End of project		

Source: The author of the study

4.4.3 Determine Budget

Determine Budget is the process of aggregating the estimated costs of individual activities or work packages to establish an authorized baseline (PMI, 2017, p.248). The benefit of this process is that it determines the cost baseline against which project performance can be monitored and controlled. The cost estimate is one of the main inputs for cost budgeting.

The IMPL Project will use the technique of cost aggregation to determine the project budget. The cost estimates have been grouped by work packages based on the work breakdown structure which is shown in Figure 11. Expert judgement and reserve analysis are two of the tools used in this process.

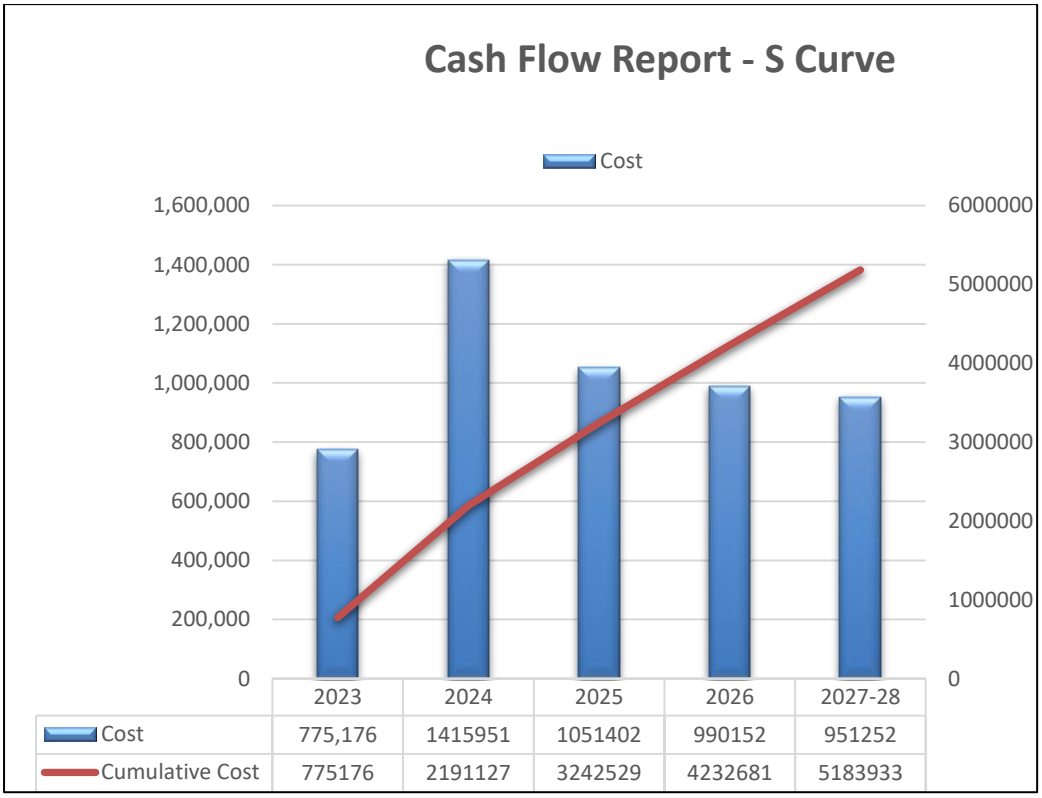
After the Project Board approves the project budget, the project manager establishes the baseline budget. The baseline budget is the approved version of a budget that serves as the reference point for comparison throughout the project lifecycle. In this project, it is a time phased budget reflective of the total amount for all the WBS activities and processes.

The BRW is a flood prone area; therefore, a contingency reserve of 20% is adequate in case there are natural disasters causing destruction of nurseries and other infrastructure. A Management Reserve of approximately USD $10,000.00 has been deemed sufficient due to the existing expertise within the implementing agencies. The contingency reserve and the management reserve have already been incorporated into the approved budget. The S-Curve shown in figure 13 below represents the projected yearly expenditure which was determined based on the activities and their duration during the project's lifecycle. It can be

observed that initially the costs are low; they increase by the second year then gradually decrease. This case can signify that the majority of procurements will be done in Year 2 of the IMPL Project.

Figure 13.

S-Curve



Source: Author of the study

4.4.4 Cost Monitoring and Control

Cost control plays a crucial role in project management, guaranteeing the efficient and effective utilization of financial resources during the project's lifecycle. This is a complex project, being implemented by several responsible partners. Having control over the cost is vital to ensure that the project remains within budget and meets its objectives. To

accomplish this, the project will implement Earned Value Management (EVM), which is a project management technique that integrates scope, schedule and cost performance to assess the project progress and forecast future performance. It involves comparing the value of work completed (earned value) against the actual costs incurred (actual cost) and the planned costs for the work performed (planned value). This analysis provides a robust framework for monitoring, analyzing and managing project expenditures. The Earned Value Management (EVM) indicators for the IMPL Project are as follows:

1. Planned Value (PV) represents the authorized budget assigned to the work scheduled to be completed at a specific time. PV is the cost of the work scheduled.
2. Earned Value (EV) is the value of the work performed and completed at a specific time.
3. Actual Cost (AC) is the total cost actually incurred and recorded in accomplishing the work performed for a specific period. It reflects the actual expenses associated with the project activities.
4. Budget at Completion (BAC) is the total budget allocated to the project's completion.
5. Cost Variance (CV) measures the cost performance of the project and assesses the variance between the actual costs incurred and the planned costs for the work performed. It indicates whether the project is over or under budget at a certain time. It is calculated EV – AC. A positive CV signifies that the project is under budget (cost savings).

6. Schedule Variance (SV) measures the Schedule performance of the project indicating whether the project is ahead or behind schedule based on the original project plan. It is calculated as EV – PV. A positive SV indicates the project is ahead of schedule.
7. Cost Performance Index (CPI) is a ratio of EV to AC which indicates how efficiently the project team is utilizing resources to accomplish the work compared to the approved budget.
8. Schedule Performance Index (SPI) is the ratio of EV to PV to the work performed at a specific point in time.

The S-Curve, depicted in Figure 12, serves as a valuable tool, presenting a visual representation of planned, earned and actual progress over time. It provides a clear picture of the project's alignment with the scheduled timeline and budget.

4.4.5 Cost Variance Response

Cost variance response involves a structured procedure for identifying, analyzing and addressing discrepancies between planned and actual project costs. Depending on whether the cost variance is positive (indicating that the project is under budget), or negative (indicating project is over budget), different responses may be required. These responses typically involve analyzing the root causes of the variance, assessing its impact on the project objectives, and implementing corrective actions to mitigate the variance and keep the project on track financially. Chart 15 below depicts the cost variance performance measure that will be used in the IMPL Project. In this case if the SPI or CPI has a variance of or between 0.1 and 0.2, the Project Manager must report the reason for the exception. If

the SPI or CPI has a variance of greater than 0.2, the Project Manager must report the reason for the exception and provide the Project Board with a detailed corrective plan to revert the project's performance to acceptable levels.

Chart 15.

Cost Variance Response Process

Performance Measure	**Green Condition**	**Yellow Condition**	**Red Condition**
Schedule Performance Index (SPI)	Greater or equal to 0.95	Between 0.9 and 0.8 Between 1.1 and 1.2	Less than 0.8 or Greater than 1.2
Cost Performance Index (CPI)	Greater or equal to 0.95	Between 0.9 and 0.8 Between 1.1 and 1.2	Less than 0.8 or Greater than 1.2
Indicators	**Response**		
Green	Project is on schedule or ahead or project is under budget or on target.		
Yellow (alert)	Some concerns, monitor closely, or some cost concerns, investigate and consider corrective actions.		
Red (Critical)	Project is behind schedule, take corrective actions immediately, or project is over budget, implement corrective actions urgently.		

Source: Author of the study

4.4.6 Cost Reporting and Format

Reporting on cost management will be included in the quarterly end of stage progress reports. In this report, there will be a section "Cost Management" where the Earned Value Metrics identified will be included. All cost variances outside of the

thresholds will be reported along with corrective actions. The Change Orders will be triggered based on the project overruns.

4.4.7 Cost Change Management

Any project team member, Project Board or Project Sponsor can request project cost changes throughout the life cycle of the project. If a change to the IMPL Project cost is needed, a change request form will be submitted to the project manager as shown in Chart 7, Change Request Form: These change requests may include corrective measures which will be processed for review and approval through the Change Control Process. The Project Manager will review the cost change request, make estimations, analyze and quantify the impact that these changes will have on the project performance. The Project Manager may either reject or accept the request, convene a Change Control meeting with the project team and the Project Board to formally submit the request. If the Project Board, which also serves as the Change Control Board, approves the cost change request, they will formally sign the project change control document. Once approved by the Change Control Board the Project Manager will update all the project documents and communicate the cost change to all the project team members and stakeholders.

4.5. Quality Management Plan

The Quality Management Plan includes the processes for incorporating the organization's quality policy regarding planning, managing and controlling project and product quality requirements to meet stakeholders' objectives (PMI, 2017, p.271). It documents the necessary information required to effectively manage the project quality, from project planning to delivery, and is an essential component that will contribute towards the success of the project. The person responsible for the oversight of the quality

management plan is the Project Manager; however, this is not only limited to the project team.

4.5.1 Quality Management Approach

The quality approach adopted by the IMPL Project involves utilizing the existing standards and criteria of the Responsible Partners which in this case are Friends for Conservation and Development, Belize Livestock Producers Association, Government of Belize and UNDP. Project quality management addresses both the management of the project and the product/deliverables.

To ensure that the project is meeting the quality objectives, it is imperative to constantly perform checks and measure them against the project objective. Quality metrics and quality checklists are utilized by the IMPL Project to control quality of the products/deliverables and the project. The quality checklist is shown in Appendix 5. The quality metrics that will be used by this project can be seen below in Chart 16. These metrics can be changed based on the request of any member of the project board or the team.

Chart 16.

Quality Metric

Type	Quality Metric
Product/Deliverable	Product meets the specifications
	On time delivery of reports and agreed deliverables of the consultants
	Customer Satisfaction
	Availability

	Response time from providers
Project	Schedule performance: measures the project's adherence to the planned schedule.
	Scope management (scope creep and scope change requests)
	Risk response measures the success of risk mitigation.
	Stakeholder satisfaction: metrics include stakeholder engagement and stakeholder feedback
	Resource utilization rate
	Resource allocation

Source: Author of the study

4.5.2 Quality Requirements/Standards

The project quality standards that must be adhered to according to the quality criteria are the following:

Relevant:

- The project outputs should be relevant and applicable to the intended audience or stakeholders. This criterion involves ensuring that the project meets the expectations of the sponsor and beneficiaries.
- The project objectives and results are still relevant and are consistent with the national strategic plan and other national initiatives. It contributes towards the achievement of the country's regional and global commitments.

Management:

- The project outcomes are clearly defined and are consistent throughout the project lifecycle. The activities are aligned with the theory of change which include results-

driven indicators, established baselines and targets. Risk plans are developed, and risks are mitigated before they have a negative impact on the project. The project governance is well-defined, with clear roles and responsibilities that will contribute to informed decision-making.

Efficient:

- The project tasks are completed promptly, resources are allocated wisely and within budget, and project deliverables are achieved within the established schedule and budget.
- The ability of the project team to adapt and respond swiftly to changes during the project lifecycle whilst still meeting project deadlines and goals.

Effective:

- The data from the consultancies can be used for decision making, development of policies, rules and regulations.

Scalability:

- The project is designed to accommodate potential future growth or changes in requirements. It should be flexible and scalable to adapt to evolving needs.

Completeness:

- All aspects of the project should be fully developed and implemented according to the agreed-upon scope. This scope involves delivering all planned features, functionalities and deliverables.

4.5.3 Quality Assurance Approach

Quality assurance involves a series of systematic steps aimed at ensuring that the project meets the desired quality standards and requirements. The steps that are taken to perform quality assurance in the IMPL Project are the following:

1. The Terms of Reference (ToRs) that are elaborated have clear and precise deliverables that are aligned with the objectives of the project.
2. Ensure that qualified personnel are hired for the consultancies. This will be achieved by having an experienced and knowledgeable evaluation panel who has the capacity to conduct fair evaluations.
3. The Project Manager will keep in constant communication with the Consultants to ensure that work is being advanced as per schedule and as per agreed contract.
4. Conduct periodic quality audits to assess the effectiveness of quality assurance activities and identify areas of improvement. Determine whether the project is in compliance with quality standards, processes and procedures.
5. Monitor and measure key quality metrics throughout the project lifecycle. Collect relevant data on quality performance, such as adherence to specifications.
6. For the ongoing consultancies, keep constant track on the agreed schedule to ensure that the work is being conducted as agreed on the contract. The project team will verify all deliverables to ensure that these meet the specifications before the consultancy is declared as completed.
7. The IMPL project will establish a “percentage of work completed” metrics by having weekly, monthly and quarterly meetings to review advances in the project,

identify potential risks, develop mitigation plans and check if the required milestone has been achieved.

8. The Third-Party Responsible Partners will conduct regular project monitoring and project quality assessment to ensure that the project is on track and is abiding by the established processes.
9. Review the effectiveness of quality assurance processes and outcomes regularly. Request feedback from stakeholders, analyze performance data and identify opportunities for enhancing quality performance and methodologies.
10. Annual audits will be conducted to ensure that the deliverables meet the specified quality and cost.

4.5.4 Quality Control Approach

The IMPL Project will implement quality approach through the following activities:

- The project team will conduct constant meetings with the consultants to ensure that they are performing as per the agreed schedule.
- The project manager will conduct regular meetings with the TPRPs and their team to ensure that they are performing as agreed in the workplan.
- Constant inspections will be conducted at the project sites to monitor and to ensure that the work is done in accordance with the contracts.
- Implement preventative measures to avoid future quality problems. This step may involve process improvements, training, quality awareness programs or changes to quality control procedures.

4.6. Resource Management Plan

The Resources Management Plan includes the processes to identify, acquire and manage the resources required for the successful completion of the project (PMI,2017, p. 307). This plan is a fundamental aspect of project management and is crucial for ensuring that resources are effectively utilized to achieve project objectives within budget and time constraints. The following is the resource management plan for the IMPL Project.

4.6.1 Resource Management Approach

The resource management approach for the IMPL Project is a comprehensive plan that details the acquisition and supervision of the project team, delineating roles and responsibilities and establishing methods for acquiring and managing physical resources such as materials and equipment. The team members are chosen according to their qualifications and experience, with roles and responsibilities already defined based on the project's deliverables and requirements. This plan also includes the acquisition of goods and services through a procurement plan, taking into consideration timelines and budget. This approach aims to optimize resource utilization, mitigate risks and contribute to the overall success of the project.

4.6.2 Roles, Responsibilities and Authority

The IMPL project is being executed by the MSDCCDRM through seven Third Party Responsible Partners (TPRPs); hence, it is critical that the roles, responsibilities and authority be clearly defined to ensure that they properly implement their portion of the project. Chart 17 below explains the roles, responsibilities, authority and competencies of the project team.

Chart 17.

Project Resource Management Roles and Responsibilities

Roles	Responsibilities	Skills
Project Director (PD)	- Overall supervision and accounting of the project. - Is the chairman of the Project Board. - Reports and liaises directly with the executing entity, UNDP. - Direct supervisor of the PM and the project team - Serve as a member of the Project Board	- Leadership - Administrative and Management experience - Team Building - Effective communication skills (written and oral)
Project Manager (PM)	- Authorize and approve all project expenses and accept deliverables. - Project management and administration - Liaise with PD to keep him abreast of project implementation and other matters - Liaise with Project Board (PB) to assure the overall direction of the project - Organize and conduct project status, planning and coordination meetings - Development of the Inception Report, Annual Operational Plan (AOP), Project Manager's report - Monitor and evaluate the performance of all project team members and submit to the PD. - Supervise consultants	- Leadership - Team Building - Conflict Resolution - Management and administration - Effective communication both written and oral - At least 10 yrs. of experience in natural resource management - At least 5 years of experience working with ministries and other institutions

Roles	Responsibilities	Skills
Finance Associate (PFA)	- Keep records of funds and expenditures - Validate and certify FACE forms before submission to UNDP - Review project expenditures and ensure that they are used as per the approved workplans and Project Document. - Liaise with TPRPs to ensure adequate use of funds - Assist the PM in day-to-day management and oversight of project activities - Provide financial information during audits - Ensure that all project documentation is properly filed. - Has limited authority in decision-making and use of resources	- Experience in accounting - Analytical skills - Time management - Organized and multi-tasked - Team player - Excellent communication skills
Implementing Partner	- The MSDCCDRM represents the Implementing Partner and Executing Agency. - Project planning, coordination management, monitoring and evaluation, - Ensure that project deliverables are achieved as per the Project Document, Project Charter and Project Management Plan	
Project Board (PB)	- Provide overall guidance and direction to the project.	

Roles	Responsibilities	Skills
	- Approve project inception report, Mid-term Review, and Terminal Evaluation Reports. - Apply corrective measures as needed. - Approve annual operating plans, stage plans and project manager's report.	
Executing Agency (UNDP)	- Acts as the project sponsor Implementing Agency. - Ensures that the project keeps within budget, schedule and meets its goals.	
Consultants	- Training and capacity building - Ensure that project deliverables are achieved as per the ToR - Engage with the stakeholders and beneficiaries	- Effective communication and reporting - Team player - Knowledgeable in the specified field such as watersheds, natural resource, gender, monitoring and evaluation

Source: Author of the study

4.6.3 Project Organizational Chart RACI Matrix

The RACI chart matrix is a tool used to clarify employee roles and responsibilities for each task, milestone and decision that takes place throughout a project (Miranda, 2023). This following matrix shown in Chart 18 illustrates the responsibilities that the team members have in relation to the project tasks.

Chart 18.

RACI Responsibility Matrix

Task Name	PD	PM	PFA	C	PB	TPRPs	EA
Clarification of agencies mandates	C	A	I	R	I	R	I
National coordinating framework for IWM defined and enabled	C	A	I	R	I	R	I
Development and strengthening of protocols for inter-institutional co-ordination to enforce norms and establish penalties to the loss of forest cover	C	A	I	R	I	R	I
Sensitization for communities/stakeholders	C	A	I	R	I	R	I
Participatory awareness enforcement strategy	C	A	I	R	I	R	I
Workshops for the revision of water, air legislations and regulations	C	A	I	R	I	R	I
Equipment and infrastructure	C	A	R	I	I	R	I
Training program developed on data analysis	C	A	I	R	I	R	I
Community-based monitoring program	C	A	I	R	I	R	I
Routine surveys for environmental compliance	C	A	I	R	I	R	I
Contracting of a Financial Strategist	C	A	R	I	I	R	I
Design of incentive program	C	A	I	R	I	R	I
Amendments to existing strategies, programs, policies and legislation	C	A	I	R	I	R	I
Socialization of the financial incentives program.	C	A	I	R	I	R	I
Experiences, best practices and lessons learned	C	A	I	R	I	R	I
Adoption of "environmental" KPI	C	A	I	R	I	R	I
Establish protocols for data gathering, collecting, storing and validating.	C	A	I	R	I	R	I
Expand capabilities of the National Statistics System	C	A	I	R	I	R	I

Task Name	PD	PM	PFA	C	PB	TPRPs	EA
Training in the information management system	C	A	I	R	I	R	I
Needs assessment	C	A	I	R	I	R	I
Capacity Building	C	A	R	R	I	R	I
Conservation agreements developed and signed	C	A	R	R	I	R	I
Rehabilitation and management strategies implemented	C	A	I	I	I	R	I
Riparian forest restoration strategy implemented	C	A	I	R	I	R	I
Forest protection strategy implemented	C	A	I	R	I	R	I
Equipment, infrastructure and training	C	A	R	R	I	R	I
Grazing reform/pasture management program	C	A	I	R	I	R	I
Establish an emergency seed bank	C	A	I	R	I	R	I
Expand and equip the National use of Earth Observation Platform	C	A	I	R	I	R	I
Consultancy for the Master Plan for the BRW	C	A	R	R	I	R	I
Socialization for the Master Plan for the BRW	C	A	R	R	I	R	I
Support extension work program	C	A	R	R	I	R	I
Application of Green value chains	C	A	I	R	I	R	I
Update farmer field school curriculum	C	A	I	R	I	R	I
Community outreach	C	A	I	R	I	R	I
Knowledge exchange capacity building value chain actors	C	A	R	R	I	R	I
Training and development of farmers and exchange programs	C	A	R	R	I	R	I
UNDP's Global Green Commodity Program	C	A	R	R	I	R	I
Establishment of a small agro-processing facility	C	A	R	R	I	R	I
Participation in knowledge exchange programs	C	A	R	I	I	R	I
Development of 6 business/strategic plans	C	A	R	R	I	R	I
Development of community awareness/outreach program	C	A	I	R	I	R	I
Development of community awareness/outreach program	C	A	I	R	I	R	I

Task Name	PD	PM	PFA	C	PB	TPRPs	EA
Implementation of community awareness/outreach program	C	A	R	R	I	R	I
Equipment for monitoring	C	A	R	R	I	R	I
Training for monitoring of GEBs	C	A	R	R	I	R	I
Development and Implementation of micro-granting scheme	C	A	R	R	I	R	I
Updating of the Gender Mainstreaming Plan	C	A	R	R	I	R	I
Participation in global/regional forums and conferences	C	A	R	I	I	R	I
Systematization of the project	C	A	R	R	I	R	I
Conduct M&E of the project	C	A	R	R	I	I	I

Source: Author of the study

Key:

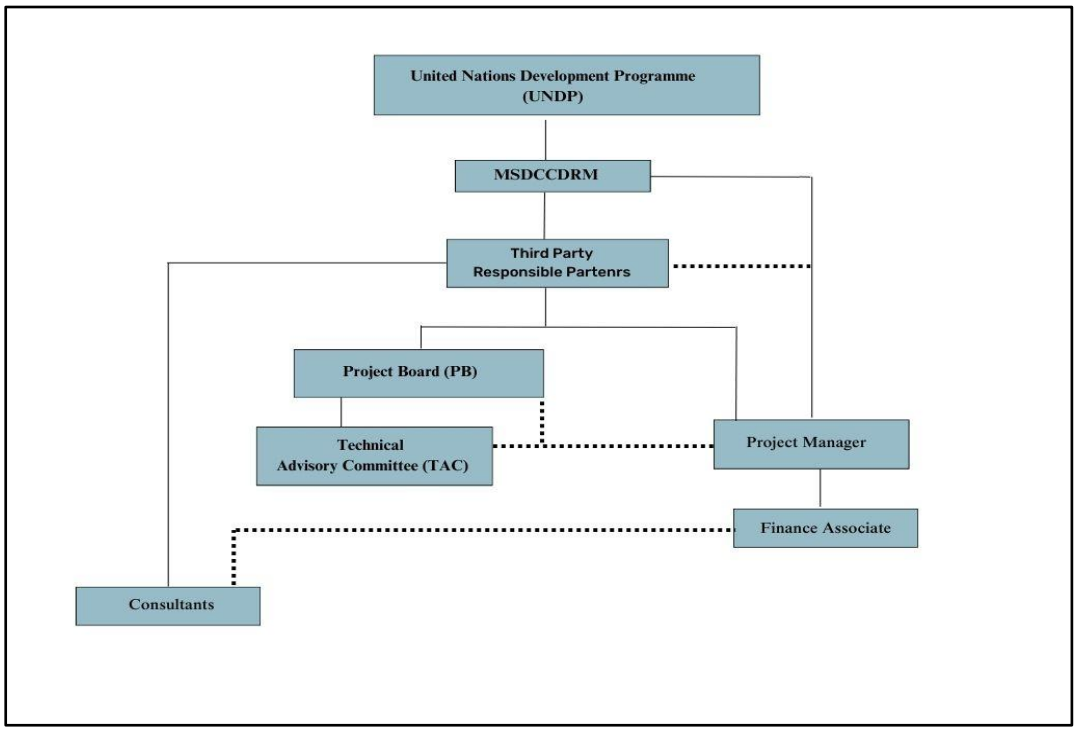
R – Responsible for completing the work
A – Accountable for ensuring task completion
C – Consulted before any decisions are made
I – Informed of when an action/decision has been made

4.6.4 Project Team Organizational Structure

The organizational structure of a project team is vital in ensuring that everyone knows and understands their role and responsibility to ensure proper flow of communication. The organizational structure of the project team can be seen in Figure 14 depicting the positions and reporting hierarchy of the IMPL Project.

Figure 14.

Organizational Structure of the IMPL Project



Source: Author of the study

4.6.5 Acquisition of Team Members

The IMPL Project staff will consist of both internal and external resources. The project team members acquisition approach will be the following:

1. The Project Director will be assigned as counterpart contribution on behalf of the Implementing Partner, MSDCCDRM.
2. The project manager is directly appointed by the MSDCCDRM who should be different from the Implementing Partners' Representative in the Project Board. The Project Manager will be responsible for the procurement process to hire the Project Finance Associate and consultants.

3. The Project Finance Associate will be selected through a fair process where the prospective applicants will submit their applications and undergo interviews. The interview panel, through a grade point system, will select the most suitable person to fill the position of Finance Associate.
4. The Consultants will be hired following the Government of Belize and the Responsible Partner's procedures. Their selection will be based on qualifications, technical experience and financial proposal.

4.6.6 Training Requirements

This project will only provide training to the Project Manager and the Project Finance Associate. This training will be conducted at the initial phase of the project so that they familiarize and understand the Responsible Partner's reporting, financial policies and procedures.

4.6.7 Performance Reviews

The IMPL Project is being implemented under a "National Implemented Modality" as such the FPA will be assessed following the Government of Belize Appraisal System. The consultants will be evaluated based on the consultancy deliverables. The TPRPs performance will be evaluated based on the project outputs that they agreed to deliver in the TPRA.

4.6.8 Safety

The project will ensure that the project management team or consultants are always protected; therefore, safety training is mandatory. Parallel to this is the development of an emergency response plan in cases of hurricanes, wildfires, or other natural disasters. Proper

field and protective gear will also be provided for the project team. In cases of pandemics, such as the recent COVID-19 pandemic, officers will be permitted to work from home using established virtual platforms.

