UNIVERSIDAD PARA LA COOPERACION INTERNACIONAL
(UCI)

Project Management Plan for the Diamond Farms Permaculture Initiative

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DEDICATION

This research project is dedicated to my family, friends, and the hard working farmers of Grenada, Carriacou, and Petite Martinique. To my most loving and supportive wife, who continues to be my source of strength, support, and inspiration. To my parents who worked very hard to help me realize my potential. To my extended family who helped me to be the person I am today. In the memory of those who have passed who worked hard to provide me with the opportunities that I now have. To the underappreciated farmers within our tri-island state.

ACKNOWLEDGMENTS

To everyone who contributed to the completion of this research project, I acknowledge and thank you. My very supportive and loving wife, for her advice, support, and timely commendations. To my sister Annabelle who gave me advice and inspiration when I most needed it. To my fellow stakeholders at the Diamond Farms Permaculture Initiative – Andy, George, Phillip, Maurice, and Anthony – who without whose support and encouragement, this research project would not have been completed. To the representatives of the Ministry of Agriculture – whether at the ministry itself or at the propagation stations - who showed support and encouragement, I thank you all. To my late Uncle Pablo who inspired me and gave me the opportunity to consider investing in agriculture. To my Mother and Father for their prayers and encouragement. To Nicole, Giselle, and the other persons who assisted with proofreading and timely editing of this document for submission, I thank you all.

To the Father above – without whose blessings, mercies, and protection, I would not have been able to complete this research project. God is good.

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ABBREVIATIONS AND ACRONYMS

- APM – Assistant Project Manager
- DFPI – Diamond Farms Permaculture Initiative
- PM – Project Manager
- PMBOK® Guide – Project Management Book of Knowledge
- PMI – Project Management Institute
- PMT – Project Management Team
- QA - Quality Assurance
- QC - Quality Control
- RACI – Risk, Accountable, Consult, Inform
- RFB – Request For Bid
- RFP- Request For Proposal
- RFQ – Request For Quotation
- RMP – Requirements Management Plan
- RTM – Requirements Traceability Matrix
- WBS – Work Breakdown Structure

EXECUTIVE SUMMARY (ABSTRACT)

Permaculture is a relatively new concept in modern farming. In Grenada, farmers have gradually strayed from traditional farming methods, and have embraced modern - yet unsustainable - practices with increasing disregard for environmental concerns. Despite this, there are a number of farms that still engage in operations that are consistent with permaculture teachings, and environmental stewardship.

The company in study, Diamond Farms Permaculture Initiative (DFPI), was set up by a number of landowners and investors, to exploit the economic potential of many acres of very fertile rural farmland. The market for fresh produce is steadily expanding, and so is the competitive nature of the industry. In response to this, DFPI focused on its branding, and marketing its produce as fresh, organic, and produced by a cooperative of farmers on a fifteen-acre farm in the lush mountains of St. Mark, Grenada.

Although the collective of DFPI investors have either business investment experience and/or a farming background, there are many challenges the farm faces, including: scope changes/scope creep, improper risk management, undefined goals, improper standards, fast tracking, crashing, inadequate resources, and lack of accountability. For these reasons, DFPI embarked upon the formation of a Project Management Plan to effect the application of project management practices to the project.

The general objective was to create a Project Management Plan, in line with the standards of the Project Management Institute (PMI), for the establishment of a permaculture investment. The specific objectives were: To create a Project Charter for the DFPI project as the basis for an integrated management approach during the future implementation of the project; to create a stakeholder management plan which identifies all stakeholders and outlines the commitment to effective engagement of them all; to create a scope management plan that outlines the scope of the project in order to realize the planned successful completion of the project; to develop a schedule management plan to ensure the timely completion of the project through the development and management of a project schedule; to create a cost management plan to outline the development and management of a project budget to ensure that the project is completed within the established budget; to develop a quality management plan to outline the quality requirements in order to meet expectations within the scope of the project; to develop a human resource management plan to identify and effectively manage the processes that lead the project team; to create a risk management plan outlining ways to conduct risk management activities to minimize risks throughout the project life cycle; to develop a procurement management plan for the outlining of procurement decisions that are necessary for the goods and services needed along the timeline of the project; to create a communication management plan that outlines effective communication approaches within the project to the benefit of all stakeholders.

The methodology for this research employed descriptive, observational, and analytical approaches. Various mediums of data collection were utilized, and subsequently analyzed, for the creation of a methodological solution. The analyzed information contributed to the creation of the subsidiary plans for the overall project plan for the farm.

The current project management practices of DFPI are not structured or standardized. The lack of standardized practices allowed for project stakeholders to operate in an unstructured and unprofessional way, which prevented the project from realizing its full potential.

It is recommended that DFPI implements the proposed plan. This enables a proven logical sequence of procedure, guidelines, and activities, which will contribute to the mission and vision of the permaculture investment. In addition, the project team is advised to document and treat the execution of the plan as a venture to acquire information that can be used in the future for other similar initiatives.

1. INTRODUCTION

1.1 Background

The Diamond Farms Permaculture Initiative is located over a 15 acre area in the rural district of Diamond, St. Mark; a parish on the Western side of Grenada. The land was once part of one of the most productive estates in Grenada – the Diamond Estate, and today it is at 10% production, compared to the pre-2004 levels. In September 2004, Hurricane Ivan hit Grenada with category 5 winds and devastated the entire island. There were reports of 95% loss sustained by farms in the rural areas. This had a devastating effect in the nutmeg and cocoa industry which crippled the rural economy.

The high levels of rainfall at Diamond contributed to the resilience of the lands post 2004. In 2015, the 15-acre property was divided into four lots, with four separate owners. There were steady returns from marginal investments over time for two of the four landowners; but not enough to sustain individual farms as an investment. For this reason, one landowner initiated a collective of the landowners and investors to reinvest in the lands.