4.6.9 Regulations, Standard and Policy Compliance

All human resource acquisition shall be in conformance to the established local government laws of Belize and the United Nations Charter on human rights promoting equality and gender equity.

4.6.10 Recognition and Awards

The scope of this project does not cater for funds to be used as monetary rewards; however, recognition for outstanding personnel can be highlighted and honored on a yearly basis during meeting sessions. The project will also ensure that travel allowances are provided to personnel when they travel abroad to attend meetings or to conduct site visits.

4.6.11 Conflict Management

The project manager is responsible for supervising the conflict resolution process to ensure that it is carried out effectively and fairly. The IMPL Project will address conflicts in the following manner:

- Establishment of a grievance mechanism to ensure accountability, transparency, and justice within the project by addressing issues promptly and impartially.
- Identify staff who have the expertise in responding to conflicts and grievances which may arise from stakeholders.
- Develop and implement policies that will support the establishment of the grievance mechanism.

- Foster an environment of open communication where team members feel comfortable expressing concerns or disagreements openly.
- Provide training to equip personnel on conflict resolution techniques.
- Conduct mediation and facilitation sessions where a trained mediator will be appointed to facilitate discussion and guide conflict resolution sessions.

4.6.12 Control Resources

Control resources is the process of ensuring that the physical resources assigned and allocated to the project are available as planned, as well as monitoring the planned versus actual utilization of resources and taking corrective action as necessary (PMI, 2017, p. 352). The IMPL Project will manage and control physical resources by developing a resource inventory database to record, track and manage assets. This inventory database will streamline and enhance the management of the inventory by providing accurate, up-to-date information enabling efficient control and utilization of resources. In addition, physical audits will be conducted to verify the current condition, quality and existence of the resources. In instances where the resource is damaged or lost, a formal lost or damaged report will be submitted to the project manager then recorded into the database.

4.7. Communication Management Plan

The communication management plan (CMP) plays a vital role within the project management plan since it outlines how communication will be addressed throughout the project's lifecycle. It organizes and document the progress, types and expectations of communications. It includes details such as stakeholders, communication channels to be

used, frequency of communication, types of information to be communicated and the methods for solving communications issues. The main objective of the CMP for the IMPL Project is to ensure effective and transparent communication among stakeholders. The following is the CMP for the IMPL Project. The communication management plan consists of three (3) processes: plan communication management, manage communications and monitor communications.

4.7.1 Plan Communication Management

The Plan Communication Management process is one of the key processes within the communication management plan since it involves developing an approach on how communication will be addressed throughout the project. This will establish the flow of communication among stakeholders whilst ensuring that communication within the project is effective and aligned with project goals, ultimately contributing to project success and stakeholder satisfaction. One of the first steps in developing in achieving this objective is to identify all stakeholders who need to be communicated with and involved in the project. The communication requirements are then determined to ensure that stakeholders receive the right information, in the correct format, within specified timeline and, very important, through the right channel. The stakeholder and communication requirements analysis for the IMPL Project is shown in Chart 19 below.

CHART 19.

Stakeholder Identification and Communication Requirements Analysis

Stakeholder	Title	Communication Requirements	Communication Method	Contact Information	Responsible
UNDP – Mrs. Isabella Escalante	Acting Project Sponsor	• Project Status Reports • Financial Reports • Project Risks	• Email Phone	isabella.lopez@undp.org	Project Manager
Dr. Kenrick Williams	Project Director	• Project Status Reports • Financial Reports • Change Request • Annual Operational Plans	• Emails • Meetings • Telephone Calls	ceo@environment.gov.bz	Project Manager
Yanira Pop	Project Manager	• Project Annual Operational Plan • Project status and quarterly reports, • Project Budget • Financial Reports	• Emails • Meetings • Telephone Calls	pm.gef6@environment.gov.bz	Project Finance Associate
Leon Castillo	Project Finance Associate	• Project budgets/financial reports • Status reports • Project risk updates	• Emails • Meetings • Telephone Calls	pa.gef6@environment.gov.bz	Project Finance Associate

Stakeholder	Title	Communication Requirements	Communication Method	Contact Information	Responsible
Project Board	Project Board	• Project status and quarterly reports • Financial Reports • Change Request • Annual Operational Plans	• Emails • Meetings • Telephone Calls		Project Manager
Third Party Responsible Partners (TPRP)	Third Party Responsible Partners (TPRP)	Requests on: • project deliverables • financial reports • workplans • risks	• Emails • Meetings • Telephone Calls		Project Manager, Project Finance Associate
Technical Advisory Committee (TAC)	Technical Advisory Committee (TAC)	• Project status and quarterly reports • Financial Reports • Change Request	• Emails • Meetings • Telephone Calls		Project Manager
Consultants	Consultant	• Deliverables reports			Project Manager, Project Finance Associate

Source: Author of the study

4.7.2 Communication methods

The communication methods in Chart 20 below identifies all the types of communications required to successfully implement the IMPL Project.

Chart 20.

Communication Matrix

Types of Communication (Deliverables)	Audience	Purpose	Medium	Frequency	Responsible
Inception Meeting	• All Stakeholders	• Familiarize stakeholders with the project and project team. • Finalize the first year workplan. • Establish modes of communication • Formal launch of the project.	Face to face meeting	Once	Project Manager
Project Team Meetings	• Project team	• Review weekly project status • Review project schedule • Discuss any risk	• Email • Conference call • Face to face	Weekly	Project Manager
Technical Meetings	• Technical project team	• Provide progress on technical aspects of the project	• Email	Weekly	Technical lead
Financial Reports	• Project manager • Project Finance Associate	• Present proposed budget based on Annual Operational Plan.	• Email	Monthly	PM & FPA

Types of Communication (Deliverables)	Audience	Purpose	Medium	Frequency	Sender
	• Third-Party Responsible Partner	• Expenditure report on current quarter.	• Face to face meeting	Quarterly Annual	
Quarterly Status Reports (End of Stage report shown in Appendix 6 and 7)	• Third Party Responsible Partner (TPRP) • Project Manager Project • Finance Associate • Project Director • Project Board	• Provide a comprehensive summary of the activities, accomplishments and outcomes of a specific stage within the project.	• E-mail • Printed	Quarterly	PM
Change requests	• Project Director • Project Board • Third Party Responsible Partner (TPRP) • Project Manager Project • Finance Associate	• Communicate and discuss proposed changes to project scope	• Change request forms • Meetings	As needed	PM and TPRP

Types of Communication (Deliverables)	Audience	Purpose	Medium	Frequency	Sender
	• Technical Advisory Committee •				
Post project evaluation	• All stakeholders	• Presentation of entire project and its final deliverables.	• Printed • Face to face	End of project	Project team (PM, PFA, TPRP)

Source: Author of the study

4.7.3 Project Meetings

The communication methods in Chart 21 below identifies all the types of communications required to successfully implement the IMPL Project.

Chart 21.

Project Meetings

Meeting Type	Purpose	Frequency	Owner	Comments
Status meeting	Project progress	Bi-weekly or as needs be	Project Manager	These are informal meetings to discuss ongoing issues and make decisions on ongoing situations.
Consultation meeting	Project progress on the specific consultancy	Based on consultancy's timeline	Project Manager, Project Finance Associate	Meetings with the consultants to strategize on the consultancy
Stakeholder consultation	Gather information and buy-in of stakeholders.	Based on the consultancy's timeline	Consultant, Project Manager	These are to be held monthly with key focus groups.
Technical Meeting	Provide progress on technical aspects of the project	Weekly	Technical Lead	Meetings to review ongoing activities
Board Meetings	Project progress and decision making.	Quarterly	Project Manager	Report on overall project progress, challenges, risks, lessons learnt and approval of work plans.

Source: Author of the study

4.7.4 Manage Communication

Manage communication is the process that permits the efficient and effective sharing of information among all project stakeholders throughout the project lifecycle. It is very important since it permits the stakeholders make the right decisions based on the information. The IMPL Project will use the communication matrix in Chart 21 as its guide to manage communications. As can be seen in Chart 23 the project manager has a key role in managing the communication among all stakeholders.

The manage communications process requires different inputs such as the communications management plan, project documents such as the risk log, change request log, lessons learned, stakeholder register, enterprise environmental factors, organizational process assets updates. The project team must possess communication and interpersonal skills such as written communication ability, verbal communication ability, listening skills, non-verbal communication skills, conflict management. In addition, the tools and techniques that can be used to have an effective communication and ensure that all stakeholders have a comprehensive understanding of the situation are presentations, meetings, project management information system (PMIS), verbal and written reports.

Project Management Information System (PMIS) ensure that stakeholders easily retrieve the information that they require in a timely manner (PMI, 2017, p. 385). The PMIS is a tool that will help the team facilitate project planning, execution, monitoring, and control. The following is the PMIS that the IMPL Project will utilize:

1. Electronic Communication Management: the project team and stakeholders will utilize emails and platforms such as Microsoft Teams, Google Meet and Zoom for real time virtual meetings. These meetings will be recorded and filed.
2. Electronic Project Management Tools: Microsoft Project, Google Drive, SharePoint and Ms Teams will be used by the project manager and the project team. Microsoft Project will be used by the project manager for project planning, resource management, scheduling, tracking and monitoring the project, reporting and analysis. The project team members will access Microsoft Projects to stay organized, review task assignments, monitor available resources and keep track of the project. Google Drive, Ms Team and SharePoint will be used by all stakeholders to store, share and make inputs where necessary to all project documents. This process will permit close monitoring and rapid decision making on crucial issues.
3. Social Media Management: Social media applications specifically WhatsApp chat groups will be used to enhance stakeholder communication.

4.7.5 Monitor Communication

Monitor communication is an ongoing process that involves overseeing the flow of information among project stakeholders to ensure that it remains effective, timely and aligned with the project objectives. This is done throughout the project. The communication matrix shown in Chart 20 outlines the various types of communication frequencies, target audience, and person responsible.

4.7.6 Communication Escalation Process

The communication escalation process defines the procedures for addressing issues or concerns that cannot be resolved at the project management level. This process is crucial in identifying and mitigating potential threats. The IMPL Project will follow a three-level tier escalation process. Level 1 will be addressing issues within the project team; Level 2 will escalate and be resolved by the project board, and Level 3 is when it escalates that a decision is needed from the Project Sponsor. The escalation criteria will be based on impact to project scope, schedule or budget which, if left unattended, will lead to project delays and may result in unsuccessful project implementation. Chart 22 below shows the escalation matrix for the IMPL Project.

Chart 22

Escalation Matrix – IMPL Project

Level	Description	Escalation Triggers	Communication Responsible	Decision Maker
1	Within project team	Impact on scope, schedule, budget	Escalation Owner, Project Manager	Project Manager and Project Team
2	Project Management Team	Impact on scope, schedule, budget	Project Manager	Project Manager, Project Board
3.	Project Management Team	Impact on scope, schedule, budget, deliverables	Project Board	Project Sponsor

Source: Author of the study

4.8. Risk Management Plan

Risk management includes the processes of conducting risk management planning, identification, analysis, response planning, response implementation and monitoring risk in a project (PMI, 2017, p. 395). The objective of this process is for projects to actively identify, record, evaluate and address potential threats even before they arise within the project management process.

The project manager is the one responsible for the identification, monitoring, recording, and reporting of all risks. Once the risk has been identified, categorized as “high impact” the project manager enters the information in the risk log and reports it to the project team. The project team then discusses and develops a mitigation plan to control the risk. Risk management is done throughout the lifecycle of the project.

The following is the risk management plan for the IMPL Project that includes: identify risk, risk breakdown structure, perform qualitative risk analysis, risk register, and monitoring and controlling risks.

4.8.1 Identify Risks

Risk identification is the process of identifying individual risks, as well as sources of overall project risk, and documenting their characteristics (PMI, 2027, p. 409). This is the first and most important step in risk management since it seeks to identify ongoing and potential risks that may arise and hinder the project. The possible risks were identified using techniques of brainstorming, expert judgment and lessons learnt from other projects.

4.8.1.1 Risk Breakdown Structure

The risk breakdown structure is a tool for managing risks that helps the team identify risks and develop their mitigation plan. It is a hierarchical representation that organizes the project into logical structure giving an overview of the potential risks, enabling the team to systematically identify, assess and prioritize them. The following Chart 23. illustrates the risk breakdown structure (RBS) for the IMPL Project that includes the risk categories that are likely to impact the project. The RBS is divided into five (5) main categories: technical, management, organizational, external, and project risks that will likely impact the project.

Chart 23.

Risk Breakdown Structure.

RBS Level 0	RBS Level 1	RBS Level 2	RBS Level 3
Integrated Management of Production Landscape Project	5. Project	1.1 Late start of the project	1.1.1 Delay in the implementation of project activities.
		1.2 Regulatory	1.2.1 Changes in regulatory requirements
		1.3 Complexity of project	1.3.1 Responsible Partners are from different Government Ministries
	2. Technical	2.1 Human resources	2.1.1 Limited availability of experts
		2.2 Technology	2.2.1 Adoption of new technologies
	3. Management	3.1 Leadership	3.1.1 Limited support for decision making
		3.2 Communication	3.2.1 Inadequate communication among team members
	4. Organizational	4.1 Stakeholder	4.1.1 Lack of stakeholder support
			4.1.2 Unrealistic expectations
		4.2 Staffing	4.2.1 Limited personnel to support project team
	5. External	5.1 Environment	5.1.1 Natural Disasters
		5.2 Political	5.2.1 Changes in government
		5.3 Economic	5.3.1 Higher cost of materials

Source: Author of the study

4.8.2 Perform Qualitative Risk Analysis

Perform Qualitative Risk Analysis is the process of prioritizing individual risks for further analysis or action by assessing their probability of occurrence and impact as well as other characteristics (PMI, 2017, p. 419). The qualitative method that the project manager and the project team utilized to identify the IMPL Project risk prioritization and categorization is the risk prioritization and categorization. In this method the project team identifies the risk, and the project manager then prioritizes them and develops a mitigation plan to avoid the occurrence of the risk. Risks that are more likely to occur and will have a high impact on the project will be ranked as the highest priority and those that are less likely to happen or have low impact will be of lowest priority.

4.8.2.1 Probability and Impact Scales

The Probability and Impact scales are the Risk Probability Scale shown in Chart 24 and the Risk Impact Scale shown in Chart 25. These were quantified based on the likelihood of a specific event occurring and rated at the highest priority.

Chart 24.

Risk Probability Scale

Scale	Probability Score	Description
Very High	0.9	More than once a week
High	0.7	Once every one to three weeks
Medium	0.5	Once every four weeks to six months
Low	0.3	Once every seven months to 12 months
Very Low	0.1	Once every 13 months to 24 months

Source: Author of the study

Chart 25.

Risk Impact Scale

Scale		+/- Impact on Project Objectives				
		Very Low	**Low**	**Medium**	**High**	**Very High**
Impact Score/Category Description		**0.1**	**0.3**	**0.5**	**0.7**	**0.9**
Project Objectives	**Schedule**	1 - 2 days delay	3-7 days delay	8-14 days delay	15- 30 days delay	> 30 days delay
	Cost	Less than $100 over budget	$101 - $1000 over budget	$1001- $1500 over budget	$1501 - $2500 over budget	$2501 over budget
	Scope	Slight adjustment, barely noticeable	Minor Scope Change	Major Scope Change	Unacceptable Scope Change for project sponsor	Major scope work. Project terminated.
	Quality	Minimal Impact on performance	Minor impact on overall service performance	Moderate impact on performance	Severe impact on overall service performance	Deliverables cannot be achieved.

Source: Author of the study

4.8.2.2 Probability and Impact Matrix

The probability and impact matrix of risks that can be seen in Chart 26 helps the project manager and the project team determine which risks need to be addressed immediately and identifies the ones that will need the development of a mitigation plan.

Chart 26.

Probability and Impact Matrix

Severity	**Probability of Impact**				
	Very Low (0.1)	**Low (0.3)**	**Medium (0.5)**	**High (0.7)**	**Very High (0.9)**
Very High (0.9)	0.09	0.27	0.45	0.63	0.81
High (0.7)	0.07	0.21	0.35	0.49	0.63
Medium (0.5)	0.05	0.15	0.25	0.35	0.45
Low (0.3)	0.03	0.09	0.15	0.21	0.27
Very Low (0.1)	0.01	0.03	0.05	0.07	0.09

Source: Author of the study

Chart 27.

Probability and Impact Matrix Scale

Risk Level	**Range**	**Color**
Low	0.01 - 0.09	
Moderate	0.10 - 0.04	
High	0.04 - 0.60	
Extreme	0.61- 0.90	

Source: Author of the study

4.8.3 Risk Register

A Risk Register was developed for the IMPL Project as can be seen in Chart 28 below. It lists all possible identified risks, cause, consequences of each risk, risk trigger, probability and impact of occurrence, their category, risk response and owner. The risk log is color coded based on the probability and impact matrix scale as shown in Chart 27.

Chart 28.

Risk Register IMPL Project

RBS Code	Cause	Risk Description	Consequences	Risk Trigger	Probability (P)	Impact (I)	Risk Score PxI	Risk Response	Risk Owner
1.1.1	Late disburse-ment of funds to the Country Office.	Late start of project	Delay in the imple-mentation of project activities will affect delivery rate which can affect project completion.	Imple-menting partners do not get disbursement of funds by approved dates.	0.7	0.7	0.49	Revise the workplan to have parallel execution of activities where possible.	Project Manager
1.2.1	Govern-ment change in laws and policies.	Changes in regulatory requirements	Regulatory changes may necessitate revisions to project plans, designs, or approvals, leading to delays in project timelines.	Receipt of official notifications, alerts, or announce-ments from regulatory authorities indicating changes, amendments, or additions to existing	0.5	0.5	0.25	Acquire legal and regu-latory expertise to review and advise on the best approach. At the same time keep	Project Manager

RBS Code	Cause	Risk Description	Consequences	Risk Trigger	Probability (P)	Impact (I)	Risk Score PxI	Risk Response	Risk Owner
				regulations relevant to the project.				in constant communication with regulatory agencies to discuss and get immediate advice.	
1.3.1	Responsible partners are from different ministries with established processes that differ amongst agencies.	Complexity of the project	Delay in response from each responsible partner	Slow response from implementing partners.	0.5	0.5	0.25	Develop a stakeholder engagement plan.	Project Manager Project Management Team
2.1.1	Unavailability of consultants in	Limited availability of experts.	Delay in the execution of certain	Low numbers of applications	0.7	0.7	0.49	Hire specialist for only a	Project Manager,

RBS Code	Cause	Risk Description	Consequences	Risk Trigger	Probability (P)	Impact (I)	Risk Score PxI	Risk Response	Risk Owner
	Bio-diversity manage-ment.		activities that require specialized expertise, for example, riparian engineer.	received for the advertised position.				couple number of days per week for an extended duration.	Respon-sible Partners
2.2.1	Limited under-standing of the benefits of the adoption of new tech-nologies.	Adoption of new tech-nologies	Delay in the execution of activities. Impact on budget.	Low stakeholder involvement in workshops.	0.5	0.5	0.25	Conduct training and work-shops on the new tech-nologies.	Limited under-standing of the benefits of the adoption of new tech-nologies .
3.1.1	Lack of clear delegation of authority.	Uncertainty in decision making and authority.	Delays in project imple-mentation due to the dependency on the approvals.	Delays due to constant bottlenecks in the approval process.	0.7	0.7	0.49	Develop contin-gency plans and explore alter-native approach es such as phased	Project Manager Project Manage-ment Team

RBS Code	Cause	Risk Description	Consequences	Risk Trigger	Probability (P)	Impact (I)	Risk Score PxI	Risk Response	Risk Owner
								execution or having meetings with key decision makers to obtain pre-approvals of the proposed procure-ment plan.	Respon-sible Partners
3.2.1	Absence of established communi-cation channels added to poor communi-cation culture.	Inadequate communi-cation among team.	Misinterpre-tation of information	Project delays due to misunder-standing in communi-cation	0.5	0.5	0.25	Define clear communi-cation channels and protocols for sharing infor-mation. Provide commun	Project Manager

RBS Code	Cause	Risk Description	Consequences	Risk Trigger	Probability (P)	Impact (I)	Risk Score PxI	Risk Response	Risk Owner
								communication training	
4.1.1	Lack of awareness and understanding of the importance of sustainable land management.	Lack of stakeholder support to implement sustainable land management practices.	Delay in the implementation of project activities.	Reluctance to support the project initiatives and limited participation in community meetings.	0.3	0.5	0.15	Engage with stakeholders early in the project to build awareness of the project, provide training sessions to increase their understanding of the benefits of SLM practices.	Project Manager

RBS Code	Cause	Risk Description	Consequences	Risk Trigger	Probability (P)	Impact (I)	Risk Score PxI	Risk Response	Risk Owner
4.1.2	Unrealistic expec-tations	Unrealistic expectations from stakeholders will cause dis-satisfaction.	Delays in project progress.	Stakeholder priorities are different than those of the project.	0.5	0.7	**0.35**	Set realistic project expec-tations	
4.2.1	Resource constraints such as limited time, personnel budget.	Limited personnel to support project team	Delays in completing deliverables, which can result in delays in the overall project timeline.	Minimal involvement of responsible party staff in the project.	0.5	0.7	0.35	Con-tinuous moni-toring to adjust the resource allocation plans as needed and if feasible consider augment-ting the project team with addi-tional personnel on a tempo-	

RBS Code	Cause	Risk Description	Consequences	Risk Trigger	Probability (P)	Impact (I)	Risk Score PxI	Risk Response	Risk Owner
								rary basis.	
5.1	Natural Disasters	Catas-trophic events caused by natural disasters such as hurricanes and wildfires.	Disruption in project schedule and impact on budget.	Meteoro-logical warnings on hurricanes and wildfires.	0.7	0.7	0.49	Develop contin-gency plans for natural disasters.	Project Manager
5.2	Elections will be conducted during project imple-mentation.	Change of Government	Delay in obtaining project approvals to complete the procurement process.	Prime Minister announces general elections.	0.5	0.7	0.35	Acti-vation of a contin-gency plan that has approved signature specimen in these circum-stances.	Project Manager

RBS Code	Cause	Risk Description	Consequences	Risk Trigger	Probability (P)	Impact (I)	Risk Score PxI	Risk Response	Risk Owner
5.3	Global market conditions	Budget overrun due to increase in price of goods and services.	Impact on the budget allocated for resources.	Quotations on goods and services	0.5	0.7	0.35	Source from alter-native suppliers and negotiate contract prices.	

Source: Author of the study

4.8.4 Risk Monitoring and Control

The project manager will monitor the status of the risks that have been identified in the risk log and ensure that the mitigation strategies are being implemented. The project manager and the project management team will identify any other possible risk during the weekly status meetings, evaluate its probability and impact, and based on the results, prioritize them and decide whether they are to be entered it into the risk log. The risks with high probability and impact will be reported to the project board at the quarterly meetings. The risks will be recorded in a risk log chart and updated monthly as can be seen in Chart 28 above.

Each identified risk will be assigned a risk owner (s) who will have the responsibility to track, monitor and control the assigned risk. The risk owner will provide weekly status updates of the risk to the project manager. The project manager will update the project director during weekly status meetings. The risk log will be presented with its respective updates and status at project board quarterly meetings. These risks will also be discussed with the Technical Advisory Committee to finalize the respective mitigation plan for the specific risk.

The cost of the known risks that are listed in Chart 28 will be absorbed from the contingency plan. The cost of the unknown/unknown risks that are not reflected in the risk log as shown in Chart 29 will be obtained from the funds that have been allocated in the management reserve. These funds are controlled by the Project Board and the Project Sponsor and are available upon the request made by the Project Manager.

The project manager will communicate in writing and notify the Third-Party Responsible Partners, Project Steering Committee, and Project Sponsor of important changes to risk status, especially if they have escalated and are considered extreme immediately.

4.9. Procurement Management Plan

The Procurement Management Plan (PMP) is a component of a project management plan that describes how a project team will acquire goods and services from outside the performing organization (PMI, 2017 p.186). PM SIXTH Edition further states that it includes information on how procurements will be integrated with other project work and stakeholders involved in procuring resources. The goal of the procurement plan is to increase the efficiency, effectiveness, accountability and transparency of the procurement process. The following is the procurement management plan for the IMPL Project that outlines the procurement process that will be used to acquire goods and service during the lifetime of the project.

4.9.1 Procurement Management Approach

The procurement management approach for this project will be led and managed by the Project Manager, in collaboration with the Procurement Unit (PU) within the MSDCCDRM. The Project Finance Associate (PFA) will work along with the PM to identify all goods and services to be procured for the successful implementation of the project. The PM will review the procurement list and along with the PFA will determine the procurement method that will be implemented. This list will then be shared with the PU who revises it to ensure that the procurement processes established by the MSDCCDRM

are being adhered to. The IMPL Project will follow the procurement procedures as established by the Government of Belize in the Stores Order, Financial Orders or any other Ministerial Policy such as a Procurement Policy.

4.9.1.1 Procurement of Goods and services

The process that will be followed for the procurement of goods is dependent on the cost of the goods that will be acquired. It is important to note that Terms of Reference (ToR) as shown in Chart 32 are developed by the PM with assistance of the PFA and approved by the PD before the procurement process initiates. Below is the description of the procurement process based on the cost of the goods or services that will be implemented by the IMPL Project.

- In instances where the cost of the goods that will be procured is under or equal to one thousand Belize dollars (BZE$1000) it is the responsibility of the PFA to obtain three quotations from three different suppliers and conduct a comparison among the quotations using the Micro Purchasing Canvass form shown in Chart 31. The supplier is selected based on best value for money, availability of goods and quality. Once this process is finalized a requisition form as shown in Figure15 is then filled and approved by the Project Director (PD) and submitted along with the three quotations to the Accounting Department within the MSDCCDRM for their revision and processing. At the end of this process a Purchase Order (PO) is obtained to acquire the goods as can be seen in Chart 34.
- In cases where the cost of goods or services is between one thousand Belize dollars (BZB$1000) to twenty thousand Belize dollars BZE$20000 a Request for Quotation

(RFQ) as can be seen in Chart 34 is sent to proposed suppliers who are selected based on experience and expert judgement. Once the RFQ is received, the PFA will enter the information in the Micro Purchasing Canvass form shown in Chart 31. This is then evaluated by the PM, PFA and PD and approved by the PD. These are then accompanied in some cases by a short-term contract which is signed between the supplier and the MSDCCDRM.

- Goods and services above twenty thousand Belize dollars (BZE$20,000) need to follow the open tendering process where it will be advertised for two weeks in two local newspapers. The interested parties will request via email the ToR and submit a hardcopy of the proposal at the office. In some instances where only one or two bids are received the add is re-advertised for another two weeks to ensure there is ample time for any interested party to submit their proposal. An evaluation committee is established for the review and evaluation of proposals. The evaluation committee consists of a representative from the Ministry of Finance, Technical Advisory Committee, PM, Implementing Partner and the Administrative Officer from the MSDCCDRM. An evaluation report is then developed detailing the process. An evaluation summary sheet is developed reflecting the results and signed by all members of the evaluating team as shown in the evaluation matrix Figure 17 . The evaluation report is then presented to the PD along with the recommended selected consultant/contractor. With the approval from the PD, the request for approval of contract for the consultant/ service provider is further submitted to the Ministry of Finance and the office of the Contractor General. Once approved from these

ministries the contract between the MSDCCDRM and the selected service provider is signed by both parties. When the contract is signed, and based on the submission of deliverables the PFA prepares the requisition forms, gets approval from PD and submits to the Accounting Section of the MSDCCDRM to conduct payments as per agreed contract schedule.

4.9.2 Procurement Plan

The procurement plan template in Chart 29 is the annual procurement plan template that will be used for the IMPL Project. This plan will be the guide used for executing the procurement throughout the duration of the project. It is developed by the FPA based on the activities in the Annual Operational Plan of the project. This plan should be presented at the first Project Board Meeting for its approval. Once approved, it is shared with the procurement unit of the MSDCCDRM for its implementation. The procurement management plan identifies and defines the items to be procured, type of procurement, timeframe for the procurement and contract cost.

Chart 29.

Procurement Plan Template IMPL Project

ITEM	ITEM DESCRIPTION	COST (USD$)	PRO-CUREMENT METHOD	START DATE	CONTRACT DATE
Goods and Non-Consulting Services					
Goods	Field gear	10,000	Open/selective Tender	April	July
Goods	1 Mule with Spare tire, winch & maintenance accessories.	34,000	Open/selective Tender	May	August
Goods	Material for the establishment of nurseries	580	Open/selective Tender	May	May
			Open/selective Tender		
Sub-total		44580			
Consultancy Services					
Indi-vidual Con-sultant	Consultancy for the comprehensive review of environmental pollution in Belize	15,000	Open tender	March	June
Firm	Development of a Landscape Management Plan	25,000	Open tender	February	June
Sub-total		40,000			
Total		84,580.00			

Source: Author of the study

4.9.3 Type of Contract

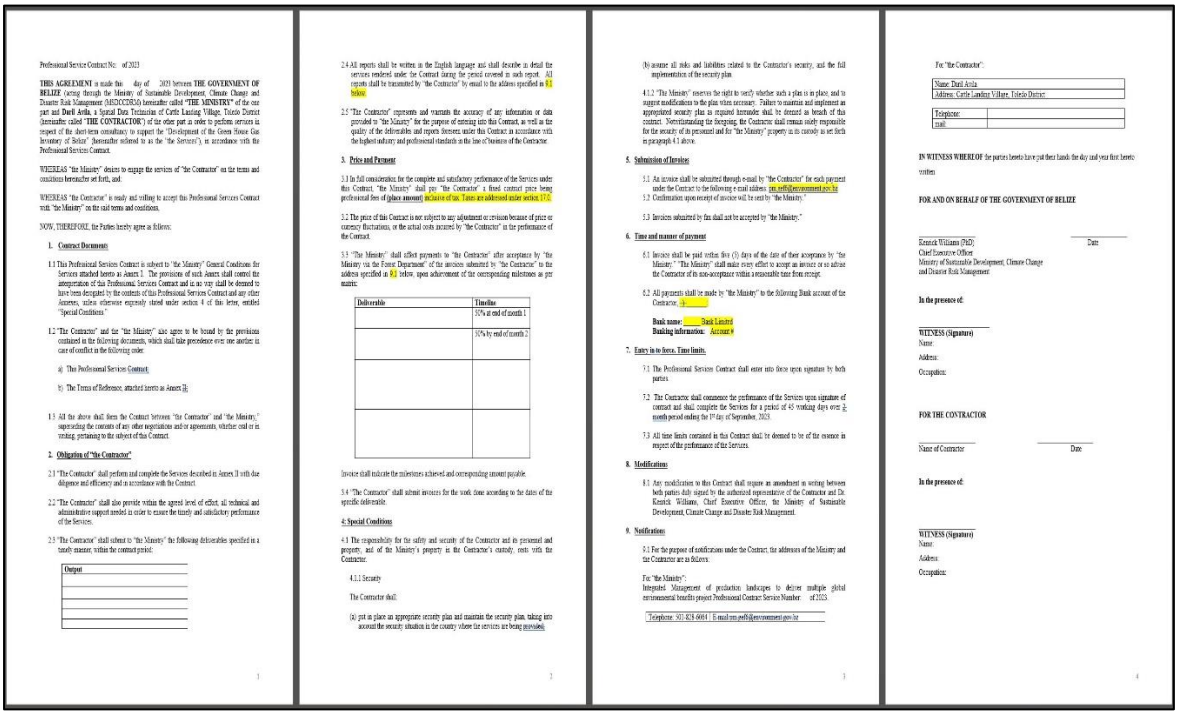
The PMBOK 7th Edition states that firm fixed-price contracts involve setting a fixed price for a well-defined product, service, or result. The IMPL Project is being implemented under a National Implemented Modality (NIM) and as such it must follow the procurement processes established by the Government. In this case, the procurement of services, either individual consultant or firm, is solicited under firm fixed-price contracts.

This firm fixed-price contract places the risk on the contractor for any cost overruns or unforeseen expenses that may arise due to delays in shipping, changes in price or in the acquisition of goods. The advantage that the IMPL Project has in using this type of contract is that it provides the surety that the product or service will be obtained at a fixed cost that is within the project budget and scope.

The project management team will develop the terms of reference (ToR) and the request for proposal (RFP). Once approved by the PD, the advertisement, ToR, and evaluation matrix is submitted to the procurement unit. The procurement unit then proceeds with the advertisement, solicits bids, the evaluation is conducted, and the selected consultant or firm is approved by the PD. The firm fixed-price contract is signed with the selected vendor. Figure 15 shows a Firm Fixed Price Contract.

Figure 15

Firm Fixed Price Contract Template



Professional Service Contract No: of 2023

THIS AGREEMENT is made this day of 2023 between **THE GOVERNMENT OF BELIZE** (acting through the Ministry of Sustainable Development, Climate Change and Disaster Risk Management (MSDCCDRM)) hereinafter called **"THE MINISTRY"** of the one part and **Dardi Ardia**, a Spatial Data Technician of Cattle Landing Village, Toledo District (hereinafter called **"THE CONTRACTOR"**) of the other part in order to perform services in respect of the short-term consultancy to support the "Development of the Green House Gas Inventory of Belize" (hereinafter referred to as the "the Services"), in accordance with the Professional Services Contract.

WHEREAS "the Ministry" desires to engage the services of "the Contractor" on the terms and conditions hereinafter set forth, and

WHEREAS "the Contractor" is ready and willing to accept this Professional Services Contract with "the Ministry" on the said terms and conditions.

NOW, THEREFORE, the Parties hereby agree as follows:

1. **Contract Documents**

1.1 This Professional Services Contract is subject to "the Ministry" General Conditions for Services attached hereto as Annex I. The provisions of such Annex shall control the interpretation of this Professional Services Contract and in no way shall be deemed to have been derogated by the contents of this Professional Services Contract and any other Annexes, unless otherwise expressly stated under section 4 of this letter, entitled "Special Conditions."

1.2 "The Contractor" and the "the Ministry" also agree to be bound by the provisions contained in the following documents, which shall take precedence over one another in case of conflict in the following order:

a) This Professional Services Contract;

b) The Terms of Reference, attached hereto as Annex II;

1.3 All the above shall form the Contract between "the Contractor" and "the Ministry," superseding the contents of any other negotiations and/or agreements, whether oral or in writing, pertaining to the subject of this Contract.

2. **Obligation of "the Contractor"**

2.1 "The Contractor" shall perform and complete the Services described in Annex II with due diligence and efficiency and in accordance with the Contract.

2.2 "The Contractor" shall also provide within the agreed level of effort, all technical and administrative support needed in order to ensure the timely and satisfactory performance of the Services.

2.3 "The Contractor" shall submit to "the Ministry" the following deliverables specified in a timely manner, within the contract period:

Output

2.4 All reports shall be written in the English language and shall describe in detail the services rendered under the Contract during the period covered in each report. All reports shall be transmitted by "the Contractor" by email to the address specified in 8.1 below.

2.5 "The Contractor" represents and warrants the accuracy of any information or data provided to "the Ministry" for the purpose of entering into this Contract, as well as the quality of the deliverables and reports foreseen under this Contract in accordance with the highest industry and professional standards in the line of business of the Contractor.

3. **Price and Payment**

3.1 In full consideration for the complete and satisfactory performance of the Services under this Contract, "the Ministry" shall pay "the Contractor" a fixed contract price being professional fees of **(place amount)** inclusive of tax. Taxes are addressed under section 17.0.

3.2 The price of this Contract is not subject to any adjustment or revision because of price or currency fluctuations, or the actual costs incurred by "the Contractor" in the performance of the Contract.

3.3 "The Ministry" shall effect payments to "the Contractor" after acceptance by "the Ministry (in the Forest Department)" of the invoices submitted by "the Contractor" to the address specified in 8.1 below, upon achievement of the corresponding milestones as per matrix:

Deliverable	Timeline
	50% at end of month 1
	50% by end of month 2

Invoice shall indicate the milestones achieved and corresponding amount payable.

3.4 "The Contractor" shall submit invoices for the work done according to the dates of the specific deliverable.

4. **Special Conditions**

4.1 The responsibility for the safety and security of the Contractor and its personnel and property, and of the Ministry's property in the Contractor's custody, rests with the Contractor.

4.1.1 Security

The Contractor shall:

(a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the services are being provided;

(b) assume all risks and liabilities related to the Contractor's security, and the full implementation of the security plan.

4.1.2 "The Ministry" reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed as breach of this contract. Notwithstanding the foregoing, the Contractor shall remain solely responsible for the security of its personnel and for "the Ministry" property in its custody as set forth in paragraph 4.1 above.

5. **Submission of Invoices**

5.1 An invoice shall be submitted through e-mail by "the Contractor" for each payment under the Contract to the following e-mail address: env.mrd@environment.gov.bz

5.2 Confirmation upon receipt of invoice will be sent by "the Ministry."

5.3 Invoices submitted by fax shall not be accepted by "the Ministry."

6. **Time and manner of payment**

6.1 Invoices shall be paid within five (5) days of the date of their acceptance by "the Ministry." The Ministry" shall make every effort to accept an invoice or to advise the Contractor of its non-acceptance within a reasonable time from receipt.

6.2 All payments shall be made by "the Ministry" to the following Bank account of the Contractor: [ ]

Bank name: [ ] Bank Limited
Banking information: Account #

7. **Entry in to force. Time limits.**

7.1 The Professional Services Contract shall enter into force upon signature by both parties.

7.2 The Contractor shall commence the performance of the Services upon signature of contract and shall complete the Services for a period of 45 working days over a 3-month period ending the 1st day of September, 2023.

7.3 All time limits contained in this Contract shall be deemed to be of the essence in respect of the performance of the Services.

8. **Modifications**

8.1 Any modification to this Contract shall require an amendment in writing between both parties duly signed by the authorized representative of the Contractor and Dr. Kenrick Williams, Chief Executive Officer, the Ministry of Sustainable Development, Climate Change and Disaster Risk Management.

9. **Notifications**

9.1 For the purpose of notifications under the Contract, the addresses of the Ministry and the Contractor are as follows:

For "the Ministry":
Integrated Management of production landscapes to deliver multiple global environmental benefits project Professional Contract Service Number of 2023.

Telephone: 501-824-0604 | E-mail:env.mrd@environment.gov.bz

For "the Contractor":

Name: Dardi Ardia
Address: Cattle Landing Village, Toledo District

Telephone:
mail:

IN WITNESS WHEREOF the parties hereto have put their hands the day and year first hereto written

FOR AND ON BEHALF OF THE GOVERNMENT OF BELIZE

Kenrick Williams (PhD) Date
Chief Executive Officer
Ministry of Sustainable Development, Climate Change
and Disaster Risk Management

In the presence of:

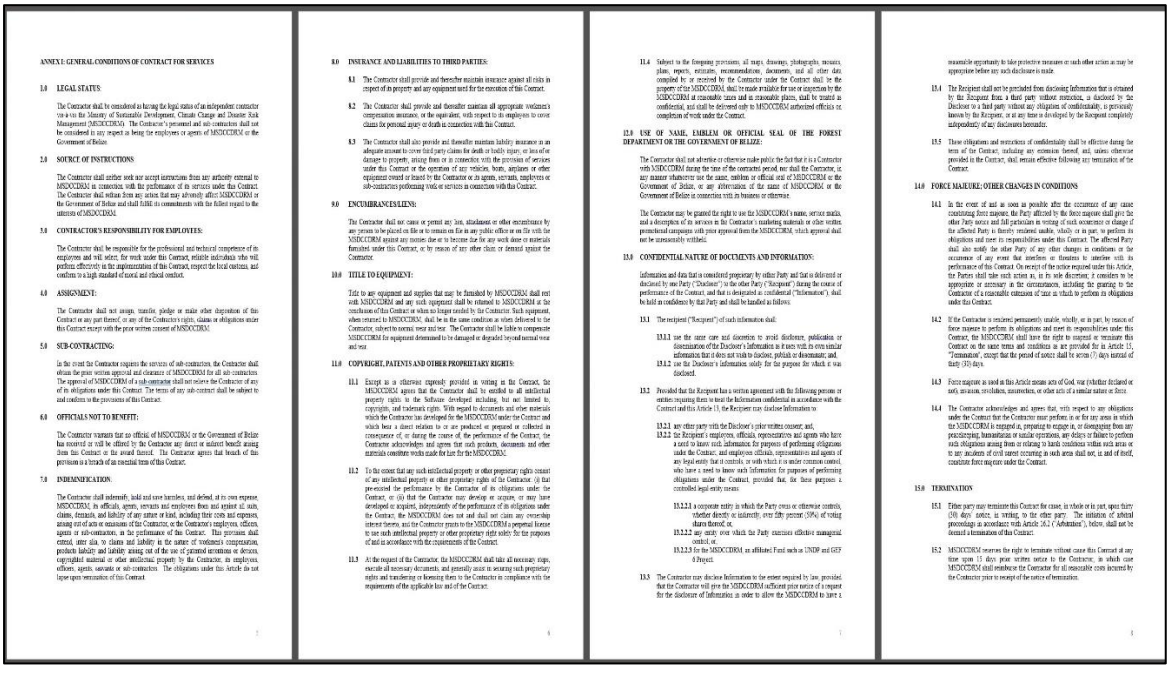
WITNESS (Signature)
Name:
Address:
Occupation:

FOR THE CONTRACTOR

Name of Contractor Date

In the presence of:

WITNESS (Signature)
Name:
Address:
Occupation:



ANNEX I: GENERAL CONDITIONS OF CONTRACT FOR SERVICES

1.0 LEGAL STATUS

The Contractor shall be considered as having the legal status of an independent contractor vis-à-vis the Ministry of Sustainable Development, Climate Change and Disaster Risk Management (MSDCCDRM). The Contractor's personnel and sub-contractors shall not be considered in any respect as being the employees or agents of MSDCCDRM or the Government of Belize.

2.0 SOURCE OF INSTRUCTIONS

The Contractor shall neither seek nor accept instructions from any authority external to MSDCCDRM in connection with the performance of its services under this Contract. The Contractor shall refrain from any action that may adversely affect MSDCCDRM or the Government of Belize and shall fulfill its commitments with the fullest regard to the interests of MSDCCDRM.

3.0 CONTRACTOR'S RESPONSIBILITY FOR EMPLOYEES:

The Contractor shall be responsible for the professional and technical competence of its employees and will select, for work under this Contract, reliable individuals who will perform effectively in the implementation of this Contract, respect the local customs, and conform to a high standard of moral and ethical conduct.

4.0 ASSIGNMENT:

The Contractor shall not assign, transfer, pledge or make other disposition of this Contract or any part thereof, or any of the Contractor's rights, claims or obligations under this Contract except with the prior written consent of MSDCCDRM.

5.0 SUB-CONTRACTING:

In the event the Contractor requires the services of sub-contractors, the Contractor shall obtain the prior written approval and clearance of MSDCCDRM for all sub-contractors. The approval of MSDCCDRM of a sub-contractor shall not relieve the Contractor of any of its obligations under this Contract. The terms of any sub-contract shall be subject to and conform to the provisions of this Contract.

6.0 OFFICIALS NOT TO BENEFIT:

The Contractor warrants that no official of MSDCCDRM or the Government of Belize has received or will be offered by the Contractor any direct or indirect benefit arising from this Contract or the award thereof. The Contractor agrees that breach of this provision is a breach of an essential term of this Contract.

7.0 INDEMNIFICATION:

The Contractor shall indemnify, hold and save harmless, and defend, at its own expense, MSDCCDRM, its officials, agents, servants and employees from and against all suits, claims, demands, and liability of any nature or kind, including their costs and expenses, arising out of acts or omissions of the Contractor, or the Contractor's employees, officers, agents or sub-contractors, in the performance of the Contract. This provision shall extend, inter alia to claims and liability in the nature of workmen's compensation, products liability and liability arising out of the use of patented inventions or devices, copyrighted material or other intellectual property by the Contractor, its employees, officers, agents, servants or sub-contractors. The obligations under this Article do not lapse upon termination of this Contract.

8.0 INSURANCE AND LIABILITIES TO THIRD PARTIES:

8.1 The Contractor shall provide and thereafter maintain insurance against all risks in respect of its property and any equipment used for the execution of this Contract.

8.2 The Contractor shall provide and thereafter maintain all appropriate workmen's compensation insurance, or the equivalent, with respect to its employees to cover claims for personal injury or death in connection with this Contract.

8.3 The Contractor shall also provide and thereafter maintain liability insurance in an adequate amount to cover third party claims for death or bodily injury, or loss of or damage to property, arising from or in connection with the provision of services under this Contract or the operation of any vehicles, boats, airplanes or other equipment owned or leased by the Contractor or its agents, servants, employees or sub-contractors performing work or services in connection with this Contract.

9.0 ENCUMBRANCES/LIENS:

The Contractor shall not cause or permit any lien, attachment or other encumbrance by any person to be placed on file or to remain on file in any public office or on file with the MSDCCDRM against any monies due or to become due for any work done or materials furnished under this Contract, or by reason of any other claim or demand against the Contractor.

10.0 TITLE TO EQUIPMENT:

Title to any equipment and supplies that may be furnished by MSDCCDRM shall vest with MSDCCDRM and any such equipment shall be returned to MSDCCDRM at the conclusion of this Contract or when no longer needed by the Contractor. Such equipment, when returned to MSDCCDRM, shall be in the same condition as when delivered to the Contractor, subject to normal wear and tear. The Contractor shall be liable to compensate MSDCCDRM for equipment determined to be damaged or degraded beyond normal wear and tear.

11.0 COPYRIGHT, PATENTS AND OTHER PROPRIETARY RIGHTS:

11.1 Except as is otherwise expressly provided in writing in the Contract, the MSDCCDRM agrees that the Contractor shall be entitled to all intellectual property rights in the Software developed including, but not limited to, copyright, and trademark rights. With regard to documents and other materials which the Contractor has developed for the MSDCCDRM under the Contract and which bear a direct relation to or are produced or prepared or collected in consequence of, or during the course of, the performance of the Contract, the Contractor acknowledges and agrees that such products, documents and other materials constitute works made for hire for the MSDCCDRM.

11.2 To the extent that any such intellectual property or other proprietary rights consist of any intellectual property or other proprietary rights of the Contractor: (i) that pre-existed the performance by the Contractor of its obligations under the Contract, or (ii) that the Contractor may develop or acquire, or may have developed or acquired, independently of the performance of its obligations under the Contract, the MSDCCDRM does not and shall not claim any ownership interest thereto, and the Contractor grants to the MSDCCDRM a perpetual license to use such intellectual property or other proprietary right solely for the purposes of and in accordance with the requirements of the Contract.

11.3 At the request of the Contractor, the MSDCCDRM shall take all necessary steps, execute all necessary documents, and generally assist in securing such proprietary rights and transferring or licensing them to the Contractor in compliance with the requirements of the applicable law and of the Contract.

11.4 Subject to the foregoing provisions, all maps, drawings, photographs, mosaics, plans, reports, estimates, recommendations, documents, and all other data compiled by or received by the Contractor under the Contract shall be the property of the MSDCCDRM, shall be made available for use or inspection by the MSDCCDRM at reasonable times and in reasonable places, shall be treated as confidential, and shall be delivered only to MSDCCDRM authorized officials on completion of work under the Contract.

12.0 USE OF NAME, EMBLEM OR OFFICIAL SEAL OF THE FOREST DEPARTMENT OR THE GOVERNMENT OF BELIZE:

The Contractor shall not advertise or otherwise make public the fact that it is a Contractor with MSDCCDRM during the time of the contracted period, nor shall the Contractor, in any manner whatsoever use the name, emblem or official seal of MSDCCDRM or the Government of Belize, or any abbreviation of the name of MSDCCDRM or the Government of Belize in connection with its business or otherwise.

The Contractor may be granted the right to use the MSDCCDRM's name, service marks, and a description of its services in the Contractor's marketing materials or other written promotional campaigns with prior approval from the MSDCCDRM, which approval shall not be unreasonably withheld.

13.0 CONFIDENTIAL NATURE OF DOCUMENTS AND INFORMATION:

Information and data that is considered proprietary by either Party and that is delivered or disclosed by one Party ("Discloser") to the other Party ("Recipient") during the course of performance of the Contract, and that is designated as confidential ("Information"), shall be held in confidence by that Party and shall be handled as follows:

13.1 The recipient ("Recipient") of such information shall:

13.1.1 use the same care and discretion to avoid disclosure, publication or dissemination of the Discloser's Information as it uses with its own similar information that it does not wish to disclose, publish or disseminate; and,

13.1.2 use the Discloser's Information solely for the purpose for which it was disclosed.

13.2 Provided that the Recipient has a written agreement with the following persons or entities requiring them to treat the Information confidential in accordance with the Contract and this Article 13, the Recipient may disclose Information to:

13.2.1 any other party with the Discloser's prior written consent; and,

13.2.2 the Recipient's employees, officials, representatives and agents who have a need to know such Information for purposes of performing obligations under the Contract, and employees officials, representatives and agents of any legal entity that it controls, or with which it is under common control, who have a need to know such Information for purposes of performing obligations under the Contract, provided that, for these purposes a controlled legal entity means:

13.2.2.1 a corporate entity in which the Party owns or otherwise controls, whether directly or indirectly, over fifty percent (50%) of voting shares thereof; or,

13.2.2.2 any entity over which the Party exercises effective managerial control; or,

13.2.2.3 for the MSDCCDRM, an affiliated Fund such as UNDP and GEF 6 Project.

13.3 The Contractor may disclose Information to the extent required by law, provided that the Contractor will give the MSDCCDRM sufficient prior notice of a request for the disclosure of Information in order to allow the MSDCCDRM to have a reasonable opportunity to take protective measures or such other action as may be appropriate before any such disclosure is made.

13.4 The Recipient shall not be precluded from disclosing Information that is obtained by the Recipient from a third party without restriction, is disclosed by the Discloser to a third party without any obligation of confidentiality, is previously known by the Recipient, or at any time is developed by the Recipient completely independently of any disclosures hereunder.

13.5 These obligations and restrictions of confidentiality shall be effective during the term of the Contract, including any extension thereof, and, unless otherwise provided in the Contract, shall remain effective following any termination of the Contract.

14.0 FORCE MAJEURE; OTHER CHANGES IN CONDITIONS

14.1 In the event of and as soon as possible after the occurrence of any cause constituting force majeure, the Party affected by the force majeure shall give the other Party notice and full particulars in writing of such occurrence or change if the affected Party is thereby rendered unable, wholly or in part, to perform its obligations and meet its responsibilities under this Contract. The affected Party shall also notify the other Party of any other changes in conditions or the occurrence of any event that interferes or threatens to interfere with its performance of this Contract. On receipt of the notice required under this Article, the Parties shall take such action as, in its sole discretion, it considers to be appropriate or necessary in the circumstances, including the granting to the Contractor of a reasonable extension of time in which to perform its obligations under this Contract.

14.2 If the Contractor is rendered permanently unable, wholly, or in part, by reason of force majeure to perform its obligations and meet its responsibilities under this Contract, the MSDCCDRM shall have the right to suspend or terminate this Contract on the same terms and conditions as are provided for in Article 15, "Termination", except that the period of notice shall be seven (7) days instead of thirty (30) days.