This project plan seeks to formulate and implement a path for the sustainable development of all 15 acres to exceed pre-2004 levels of productivity. This approach to planning farming operations will be novel and new to the industry since it will include resources not traditionally utilized within the agriculture sector.

1.2 Statement of the problem

There is a growing market for spices, cocoa, and local produce, but inconsistent production has led to decreased sales on the market. All four landowners have accepted the need to pool their resources and invest wisely in order to realize robust returns over a sustained period. Due to the increasing risks associated with investing in agriculture including: access to financing, fluctuating prices, pests,

weather conditions, and praedial larceny, the landowners have acknowledged that securing a project management plan addresses the problem.

1.3 Purpose

As outlined in the PMBOK® Guide, through the effective use of project management plans, organizations are able to realize greater business value from investments (Project Management Institute, 2013, p. 15). The purpose of this plan is to reduce risk and add value to operations.

This Project Management Plan seeks to explore and outline the critical areas of an economically viable permaculture initiative, and furthermore present the findings within the sphere of the knowledge areas of project management. The reports include contributions on: project integration, scope, time, quality, cost, human resource, communication, risk, procurement, and stakeholder management. The documented findings will subsequently be merged into one document that will serve as the guide for project execution.

1.4 General objective

To develop a Project Management Plan that integrates project management principles outlined by the Project Management Institute to manage an investment in permaculture.

1.5 Specific objectives

1. To create a Project Charter for the DFPI project as the basis for an integrated management approach during the future implementation of the project.
2. To create a stakeholder management plan which identifies all stakeholders and outlines the commitment to effective engagement of them all.

3. To create a scope management plan that outlines the scope of the project in order to realize the planned successful completion of the project.
4. To develop a schedule management plan to ensure the timely completion of the project through the development and management of a project schedule.
5. To create a cost management plan to outline the development and management of a project budget to ensure that the project is completed within the established budget.
6. To develop a quality management plan to outline the quality requirements in order to meet expectations within the scope of the project.
7. To develop a human resource management plan to identify and effectively manage the processes that lead the project team.
8. To create a risk management plan outlining ways to conduct risk management activities to minimize risks throughout the project life cycle.
9. To develop a procurement management plan for the outlining of procurement decisions that are necessary for the goods and services needed along the timeline of the project.
10. To create a communication management plan that outlines effective communication approaches within the project to the benefit of all stakeholders.

2. THEORETICAL FRAMEWORK

2.1 Company/Enterprise framework

The research for this plan will be carried out with the support and resources of the Diamond Farms Permaculture Initiative.

Company/Enterprise background

Diamond Farms Permaculture Initiative is a permaculture initiative registered in Grenada in 2015. The farm is currently in operation and realizing marginal returns, but with increased market opportunity, the members decided to undertake a comprehensive strategy to increase production.

Mission and vision statements

Mission Statement

According to Wayne McIntyre one of the project partners, DFPI seeks “To engage in responsible investment in agriculture to create the opportunity for the socio-economic development of all stakeholders” (McIntyre, 2018).

Vision Statement

According to Wayne McIntyre “To be the leading permaculture investment initiative in Grenada” (McIntyre, 2018).

Organizational Structure

The following figure illustrates the organizational structure of the
DFPI, as outlined by the Project Manager, Wayne McIntyre.

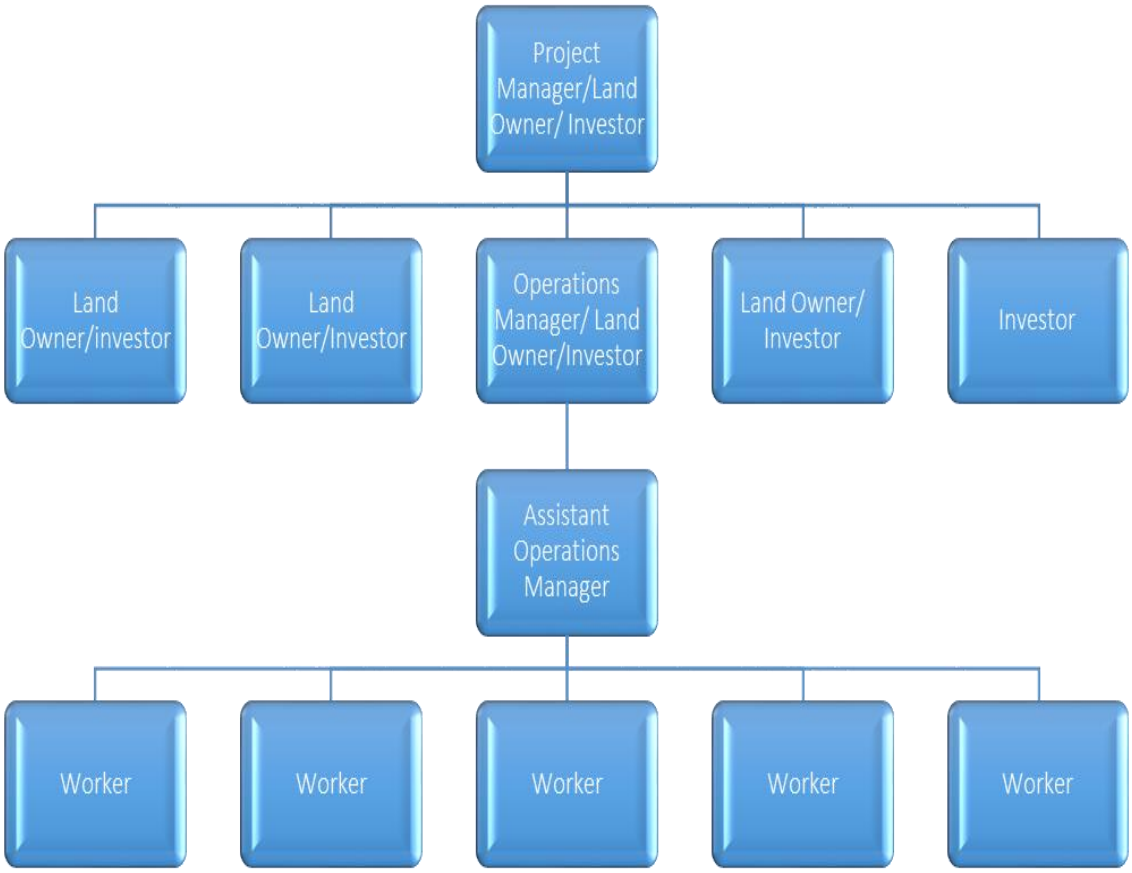

Figure 1-1: Organization Structure of Diamond Farms Permaculture Initiative

(Source: W. McIntyre, the Author, 2018)

Products offered

Diamond Farms Permaculture Initiative provides quality medium and long-term agriculture produce (Bananas, citruses, breadfruits, avocadoes, nutmegs, cocoa, plantains, etc.) to the local and export market.

2.2 Project Management concepts

Project

A project is "…a temporary endeavor undertaken to create a unique product, service, or result" (Project Management Institute, 2013, p. 3).

Project management

Project Management is "…the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements" (Project Management Institute, 2013, p.5). The PMBOK® Guide also outlines that Project Management is carried out with the implementation and integration of 47 logically grouped project management processes that have been categorized into five Process Groups (Project Management Institute, 2013, p.5). These process groups are: Initiating, Planning, Execution, Monitoring and Controlling, and Closing.

The appreciation of the Project Management Process Groups will serve as a guide to ensure all requirements and objectives are achieved – considering the constraints of time, cost, quality, and scope.

Project life cycle

A project life cycle is "…the series of phases that a project passes through from its initiation to its closure" (Project Management Institute, 2013, p. 38). The PMBOK® Guide states that these time bound actions/activities of the project life cycle are distinguished by functional and partial objectives, results or deliverables, milestones, or financial availability (Project Management Institute, p. 38).

The following generic life cycle structure illustrates the starting of the project, the organization and preparation stage, the execution of the project, and the closing.

This life cycle structure is a simple way to communicate essential information to all stakeholders about the specific requirements of the project, while reinforcing the overall scope.

The following figure is a generic project life cycle.

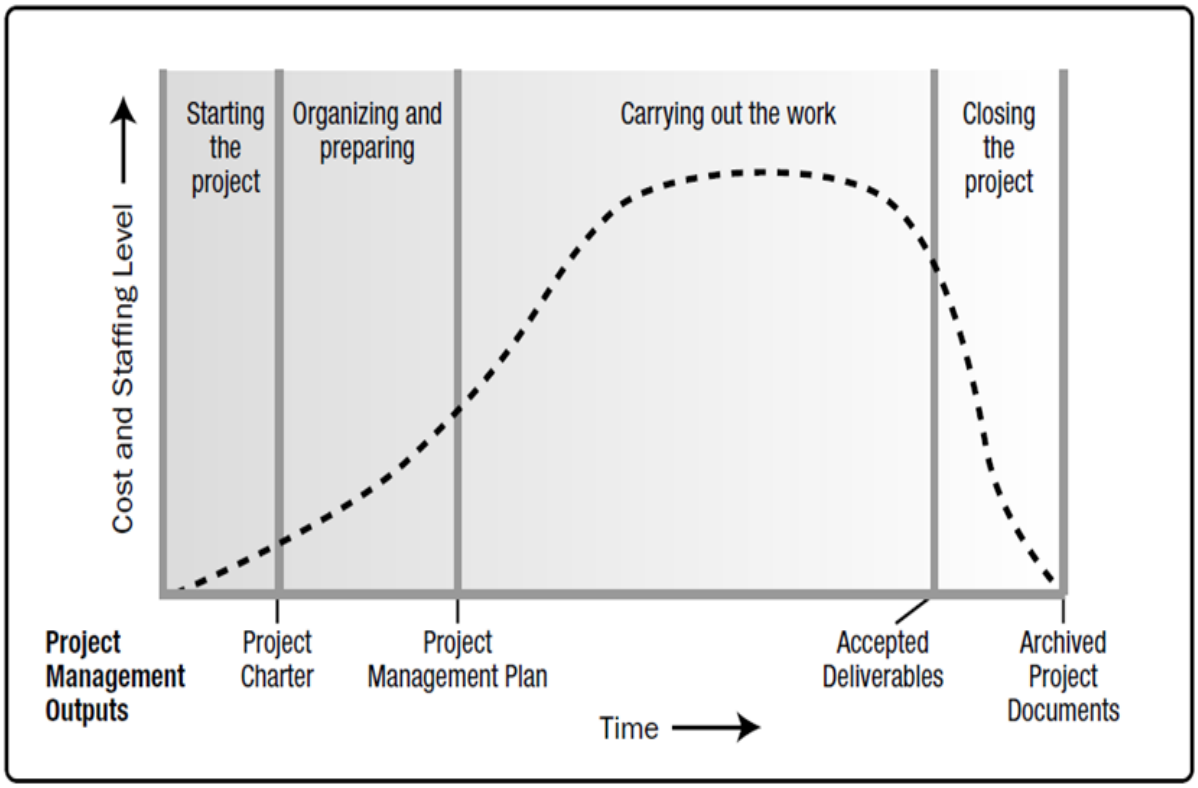

Figure 1-2: Generic project life cycle illustration (Project Management Institute, 2013, p. 39).

Project management processes

Project management processes are "…a set off interrelated actions and activities performed to create a pre-specified product, service or result" (Project Management Institute, 2013, p. 47).