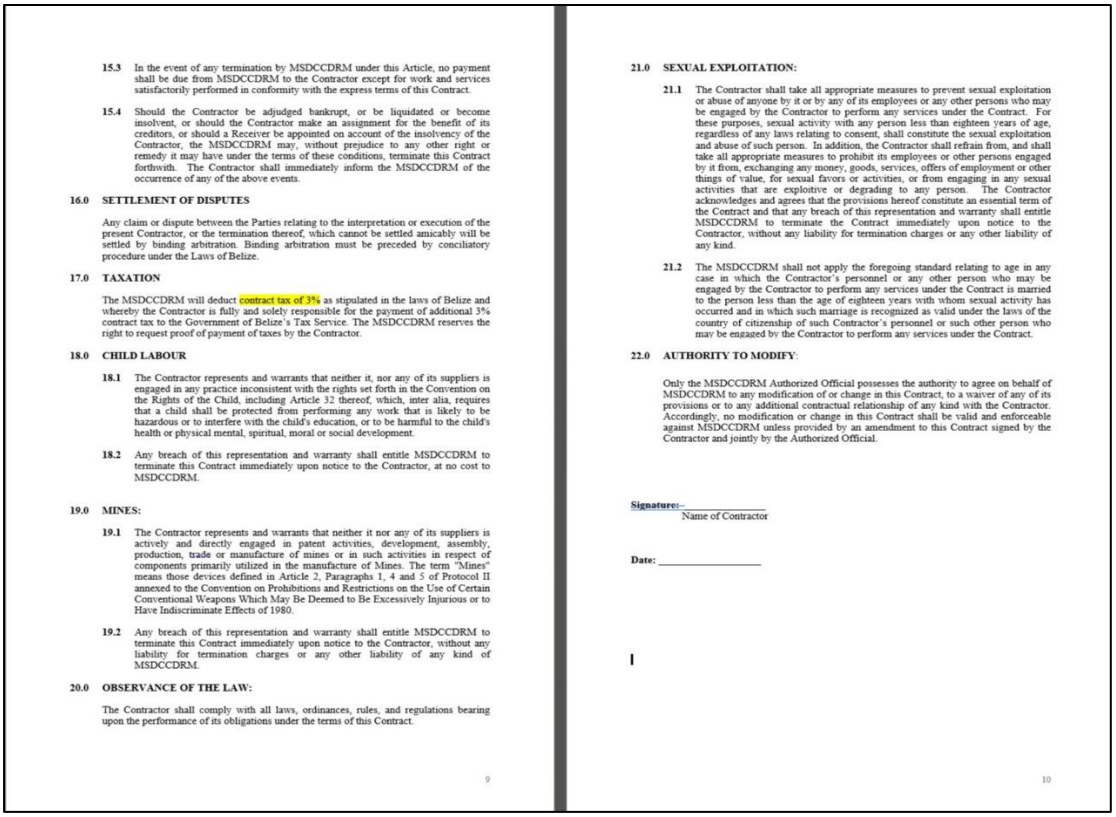
14.3 Force majeure as used in this Article means acts of God, war (whether declared or not), invasion, revolution, insurrection, or other acts of a similar nature or force.

14.4 The Contractor acknowledges and agrees that, with respect to any obligations under the Contract that the Contractor must perform, in or for any areas in which the MSDCCDRM is engaged in, preparing to engage in, or disengaging from any peacekeeping, humanitarian or similar operations, any delays or failure to perform such obligations arising from or relating to harsh conditions within such areas or to any incidents of civil unrest occurring in such areas shall not, in and of itself, constitute force majeure under the Contract.

15.0 TERMINATION

15.1 Either party may terminate this Contract for cause, in whole or in part, upon thirty (30) days' notice, in writing, to the other party. The initiation of arbitral proceedings in accordance with Article 26.3 ("Arbitration"), below, shall not be deemed a termination of this Contract.

15.2 MSDCCDRM reserves the right to terminate without cause this Contract at any time upon 15 days prior written notice to the Contractor, in which case MSDCCDRM shall reimburse the Contractor for all reasonable costs incurred by the Contractor prior to receipt of the notice of termination.



15.3 In the event of any termination by MSDCCDRM under this Article, no payment shall be due from MSDCCDRM to the Contractor except for work and services satisfactorily performed in conformity with the express terms of this Contract.

15.4 Should the Contractor be adjudged bankrupt, or be liquidated or become insolvent, or should the Contractor make an assignment for the benefit of its creditors, or should a Receiver be appointed on account of the insolvency of the Contractor, the MSDCCDRM may, without prejudice to any other right or remedy it may have under the terms of these conditions, terminate this Contract forthwith. The Contractor shall immediately inform the MSDCCDRM of the occurrence of any of the above events.

16.0 SETTLEMENT OF DISPUTES

Any claim or dispute between the Parties relating to the interpretation or execution of the present Contractor, or the termination thereof, which cannot be settled amicably will be settled by binding arbitration. Binding arbitration must be preceded by conciliatory procedure under the Laws of Belize.

17.0 TAXATION

The MSDCCDRM will deduct contract tax of 3% as stipulated in the laws of Belize and whereby the Contractor is fully and solely responsible for the payment of additional 3% contract tax to the Government of Belize's Tax Service. The MSDCCDRM reserves the right to request proof of payment of taxes by the Contractor.

18.0 CHILD LABOUR

18.1 The Contractor represents and warrants that neither it, nor any of its suppliers is engaged in any practice inconsistent with the rights set forth in the Convention on the Rights of the Child, including Article 32 thereof, which, inter alia, requires that a child shall be protected from performing any work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical mental, spiritual, moral or social development.

18.2 Any breach of this representation and warranty shall entitle MSDCCDRM to terminate this Contract immediately upon notice to the Contractor, at no cost to MSDCCDRM.

19.0 MINES:

19.1 The Contractor represents and warrants that neither it nor any of its suppliers is actively and directly engaged in patent activities, development, assembly, production, trade or manufacture of mines or in such activities in respect of components primarily utilized in the manufacture of Mines. The term "Mines" means those devices defined in Article 2, Paragraphs 1, 4 and 5 of Protocol II annexed to the Convention on Prohibitions and Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects of 1980.

19.2 Any breach of this representation and warranty shall entitle MSDCCDRM to terminate this Contract immediately upon notice to the Contractor, without any liability for termination charges or any other liability of any kind of MSDCCDRM.

20.0 OBSERVANCE OF THE LAW:

The Contractor shall comply with all laws, ordinances, rules, and regulations bearing upon the performance of its obligations under the terms of this Contract.

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21.0 SEXUAL EXPLOITATION:

21.1 The Contractor shall take all appropriate measures to prevent sexual exploitation or abuse of anyone by it or by any of its employees or any other persons who may be engaged by the Contractor to perform any services under the Contract. For these purposes, sexual activity with any person less than eighteen years of age, regardless of any laws relating to consent, shall constitute the sexual exploitation and abuse of such person. In addition, the Contractor shall refrain from, and shall take all appropriate measures to prohibit its employees or other persons engaged by it from, exchanging any money, goods, services, offers of employment or other things of value, for sexual favors or activities, or from engaging in any sexual activities that are exploitive or degrading to any person. The Contractor acknowledges and agrees that the provisions hereof constitute an essential term of the Contract and that any breach of this representation and warranty shall entitle MSDCCDRM to terminate the Contract immediately upon notice to the Contractor, without any liability for termination charges or any other liability of any kind.

21.2 The MSDCCDRM shall not apply the foregoing standard relating to age in any case in which the Contractor's personnel or any other person who may be engaged by the Contractor to perform any services under the Contract is married to the person less than the age of eighteen years with whom sexual activity has occurred and in which such marriage is recognized as valid under the laws of the country of citizenship of such Contractor's personnel or such other person who may be engaged by the Contractor to perform any services under the Contract.

22.0 AUTHORITY TO MODIFY:

Only the MSDCCDRM Authorized Official possesses the authority to agree on behalf of MSDCCDRM to any modification of or change in this Contract, to a waiver of any of its provisions or to any additional contractual relationship of any kind with the Contractor. Accordingly, no modification or change in this Contract shall be valid and enforceable against MSDCCDRM unless provided by an amendment to this Contract signed by the Contractor and jointly by the Authorized Official.

Signature:_____
Name of Contractor

Date: _____

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Source: Government of Belize, 2023

4.9.4 Decision Criteria

The decision criteria for the IMPL Project are essential to ensure effective supplier selection, contract management, and overall project success. The key decision criteria are:

1. **Quality and technical competence:** this is based on the highest technical score. Each bidder will be required to submit a technical proposal detailing the brand, mark, make, etc. of the goods being offered. In the case of services, a technical proposal detailing the scope of proposed work is required. These will then be compared against the ToR and evaluated to ensure that they meet the specifications and requirements of the goods or services.

2. **Financial Proposal**: will assess that the proposed cost is within budget. Each prospective supplier or consultant is expected to submit a financial proposal outlining the cost of the goods or services that will be provided.
3. **Delivery Timelines:** will evaluate the proposed delivery timelines and proposed schedules from the suppliers. This will ensure that the goods or services are within the already established schedule.
4. **Experience and reputation of suppliers:** will evaluate the experience, reputation, and track record of the potential supplier/consultant completing their commitments with other projects.

4.9.5 Procurement Change Control Process

The procurement change control process is a systematic procedure used to manage changes to the procurement activities. Once the purchase orders are issued or the contracts are signed, the PM is responsible for monitoring these and ensuring that the goods are received as per specifications: cost and delivery timeframe in the contract or purchase order. It is also the responsibility of the PM to identify immediate risks that may arise during the process. In cases where the risk triggers for a change to be made, the change request form shown in Chart 7 is completed and the change request process is followed.

4.9.6 Procurement Documentation

The standard procurement documents for the IMPL Project are:

- Micro-Purchase Canvass form (Chart 30)
- Requisition Form (Figure 16)
- Purchase Order Form (Figure 17)

- Terms of Reference (Tor) (Chart 31)
- Request for Quotation (Chart 32)
- Evaluation Matrix (Figure 18)
- Firm Fixed Price Contract (Figure 15)

Chart 30.

Micro-Purchase Canvass Form

MICRO-PURCHASE CANVASS FORM

Vendor Details			**VENDOR 1**		**VENDOR 2**		**VENDOR 3**	
Full Name:								
Address:								
Tel./Fax. No.:								
Email Address:								
Website/URL:								
Link to Product and Price site, if canvass was done on-line (Pls. attach all printouts)								
Date/s of Canvassing			**12/4/2022**		**12/4/2022**		**12/4/2022**	
Item No.	**Brief Description/Specification of Goods/Services/Small Works**	**Quantity**	**Unit Price (BZD)**	**Total Price per Item (BZD)**	**Unit Price (BZD)**	**Total Price per Item (BZD)**	**Unit Price (BZD)**	**Total Price per Item (BZD)**
1.								
Total Prices of Goods/Services/Small Works								
Add : Cost of Transportation/Shipment (if any)								
Add : Other Charges (pls. specify) GST 12.5%								
TOTAL FINAL AND ALL-INCLUSIVE PRICE:								
Other Information: Acceptance of GOB Purchase Order								
Exact Date Needed by PMU:								

I, the undersigned, confirm that I personally conducted the canvassing of the prices of the goods/services/small works described above, and I, hereby, certify accuracy of the information I have provided.

_____ _____

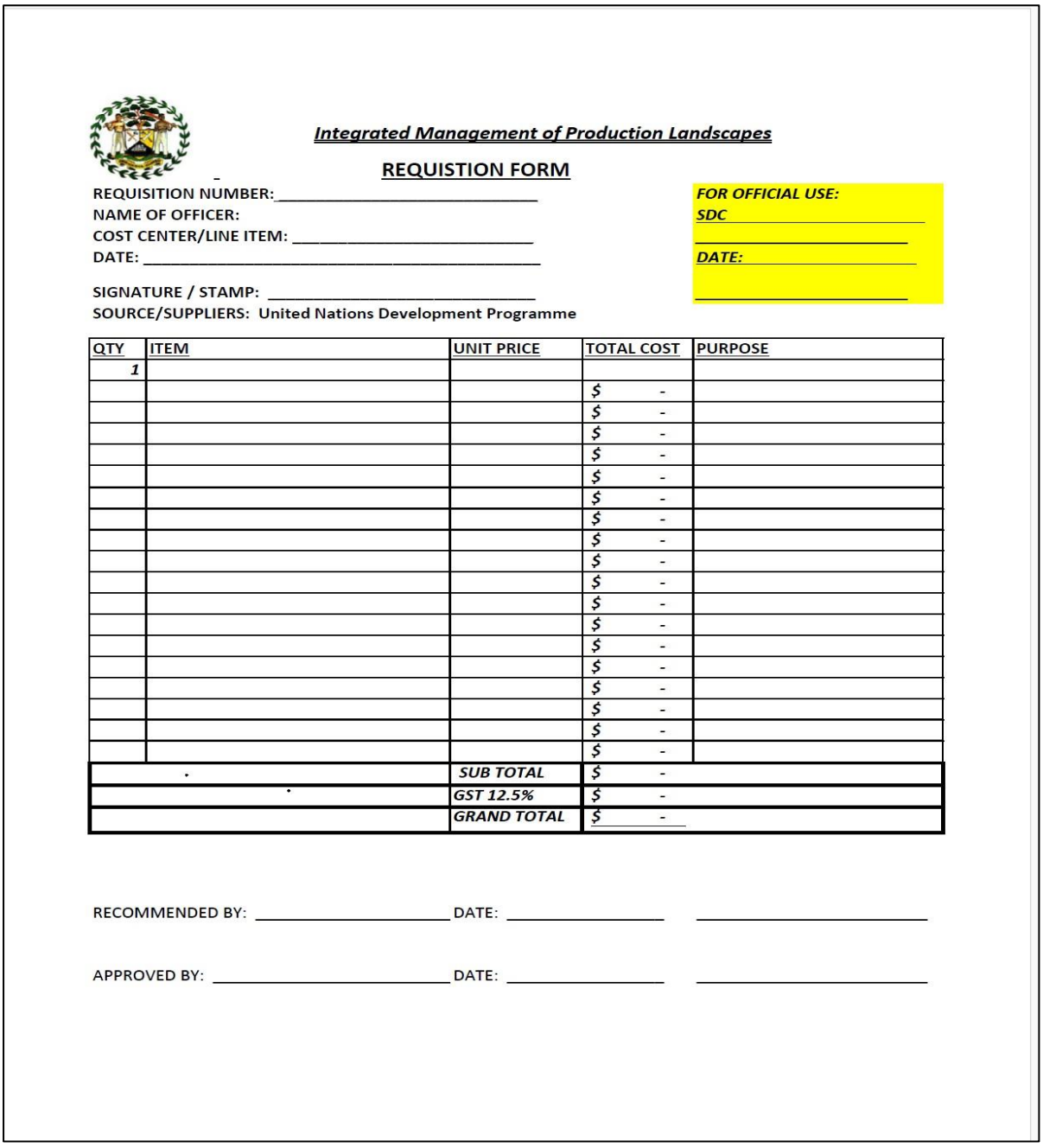
[Project Finance Associate] *[Date]*

To be filled up by the Procurement Staff Preparing this Canvass Form: **Recommended Vendor:**	***To be filled up by the Requisitioner:*** **Vendor Selected :**
Reason for Recommendation:	**Vendor Selected by *(Name and signature):***
Activity and Account Code:	**Reason for selection *(if different from Recommended vendor):***

Source: Author of the study

Figure 16

Requisition Form Template



Integrated Management of Production Landscapes

REQUISTION FORM

REQUISITION NUMBER: _____
NAME OF OFFICER:
COST CENTER/LINE ITEM: _____
DATE: _____

SIGNATURE / STAMP: _____
SOURCE/SUPPLIERS: United Nations Development Programme

FOR OFFICIAL USE:
SDC _____
_____
DATE: _____
_____

QTY	ITEM	UNIT PRICE	TOTAL COST	PURPOSE
1				
			$ -	
			$ -	
			$ -	
			$ -	
			$ -	
			$ -	
			$ -	
			$ -	
			$ -	
			$ -	
			$ -	
			$ -	
			$ -	
			$ -	
			$ -	
			$ -	
			$ -	
			$ -	
			$ -	
		SUB TOTAL	$ -	
		GST 12.5%	$ -	
		GRAND TOTAL	$ -	

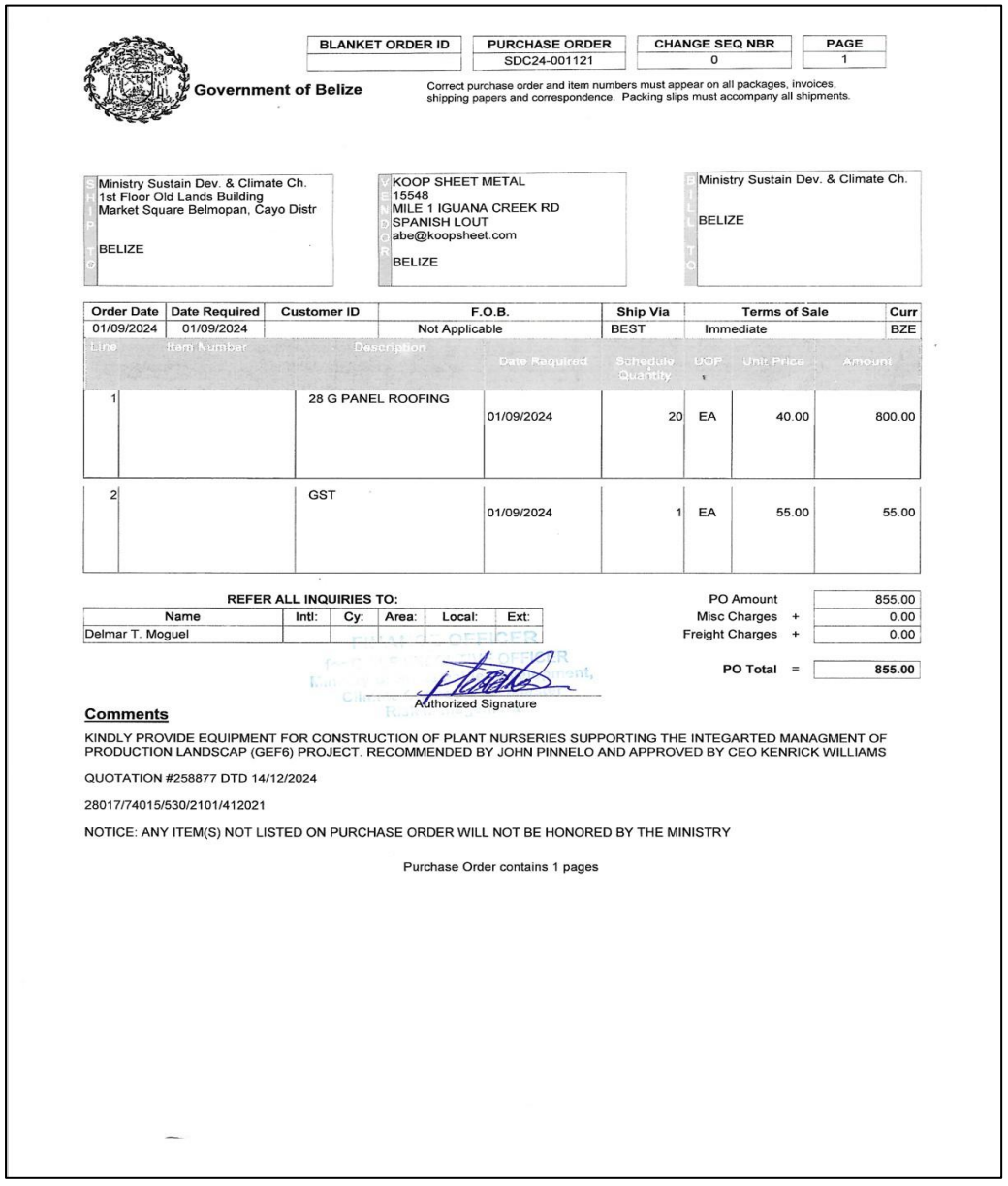
RECOMMENDED BY: _____ DATE: _____ _____

APPROVED BY: _____ DATE: _____ _____

Source: Government of Belize, 2023

Figure 17

Purchase Order



Government of Belize

BLANKET ORDER ID	PURCHASE ORDER	CHANGE SEQ NBR	PAGE
	SDC24-001121	0	1

Correct purchase order and item numbers must appear on all packages, invoices, shipping papers and correspondence. Packing slips must accompany all shipments.

SHIP TO
Ministry Sustain Dev. & Climate Ch.
1st Floor Old Lands Building
Market Square Belmopan, Cayo Distr

BELIZE

VENDOR
KOOP SHEET METAL
15548
MILE 1 IGUANA CREEK RD
SPANISH LOUT
abe@koopsheet.com

BELIZE

BILL TO
Ministry Sustain Dev. & Climate Ch.

BELIZE

Order Date	Date Required	Customer ID	F.O.B.	Ship Via	Terms of Sale	Curr
01/09/2024	01/09/2024		Not Applicable	BEST	Immediate	BZE

Line	Item Number	Description	Date Required	Schedule Quantity	UOP	Unit Price	Amount
1		28 G PANEL ROOFING	01/09/2024	20	EA	40.00	800.00
2		GST	01/09/2024	1	EA	55.00	55.00

REFER ALL INQUIRIES TO:

Name	Intl:	Cy:	Area:	Local:	Ext:
Delmar T. Moguel					

PO Amount		855.00
Misc Charges	+	0.00
Freight Charges	+	0.00
PO Total	=	**855.00**

Authorized Signature

Comments

KINDLY PROVIDE EQUIPMENT FOR CONSTRUCTION OF PLANT NURSERIES SUPPORTING THE INTEGARTED MANAGMENT OF PRODUCTION LANDSCAP (GEF6) PROJECT. RECOMMENDED BY JOHN PINNELO AND APPROVED BY CEO KENRICK WILLIAMS

QUOTATION #258877 DTD 14/12/2024

28017/74015/530/2101/412021

NOTICE: ANY ITEM(S) NOT LISTED ON PURCHASE ORDER WILL NOT BE HONORED BY THE MINISTRY

Purchase Order contains 1 pages

Source: Government of Belize, 2023

Chart 31.

Terms of Reference Template

TERMS OF REFERENCE
NAME OF CONSULTANCY

A. Project Title

B. Project Description

a. Briefly describe the project background and the objectives of the project.
b. Briefly describe the context of the required services.
c. Relevance of the work required with the project.

B. Scope of work

a. List the results and major tasks expected to be undertaken by the consultant.
b. Briefly describe any other information that may be useful to the consultant.

D. Expected Outputs and Deliverables

a. List the outputs and deliverables in order along with the work needed and the delivery dates based on the date specified in the contract (2 weeks after signing of the contract).
b. If possible, include a table that will outline the expected outputs with their respective dates as can be seen below:

E. Duration of the Consultancy

a. State the time that the consultant will have to complete the work required. Clearly state whether this work will commence immediately after signing the contract.
b. Clearly define the time allotted for feedback between the consultant and the implementing partners.

E. Institutional Arrangement:

a. Identify the specific authority who will directly supervise the consultancy and to whom the consultant will report to.
b. Identify frequency of the progress report, recommended formats, if any.

c. Identify stakeholders that must be consulted.
d. State whether the project or any other implementing party will be able to provide support personnel, facilities or logistical support to the consultant.

F. Duty Station

a. Identify the Consultant's duty station/location for the contract duration.
b. If home-based, state whether the Consultant will be required to report regularly or be present during specific dates and times at the office.

G. Qualifications of the Successful Consultant

Clearly define the following:

a. Academic qualification stating the area of specialization, minimum level of education acceptable and preferred fields of study.
b. The minimum number of years of relevant work experience specifically in the areas for this consultancy.
c. Required Skills and Competencies which will be needed for the success of this consultancy.
d. Desired additional skills and competencies which can be an asset to the consultancy.
e. Required Language(s) (at professional level)
f. Professional Certificates

H. Scope of Proposal and Schedule of Payments

Clearly define**:**

a. The pricing option of the financial proposal should be clearly defined: lump-sum for the delivery of the outputs identified in the ToR above or daily rates.
b. The total amount quoted shall be the lump-sum of all professional costs excluding the venue, food, and printing materials for the stakeholder consultation sessions. All other possible costs shall be factored into the final amount submitted in the proposal.

I. Recommended Presentation of Offer

a. CV indicating experience and copy of respective documents.
b. Technical proposal that clearly indicates the description of the activities, and methodology that will be implemented to obtain the objective of the consultancy.

c. Financial Proposal that indicates the all-inclusive contract price supported by a breakdown of costs including and not limited to: charges, transportation expenses, etc.
d. If not included in the ToR, the Forest Department will not reimburse costs not directly related to the consultancy. This contract does not allow payment of off-hours, medical insurance, taxes and sick leave.

The subject of the package should read:

"Name of Proposal" under "Name of Project"

The above proposal should be addressed to:

Mr. Wilber Sabido
Chief Forest Officer
Forest Department
Ministry of Sustainable Development and Climate Change

Email for more information: jaguar-bz-asst@forest.gov.bz

Deadline: Include date and time

Source: Author of the study

Chart 32.

Request for Quotation

REQUEST FOR QUOTATION (RFQ)
(Goods)

NAME & ADDRESS OF FIRM	DATE:
	REFERENCE:

Dear Sir / Madam:

We kindly request you to submit your quotation for 8 laptops with accessories, 4 battery back-ups, 4 desktops with monitors, 4 monitors, as detailed in Annex 1 of this RFQ. When preparing your quotation, please be guided by the form attached hereto as Annex 2.

Quotations may be submitted on or before (August 26, 2022) and via ☐*e-mail,*☐*direct delivery* to the address below:

FOREST DEPARTMENT
FOREST DRIVE
Wilber Sabido
822-1524

Quotations submitted by email must be virus-free and no more than two email transmissions. They must be free from any form of virus or corrupted contents, or the quotations shall be rejected.

It shall remain your responsibility to ensure that your quotation will reach the address above on or before the deadline. Quotations that are received by the Forest Department after the deadline indicated above, for whatever reason, shall not be considered for evaluation. If you are submitting your quotation by email, kindly ensure that they are signed and in the pdf format, and free from any virus or corrupted files.

Please take note of the following requirements and conditions pertaining to the supply of the abovementioned good/s: *[check the condition that applies to this RFQ, delete the entire row if condition is not applicable to the goods being procured]*.

Customs clearance, if needed, shall be done by:	Supplier/Provider
Exact Address of Delivery Location	Forest Department, Forest Drive, Belmopan City
Latest Expected Delivery Date and Time *(if delivery time exceeds this, quote may be rejected by UNDP)*	30 days from the signing of the Service Contract
Preferred Currency of Quotation	Local Currency: Belize Dollars
General Sales Tax on Price Quotation[1]	☐Must be inclusive of GST and other applicable indirect taxes ☐Must be exclusive of GST and other applicable indirect taxes
After-sales services required	☐Warranty on Parts and Labor for minimum period of 3 years ☐Technical Support ☐Provision of Service Unit when pulled out for maintenance/ repair ☐Others (Please specify)
Deadline for the Submission of Quotation	
All documentations, including catalogs, instructions and operating manuals shall be in this language	English
Documents to be submitted[2]	☐Duly Accomplished Form as provided in Annex 2, and in accordance with the list of requirements in Annex 1 ☐Latest Business Registration Certificate ☐Latest Internal Revenue Certificate / Tax Clearance ☐Manufacturer's Authorization of the Company as a Sales Agent (if Supplier is not the manufacturer) ☐Certificate of Exclusive Distributorship in the country (if applicable, and if Supplier is not the manufacturer) ☐Complete documentation, information and declaration of any goods classified or may be classified as "Dangerous Goods". ☐Patent Registration Certificates (if any of technologies submitted in the quotation is patented by the Supplier)
	90 days

Period of Validity of Quotes stating the Submission Date	In exceptional circumstances, the Forest Department may request the Vendor to extend the validity of the Quotation beyond what has been initially indicated in this RFQ. The Proposal shall then confirm the extension in writing, without any modification whatsoever to the Quotation.
Partial Quotes	Not permitted ☐Permitted [*pls. provide conditions for partial quotes, and ensure that requirements are properly listed to allow partial quotes (e.g., in lots, etc.)]*
Payment Terms	☐50% upon signing of service contract ☐ 50% upon delivery of products.
Liquidated Damages	
Evaluation Criteria *[check as many as applicable]*	Technical responsiveness/Full compliance to requirements Lowest price Comprehensiveness of after-sales services Full acceptance of the PO/Contract General Terms and Conditions Earliest Delivery / Shortest Lead Time
Forest Department will award to:	☐One and only one supplier ☐One or more Supplier, depending on the following factors: *[Clarify fully how and why will this be achieved. Please do not choose this option without indicating the parameters for awarding to multiple Suppliers]*
Type of Contract to be Signed	Service of Contract
Special conditions of Contract	Cancellation of PO/Contract if the delivery/completion is delayed by thirty days
Conditions for Release of Payment	Signing of Service Contract Delivery of all equipment

Goods offered shall be reviewed based on completeness and compliance of the quotation with the minimum specifications described above and any other annexes providing details of Government of Belize requirements.

The quotation that complies with all the specifications, requirements and offers the lowest price, as well as all other evaluation criteria indicated, shall be selected. Any offer that does not meet the requirements shall be rejected.

Any discrepancy between the unit price and the total price (obtained by multiplying the unit price and quantity) shall be re-computed by the Forest Department. The unit price shall prevail, and the total price shall be corrected. If the supplier does not accept the final price based on UNDP's re-computation and correction of errors, its quotation will be rejected.

At any time during the validity of the quotation, no price variation due to escalation, inflation, fluctuation in exchange rates, or any other market factors shall be accepted by the Forest Department after it has received the quotation. At the time of award of Contract or Purchase Order, the Forest Department reserves the right to vary (increase or decrease) the quantity of services and/or goods, by up to a maximum of twenty-five per cent (25%) of the total offer, without any change in the unit price or other terms and conditions.

Any Purchase Order that will be issued because of this RFQ shall be subject to the General Terms and Conditions attached hereto. The mere act of submission of a quotation implies that the vendor accepts without question the General Terms and Conditions of the Forest Department herein attached as Annex 3.

Forest Department is not bound to accept any quotation, nor award a contract/Purchase Order, nor be responsible for any costs associated with a Supplier's preparation and submission of a quotation, regardless of the outcome or the manner of conducting the selection process.

The Forest Department encourages every prospective Vendor to avoid and prevent conflicts of interest, by disclosing to the Forest Department if you, or any of your affiliates or personnel, were involved in the preparation of the requirements, design, specifications, cost estimates, and other information used in this RFQ.

Thank you and we look forward to receiving your quotation.

Sincerely yours,

[Enter name of authorized staff]

[Designation]

[*Click here to enter a date]*

Annex 1

Technical Specifications

Items to be Supplied*	Quantity	Description/Specifications of Goods	Latest Delivery Date

**Pls. attach delivery schedule, if relevant, and cluster by lot, if partial bids will be allowed. Specify delivery locations if goods require multiple destinations.*

[Enter name of authorized staff]

[Designation]

[*Click here to enter a date]*

Annex 2

FORM FOR SUBMITTING SUPPLIER'S QUOTATION[3]

(This Form must be submitted only using the Supplier's Official Letterhead/Stationery[4])

We, the undersigned, hereby accept in full the Forest Department General Terms and Conditions, and hereby offer to supply the items listed below in conformity with the specification and requirements of GOB as per RFQ Reference No. _____:

TABLE 1 : Offer to Supply Goods Compliant with Technical Specifications and Requirements

Item No.	Description/Specification of Goods	Quantity	Latest Delivery Date	Unit Price	Total Price per Item
	Total Prices of Goods[5]				
	Add : Cost of Transportation				
	Add : Cost of Insurance				
	Add : Other Charges (pls. specify)				
	Total Final and All-Inclusive Price Quotation				

TABLE 2 : Estimated Operating Costs (if applicable)

List of Consumable Item/s *(Include fast moving parts, if any)*	Estimated Average Consumption	Unit of Measure	Unit Price	Total Price per Item

[3]*This serves as a guide to the Supplier in preparing the quotation and price schedule.*
[4] *Official Letterhead/Stationery must indicate contact details – addresses, email, phone and fax numbers – for verification purposes*
[5]*Pricing of goods should be consistent with the INCO Terms indicated in the RFQ*

TABLE 3 : Offer to Comply with Other Conditions and Related Requirements

Other Information pertaining to our Quotation follows :	**Your Responses**		
	Yes, we will comply	***No, we cannot comply***	***If you cannot comply, pls. indicate counter proposal***
Delivery Lead Time			
Estimated weight/volume/dimension of the Consignment:			
Country/-ies Of Origin[6]:			
Warranty and After-Sales Requirements			
a) Training on Operations and Maintenance			
b) Minimum one (1) year warranty on both parts and labor			
c) Service Unit to be Provided when the Purchased Unit is Under Repair			
d) New replacement if Purchased Unit is beyond repair			
e) Others			
Validity of Quotation			
All Provisions of the UNDP General Terms and Conditions			
Other requirements *[pls. specify]*			

All other information that we have not provided automatically implies our full compliance with the requirements, terms and conditions of the RFQ.

[Name and Signature of the Supplier's Authorized Person]
[Designation]
[Date]

[6]*If the country of origin requires Export License for the goods being procured,or other relevant documents that the country of destination may require, the supplier must submit them to UNDP if awarded the PO/contract.*

Annex 3

General Terms and Conditions

1. ACCEPTANCE OF THE PURCHASE ORDER

This Purchase Order may only be accepted by the Supplier's signing and returning an acknowledgement copy of it or by timely delivery of the goods in accordance with the terms of this Purchase Order, as herein specified. Acceptance of this Purchase Order shall effect a contract between the Parties under which the rights and obligations of the Parties shall be governed solely by the terms and conditions of this Purchase Order, including these General Conditions. No additional or inconsistent provisions proposed by the Supplier shall bind UNDP unless agreed to in writing by a duly authorized official of UNDP.

2. PAYMENT

2.1 The Forest Department shall, on fulfillment of the Delivery Terms, unless otherwise provided in this Purchase Order, make payment within 30 days of receipt of the Supplier's invoice for the goods and copies of the shipping documents specified in this Purchase Order.

2.2 Payment against the invoice referred to above will reflect any discount shown under the payment terms of this Purchase Order, provided payment is made within the period required by such payment terms.

2.3 Unless authorized by the Forest Department, the Supplier shall submit one invoice in respect of this Purchase Order, and such invoice must indicate the Purchase Order's identification number.

2.4 The prices shown in this Purchase Order may not be increased except by express written agreement of UNDP.

3. TAX EXEMPTION

3.1 Section 7 of the Convention on the Privileges and Immunities of the United Nations provides, inter alia, that the United Nations, including its subsidiary organs, is exempt from all direct taxes, except charges for utilities services, and is exempt from customs duties and charges of a similar nature in respect of articles imported or exported for its official use. In the event any governmental authority refuses to recognize UNDP's exemption from such taxes, duties or charges, the Supplier shall immediately consult with UNDP to determine a mutually acceptable procedure.

3.2 Accordingly, the Supplier authorizes the Forest Department to deduct from the Supplier's invoice any amount representing such taxes, duties or charges,

unless the Supplier has consulted with UNDP before the payment thereof and UNDP has, in each instance, specifically authorized the Supplier to pay such taxes, duties or charges under protest. In that event, the Supplier shall provide UNDP with written evidence that payment of such taxes, duties or charges has been made and appropriately authorized.

4. RISK OF LOSS

Risk of loss, damage to or destruction of the goods shall be governed in accordance with Incoterms 2010, unless otherwise agreed upon by the Parties on the front side of this Purchase Order.

5. EXPORT LICENCES

Notwithstanding any INCOTERM 2010 used in this Purchase Order, the Supplier shall obtain any export licences required for the goods.

6. FITNESS OF GOODS/PACKAGING

The Supplier warrants that the goods, including packaging, conform to the specifications for the goods ordered under this Purchase Order and are fit for the purposes for which such goods are ordinarily used and for purposes expressly made known to the Supplier by the Forest Department, and are free from defects in workmanship and materials. The Supplier also warrants that the goods are contained or packaged adequately to protect the goods.

7. INSPECTION

7.1 The Forest Department shall have a reasonable time after delivery of the goods to inspect them and to reject and refuse acceptance of goods not conforming to this Purchase Order; payment for goods pursuant to this Purchase Order shall not be deemed an acceptance of the goods.

7.2 Inspection prior to shipment does not relieve the Supplier from any of its contractual obligations.

8. INTELLECTUAL PROPERTY INFRINGEMENT

The Supplier warrants that the use or supply by the Forest Department of the goods sold under this Purchase Order does not infringe any patent, design, tradename or trademark. In addition, the Supplier shall, pursuant to this warranty, indemnify, defend and hold Forest Department harmless from any actions or claims brought against UNDP or the United Nations pertaining to the alleged infringement of a patent, design, tradename or trademark arising in connection with the goods sold under this Purchase Order.

9. RIGHTS OF UNDP

In case of failure by the Supplier to fulfil its obligations under the terms and conditions of this Purchase Order, including but not limited to failure to obtain necessary export licenses, or to make delivery of all or part of the goods by the agreed delivery date or dates, the Forest Department may, after giving the Supplier reasonable notice to perform and without prejudice to any other rights or remedies, exercise one or more of the following rights:

9.1 Procure all or part of the goods from other sources, in which event the Forest Department may hold the Supplier responsible for any excess cost occasioned thereby.
9.2 Refuse to accept delivery of all or part of the goods.
9.3 Cancel this Purchase Order without any liability for termination charges or any other liability of any kind of the Forest Department.

10. LATE DELIVERY

Without limiting any other rights or obligations of the parties hereunder, if the Supplier will be unable to deliver the goods by the delivery date(s) stipulated in this Purchase Order, the Supplier shall (i) immediately consult with the Forest Department to determine the most expeditious means for delivering the goods and (ii) use an expedited means of delivery, at the Supplier's cost (unless the delay is due to Force Majeure), if reasonably so requested by UNDP.

11. ASSIGNMENT AND INSOLVENCY

11.1. The Supplier shall not, except after obtaining the written consent of the Forest Department, assign, transfer, pledge or make other disposition of this Purchase Order, or any part thereof, or any of the Supplier's rights or obligations under this Purchase Order.
11.2. Should the Supplier become insolvent or should control of the Supplier change by virtue of insolvency, the Forest Department may, without prejudice to any other rights or remedies, immediately terminate this Purchase Order by giving the Supplier written notice of termination.

12. USE OF UNDP OR UNITED NATIONS NAME OR EMBLEM

The Supplier shall not use the name, emblem or official seal of the Forest Department for any purpose.

13. PROHIBITION ON ADVERTISING

The Supplier shall not advertise or otherwise make public that it is furnishing goods or services to the Forest Department without specific permission of UNDP in each instance.

14. CHILD LABOUR

The Supplier represents and warrants that neither it nor any of its affiliates is engaged in any practice inconsistent with the rights set forth in the Convention on the Rights of the Child, including Article 32 thereof, which, inter alia, requires that a child shall be protected from performing any work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral or social development.

Any breach of this representation and warranty shall entitle the Forest Department to terminate this Purchase Order immediately upon notice to the Supplier, without any liability for termination charges or any other liability of any kind of the Forest Department.

15. MINES

The Supplier represents and warrants that neither it nor any of its affiliates is actively and directly engaged in patent activities, development, assembly, production, trade or manufacture of mines or in such activities in respect of components primarily utilized in the manufacture of Mines. The term "Mines" means those devices defined in Article 2, Paragraphs 1, 4 and 5 of Protocol II annexed to the Convention on Prohibitions and Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects of 1980.

Any breach of this representation and warranty shall entitle the Forest Department to terminate this Purchase Order immediately upon notice to the Supplier, without any liability for termination charges or any other liability of any kind of the Forest Department.

16. SETTLEMENT OF DISPUTES

16.1 Amicable Settlement. The Parties shall use their best efforts to settle amicably any dispute, controversy or claim arising out of, or relating to this Purchase Order or the breach, termination or invalidity thereof. Where the Parties wish to seek such an amicable settlement through conciliation, the conciliation shall take place in accordance with the UNCITRAL Conciliation Rules then obtaining, or according to such other procedure as may be agreed between the Parties.

16.2 Arbitration. Unless, any such dispute, controversy or claim between the Parties arising out of or relating to this Purchase Order or the breach, termination

or invalidity thereof is settled amicably under the preceding paragraph of this Section within sixty (60) days after receipt by one Party of the other Party's request for such amicable settlement, such dispute, controversy or claim shall be referred by either Party to arbitration in accordance with the UNCITRAL Arbitration Rules then obtaining, including its provisions on applicable law. The arbitral tribunal shall have no authority to award punitive damages. The Parties shall be bound by any arbitration award rendered as a result of such arbitration as the final adjudication of any such controversy, claim or dispute.

17. PRIVILEGES AND IMMUNITIES

Nothing in or related to these General Terms and Conditions or this Purchase Order shall be deemed a waiver of any of the privileges and immunities of the Forest Department, including its subsidiary organs.

18. SEXUAL EXPLOITATION:

18.1 The Contractor shall take all appropriate measures to prevent sexual exploitation or abuse of anyone by it or by any of its employees or any other persons who may be engaged by the Contractor to perform any services under the Contract. For these purposes, sexual activity with any person less than eighteen years of age, regardless of any laws relating to consent, shall constitute the sexual exploitation and abuse of such person. In addition, the Contractor shall refrain from, and shall take all appropriate measures to prohibit its employees or other persons engaged by it from, exchanging any money, goods, services, offers of employment or other things of value, for sexual favors or activities, or from engaging in any sexual activities that are exploitive or degrading to any person. The Contractor acknowledges and agrees that the provisions hereof constitute an essential term of the Contract and that any breach of this representation and warranty shall entitle the Forest Department to terminate the Contract immediately upon notice to the Contractor, without any liability for termination charges or any other liability of any kind.

18.2 The Forest Department shall not apply the foregoing standard relating to age in any case in which the Contractor's personnel or any other person who may be engaged by the Contractor to perform any services under the Contract is married to the person less than the age of eighteen years with whom sexual activity has occurred and in which such marriage is recognized as valid under the laws of the country of citizenship of such Contractor's personnel or such other person who may be engaged by the Contractor to perform any services under the Contract.

19.0 OFFICIALS NOT TO BENEFIT:

The Contractor warrants that no official of the Forest Department has received or will be offered by the Contractor any direct or indirect benefit arising from this Contract

or the award thereof. The Contractor agrees that breach of this provision is a breach of an essential term of this Contract.

20. AUTHORITY TO MODIFY:

Pursuant to the Financial Regulations only the Forest Department Authorized Official possess the authority to agree on behalf of Forest Department to any modification of or change in this Agreement, to a waiver of any of its provisions or to any additional contractual relationship of any kind with the Contractor. Accordingly, no modification or change in this Contract shall be valid and enforceable against Forest Department unless provided by an amendment to this Agreement signed by the Contractor and jointly by the Forest Department Authorized Official.

Figure. 18

Evaluation Form Matrix

Name of Consultancy:

Announcement Date: February 27th, 2023

		Technical profile and references of previuos consultancies on similar topics (30)				Financial offer, must include all associated expenses to the developmnet of the work (20 points)	Technical pro(posal (50%)					
Evaluator	**Consultancy Firm**	Knowledge and professioanl experience proven in (i.e: Knowledge of Belize's Wildlife and Environmental Laws) (5 points)	Knowledge and experieince proved in Camera Trapping in Belize (10 points)	Knoweldge and experience developing and delivery in training courses as it relates to camera trapping (5 points)	Knowledge and experience in the analysis of camera trapping data (10 points)	Quality and detail of the financial offer (20 points)	Amount of financial offer	Technical quality of the proposal (does it fulfill the objectives and established deliverables? (20 points)	Innovative tools and methodologies proposed (15 points)	Quality feasibility of the proposed work plan (15 points)	TOTAL	**SPECIAL OBSERVATIONS (something relevant about the technical and/or financial proposal)**
		5	10	5	10	20		20	15	15	100	
Average											####	

Justification for the selecion of successful firm.

PANTHERA fits all the requirements as stipulated in the ToR and is the only organization that can provide this specialized training in Belize.

Name and Evaluator Signature 1 Floridalia Quiroz _____ Date _____

Name and Evaluator Signature 2 John Pinelo _____ Date _____

Name and Evaluator Signature 3 Yanira Pop _____ Date: _____

Source: Author of the study

4.10 Stakeholder Management Plan

The stakeholder management plan is crucial for developing and establishing positive relationships with the project stakeholders. The plan includes the processes required to identify the people, groups, or organizations that could impact or be impacted by the project, to analyze stakeholder expectations and their impact on the project, and to develop appropriate management strategies for effectively engaging stakeholders in project decisions and execution (PMBOK -SIXTH EDITION. p. 503). The stakeholder management plan will identify the IMPL stakeholders to foster positive relationships, mitigate risks and maximize stakeholder support which are key aspects for the success of the project. It will also determine the stakeholders' power, interest and influence/impact on the project. This management plan consists of four processes which are: identify stakeholders, plan stakeholder engagement, manage stakeholder engagement and monitor stakeholder engagement.

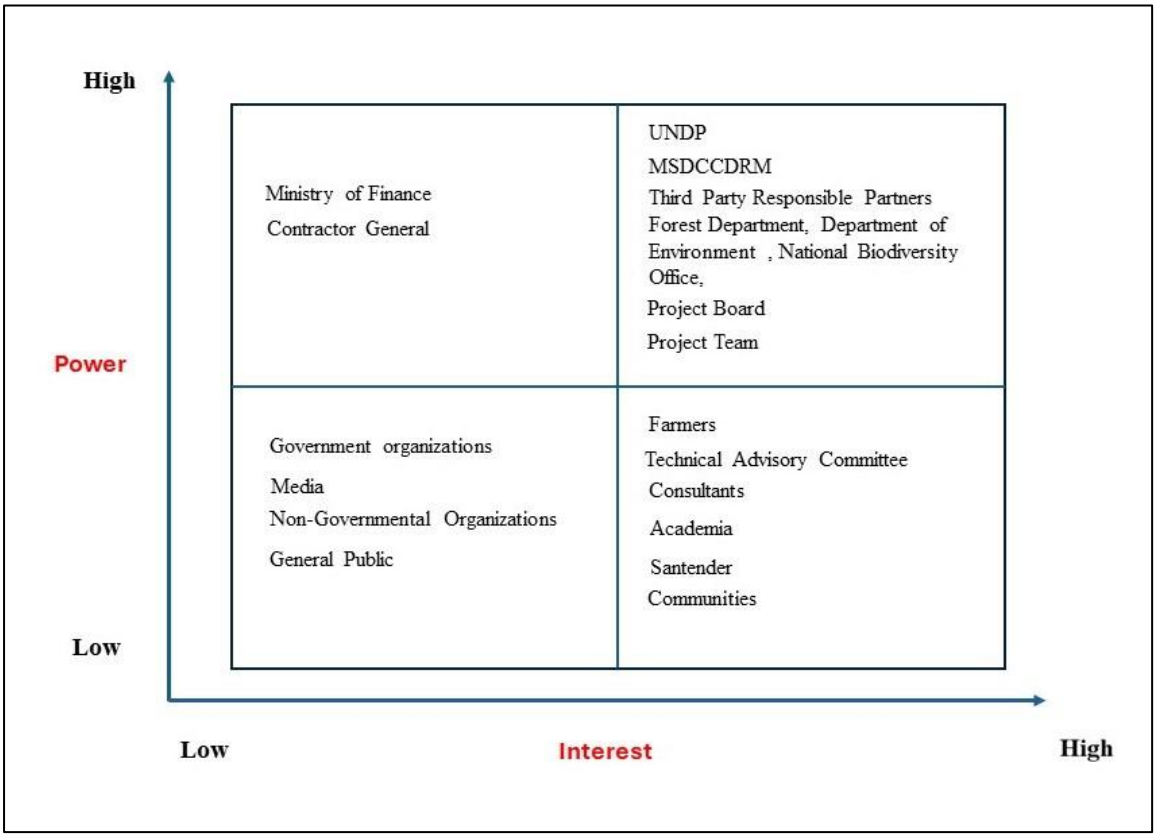
4.10.1 Identify Stakeholders

Identifying stakeholders is key in ensuring the successful implementation of the IMPL Project. It involves identifying and documenting all individuals, groups or organizations that are impacted directly or indirectly by the project. The benefit of this process is that it permits the project team to identify and understand the level of engagement that each stakeholder requires. The stakeholders for this project will be identified by performing a stakeholder analysis. Figure 19, Figure 20 and Figure 21 show the power/interest grid, the power/influence grid, and the influence/impact grid with the stakeholders. The stakeholder register is shown in Chart 35 below and lists all possible

stakeholders involved in the project. The stakeholder register is constantly reviewed and updated as now stakeholders are identified or changed.

Figure 19.

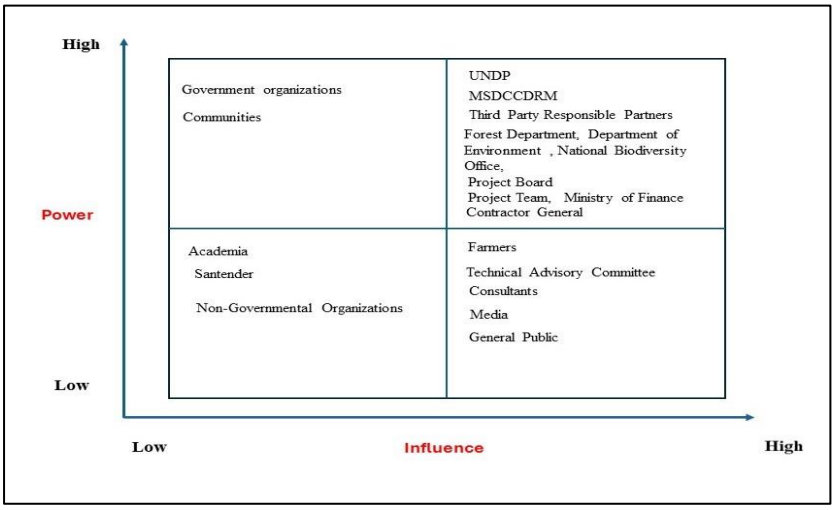
Power/Interest Grid with Stakeholders



Source: Author of the study

Figure 20.

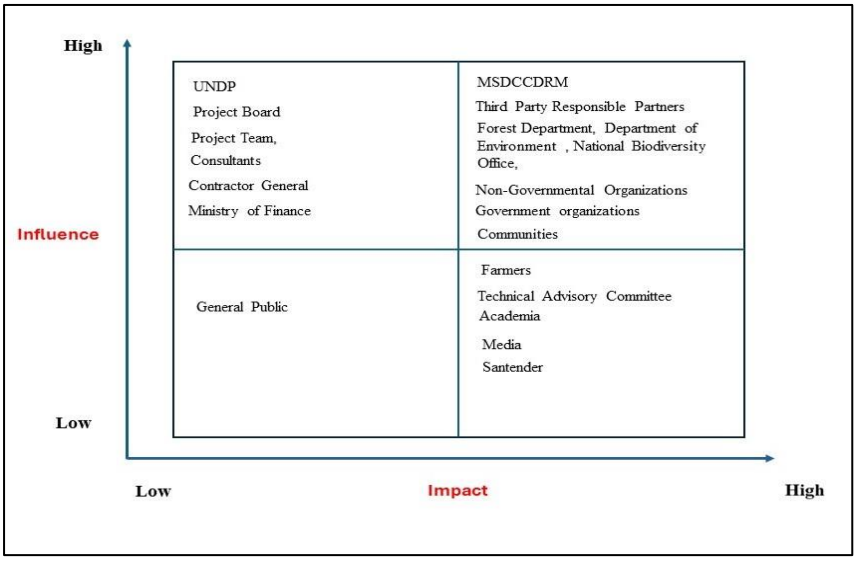
Power/Influence Grid with Stakeholders



Source: Author of the study

Figure 21.

Influence/Impact Grid with Stakeholders



Source: Author of study

Chart 33.