The PMBOK® Guide describes the nature of the processes in relation to the integration, interaction, and purpose of the processes (Project Management Institute, 2013, p. 48). As illustrated below, PMBOK® Guide outlines five Project

Management Process Groups (or process groups) which are the: Initiating, Planning, Executing, Monitoring and Controlling, and Closing process groups.

The processes serve as "…guides for applying appropriate project management knowledge and skills during the project" (Project Management Institute, 2013, p. 50). For this reason, the DFPI will underscore the merit in appreciating these processes.

The following figure is an illustration of the process groups of a project

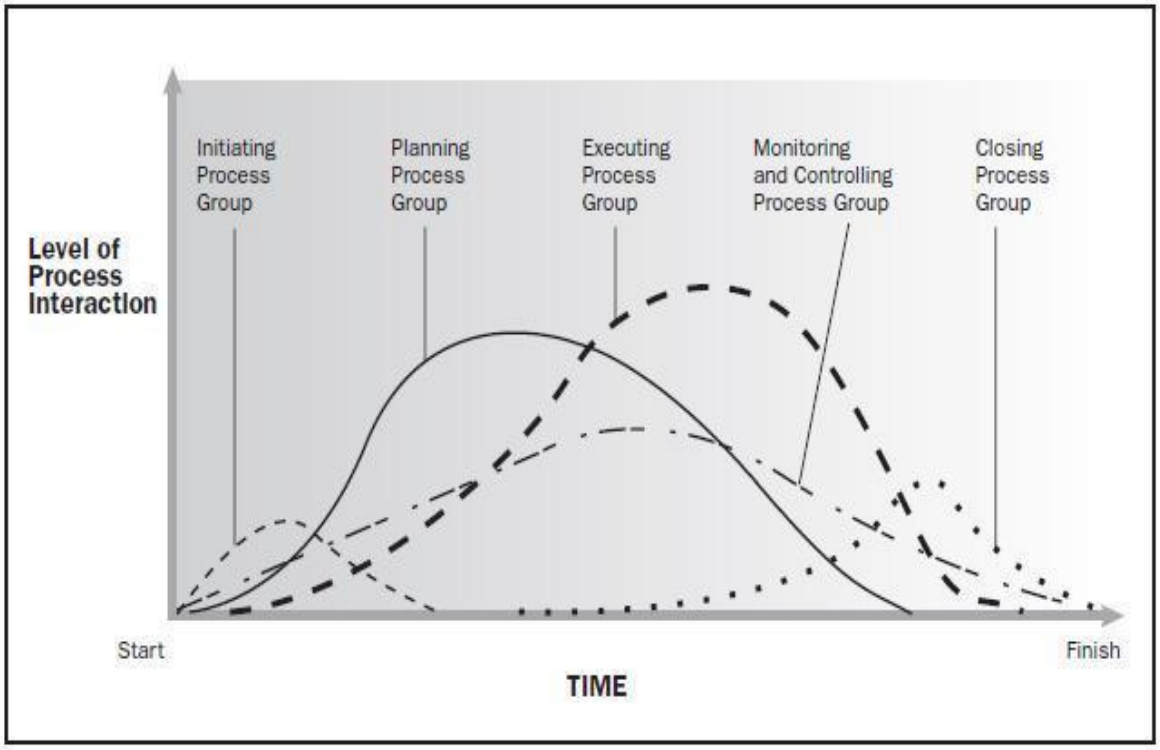

Figure 1-3: Process groups of a project (Project Management Institute, 2013, p. 51)

Project management knowledge areas

"A Knowledge Area represents a complete set of concepts, terms, and activities that make up a professional field, project management field, or area of specialization" (Project Management Institute, 2013, p. 60). The PMBOK® Guide

lists them as: Integration Management, Scope Management, Time Management, Cost Management, Quality Management, Human Resource Management, Communication Management, Risk Management, Procurement Management, and Stakeholder Management (Project Management Institute, 2013, p. 423).

This feasibility study will develop ten plans with these knowledge areas in mind. The following lists the project plans and reasons for their development – as directed by the Project Management Institute.

Integration Plan

This plan outlines the best practices to integrate activities of the project. The plan "…Includes the processes and activities to identify, define, combine, unify, and coordinate the various processes and project management activities within the Project Management Process Groups. In the project management context, integration includes characteristics of unification, consolidation, communication, and integrative actions that are crucial to controlled project execution through completion, successfully managing stakeholder expectations, and meeting requirements" (Project Management Institute, 2013, p. 63).

Scope Management Plan

This plan outlines the detailed scope of the project. "Plan Scope Management is the process of creating a scope management plan that documents how the project scope will be defined, validated, and controlled. The key benefit of this process is that it provides guidance and direction on how scope will be managed throughout the project" (Project Management Institute, 2013, p. 105).

Schedule Management Plan

This plan ensures the project confirms to the time constraints of the project. "Project Time Management includes the processes required to manage the timely completion of the project" (Project Management Institute, 2013, p. 141)

Cost Management Plan

This plan outlines the project remains within budget. “Project Cost Management includes the processes involved in planning, estimating, budgeting, financing, funding, managing, and controlling costs so that the project can be completed within the approved budget” (Project Management Institute, 2013, p. 193).

Quality Management Plan

This plan ensures that quality control standards are maintained. “Project Quality Management includes the processes and activities of the performing organization that determine quality policies, objectives, and responsibilities so that the project will satisfy the needs for which it was undertaken” (Project Management Institute, 2013, p. 227).

Human Resource Management Plan

This plan serves to manage the project staff within the project. “Project Human Resource Management includes the processes that organize, manage, and lead the project team. The project team is comprised of the people with assigned roles and responsibilities for completing the project. Project team members may have varied skill sets, may be assigned full or part-time, and may be added or removed from the team as the project progresses. Project team members may also be referred to as the project’s staff” (Project Management Institute, 2013, p.255).