Stakeholder Register

ID	Stakeholder	Function Role	Roles – Responsibilities	Requirements	Main Expectation	Power	Interest
1	United Nations Development Program (UNDP)	Project Sponsor	Strategic Project Guidance	High project delivery, positive impact to key stakeholders	Successful implementation of the project.	High	High
2	Ministry of Sustainable Development, Climate Change and Disaster Risk Management	National Implementing Agency	Project Implementation and Financial Management	Project to be completed within schedule, cost meets project objectives.	Project activities are aligned to ministerial and departmental strategic plan.	High	High
3	Third Party Responsible Partners	Implementing Partners	Project implementation within specified timelines and budget.	Project to be completed within schedule, cost meets project objectives.	Project activities are aligned to departmental strategic plan.	High	High
4	Project Board	Oversight and decision-making	Leadership, guidance and oversight to ensure that the project deliverables are achieved.	Project activities are aligned with the project goal, timelines, and budget.	Ensure that project delivers value to the organization and its stakeholders in alignment with strategic objectives.	High	High

ID	Stakeholder	Function Role	Roles – Responsibilities	Requirements	Main Expectation	Power	Interest
5	Project Manager	Project Management	Overall project leadership and control	Successful project delivery	The project is implemented within specified timeline and budget.	High	High
6	Project Finance Associate	Finance	Administration	Financial reporting, audits	Budget compliance	Medium	High
7	Technical Advisory Committee	Advisory	Give expert guidance on technical issues	Communication and stakeholder skills to effectively convey technical information and recommendations to stakeholders.	The implementing partners take into consideration expert advice to reduce risks and have impactful project deliverables.	Low	High
8	Farmers	Project Beneficiaries	Project execution.	Compliance with requirements of the project	Farmer involvement and project alignment	Low	High
9	Community	Project Beneficiaries	Project execution	Compliance with requirements of the project	Community involvement and project alignment	Low	High
10	Suppliers	Service Provider	Provide services as requested per project requirements	Compliance with delivery terms as per contract	Timely and quality deliverable of goods	Low	Low
11	Experts/Consultants	Service Provider	Provide services as requested per ToR	Compliance with delivery terms as per contract	Timely and quality deliverable of products.	Medium	Medium

ID	Stakeholder	Function Role	Roles – Responsibilities	Requirements	Main Expectation	Power	Interest
12	Ministry of Finance	Regulatory Agency	Financial	Compliance with Government of Belize Financial Processes	Budget and process compliance.	High	Low
13	Office of the Contractor General	Regulatory Agency	Financial and approval of contracts.	Compliance with Government of Belize Procurement and financial Processes	Budget and process compliance.	High	Low
14	Non-governmental Organizations	Advocacy and support	Support to project activities	Project activities are beneficial to the people and the environment	All key stakeholders benefit from the project.	Low	High

Source: Author of the study

4.10.2 Plan Stakeholder Engagement

Plan stakeholder engagement is the process of developing approaches to involve project stakeholders based on their needs, expectations, interests, and potential impact on the project (PMBOK-SIXTH EDITION, p.516). Thus, the IMPL Project will provide an action plan for the effective engagement and management of stakeholders throughout the project lifecycle. This process is performed periodically throughout the project. The stakeholder register as shown in Chart 33 is one of the inputs for this process. The output of this process is the stakeholder engagement plan.

4.10.2.1 Stakeholder Engagement Assessment Matrix

The stakeholder engagement assessment matrix is a tool that supports the comparison between the current engagement levels of each stakeholder and the desired engagement levels required by the project. The “C” represents the current level of engagement that the project team has with the stakeholder and “D” the desired level the project team must reach to ensure that the project is successful. The comparison of these two levels will assist the project manager and the team to identify areas they need to strengthen in communication, collaboration and develop a stakeholder management plan. Chart 34 displays the Stakeholder Engagement Assessment Matrix for the IMPL Project. The stakeholder engagement levels are classified as follows:

1. Unaware – represents stakeholders who are unaware of the project and potential impacts.
2. Resistant – represents stakeholders who are aware of the project and its potential impacts but show resistance to any changes that may occur because of the work or

outcomes of the project. These stakeholders would be unsupportive of the work or of the project outcomes.

3. Neutral – represents stakeholders who are aware of the project but are neither supportive nor unsupportive to its activities and impacts.
4. Supportive – represents stakeholders who are aware and are in support of the project and potential impacts.
5. Leading – represents stakeholders who are aware of the project and are highly engaged in ensuring that the project is successful.

Chart 34.

Stakeholder Engagement Assessment Matrix

ID	Stakeholder	Unaware	Resistant	Neutral	Supportive	Leading
1	United Nations Development Program (UNDP)					C, D
2	Ministry of Sustainable Development, Climate Change and Disaster Risk Management					C, D
3	Third Party Responsible Partners					C, D
4	Project Board					C, D
5	Project Manager					C, D
6	Project Finance Associate					C, D
7	Technical Advisory Committee				C, D	
8	Farmers				C	D
9	Community			C	D	
10	Suppliers			C	D	
11	Experts/Consultants	C			D	
12	Ministry of Finance				C, D	
13	Office of the Contractor General				C, D	
14	Non-governmental Organizations	C			D	

Source: Author of the study

4.10.3 Manage Stakeholder Engagement

Manage Stakeholder Engagement is the process of communicating and working with stakeholders to meet their needs and expectations, address issues, and foster appropriate stakeholder involvement (PMBOK-SIXTH EDITION. p. 523). This engagement will allow the project manager to garner support and minimize resistance from stakeholders. The project manager for the IMPL Project will be responsible to conduct the following activities to manage stakeholder engagement:

- Regular stakeholder meetings: Organize regular stakeholder meetings of forums to gather input, provide updates and address concerns as per Chart 22. Communication Matrix. The project manager will encourage active participation and collaboration among stakeholders.
- Feedback mechanisms: Establish feedback mechanism to gather input from stakeholders throughout the lifecycle of the project. Collect the feedback and incorporate the inputs into the project planning and decision making.
- Conflict Resolution: Address conflicts or disagreements among stakeholders promptly and fairly.
- Stakeholder register: Update the stakeholder register on a regular basis by incorporating new stakeholders and maintaining updated information on existing stakeholders.
- Engagement strategies: Implement engagement strategies based on the stakeholder analysis.

- Manage Expectations: Set clear expectations with stakeholders regarding project scope, timelines, deliverables and outcomes.
- Foster relationships: Build stakeholder relationships through constant communication, by addressing their needs, and by being transparent.

4.10.4 Monitoring Stakeholder Engagement

Monitoring stakeholder engagement is a systematic process of tracking and assessing stakeholder interactions, perceptions and levels of support throughout the project lifecycle. PMBOK SIXTH EDITION also states that the key benefit of this process is that it maintains or increases the efficiency and effectiveness of stakeholder engagement activities as the project evolves and its environment changes. The project manager will be responsible for the following activities to monitor stakeholder engagement:

- Review in a timely manner the Communication Matrix presented in Chart 22 to evaluate which communication medium utilized is most effective.
- Constantly review and evaluate the Stakeholder Engagement Assessment Matrix shown in Chart 21 to assess the effectiveness of the engagement strategies.
- Update the Stakeholder Register shown in Chart 35 with information obtained from the monitoring stakeholder engagement.
- Constantly update the “Lessons learned register” as shown in Chart 9 with information on challenges and how their reoccurrence can be prevented.
- Maintain continuous communication with stakeholders to address concerns, provide guidance and ensure accountability and transparency.
- Constantly update the risk register with possible responses to address the risks.

4.11 Sustainable Development Plan

The Sustainable Development Plan is a strategic section within the project management plan that is designed to promote economic, social and environmental progress while preserving resources and minimizing negative impacts on the planet. It aims to achieve a balance between meeting current needs and ensuring the ability of future generations to meet their own needs. The sustainable development plan for the IMPL Project outlines the approach, roles and responsibilities, budget practices, and monitoring and reporting mechanisms that will be implemented by the project team to ensure that the project goals are aligned with the sustainable development principles throughout the lifecycle of the project.

4.11.1 Identifying Sustainability Impacts

The project team will identify and further develop the sustainability impacts of the IMPL Project by analyzing the Sustainable Development Goals (SDGs), as described in Chapter 7, and by conducting the following activities:

- The project team will update the P5 Impact Analysis as shown in Chart 36 to further identify and evaluate the sustainability impacts. These results will then be integrated into the project planning and implementation phase to get a more comprehensive understanding of the potential impacts.
- Engage stakeholders from the local communities, environmental groups, academia, non-governmental organizations, village councils and any other stakeholder working in or around the project site to obtain varied perspectives on potential impacts.

- Conduct quarterly meetings with the project team and any other key stakeholder to review and update the P5 Standard for Sustainability in Project Management version 5.01. The results of the P5 Impact Analysis will be monitored and tracked quarterly from the P5 initial score.
- Organize mid- and end-of-year workshops and meetings to get feedback on the impact that the IMPL Project is having in the area.
- Establish Key Performance Indicators (KPIs) to measure and monitor sustainability impacts. These KPIs may include metrics related to regulatory compliance, resiliency, policy development, local economic growth, and environmental protection.

Chart 35.

IMPL Project P5 Score

People Impacts	**Initial Score**	**New Score**	**Change**
Labor Practices and Decent Work	2.0	4.3	2.2
Society and Customers	2.1	4.0	1.9
Human Rights	2.0	4.0	2.0
Ethical Behaviour	2.0	4.2	2.2
Overall People Score	**4.1**		
Planet Impacts	**Initial Score**	**New Score**	**Change**
Transport	1.9	4.3	2.4
Energy	2.0	4.6	2.6
Land Air, and Water	1.6	4.6	3.0
Consumption	2.0	3.6	1.6
Overall Planet Score	**4.3**		
Prosperity Impacts	**Initial Score**	**New Score**	**Change**
Project Feasibility	2.6	4.5	1.9
Business Agility	2.2	4.4	2.2
Local Economic Impact	2.5	4.5	2.0
Overall Prosperity Score	**4.5**		
Overall Project P5 Score	**4.3**		

Source: Author of the study

4.11.2 Responding to Sustainability Impacts

The IMPL Project team will proactively respond to the sustainability impacts as follows:

- Update the P5 Impact Analysis as shown in Chart 35 and develop mitigation strategies for all domains and categories that have a negative value or severe impact scores.
- Schedule monthly or quarterly meetings with the objective to review, discuss and update the team on the status of the sustainability impacts based on the P5 Impact analysis or any other risk/opportunity that may occur that may pose a direct impact on sustainability.
- Integrate sustainability risk and opportunities within the project risk and opportunity management framework.
- Collaborate and partner with other local organizations, projects, government and non-governmental organizations, institutions, and academia to identify possible sustainable solutions that can be adopted by the project.
- Incorporate stakeholder feedback to maintain open communication with them whilst gaining trust and promoting transparency.
- Conduct regular revisions of the Sustainable Development Plan to evaluate the sustainability impacts, and effectiveness of the response measures that have been identified and implemented.
- Report to Project Board, Project Sponsor and key stakeholders, on a quarterly basis, the sustainability initiatives and mitigation strategies that have been implemented by

the team. This report will promote trust between the project, communities and key stakeholders.

4.11.3 Roles and Responsibilities

The Project Manager, Project Team and the Sustainability Impact Owner will work together to ensure that the project is managed sustainably. The following list explains the important role and responsibilities that each one has in ensuring sustainability.

Project Manager:

1. Provide leadership and guidance on sustainability issues and ensure that the project goals and the sustainability goals are aligned.
2. Develop and conduct the P5 Impact Analysis as shown in Chart 35.
3. Integrate the activities and resources identified from the Sustainable Management Plan into the Project Management Plan so that they are contemplated in the scope, schedule, risk and budget of the project.
4. Engage with stakeholders, including communities, suppliers, and regulators to understand their sustainability priorities and concerns.
5. Management of project resources in a sustainable manner. This includes optimizing resource use, minimizing waste generation, and promoting energy efficiency throughout the project lifecycle.
6. Communicate the project's sustainability initiatives, progress and achievements to internal and external stakeholders. This will help build awareness, transparency and the project's commitment to sustainability.

7. Organize training sessions for the project team to understand the necessity and manner in how the sustainable principles, practices and goals align to the project.

Project Team:

1. Provide the Project Manager with the necessary information to conduct the P5 Impact Analysis.
2. The Project Team is responsible for integrating sustainability considerations into their day-to-day tasks and decision-making processes. This may involve optimizing resource use, minimizing waste generation, and considering the environmental and social impacts of their actions.
3. Support the Project Manager with the identification of risks and the development of mitigation strategies that may impact the sustainable development plan.
4. Actively seek out innovative solutions to sustainability challenges.
5. Collaborate in monitoring and reporting on sustainability KPIs.

Sustainability Impact Owner:

1. Lead the P5 Impact Assessment process, identifying and evaluating the sustainability impacts across the project.
2. Develop strategies and action plans based on the results of the P5 Impact Assessment to mitigate negative impacts and enhance positive ones.
3. Establish KPIs to measure the effectiveness of the sustainability measures being implemented by the project.
4. Evaluate regularly the progress of KPIs and adjust strategies as needed.

5. Communicate the outcomes of sustainability impact and response strategies to the project manager and key stakeholders.
6. Seeks opportunities for continuous improvement in sustainability performance.

4.11.4 Budget

The budget shown in Chart 36 lists all the items related to managing sustainability impacts within the project.

Chart 36.

Budget for Project Sustainability Management

Sustainability-related Budget Items	Description	Estimated Cost (USD)
Legislative amendments to support Sustainable Land Management initiatives.	Clarification of agencies by contracting a legal policy expert to conduct a comprehensive assessment of current policies. This will improve the governance structure to monitor water bodies.	$65,000.00
	Workshop for the development and signing of an enforcement agreement between MSDCCDRM and MNR	$4,500.00
	Amendments to existing strategies, programs, policies and legislation.	$22,500.00
Development of Environmental Management Tools	National coordinating framework for the development of an Integrated Watershed Management of the Belize River Watershed.	$155,000.00
Community-based monitoring program	Hiring of a Monitoring & Evaluation Officer to develop a community-based monitoring program to monitor water quality.	$70,000.00
Stakeholder Engagement	Sensitization for communities/stakeholders on the importance of sustainable land management.	$60,000.00

Sustainability-related Budget Items	Description	Estimated Cost (USD)
Capacity Building	Workshops for the revision of water, air legislations and regulations including venue, food, transportation	$19,750.00
Stakeholder engagement in monitoring activities	Design of a community-based program for the consistent tracking and public reporting of water resource, biodiversity in the region.	$12,500.00
Needs assessment	Consultancy for the development of a Capacity Needs Assessment.	$25000.00
Conservation Initiatives for sustainable land management.	Hiring of a consultant to conduct community sessions to develop, validate and sign conservation agreements for the implementation of sustainable land management practices or for the monitoring of water quality.	$106,000.00
Rehabilitation strategies	Rehabilitation and management strategies implemented that includes the establishment of four nurseries and hiring of agronomists and extension staff to support the program.	$ 242,000.00
	Development of a riparian forest restoration strategy.	$45,000.00
	Assessment of the forest resources and the development of a forest protection strategy for the BRW.	$90,000.00
	Development and socialization of a water master plan for the BRW.	$371,500.00
Green value chains	Technical Assistance to support the transformation of 02 commodity sectors through their development and application of green value chain.	$45,000.00
Capacity Building for focus groups.	Update farmer field school curriculum which includes training and development of farmers within field school.	$20,000.00
Community outreach	Support to community meetings, procurement of promotional items, media rounds.	$60,000.00

Sustainability-related Budget Items	Description	Estimated Cost (USD)
Exchange of experiences to adopt best practices.	Training and development of farmers and exchange programs	$31,350.00
Improved Economic Livelihoods	Development of six Business/Strategic Plans for BRW groups.	$150,000.00
Equipment and monitoring	Purchase of equipment for community-based monitoring.	$55,000.00
Economic incentives	Development and implementation of micro-grants program. This includes hiring of a coordinator for the development and socialization of the micro-grants program for local community groups.	$125,000.00
Improved Livelihoods	Micro/low value grants to provide direct incentives to local communities to implement	$450,000.00
TOTAL		**$ 2,225,100.00**

Source: Author of the Study

4.11.5 Key Performance Indicators

Key Performance Indicators are measurable values that demonstrate how effectively the project is achieving its goals. This information will permit the project manager and the project team to evaluate the project's progress in achieving the sustainability goals and targets providing an assessment of the environmental, social and economic performance. Chart 38 below shows how the KPIs align with the IMPL Project.

Chart 37.

Key Performance Indicators

P5 Domain	Lens	Category	Element	Key Performance Indicator	Metric
People	Lifespan	Labor practices and decent work	Employment and Staffing	Number of non-specialized hires.	Number of individuals hired from outside of the local communities.
	Lifespan	Labor practices and decent work	Training and qualifications	Current number of trained persons in the community.	Number of persons in the community that actively participate in training.
	Effectiveness	Labor practices and decent work	Equal Opportunity	Number of ToRs advertised for job positions or consultancies.	Number of successful applicants hired based on the approved ToRs.
Planet	Lifespan	Transport	Local Procurement	Outsourcing from local communities.	Number of established partnerships for local acquisition of goods and services.
	Effectiveness	Transport	Digital communi-cation	Training in the use of digital platforms	Increase number of virtual sessions among project team and stakeholders.

P5 Domain	Lens	Category	Element	Key Performance Indicator	Metric
Planet	Efficiency	Transport	Travelling	Optimize travel routes	Decrease in fuel budget.
	Lifespan	Energy	GHG Emissions	Development of restoration tracking tool	Number of registered organizations that contribute to the platform.
	Fairness	Land, Air and Water	Biological Diversity	Development of a Biological Monitoring Task Force	Number of organizations actively involved in the task force
	Servicing	Land, Air and Water	Air and water quality	Number of trained community members in water monitoring	Number of community members participating in capacity building sessions.
	Lifespan	Land, Air and Water	Soil erosion and regeneration	Implemen-tation of climate smart agriculture and best practices.	Number of farmers who have adopted best practices.
Prosperity	Lifespan	Project Feasi-bility	Business Case Analysis	Riks identification	Number of mitigation plans developed
	Lifespan	Business Agility	Resiliency	Policy and/or strategy development	Development of policies on climate smart practices.

Source: Author of the study

4.11.6 Monitoring and Reporting

The monitoring of the sustainable management plan throughout the lifecycle of the IMPL Project will permit an in-depth understanding of the impact that the project will have and allow leaders to make informed decisions. The following are the methods that will be used to monitor the sustainability performance of the project.

- Project status meetings will be held monthly to discuss the project sustainability plan and make recommendations where necessary to ensure its optimum efficiency.
- The P5 Impact Analysis will be conducted, and Chart 35, shown above, will be updated with the corresponding results. This analysis will be repeated at the end of important milestones.
- The environmental, social, and economic performance of the project will be monitored against the KPIs shown in Chart 35.
- All reports will include a section reflecting the project sustainability performance that will serve as the foundation for decision-making.
- Stakeholder engagement analysis will occur at the end of every quarter to assess the stakeholder perception of the project's sustainability impacts. The results will guide the team on how to address areas that need to be strengthened.

5 CONCLUSIONS

1. The Project Charter was created to formally authorize the Integrated Management of Production Landscapes Project to be implemented. It establishes key parameters such as the project objectives, justification, key deliverables, assumptions, constraints, preliminary risks, budget, project milestones, project stakeholders and the authorized signatories. In essence, it is the foundation for the project that provides a clear roadmap from initiation to completion.
2. The scope management plan was developed, and it outlined the project requirements to ensure a thorough understanding of the works required for the project completion. It ensures that the project stays on track, prevents scope creep, meets stakeholder expectations, and delivers the intended outcomes. It includes the development of the requirements traceability matrix, roles and responsibilities, scope statement, WBS, and WBS dictionary.
3. The schedule management plan contains a detailed timeline that describes the duration and sequence of each activity that will be implemented in the project. It also includes the milestones list, Gantt Chart, and the critical path that is crucial for the timely completion of the project.
4. The cost management plan was developed to estimate, budget, allocate and control costs throughout the lifecycle of the project. The cost baseline was established based on the total cost estimate and contingency reserve. The total project cost was estimated at the activity level and includes a 20% contingency reserve and a USD$10,000.00 management reserve. The S-curve was developed based on the projected yearly cost and

cumulative cost. The cost management plan ensures that the financial resources are allocated efficiently, costs are controlled, and the project activities are achieved within the allocated budget.

5. The quality management plan was developed to ensure that the quality requirements are maintained throughout the implementation of the IMPL Project. It outlines the quality metrics and quality standards, the quality assurance approach, and control that will be used by the project team to guarantee stakeholder satisfaction and quality deliverables and overall success of the project.
6. The resource management plan was developed to identify and allocate the necessary resources, and how they will be managed and controlled throughout the project. It contains the RACI Matrix that clearly outlines the project resource management roles and responsibilities, organizational structure of the project team to guarantee improved communication, acquisition of team members to promote transparency and equal opportunity, performance reviews of staff, recognition and awards, and conflict management. It also outlines the physical resources and how these will be managed and controlled in the IMPL Project.
7. The communication management plan was developed and identifies the stakeholders and channels of communication to ensure that stakeholders are kept always informed on the status of the IMPL Project. It outlines the stakeholder and communication requirements, the communication matrix, and how to manage, monitor and control communication through the communication escalation process.

8. The risk management plan was developed and identified potential project risks, and how these will be analyzed, monitored, and controlled throughout the lifecycle of the IMPL Project with the aim to minimize their impact on the project objectives and ensure its successful completion. The plan presents the risk breakdown structure and adopts the qualitative risk analysis to develop the risk impact scale and probability and impact matrix for this project. These were used to prioritize the identified project risks and were entered into the risk register.
9. The procurement management plan was developed based on the Government of Belize established and standardized process to guide the project team in the acquisition of goods and services for the IMPL Project. This plan presents the procurement process and templates such as the procurement plan templates, the firm-fixed price contract, requisition forms, request for quotation. It further details the decision criteria to be employed to ensure effective supplier selection, procurement change control process and an evaluation matrix that will guarantee transparency and accountability in the execution of this project.
10. The stakeholder management plan was developed to foster communication at all levels to ensure that the adequate flow of information is communicated to each stakeholder group. The plan identified the key project stakeholders, their influence, interest, and power in the IMPL project. The main tools that were used are the stakeholder register, stakeholder power/influence grid, stakeholder engagement and engagement matrix.
11. The sustainable management plan was created based on a comprehensive analysis of the project's environmental, social, and economic impact whilst adopting a regenerative

and sustainable approach throughout the implementation of the IMPL Project. The plan outlines the process to identify and respond to sustainability impacts, the roles and responsibilities, sustainability budget, monitoring and reporting on what strategies need to be adopted to improve the project's sustainability performance. The P5 Impact Assessment was conducted and shows that this project can have an overall P5 Score from an average of 2.3 to 4.3, so it can have a positive impact to both the people and the environment.

6 RECOMMENDATIONS

1. The Forest Department, Ministry of Sustainable Development, Climate Change and Disaster Risk Management, should develop project management plans for each project being implemented since it provides clarity, direction and structure to the project activities increasing the probability of its success.
2. The FD, MSDCCDRM, should allow the use of the project management plan for the IMPL Project that was developed as a guide to implement the project so as to ensure that it is completed within schedule and budget. This document can be used and adopted by other ongoing projects.
3. The project manager should ensure that the project team consistently reviews, updates, and enters new risk into the risk register to develop mitigation strategies that would have a direct impact on the project.
4. The project manager should budget capacity development sessions on team building and conflict resolution whilst formally establishing the grievance mechanism to encourage respect, cooperation and communication among the team members and stakeholders.
5. The project manager should build the culture of having regular weekly, monthly and quarterly meetings to update and address emerging issues before they escalate and impact the project deliverable.
6. The project manager should utilize the Communication Matrix to effectively engage the stakeholders and discuss the organizational structure to avoid communication problems that can cause delays in project implementation.

7. The project manager should update the P5 Impact Assessment matrix and use it as a tool for reporting on the impact that the project is having on the environment, people and economy.

7 VALIDATION OF THE FGP IN THE FIELD OF REGENERATIVE AND SUSTAINABLE DEVELOPMENT

The project aims at the development of a project management plan that will guide the project manager and the project team for the successful execution and completion of the IMPL project. This plan will guarantee the accomplishment of the project's main objective, which is to mainstream biodiversity conservation and sustainable land/water management into production landscapes in Belize. This project will not only impact the BRW but will contribute towards the fulfillment of Belize's regional commitments and contributions to the Sustainable Development Goals. The following is the project's validation in the field of regenerative and sustainable development:

7.1 Relationship with regenerative development.

Regenerative development is a holistic approach that encourages communities to support and create positive relationships that will benefit society and our environments by allowing the system to evolve and adapt to changing circumstances (Regenerative Development in a nutshell). The six layers of regenerative development strive to create resilient, thriving ecosystems that will not only sustain but also enhance biodiversity and ecosystem services. These processes, as stated by Muller, are environmental, social, economic, political, cultural and spiritual. They embody from ecological restoration to community engagement which go beyond mitigating the effects of climate change to making a resilient generation that can adapt and contribute to the regeneration of the world by adopting technology, best practices, and communities. In relationship to the project

IMPL, its objective is to restore degraded areas within the Belize River Watershed through a joint effort among government, civil society, communities, academia by educating farmers and the communities on the adoption of best practices on both land and water. Hence, this project responds simultaneously to regenerative development and to the Sustainable Development Goals (SDG).

7.2 Relationship with sustainable development goals.

The article "What are the Sustainable Development Goals" states that the Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by the United Nations in 2015 as a universal call to action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity (UNDP, 2024). The seventeen (17) SDGs are all closely linked to each other and the action in one area will affect outcomes in others; therefore, development must balance social, economic and environmental sustainability. The project's validation in the field of the sustainable development goals (SDGs) is described below:

1. **Goal 1. No poverty - end poverty in all its forms**. This goal aims at eradicating poverty in all its forms and is one of the greatest challenges facing humanity (UNDP. 2024). The ILMP will be targeting vulnerable small farmers, both men and women, and will support sustainable production practices that will contribute to food security. Through targeted interventions, the project aspires to empower small-scale farmers to adopt practices that are not only economically viable but also environmentally responsible, thereby fostering long-term resilience and

sustainability within the agricultural sector. The Agriculture Department, for example, as a key partner in this project will promote the incorporation of agroforestry practices in the farms, and the Belize Producers Livestock Association (BPLA) will conduct farmers field schools to develop a model farm for cattle farmers.