Communication Management Plan

This plan ensures an effective system of communication exists. “Project Communications Management includes the processes that are required to ensure timely and appropriate planning, collection, creation, distribution, storage, retrieval, management, control, monitoring, and the ultimate disposition of project information” (Project Management Institute, 2013, p. 287).

Risk Management Plan

Ensure that risk mitigation measures are utilized. “Project Risk Management includes the processes of conducting risk management planning, identification, analysis, response planning, and controlling risk on a project. The objectives of project risk management are to increase the likelihood and impact of positive events, and decrease the likelihood and impact of negative events in the project” (Project Management Institute, 2013, p. 309).

Procurement Management Plan

This plan outlines measures to secure resources for the project. “Project Procurement Management includes the processes necessary to purchase or acquire products, services, or results needed from outside the project team. The organization can be either the buyer or seller of the products, services, or results of a project” (Project Management Institute, 2013, p. 355).

Stakeholder Management Plan

This plan outlines how stakeholders are to be engaged throughout the project timeline. “Project Stakeholder Management 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” (Project Management Institute, 2013, p. 391).

The following figure illustrates the knowledge areas of Project Management, as outlined by the PMBOK® Guide

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 Monitor and Control Project Work 4.5 Perform Integrated Change Control	4.6 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 Time Management		6.1 Plan Schedule Management 6.2 Define Activities 6.3 Sequence Activities 6.4 Estimate Activity Resources 6.5 Estimate Activity Durations 6.6 Develop Schedule		6.7 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 Perform Quality Assurance	8.3 Control Quality	
9. Project Human Resource Management		9.1 Plan Human Resource Management	9.2 Acquire Project Team 9.3 Develop Project Team 9.4 Manage Project Team		
10. Project Communications Management		10.1 Plan Communications Management	10.2 Manage Communications	10.3 Control 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 Control Risks	
12. Project Procurement Management		12.1 Plan Procurement Management	12.2 Conduct Procurements	12.3 Control Procurements	12.4 Close Procurements
13. Project Stakeholder Management	13.1 Identify Stakeholders	13.2 Plan Stakeholder Management	13.3 Manage Stakeholder Engagement	13.4 Control Stakeholder Engagement	

Figure 1-4: Project Management Knowledge Areas Mapping and Process Groups (Project Management Institute, 2013, p. 61)

2.3 OTHER APPLICABLE THEORY/CONCEPTS RELATED TO THE PROJECT TOPIC AND CONTEXT

Economic growth

As outlined in the 2018 national budget statement, Grenada has been on a consistent path of economic expansion over the last five years, and is expected to have a projected growth of 3.3% in 2018 which is led by tourism, construction, and manufacturing. This indicates an increase in demand for produce on the market. The budget also foresees a reduction in supply of agriculture produce – due to excessive rains and pests. The Government pledged to invest resources to combat and mitigate such challenges. A decrease in supply causes prices to spike affording sustainable farming initiatives to benefit from economies of scale.

Permaculture

“Permaculture is a design concept for sustainable, food producing landscapes mimicking the diversity and resilience of natural ecosystems” (Brian & Blake,” 2013).

Integrate Rather than Segregate

“This requires the recognition of complex connections in nature, and making beneficial use of those interactions. We must brainstorm the many functions that each element can perform” (Brian & Blake, 2013).

Use and Value Diversity

“Diversity fosters resilience. A society rooted in monoculture is vulnerable to unexpected change. Permaculture seeks to understand past, present, and potential biological and cultural diversity” (Brian & Blake, 2013)

Regenerative Development

“Designing human environments that restore and regenerate as opposed to degenerating the surrounding environment” (Brian & Blake, 2013).

The dominion humans have over the environment needs to be complemented with responsible use of this precious resource. The best way to sustainably exploit the natural environment is to utilize the above mentioned concept of Regenerative Development. This idea submits that humans exploit nature in ways that does not significantly affect it in the short term, in order to realize benefits for both humans and the natural environment in the long term.

3. METHODOLOGICAL FRAMEWORK

3.1 Information sources

Information is “Data that is accurate and timely, specific and organized for a purpose, presented within a context that gives it meaning and relevance, and can lead to an increase in understanding and decrease in uncertainty” (Information, 2017).

A source is “A specific publication or other type of media where specific information was obtained. These are usually included in footnotes, endnotes, or a bibliography, and can be people” (Source, 2017).

Considering these two definitions it can be concluded that an information source is a place where reliable data is obtained.

According to the University of Minnesota Crookston, there are three sources of information: primary, secondary, and tertiary (“Primary, Secondary, and Tertiary Sources,” 2017). For this plan, only primary and secondary will be used.

Primary sources

“These sources are records of events or evidence as they are first described or actually happened without any interpretation or commentary. It is information that is shown for the first time or original materials on which other research is based. Primary sources display original thinking, report on new discoveries, or share fresh information” (“Primary, sources,” 2017, “Primary”).

Primary sources of information include: memoirs, research data, technical reports, scientific journals, Interviews, correspondences, photographs, and video recordings. (“Identifying Primary,” n.d.).

Secondary sources

“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" ("Primary, sources," 2017, "Primary").

Secondary sources of information include: magazines, journals, textbooks, indexes and abstracts, commentary and testimonies, book reviews, and bibliographies. ("Identifying Primary," n.d.).

The following chart describes the information sources for each of the knowledge area, plus the Project Charter.

Chart 1: Information Sources.

(Source: Author of study & Project Management Institute)

Objectives	Information sources	
	Primary	**Secondary**
To create a Project Charter for the DFPI project as the basis for an integrated management approach during the future implementation of the project.	Correspondence, interviews, journals, memos, speeches, photographs, symposia and conferences, dissertations, theses, e-mails, scholarly journals and articles, and selected government reports.	Project Management Institute. (2013). A Guide to the Project Management Body of Knowledge, (PMBOK® Guide) - Fifth Edition, Project Management Institute, Inc., 2013., Mass Media, memoirs, research data, technical reports, scientific journals, Interviews, correspondences, photographs, and video recordings, Project Management Institute

		publications.
To create a stakeholder management plan which identifies all stakeholders and outlines the commitment to effective engagement of them all.	Correspondence, interviews, journals, memos, speeches, photographs, symposia and conferences, dissertations, theses, e-mails, scholarly journals and articles, and selected government reports.	Project Management Institute. (2013). A Guide to the Project Management Body of Knowledge, (PMBOK® Guide) - Fifth Edition, Project Management Institute, Inc., 2013., Mass Media, memoirs, research data, technical reports, scientific journals, Interviews, correspondences, photographs, and video recordings, Project Management Institute publications.
To create a scope management plan that outlines the scope of the project in order to realize the planned successful completion of the project.	Correspondence, interviews, journals, memos, speeches, photographs, symposia and conferences, dissertations, theses, e-mails, scholarly journals and articles, and selected government reports.	Project Management Institute. (2013). A Guide to the Project Management Body of Knowledge, (PMBOK® Guide) - Fifth Edition, Project Management Institute, Inc., 2013., Mass Media, memoirs, research data, technical reports, scientific journals, Interviews,

		correspondences, photographs, and video recordings, Project Management Institute publications.
To develop a schedule management plan to ensure the timely completion of the project through the development and management of a project schedule.	Correspondence, interviews, journals, memos, speeches, photographs, symposia and conferences, dissertations, theses, e-mails, scholarly journals and articles, and selected government reports.	Project Management Institute. (2013). A Guide to the Project Management Body of Knowledge, (PMBOK® Guide) - Fifth Edition, Project Management Institute, Inc., 2013., Mass Media, memoirs, research data, technical reports, scientific journals, Interviews, correspondences, photographs, and video recordings, Project Management Institute publications.
To create a cost management plan to outline the development and management of a project budget to ensure that the project is completed within the established budget.	Correspondence, interviews, journals, memos, speeches, photographs, symposia and conferences, dissertations, theses, e-mails, scholarly journals and articles, and selected government	Project Management Institute. (2013). A Guide to the Project Management Body of Knowledge, (PMBOK® Guide) - Fifth Edition, Project Management Institute, Inc., 2013., Mass Media, memoirs, research data,

	reports.	technical reports, scientific journals, Interviews, correspondences, photographs, and video recordings, Project Management Institute publications.
To develop a quality management plan to outline the quality requirements in order to meet expectations within the scope of the project.	Correspondence, interviews, journals, memos, speeches, photographs, symposia and conferences, dissertations, theses, e-mails, scholarly journals and articles, and selected government reports.	Project Management Institute. (2013). A Guide to the Project Management Body of Knowledge, (PMBOK® Guide) - Fifth Edition, Project Management Institute, Inc., 2013., Mass Media, memoirs, research data, technical reports, scientific journals, Interviews, correspondences, photographs, and video recordings, Project Management Institute publications.
To develop a human resource management plan to identify and effectively manage the processes that lead the project team.	Correspondence, interviews, journals, memos, speeches, photographs, symposia and conferences, dissertations, theses, e-mails, scholarly journals	Project Management Institute. (2013). A Guide to the Project Management Body of Knowledge, (PMBOK® Guide) - Fifth Edition, Project Management Institute, Inc.,

	and articles, and selected government reports.	2013., Mass Media, memoirs, research data, technical reports, scientific journals, Interviews, correspondences, photographs, and video recordings, Project Management Institute publications.
To create a risk management plan outlining ways to conduct risk management activities to minimize risks throughout the project life cycle.	Correspondence, interviews, journals, memos, speeches, photographs, symposia and conferences, dissertations, theses, e-mails, scholarly journals and articles, and selected government reports.	Project Management Institute. (2013). A Guide to the Project Management Body of Knowledge, (PMBOK® Guide) - Fifth Edition, Project Management Institute, Inc., 2013., Mass Media, memoirs, research data, technical reports, scientific journals, Interviews, correspondences, photographs, and video recordings, Project Management Institute publications.
To develop a procurement management plan for the outlining of procurement decisions	Correspondence, interviews, journals, memos, speeches, photographs, symposia and conferences,	Project Management Institute. (2013). A Guide to the Project Management Body of Knowledge, (PMBOK® Guide) - Fifth

that are necessary for the goods and services needed along the timeline of the project.	dissertations, theses, e-mails, scholarly journals and articles, and selected government reports.	Edition, Project Management Institute, Inc., 2013., Mass Media, memoirs, research data, technical reports, scientific journals, Interviews, correspondences, photographs, and video recordings, Project Management Institute publications.
To create a communication management plan that outlines effective communication approaches within the project to the benefit of all stakeholders.	Correspondence, interviews, journals, memos, speeches, photographs, symposia and conferences, dissertations, theses, e-mails, scholarly journals and articles, and selected government reports.	Project Management Institute. (2013). A Guide to the Project Management Body of Knowledge, (PMBOK® Guide) - Fifth Edition, Project Management Institute, Inc., 2013., Mass Media, memoirs, research data, technical reports, scientific journals, Interviews, correspondences, photographs, and video recordings, Project Management Institute publications.

3.2 Research methods

“The methods section describes actions to be taken to investigate a research problem and the rationale for the application of specific procedures or techniques used to identify, select, process, and analyze information applied to understanding the problem, thereby, allowing the reader to critically evaluate a study’s overall validity and reliability” (Methodology, 2017).

3.2.1 Analytical method/Content analysis

“Content analysis is a research technique used to make replicable and valid inferences by interpreting and coding textual material. By systematically evaluating texts (e.g., documents, oral communication, and graphics), qualitative data can be converted into quantitative data” (“Research & Methodology”, 2012, “what is content analysis?”).