2. **Goal 5. Gender equality - Achieve gender equality and empower all women and girls.** Ending all discrimination against women and girls is not only a basic human right; it is crucial for sustainable future. It has been proven that empowering women and girls helps economic growth and development (UNDP, 2024). The IMPL project is poised to serve as a catalyst for the validation of gender equality within the realm of biodiversity conservation and sustainable land management practices. By adopting a holistic approach, the initiative aims to ensure that both women and men experience tangible benefits from these initiatives. Through the implementation of sustainable practices, the IMPL seeks to create an equitable distribution of resources and opportunities, addressing the specific needs and challenges faced by women and men in the targeted communities. Moreover, the project places a strong emphasis on women's empowerment by actively involving them in decision-making processes related to land management and conservation. Recognizing the crucial role that women play in agriculture and environmental stewardship, the IMPL project aims to break down traditional barriers and empower women to actively participate in shaping the policies and strategies that affect their communities. By fostering gender-inclusive practices and promoting women's

engagement in decision-making, the project not only contributes to environmental sustainability but also facilitates a more just and equitable society.

3. **Goal 6. Clean water and sanitation**.

   Ensure availability and sustainable management of water and sanitation for all (FAO. n.d). The IMPL project seeks to ensure clean water and sanitation, in the BRW by protecting and restoring riparian forests and wetlands that contribute to groundwater recharge and promoting SLM and environmentally friendly agriculture that are conducive to reducing pollution in streams and rivers of the BRW. This dual approach is designed to mitigate the adverse impacts of conventional farming practices on water quality, thereby reducing pollution in streams and rivers within the BRW. The promotion of SLM not only ensures the preservation of soil health and fertility, but it also contributes to the overall health of aquatic ecosystems. By integrating these multifaceted strategies, the project strives to create a harmonious balance between human activities, agricultural productivity, and the preservation of water resources, fostering a sustainable environment conducive to clean water and improved sanitation in the BRW region.

4. **Goal 8. Decent work and economic growth.**

   The SDG promotes sustained economic growth, higher levels of productivity and technological innovation. Encouraging entrepreneurship and job creation are key to this goal, as are effective measures to eradicate forced labor, slavery, and human trafficking (UNDP, 2024).

The IMPL project is linked to “Decent work and economic growth” by recognizing the potential for fostering inclusive growth by prioritizing the forestry and agriculture sectors and seeking to create and sustain employment opportunities which align to the principles of decent work. This inclusivity will enhance the overall economic growth of the communities, contributing to poverty alleviation and social development. In addition, it also aims to elevate the economic output of these sectors by adding value to the selected products which will create a more robust and competitive economic landscape, providing new sources of income to the communities. A fundamental aspect of this project is the decoupling of economic growth from environmental degradation by recognizing the interconnectedness of economic activities and the environmental impact. The project advocates for sustainable practices within both the agriculture and forestry sectors, which include the adoption of environmentally friendly technologies, and sustainable land management and practices that promote biodiversity. Ultimately, the project envisions a harmonious balance between economic progress and environmental protection.

5. **Goal 13. Climate action. –Take urgent action to combat change and its impacts.**

   Climate action is at the forefront of the IMPL’s objectives that focus on both building ecosystem resilience to the impacts of climate change, and actively mitigating greenhouse gas (GHG) emissions. It recognizes the urgent need to strengthen ecosystems in response to the mounting challenges as a result of climate

change effects. This involves the implementation of adaptive strategies and initiatives such as afforestation programs, habitat restoration efforts, and the promotion of biodiversity conservation to ensure that ecosystems are better equipped to withstand the adverse effects of climate change such as floods, droughts, fires and other extreme events. Simultaneously, the project will also mitigate GHG emission through the implementation of sustainable agricultural practices, establishment of nurseries, environmental campaigns to promote afforestation, and the integration of renewable energy sources. The dual approach of building ecosystem resilience and mitigating GHG emissions reflects not only a comprehensive strategy that addresses the current impacts of climate change but also aims to secure a more sustainable and resilient future.

6. **Goal 15. Life on land.**

   Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss (FAO. n.d)

   The IMPL project seeks to enhance environmental sustainability and conservation efforts through the reinforcement of governance structures. It will establish clear mandates in the management of water and forest resources to ensure their effective and responsible management. In addition, it not only aims to address habitat preservation but places significant efforts on improving water quality. This mandate involves implementing measures that prevent pollution, enhance water purification processes, and safeguard the water resources. Ecosystem connectivity is also an

important goal of the IMPL project since it promotes the importance of maintaining corridors that will facilitate the movement of species, genetic diversity, and ecological processes which will promote resilience and adaptability to environmental changes. The adoption of best agricultural practices, like agroforestry systems, will reduce the pressures on the key biodiversity areas.

The development of the project management plan is fundamental for the IMPL project to be able to implement the activities that are directly linked to the regenerative development and will also contribute towards the achievement of the SDGs goals.

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Appendix 1: FGP Charter

CHARTER OF THE PROPOSED
FINAL GRADUATION PROJECT (FGP)

1. Student name

Yanira Pop

2. FGP name

Project Management Plan for the Integrated management of production landscapes

3. Application Area (Sector or activity)

Land and water landscape restoration

4. Student signature

5. Name of the Graduation Seminar facilitator

Róger Valverde Jiménez

6. Signature of the facilitator

7. Date of charter approval

January 12, 2024

8. Project start and finish date

January 2024	June 2024

9. Research question

What strategies and approaches can be implemented to effectively mainstream biodiversity conservation and sustainable land/water management into production landscapes?

10. Research hypothesis

This project management plan will establish the best practices and processes that will greatly enhance the successful implementation of this project.

11. General objective

To formulate a project management plan that will guide the successful execution of the “Integrated management of production landscapes in the Belize River Watershed” project.

12. Specific objectives

1. To create a project charter that will formally authorize the development of the Project Management and allow possible change control that may be required.
2. To develop a comprehensive Scope Management Plan that establishes a clear and well-defined framework outlining all necessary processes to ensure successful delivery and completion of the project.
3. To develop a Schedule Management Plan that will provide guidance to ensure the completion of the project within the defined timeframe.
4. To formulate a cost management plan that defines the framework for managing and controlling the project’s estimated costs and required resources to ensure the project remains within the approved budget.
5. To develop a Quality Management Plan that guarantees thorough documentation of all necessary information to effectively manage the project spanning from the planning phase to the delivery stage.
6. To create a Resource Management Plan that clearly outlines the strategies for acquiring necessary resources to ensure the effective and efficient utilization of resources within the project.

7. To formulate a Communication Management Plan that will establish how communication will be managed in the project to ensure that all stakeholders are adequately informed.
8. To develop a Stakeholder Engagement Plan that identifies and documents the involvement and influence of the project stakeholders in the project.
9. To create a Procurement Management Plan that will guide the project management unit on how to conduct procurement process that will ensure transparency and accountability in the project.
10. To develop a Risk Management Plan for the identification of potential problems before they occur and can be managed in the project to ensure it doesn't hinder the project's implementation and success.
11. To formulate a Project Management Plan focused on regenerative development which aims to achieve the integration of sustainable practices, restore biodiversity and create a regenerative ecosystem for the benefit of both people and the environment.

13. FGP purpose or justification

The development of a project management plan (PMP) for the "Integrated management of production landscapes in the Belize River Watershed" (IMPL)project is crucial to ensure its successful implementation. A project plan is defined as the document that describes how the project will be executed, monitored, and controlled (Project Management Institute, 2017). This project involves multiple stakeholders, including government agencies, local communities, environmental organizations academia and other private enterprises, therefore, the PMP will be the roadmap and will serve as the main document that will align the interests, influence, roles, and responsibilities of these stakeholders to ensure that there is a well-coordinated multi-stakeholder approach. Clear communication channels, defined decision-making processes, and roles clarification are integral components of the PMP management plan which will foster collaboration and enhance the overall efficiency of this project.

The goal of this project is to contribute to the reduction in loss of biodiversity and degradation of production landscapes in the Belize River watershed. This implies a complex interplay of ecological, social and economic factors. A PMP will facilitate the systematic organization and execution of tasks related to land use, water management, best practices in agriculture, restoration of degraded areas amongst other key components. The PMP will define that structured approach that will be crucial for the success of this project since it will allow for a more effective understanding and handling of the intricacies associated with integrated landscape management. It will facilitate effective resource management, outlining the allocation of resources which includes staff, time and budget to optimize the utilization of these resources.

The project management plan will also promote accountability, transparency and adaptative management principles. It will establish a well-defined monitoring and evaluation system, enabling proper tracking of the implementation of the activities, use of resources, stakeholder coordination and early identification of risks. This project management plan is a comprehensive approach that will ensure the successful implementation of the "Integrated management of production landscapes in the Belize River Watershed" project.

14. Work Breakdown Structure

1.0 Graduation Seminar

- 1.1 FGP Deliverables
  - 1.1.1 Charter
  - 1.1.2 WBS
  - 1.1.3 Chapter 1. Introduction
  - 1.1.4 Chapter 2. Theoretical Framework
  - 1.1.5 Chapter 3. Methodological Framework
  - 1.1.6 Annexes
    - 1.1.6.1 Bibliography
    - 1.1.6.2 Schedule
- 1.2 Graduation Seminar

2.0 Tutoring Process

- 2.1 Tutor
  - 2.1.1 Tutor Assignment
  - 2.1.2 Communication
- 2.2 Adjustments of previous charters (if needed)
- 2.3 Chapter 4. Development (results)
  - 2.3.1 Signed Charter
  - 2.3.2 Project Integration Management
  - 2.3.3 Scope Management Plan
  - 2.3.4 Schedule Management Plan
  - 2.3.5 Cost Management Plan
  - 2.3.6 Quality Management Plan
  - 2.3.7 Resource Management Plan
  - 2.3.8 Communications Management Plan
  - 2.3.9 Stakeholder Engagement Plan
  - 2.3.10 Procurement Management Plan
  - 2.3.11 Risk Management Plan
- 2.4 Chapter 5. Conclusion

2.5 Chapter 6. Recommendations
2.6 Chapter 7. Regenerative Development

3.0 Reading by Reviewers

3.1 Reviewers Assignment Request
3.1.1 Assignment of two reviewers
3.1.2 Communication
3.1.3 FGP Submission to Reviewers
3.2 Reviewers Work
3.2.1 Reviewer 1
3.2.1.1 FGP Reading
3.2.1.2 Reader 1 Report
3.2.2 Reviewer 2
3.2.2.1 FGP Reading
3.2.2.2 Reader 2 Report

4.0 Adjustments

4.1 Report for Reviewers
4.2 FGP Update
4.3 Second Review by Reviewers

5.0 Presentation to Board of Examiners

5.1 Final Review by board
5.2 FGP Grade Report

15. FGP budget

The total budget for this FGR: USD $1,506.50

Project Management Software: USD $250.00
Revision Services: USD $200.00
Stationaries and supplies: USD $150.00
Printing and Binding of Final FGP document: USD $150.00
Postage of Final FGP Document: USD $160.00
Utilities (Internet, electricity): USD $400.00
Contingency Fee (15%): USD $196.50

16. FGP planning and development assumptions.

- Information necessary for the development of the project management plan on integrated landscape management will be readily available.
- Key stakeholders will participate and provide timely feedback throughout this process.

- All the resources, both human and capital, will be available to successfully implement this project.
- Researcher time for the FGP will be at least 15 hours per week during the FGP development process.

17. FGP constraints

- The time limit for the project is only three months.
- Conflicting timeframes due to work commitments can cause a failure to meet deadlines.
- The quality of the FGP may be affected due to the short amount of time for each deliverable.
- A program such as MS Project is not readily available; thus, there will be a delay in finalizing the respective deliverable.

18. FGP development risks

- Failure to complete and submit the project deliverables punctually will result in a deduction of the corresponding points from the course.
- Due to conflicting schedules, the student may not be able to participate in the webinars which will lead to a delay in completing the deliverables or non-submission of the work.
- Failure to address project corrections or questions may result in the submission of poor deliverables.
- The final FGP document must be shipped to Costa Rica; thus, a delay in shipping will affect delivery of the FGP final document.

19. FGP main milestones

Deliverable	Finish estimated date
1.0 FGP profile	March 3, 2024
1.1 FGP Deliverables	February 25, 2024
1.1.1 Charter; items 1 to 10, preliminary bibliographical research	January 14, 2024
1.1.2 Charter, Items 11 and 12, FGP WBS,	January 21, 2024

Deliverable	Finish estimated date
1.1.3 Corrections, Charter items 13 to 19	January 28, 2024
1.1.4 Chapter II. Methodological Framework, Charter item 20 Framework	February 4, 2024
1.1.5 Chapter III. Methodological Framework, Corrections, Charter Item 21	February 11, 2024
1.1.6 Corrections, Chapter 1 Introduction, Chapter 7 Project Validation in the regenerative and sustainable design, Charter Item 22, FGP Schedule	February 18h, 2024
1.1.7 Corrections, Executive Summary, Abstract, Bibliographical References, Indexes, Signed FGP Charter	February 25, 2024
1.2 Graduation Seminar Approval	March 3, 2024
2.0 Tutoring Process	May7, 2024
2.1 Tutor	March 6, 2024
2.1.1 Tutor Assignment	March 4, 2024
2.1.2 Communication	March 6, 2024
2.2 Adjustments of previous charters (if needed)	March 11, 2024
2.3 Chapter IV. Development (results)	April 27, 2024
2.4 Chapter V. Conclusion	May 2, 2024
2.5 Chapter VI. Recommendations	May 7, 2024
Tutor Approval	May 7, 2024
3.0 Reading by Reviewers	May 22, 2024
3.1 Reviewers Assignment Request	May 12, 2024
3.1.1 Assignment of two reviewers	May 9, 2024
3.1.2 Communication	May 11, 2024
3.1.3 FGP Submission to Reviewers	May 12, 2024
3.2 Reviewers work	May 22, 2024
3.2.1 Reviewer 1	May 22, 2024
3.2.1.1 FGP Reading	May 21, 2024
3.2.1.2 Reader 1 Report	May 22, 2024
3.2.2 Reviewer	May 22, 2024
3.2.2.1 FGP Reading	May 21, 2024
3.2.2.2 Reader 2 Report	May 22, 2024
4.0 Adjustments	June 11, 2024
4.1 Report for Reviewers	May 31, 2024
4.2 FGP Update	June 1, 2024
4.3 Second Review by Reviewers	June 2, 2024
5.0 Presentation to Board of examiners	June 16, 2024
5.1 Final review by board	June 13, 2024
5.2 FGP Grade report	June 16, 2024
FGP End	June 16, 2024

20 Theoretical framework

20.1 Estate of the "matter"

The Belize River Watershed currently faces numerous threats including habitat loss, unsustainable exploitation of forest resources, clearing of riparian vegetation, pollution, soil fertility decline, and increased erosion due to deforestation and conversion of forested land to agriculture. The transition from farming on marginal lands adds to these challenges, heightening vulnerability to climate change. Complicating matters, biodiversity and sustainable land/water management relies on various public agencies with overlapping functions which hinder coordinated efforts for joint programming and enforcement. Integrated management of production landscapes is essential to deliver multiple global environmental benefits.

The project aims to tackle challenges like forest ecosystem fragmentation, biodiversity loss, and land degradation in the Belize River Watershed. It specifically targets the preservation of ecosystem remnants functioning as vital biological corridors. Using a participatory approach that ensures fair distribution of benefits between men and women.

To curb this situation government of Belize has developed several policies, such as, the Agroforestry Policy, strategies such as the National Landscape Restoration Strategy and projects. This FGP will contribute to guide the proper implementation of the project.

20.2 Basic conceptual framework

The basic concepts to be identified in this document are as follows:
1. Project 2. Program 3. Portfolio 4. Business strategy 5. Project Management 6. Project Life cycle 7. Regenerative Development 8. Project management knowledge Areas 9. Project Management Plan 10. Project processes 11. Principles of project management 12. Project domains 13. Sustainable Development Goals

21. Methodological framework

Objective	Name of deliverable	Information sources	Research method	Tools	Restrictions
To create a project charter that will formally authorize the development of the Project Management and allow possible change control that may be required.	-Project Charter - Theoretical Framework - Methodological Framework	- Minutes of Meetings - Personal interviews with stakeholders - FGP Project Charter Template -PMBOK ®Guide Seventh Edition (2021) - Websites	-Analytical - Mixed method	-Brain storming - Meetings - Expert judgement - Charter template	Unavailability of information due to poor documentation
To develop a comprehensive Scope Management Plan that establishes a clear and well-defined framework outlining all necessary processes to	-Scope Management Plan - Traceability requirement matrix -WBS & its dictionary	-Minutes of meetings -Interviews with the Project Board, Third Party Responsible Partners, Technical Advisory Committee,	- Analytical - Mixed Method	-Expert judgement -Meetings -Scope manage-ment plan template - Data analysis - Interviews	Changes in the scope of the project can result in delays and cost overruns which will have a direct

Objective	Name of deliverable	Information sources	Research method	Tools	Restrictions
ensure successful delivery and completion of the project.		other external stakeholders. -IMPL Project document. -Lessons learnt from similar projects. -Project Management Body of Knowledge, PMBOK GUIDE, Sixth Edition, 2017 -Websites -Lecture presentation notes		Require-ments manage-ment plan template -Bench-marking -Document analysis -Required traceability matrix template -Decom-position -WBS generator	impact on the budget.
To develop a Schedule Management Plan that will provide guidance to ensure the	-Schedule Manageme nt Plan -Gantt Chart -List of responsible	Interview with the Project Manager, Third-Party Responsible Partners,	-Analytical -Mixed method	-Expert judgement -Meetings Interviews Decom-position	- Imple-menting partners do not complete the work on

Objective	Name of deliverable	Information sources	Research method	Tools	Restrictions
project is completed within the defined timeframe.		project director and other external stakeholders, - IMPL Project document. - Lessons learnt from similar projects. -PMBOK ®Guide 7th edition (2021) -PMI database -Lecture presentation notes		-Gantt Chart -Microsoft Projects 2016 -Data Analysis -Bottom – up estimating - Microsoft Excel	given schedule causing as delay activities that are dependent on others - Conflicting schedules with stake-holders will affect the timely gathering of information
To formulate a cost management plan that defines the framework for managing and controlling the project's	-Cost Manage-ment Plan Budget -Cash flow -Curve "s"	Interview with the Project Manager and other stakeholders, -Lectures notes	-Analytical -Mixed method	Expert judgement -Meetings Interviews Forecasting	- The budget required for the activities must not exceed

Objective	Name of deliverable	Information sources	Research method	Tools	Restrictions
estimated costs and required resources to ensure the project remains within the approved budget.		IMPL Project document -Lessons learnt from similar projects. -PMBOK-®Guide 7th edition (2021) -PMI database -Internet		-Cost manage-ment plan template -Microsoft Project 2016 -Historical review Forecasting	the available budgets.
To develop a Quality Management Plan that guarantees thorough documentation of all necessary information to effectively manage the project spanning from the planning phase	-Quality Manage-ment Plan -Standard checklists -Guidelines	Interview with the Project Manager and Third-Party Responsible Partners, and other external stakeholders, -IMPL Project document -Lessons learnt from similar projects.	-Analytical -Mixed method	-Expert judgement -Cost of quality -Meetings -Quality manageme nt template -Checklist -Audits	- The sponsor may not be satisfied with the quality of the product, in this case, consul-tancies and won't accept the end product.

Objective	Name of deliverable	Information sources	Research method	Tools	Restrictions
to the delivery stage.		PMBOK-®Guide 7th edition (2021) -PMI database -Internet		-Data represent-tation -Question-naires -Inspections -Approved change review templates	
To create a Resource Management Plan that clearly outlines the strategies for acquiring necessary resources to ensure the effective and efficient utilization of	-Resource Manage-ment Plan -List of resources needed -Organiza-tional hierarchical chart	-Interview with the Project Manager -IMPL Project document -Lessons learnt from similar projects. PMBOK-®Guide 7th edition (2021)	-Analytical -Mixed method	-Expert judgement -Meetings -Organiza-tional hierarchical charts -Negotiation	The resources needed may not be readily available in the country.

Objective	Name of deliverable	Information sources	Research method	Tools	Restrictions
resources within the project.		-Websites -Journal articles		-Virtual teams -Project perfor-mance appraisals	
To formulate a Communication Management Plan that will establish how communication will be managed in the project to ensure that all stakeholders are adequately informed.	Communic ations Manage-ment Plan	-Interview with the Project Manager -IMPL Project document -Lessons learnt from similar projects. -PMBOK-®Guide 7th edition (2021) -PMI database -Websites	-Analytical -Mixed method	-Meetings -Expert judgement -Communic ation requiremen ts analysis -Communi-cations methods -Status reports -Stakeholder matrix	- There are existing rules/police s for communi-cation that may not align with those from the project. -Not all stake-holders are acquainted with the use of modern technology for

Objective	Name of deliverable	Information sources	Research method	Tools	Restrictions
				Electronic communi-cation - Communi-cation manage-ment template	Communi-cation.
To develop a Stakeholder Engagement Plan that identifies and documents the involvement and influence of the project stakeholders in the project.	Stakeholder Engagement Plan Stakeholder register - Stakeholder assessment matrix	Interview with the Project Manager and Third-Party Responsible Partners, and other external stakeholders. -IMPL Project document -PMBOK-®Guide 7th edition (2021) -PMI database	-Analytical -Mixed method	-Expert judgement Stakeholder analysis Stakeholder register template -Meetings Power/ interest grid Power/	Stake-holders might lose interest during the lifecycle of the project.

Objective	Name of deliverable	Information sources	Research method	Tools	Restrictions
				influence grid -Communi-cation methods -takeholder matrix assessment	
To create a Procurement Management Plan that will guide the project management unit on how to conduct procurement process that will ensure transparency and accountability in the project.	-Procure-ment Manage-ment Plan. -Proposal evaluation criteria -Terms of reference -Contract templates	-Interview with the Project Manager and the Project Associate -Interview with the procurement officer and Finance Officer -IMPL Project document -Lessons learnt from similar projects.	-Analytical -Mixed method	-Expert judgment -Market research -Procure-ment manage-ment plan template -Advertising Bidders Conference	Delays in shipment and availability of goods and services will impact project delivery. - The approval process for procure-ment is lengthy

Objective	Name of deliverable	Information sources	Research method	Tools	Restrictions
		-PMBOK-®Guide 7th edition (2021) -Web research -PMI database		-Proposal evaluation criteria templates -Proposal template -Terms of reference -Evaluation report template -Contract templates -Procure-ment perfor-mance review templates	thus purchasing of materials and supplies will be delayed affecting project schedule.
To develop a Risk Management Plan for the identification of potential	Risk Manage-ment Plan -Risk log	-Interview with the Project Manager Third-Party Responsible Partners, and	-Analytical -Mixed method	-Expert judgement -Meetings -Stakeholder analysis	Unforeseen risks such as environ-mental events (hurricanes,

Objective	Name of deliverable	Information sources	Research method	Tools	Restrictions
problems before they occur and can be managed in the project to ensure it doesn't hinder the project's implementation and success.	- Monitoring plan	other stakeholders. -IMPL Project document		-Risk Manage-ment Template -Literature Review -Historical data/ documents -Risk log	fires) may occur during the project that can greatly impact the project schedule and budget.
To formulate a project management plan focused on regenerative development which aims to achieve the integration of sustainable practices, restore biodiversity, and create a regenerative	-P5 Analysis Report -Report on its contributio n on the SDGs	-P5 Analysis program -IMPL Project document - The GPM Reference Guide.	Analytical	-Expert judgement -P5 analysis template -Meetings	The project team is not familiar with and does not understand the P5 Impact Analysis.

Objective	Name of deliverable	Information sources	Research method	Tools	Restrictions
ecosystem for the benefit of both people and the environment in the project.					

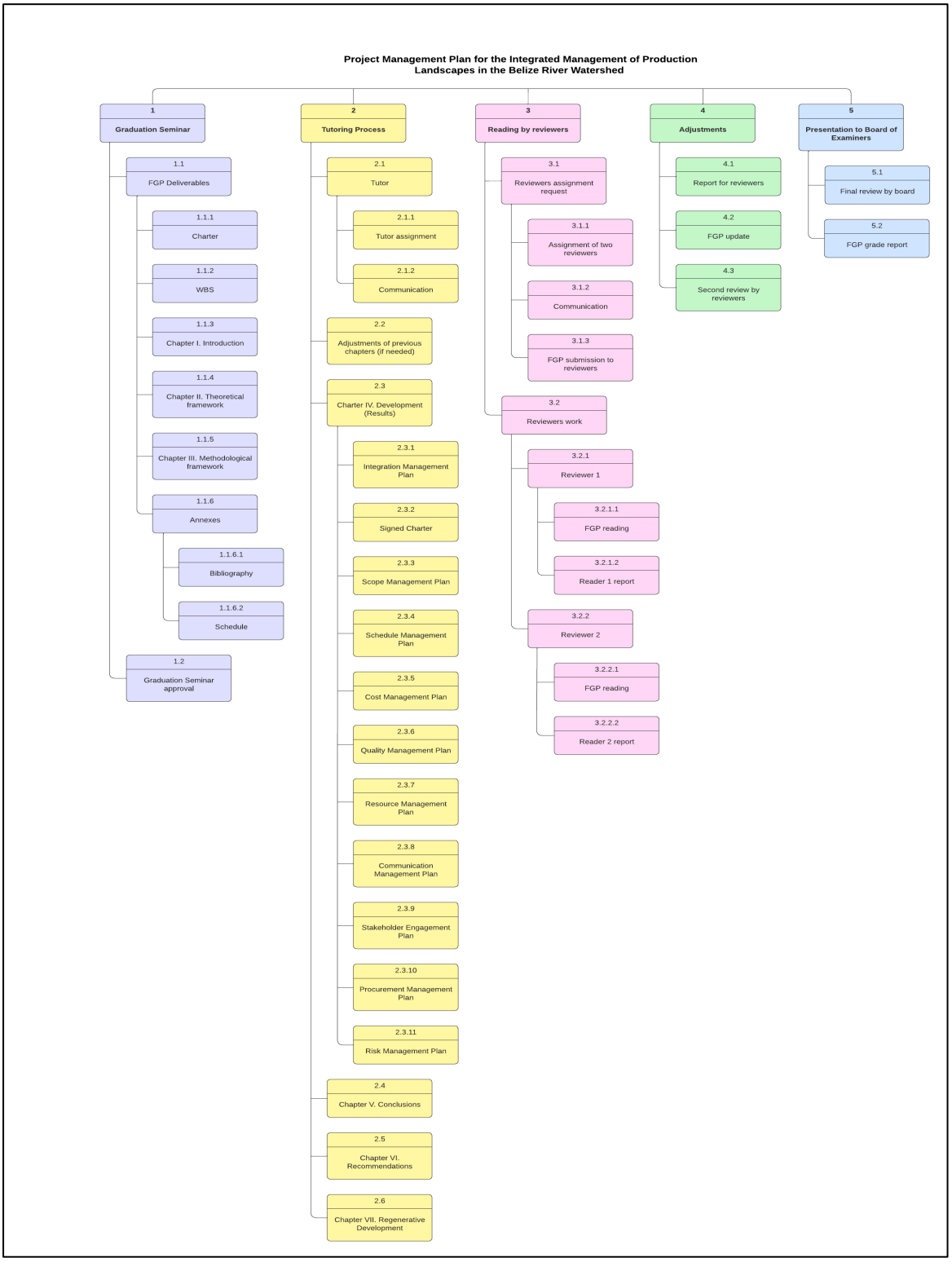
21 Validation of the work in the field of regenerative and sustainable development.