This plan will be a product of analysis and processing of multiple sources of information to arrive at an informed conclusion.

3.2.2 Observation method

According to Cohen and Crabtree (2006), observation is a data collected approach where researchers use all their senses to examine people in natural settings or during everyday situations. They went on to state that observations are carried out using two methods: participant and non-participant.

This plan will get contributions from observation processes from other permaculture investments, and the current farm operations.

3.2.3 Interviews

Cohen and Crabtree (2006) stated that interviews are structured, semi-structured, informal and unstructured engagements where one party asks questions to another and gets those questions answered.

This plan will have major contributions from interviews. It will be the primary data collection and analysis method, considering the wealth of knowledge of those experienced, long serving players in the agriculture sector.

The following chart describes the research methods for the DFPI project plan.

Chart 2: Research Methods

Research methods (Author of this study & Project Management Institute)

Objectives	**Research methods**		
	Analytical Method/ Content Analysis	**Observation**	**Interviews**
To create a Project Charter for the DFPI project as the basis for an integrated management approach during the future implementation of the project.	The analytical method will be used by using the findings of information provided to assist in the creation of the project charter.		The information gathered will be used to complete the project charter.
To create a stakeholder management plan which identifies all stakeholders and outlines the commitment to effective engagement of them all.	The analytical method will be used by using the findings of information provided to assist in the creation of the stakeholder management plan.	Observation allows the project team to understand the diversity of stakeholders and appreciate their needs more.	The information gathered will be used to complete the stakeholder management plan.
To create a scope management plan that outlines the scope of the project in	The analytical method will be used by using the findings of	Observation will be used to understand the factors that lead	Interviews will assist the project team in maintaining the

order to realize the planned successful completion of the project.	information provided to assist in the creation of the scope management plan.	to scope creep.	scope management plan when feedback is given and results are matched against plans.
To develop a schedule management plan to ensure the timely completion of the project through the development and management of a project schedule.	The analytical method will be used by using the findings of information provided to assist in the creation of the schedule management plan.	Observation allows the project team to be aware of time as a resource and the ways it can be maximized. Observation also assists in creating policy to prevent loss of time.	The schedule management plan will be created from information from interviews
To create a cost management plan to outline the development and management of a project budget to ensure that the project is completed within the established	The analytical method will be used by using the findings of information provided to assist in the creation of the cost management plan.	Observation allows the project team to anticipate, be aware of, and respond to cost concerns.	The budget will be a product of contributions on cost management from information gained through interviews.

budget.			
To develop a quality management plan to outline the quality requirements in order to meet expectations within the scope of the project.	The analytical method will be used by using the findings of information provided to assist in the creation of the quality management plan.	The obligation to quality is maintained through close observation.	The quality management plan will be created from information from interviews
To develop a human resource management plan to identify and effectively manage the processes that lead the project team.	The analytical method will be used by using the findings of information provided to assist in the creation of the human resource management plan.	Observation of the human resources leads the project team to understand their needs and what can be invested in to ensure optimum output.	The human resource management plan will be created from information from interviews
To create a risk management plan outlining ways to conduct risk management activities to minimize risks throughout the project life cycle.	The analytical method will be used by using the findings of information provided to assist in the creation of the risk	Observation – from an informed position gives the project team the ability to capitalized and/or mitigate	The risk management plan will be created from information from interviews

	management plan.	risks.	
To develop a procurement management plan for the outlining of procurement decisions that are necessary for the goods and services needed along the timeline of the project.	The analytical method will be used by using the findings of information provided to assist in the creation of the procurement management plan.	Observation affords the project team the ability to know the best resources and sources of resources for the project.	The procurement management plan will be created from information from interviews
To create a communication management plan that outlines effective communication approaches within the project to the benefit of all stakeholders.	The analytical method will be used by using the findings of information provided to assist in the creation of the communication management plan.	A communication management plan will be outlined with input from observation of the factors that enhance and may inhibit communication.	The communication management plan will be created from information from interviews

3.3 Tools

A tool is “Something tangible, such as a template or software program, used in performing an activity to produce a product or result” (Project Management Institute, 2013, p. 565).

1. Project charter template: Provides an outline and guide for the project charter development.
2. Requirements Traceability Matrix (RTM) template: assists in ensuring that the project requirements remain as planned when compared to the baseline.
3. Work Breakdown Structure (WBS) generator: A tools that allows the project team to break down the project into smaller and more manageable sections or tasks.
4. Requirements Management Plan (RMP) template: Outlines how project requirements are to be analyzed, documented and managed.
5. Requirements documentation template: Helps outline how specific requirements are to meet the business needs of the project.
6. Project Management Plan template: Outlines a guide showing the requirements for the development of a project management plan.
7. Schedule Management Plan template: guides the development of the project management plan and all its subcomponents.
8. Procurement Management Plan template: Guides the development of the procurement management plan.
9. Scheduling tool: With the use of Microsoft Project 2016 to create the Project Schedule timelines.
10. Human Resource Management Plan template: Guides the development of the human resource management plan.
11. Scope Management Plan template: Guides the development of the scope management plan.

12. Risk Management Plan and Risk Register template: Guides the development of the risk management plan.
13. Cost Management Plan template: Guides the development of the cost management plan.
14. Project Budgeting template: Helps develop the project budget and account for all financial transactions over the project timeline.
15. Cost Baseline template: Guides the development of the cost baseline.
16. Quality Management Plan template: Guides the development of the Quality Management Plan.
17. Quality Management tools: The outlining of those tools (graphical techniques) that can be used in quality control.
18. Responsibility Assignment Matrix: A grid that shows project resources and as assigned to each work package.
19. Communications Management Plan template: Guides the creation of the communications management plan.
20. Communication Matrix: Outlines the planning of communications between project team and stakeholders.
21. Stakeholder Management Plan template: Assists in the identification and classification of stakeholders, in order to properly manage them.
22. Stakeholder Analysis Chart: Outlines and assists in the categorizing and analysis of all stakeholders.
23. Stakeholder Register template: Guides the identification of project stakeholders.
24. Stakeholder Engagement Assessment Matrix: Guides the extent to which individual stakeholders should be engaged relative to their impact and involvement in the project.
25. Activity List template: Outlines the list of the activities of the project.