The success of this FGP aligns seamlessly with the regenerative development and the sustainability development goals (SDGs). It clearly outlines how the implementation of the project activities will contribute to both regenerative and sustainable development.

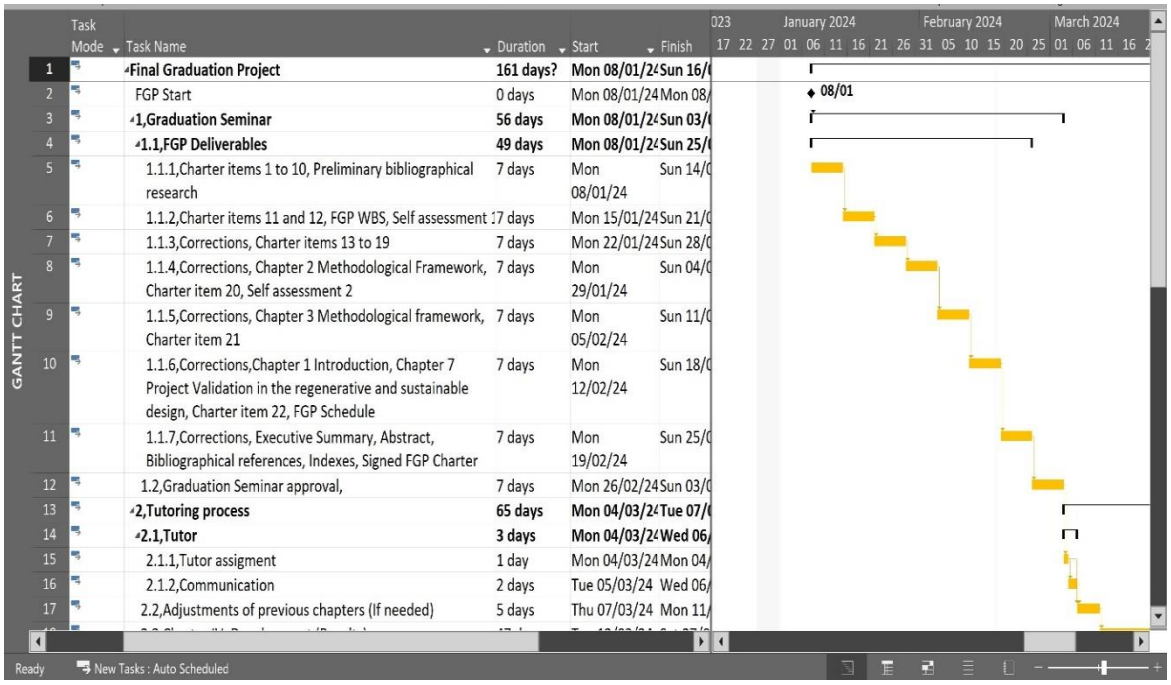
This FGP is centered on the development of a project management plan for an integrated landscape project entitled: “Integrated management of production landscapes to deliver multiple global environmental benefits. This project will help in clarifying the mandates and the responsibilities of the governmental institutions who have the responsibility to manage water and forest resources. It will also contribute on the restoration of the Belize River Watershed by introducing and implementing climate smart agriculture, promoting community nurseries, monitoring of water quality, and promoting sustainable livelihoods. By guiding the implementation of the project activities, it will also permit this project to contribute to several SDGs specifically: Goal 1: No poverty; Goal 5: Gender equality: Goal 6: Clean water and sanitation; Goal 8: Decent work and economic growth; Goal 13: Climate action and Goal 15: Life on land.

The indicators that will be used to measure these specific outcomes will be the hectares of land under sustainable agriculture with biodiversity benefits, hectares of landscape management tools that promote connectivity and biodiversity conservation, hectares of riparian forests and groundwater recharge areas restored, number of men and women directly benefiting from biodiversity conservation and sustainable land management. All these indicators will be measured from primary and secondary sources of information.

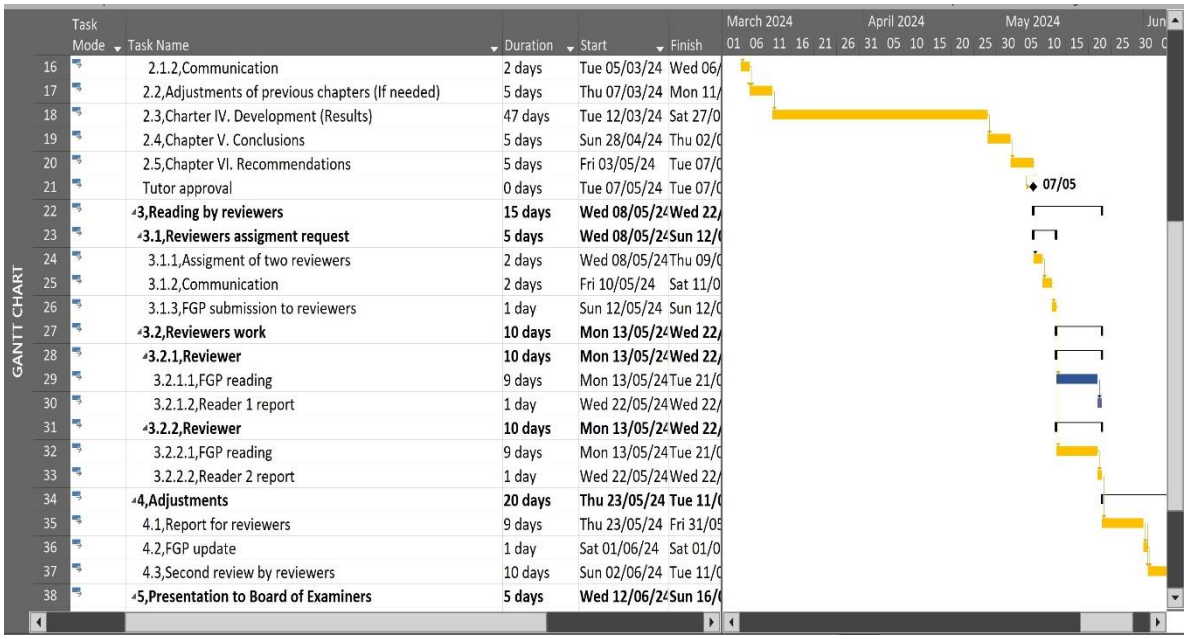
Appendix 2: FGP WBS



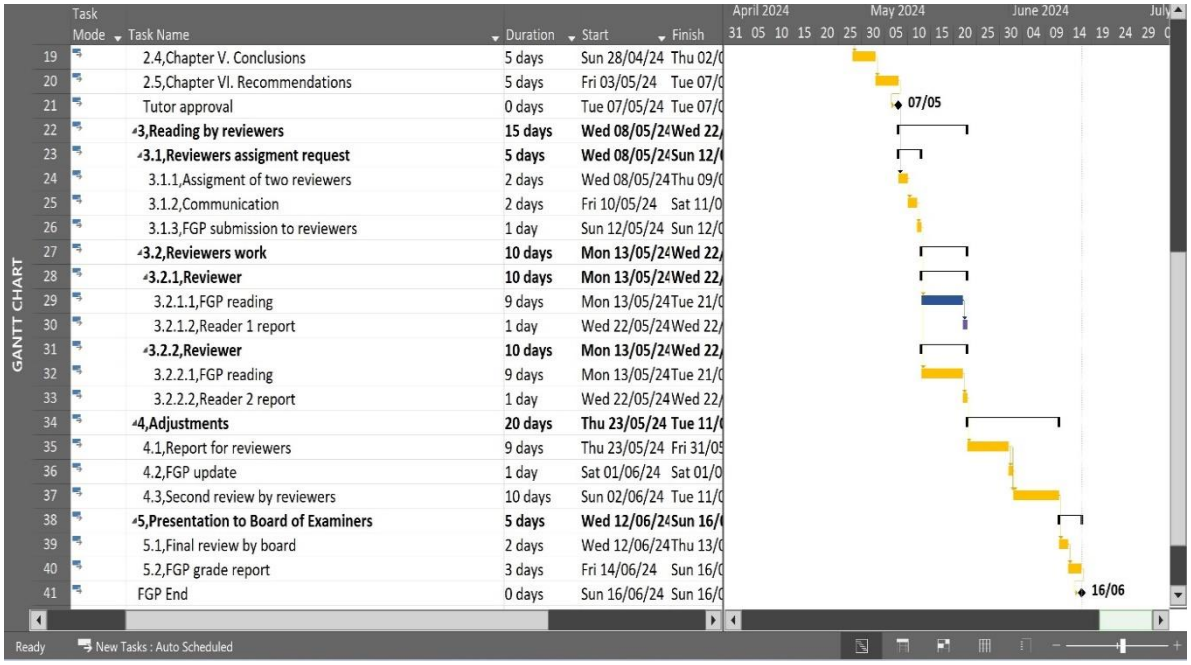
Appendix 3: FGP Schedule



	Task Mode	Task Name	Duration	Start	Finish
1		**Final Graduation Project**	**161 days?**	**Mon 08/01/24**	**Sun 16/**
2		FGP Start	0 days	Mon 08/01/24	Mon 08/
3		**1,Graduation Seminar**	**56 days**	**Mon 08/01/24**	**Sun 03/**
4		**1.1,FGP Deliverables**	**49 days**	**Mon 08/01/24**	**Sun 25/**
5		1.1.1,Charter items 1 to 10, Preliminary bibliographical research	7 days	Mon 08/01/24	Sun 14/
6		1.1.2,Charter items 11 and 12, FGP WBS, Self assessment 1	7 days	Mon 15/01/24	Sun 21/
7		1.1.3,Corrections, Charter items 13 to 19	7 days	Mon 22/01/24	Sun 28/
8		1.1.4,Corrections, Chapter 2 Methodological Framework, Charter item 20, Self assessment 2	7 days	Mon 29/01/24	Sun 04/
9		1.1.5,Corrections, Chapter 3 Methodological framework, Charter item 21	7 days	Mon 05/02/24	Sun 11/
10		1.1.6,Corrections,Chapter 1 Introduction, Chapter 7 Project Validation in the regenerative and sustainable design, Charter item 22, FGP Schedule	7 days	Mon 12/02/24	Sun 18/
11		1.1.7,Corrections, Executive Summary, Abstract, Bibliographical references, Indexes, Signed FGP Charter	7 days	Mon 19/02/24	Sun 25/
12		1.2,Graduation Seminar approval,	7 days	Mon 26/02/24	Sun 03/
13		**2,Tutoring process**	**65 days**	**Mon 04/03/24**	**Tue 07/**
14		**2.1,Tutor**	**3 days**	**Mon 04/03/24**	**Wed 06/**
15		2.1.1,Tutor assigment	1 day	Mon 04/03/24	Mon 04/
16		2.1.2,Communication	2 days	Tue 05/03/24	Wed 06/
17		2.2,Adjustments of previous chapters (If needed)	5 days	Thu 07/03/24	Mon 11/



	Task Mode	Task Name	Duration	Start	Finish
16		2.1.2,Communication	2 days	Tue 05/03/24	Wed 06/
17		2.2,Adjustments of previous chapters (If needed)	5 days	Thu 07/03/24	Mon 11/
18		2.3,Charter IV. Development (Results)	47 days	Tue 12/03/24	Sat 27/0
19		2.4,Chapter V. Conclusions	5 days	Sun 28/04/24	Thu 02/0
20		2.5,Chapter VI. Recommendations	5 days	Fri 03/05/24	Tue 07/0
21		Tutor approval	0 days	Tue 07/05/24	Tue 07/0
22		**3,Reading by reviewers**	**15 days**	**Wed 08/05/24**	**Wed 22/**
23		**3.1,Reviewers assigment request**	**5 days**	**Wed 08/05/24**	**Sun 12/**
24		3.1.1,Assigment of two reviewers	2 days	Wed 08/05/24	Thu 09/0
25		3.1.2,Communication	2 days	Fri 10/05/24	Sat 11/0
26		3.1.3,FGP submission to reviewers	1 day	Sun 12/05/24	Sun 12/0
27		**3.2,Reviewers work**	**10 days**	**Mon 13/05/24**	**Wed 22/**
28		**3.2.1,Reviewer**	**10 days**	**Mon 13/05/24**	**Wed 22/**
29		3.2.1.1,FGP reading	9 days	Mon 13/05/24	Tue 21/0
30		3.2.1.2,Reader 1 report	1 day	Wed 22/05/24	Wed 22/
31		**3.2.2,Reviewer**	**10 days**	**Mon 13/05/24**	**Wed 22/**
32		3.2.2.1,FGP reading	9 days	Mon 13/05/24	Tue 21/0
33		3.2.2.2,Reader 2 report	1 day	Wed 22/05/24	Wed 22/
34		**4,Adjustments**	**20 days**	**Thu 23/05/24**	**Tue 11/**
35		4.1,Report for reviewers	9 days	Thu 23/05/24	Fri 31/05
36		4.2,FGP update	1 day	Sat 01/06/24	Sat 01/0
37		4.3,Second review by reviewers	10 days	Sun 02/06/24	Tue 11/0
38		**5,Presentation to Board of Examiners**	**5 days**	**Wed 12/06/24**	**Sun 16/**



	Task Mode	Task Name	Duration	Start	Finish
19		2.4,Chapter V. Conclusions	5 days	Sun 28/04/24	Thu 02/0
20		2.5,Chapter VI. Recommendations	5 days	Fri 03/05/24	Tue 07/0
21		Tutor approval	0 days	Tue 07/05/24	Tue 07/0
22		**3,Reading by reviewers**	**15 days**	**Wed 08/05/24**	**Wed 22/**
23		**3.1,Reviewers assigment request**	**5 days**	**Wed 08/05/24**	**Sun 12/**
24		3.1.1,Assigment of two reviewers	2 days	Wed 08/05/24	Thu 09/0
25		3.1.2,Communication	2 days	Fri 10/05/24	Sat 11/0
26		3.1.3,FGP submission to reviewers	1 day	Sun 12/05/24	Sun 12/0
27		**3.2,Reviewers work**	**10 days**	**Mon 13/05/24**	**Wed 22/**
28		**3.2.1,Reviewer**	**10 days**	**Mon 13/05/24**	**Wed 22/**
29		3.2.1.1,FGP reading	9 days	Mon 13/05/24	Tue 21/0
30		3.2.1.2,Reader 1 report	1 day	Wed 22/05/24	Wed 22/
31		**3.2.2,Reviewer**	**10 days**	**Mon 13/05/24**	**Wed 22/**
32		3.2.2.1,FGP reading	9 days	Mon 13/05/24	Tue 21/0
33		3.2.2.2,Reader 2 report	1 day	Wed 22/05/24	Wed 22/
34		**4,Adjustments**	**20 days**	**Thu 23/05/24**	**Tue 11/**
35		4.1,Report for reviewers	9 days	Thu 23/05/24	Fri 31/05
36		4.2,FGP update	1 day	Sat 01/06/24	Sat 01/0
37		4.3,Second review by reviewers	10 days	Sun 02/06/24	Tue 11/0
38		**5,Presentation to Board of Examiners**	**5 days**	**Wed 12/06/24**	**Sun 16/**
39		5.1,Final review by board	2 days	Wed 12/06/24	Thu 13/0
40		5.2,FGP grade report	3 days	Fri 14/06/24	Sun 16/0
41		FGP End	0 days	Sun 16/06/24	Sun 16/0

Appendix 4: Preliminary bibliographical research

FAO.org. *Integrated Landscape Management/Land & Water/ Food and Agriculture Organization of the United Nations/ Land & Water/ Food and Agriculture Organization of the United Nations*. https://www.fao.org/land-water/overview/integrated-landscape-management/en/

Justification: This website will enhance the understanding and definition of the term integrated landscape, sustainable land management and other key terms to adequately define the respective actions needed to develop the project activities.

FD-MSDCCDRM. (2022). *National Landscape Restoration Strategy for Belize 2022 – 2030*.

Justification: This document has been endorsed by the Cabinet of Ministers of Belize and will be adopted by all agencies to guide landscape restoration in Belize. It clearly defines actions needed in both the forest and agro landscape to achieve national and international commitments. It is expected that this will guide the landscape restoration activities for this project.

Forbes. (2023). *What is A Project Management Plan and How to Create One.* https://www.forbes.com/advisor/business/project-management-plan/

Justification: This will give guidance on the development of the project management plan that will ensure that it guides the project in the development, implementation, and monitoring of its activities.

Hayman. (2018). *Government of Belize Forest Department Strategic Action Plan 2019-2023.*

Justification: The Belize Forest Department is the department with the responsibility to implement, monitor and report forest restoration, forest cover and other key parameters in this project. Its strategic objectives are also aligned to Belize's National Biodiversity Strategy and Action Plans' goals and targets and other national and regional commitments such as the BONN Challenge.

Hayman (2018*). Monitoring and Evaluation Framework and Plan: Government of Belize Forest Department Strategic Action Plan 2019-2023.*

Justification: This is the framework that the Forest Department and its stakeholders use to monitor the implementation of the Forest Department Strategic Plan. It will quantify, for example, the percentage of forest cover loss per year, activities being implemented, number and category of stakeholders being involved. This information will be crucial to report on biodiversity loss or actions being taken in the Belize River Landscape.

Integrated Water Resources Management Plans – GWP. Training Manual and operational Guide. (2005, March). Canadian International Development Agency, CIDA https://www.gwp.org/contentassets/f998a402e3ab49ea891fa49e77fba953/iwrmp-training-manual-and-operational-guide.pdf

Justification: Despite that this manual was developed in 2005 it is still relevant for the purpose of the development of the project management plan since it further explains some key issues in water management, the respective challenges in the roles and responsibilities of the government agencies based on their respective legislation. Moreover, there has not been further updates or other editions published.

Malsam. (2022, August 5). *Schedule Management Plan: How to Make & Maintain One*. https://www.projectmanager.com/blog/schedule-management-plan-how-to-make-maintain-one

Justification: This will give guidance on the development of the project management plan, specifically for the development of the schedule management plan.

Ministry of Agriculture, Forestry, Fisheries, the Environment and Sustainable Development. (2016). *National Biodiversity Strategy and Action Plan Belize 2016.*

Justification: This action plan guides all projects in mainstreaming to achieve its biodiversity targets. Initially it was for 2020; however, it is still the main guiding document for the development of polices and projects

Project Management Institute. (2017). *A guide to the project management Body of knowledge, (PMBOK® Guide) – Sixth Edition, Project Management Institute, Inc., 2017.*

Justification: This is one of the e- books that will serve as a guide for development of the project management plan.

Project Management Institute. (2021). *A Guide to the Project Management Body of Knowledge, (PMBOK® Guide) – Seventh Edition,* Project Management Institute, Inc., 2021.

Justification: This is another e-book will directly support the development of the project management plan.

UNDP. (2022). *Integrated management of production landscapes to deliver multiple global environmental benefits.*

Justification: The is the project document that has been developed and accepted for the implementation of this project therefore it will be used for the development of this project management plan.

Appendix 5:

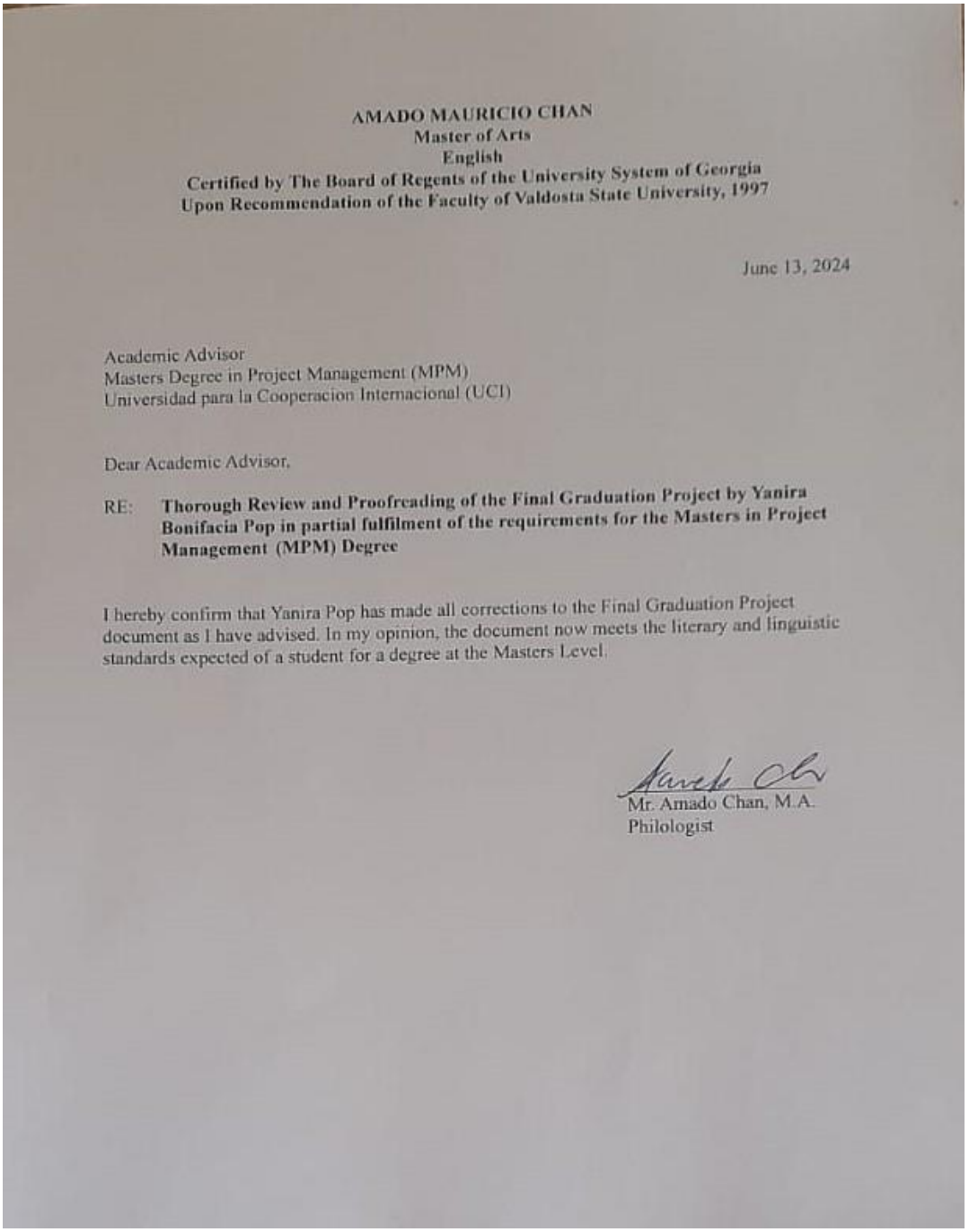
Quality Checklist

Quality Checklist					
Project					**Date:**
Quality Item	**Yes**	**No**	**N/A**	**Date**	**Comments**
Does the project have an approved quality management plan?					
Has the quality management plan been reviewed by all stakeholders?					
Do all stakeholders have access to the quality management plan?					
Is the quality management plan consistent with the rest of the overall project plan?					
Have process quality metrics been established, reviewed, and agreed upon?					
Do all metrics support a quality standard which is acceptable to the customer?					
Have quality metrics review meetings been scheduled throughout the project's duration?					
Is the project team familiar with the project's quality review process?					

Source: Quality Checklist Template

Appendix 6:

Philological Dictum



AMADO MAURICIO CHAN
Master of Arts
English
Certified by The Board of Regents of the University System of Georgia
Upon Recommendation of the Faculty of Valdosta State University, 1997

June 13, 2024

Academic Advisor
Masters Degree in Project Management (MPM)
Universidad para la Cooperacion Internacional (UCI)

Dear Academic Advisor,

RE: **Thorough Review and Proofreading of the Final Graduation Project by Yanira Bonifacia Pop in partial fulfilment of the requirements for the Masters in Project Management (MPM) Degree**

I hereby confirm that Yanira Pop has made all corrections to the Final Graduation Project document as I have advised. In my opinion, the document now meets the literary and linguistic standards expected of a student for a degree at the Masters Level.

Mr. Amado Chan, M.A.
Philologist

Valdosta State University

This Certifies That
The Board of Regents of the University System of Georgia Upon Recommendation of the
Faculty of Valdosta State University
Has Conferred on

Amado Mauricio Cham

the Degree of

Master of Arts

English

with all the Rights, Privileges, and Honors thereunto appertaining.
In Witness Whereof the seal of the University and the signatures of its duly authorized officers are hereto affixed.

Given this fourteenth day of June, in the year of our Lord
nineteen hundred and ninety-seven

Chancellor of the University System of Georgia

Hugh C. Bailey
President of the University

Ernestine H. Clark
Dean, Division of Graduate Studies

Martha F. Reynolds
Registrar