The following chart describes the tools for the creation of the DFPI project plan.

Chart 3: Tools

(Author of this study & Project Management Institute)

Objectives	**Tools**
To create a Project Charter for the DFPI project as the basis for an integrated management approach during the future implementation of the project.	Interviews, Meetings, Observations, Project Templates, Project Software, Content Analysis, Expert Judgement
To create a stakeholder management plan which identifies all stakeholders and outlines the commitment to effective engagement of them all.	Meetings, interviews, observations, brainstorming sessions, content analysis, project templates, project software
To create a scope management plan that outlines the scope of the project in order to realize the planned successful completion of the project.	Meetings, interviews, observations, brainstorming sessions, content analysis, project templates, project software
To develop a schedule management plan to ensure the timely completion of the project through the development and management of a project schedule.	Meetings, interviews, observations, brainstorming sessions, content analysis, project templates, project software
To create a cost management plan to outline the development and management of a project budget to ensure that the project is completed within the established budget.	Meetings, interviews, observations, brainstorming sessions, content analysis, project templates, project software

To develop a quality management plan to outline the quality requirements in order to meet expectations within the scope of the project.	Meetings, interviews, observations, brainstorming sessions, content analysis, project templates, project software
To develop a human resource management plan to identify and effectively manage the processes that lead the project team.	Meetings, interviews, observations, brainstorming sessions, content analysis, project templates, project software
To create a risk management plan outlining ways to conduct risk management activities to minimize risks throughout the project life cycle.	Meetings, interviews, observations, brainstorming sessions, content analysis, project templates, project software
To develop a procurement management plan for the outlining of procurement decisions that are necessary for the goods and services needed along the timeline of the project.	Meetings, interviews, observations, brainstorming sessions, content analysis, project templates, project software
To create a communication management plan that outlines effective communication approaches within the project to the benefit of all stakeholders.	Meetings, interviews, observations, brainstorming sessions, content analysis, project templates, project software
To formally authorize the project by the creation of the project charter which gives the project manager the authority to mobilize the necessary resources for the creation of the project management plan.	Meetings, interviews, observations, brainstorming sessions, content analysis, project templates, project software

3.4 Assumptions and constraints

An assumption is “A factor in the planning process that is considered to be true, real, or certain, without proof or demonstration” (Project Management Institute, 2013, p. 529).

A constraint is “A limiting factor that affects the execution of a project, program, portfolio, or process” (Project Management Institute, 2013, p. 533).

The Project Management Institute listed competed project constraints – which include, but are not limited to: scope, quality, schedule, budget, resources, and risks (Project Management Institute, 2013, p. 6).

Assumptions for the Final Graduation Project:

1. Interviewees will be accommodating and truthful
2. Continued support from stakeholders
3. Scope of project maintains alignment with resources
4. Information needed will be easily accessible
5. Resources for the creation of the plan will be sufficient

Constraints for the Final Graduation Project:

1. Scope
2. Quality
3. Schedule
4. Budget
5. Resources, and
6. Risks

The following chart illustrates the assumptions and constraints in the creation of the DFPI project plan.

Chart 4: Assumptions and Constraints

(Author of the study & Project Management Institute)

Objectives	**Assumptions**	**Constraints**
To create a Project Charter for the DFPI project as the basis for an integrated management approach during the future implementation of the project	Collection of truthful information, Support of stakeholders, Scope remains aligned, Easily accessible information, Sufficient resources	Scope, Quality, Schedule, Risk, Resources, Budget
To create a stakeholder management plan which identifies all stakeholders and outlines the commitment to effective engagement of them all.	Collection of truthful information, Support of stakeholders, Scope remains aligned, Easily accessible information, Sufficient resources	Scope, Quality, Schedule, Risk, Resources, Budget
To create a scope management plan that outlines the scope of the project in order to realize the planned successful completion of the project.	Collection of truthful information, Support of stakeholders, Scope remains aligned, Easily accessible information, Sufficient resources	Scope, Quality, Schedule, Risk, Resources, Budget
To develop a schedule management plan	Collection of truthful	Scope,

to ensure the timely completion of the project through the development and management of a project schedule.	information, Support of stakeholders, Scope remains aligned, Easily accessible information, Sufficient resources	Quality, Schedule, Risk, Resources, Budget
To create a cost management plan to outline the development and management of a project budget to ensure that the project is completed within the established budget.	Collection of truthful information, Support of stakeholders, Scope remains aligned, Easily accessible information, Sufficient resources	Scope, Quality, Schedule, Risk, Resources, Budget
To develop a quality management plan to outline the quality requirements in order to meet expectations within the scope of the project.	Collection of truthful information, Support of stakeholders, Scope remains aligned, Easily accessible information, Sufficient resources	Scope, Quality, Schedule, Risk, Resources, Budget
To develop a human resource management plan to identify and effectively manage the processes that lead the project team.	Collection of truthful information, Support of stakeholders, Scope remains aligned, Easily accessible information, Sufficient resources	Scope, Quality, Schedule, Risk, Resources, Budget
To create a risk management plan outlining ways to conduct risk management activities to minimize risks throughout the project life cycle.	Collection of truthful information, Support of stakeholders, Scope remains aligned, Easily accessible information, Sufficient resources	Scope, Quality, Schedule, Risk, Resources, Budget
To develop a procurement management	Collection of truthful	Scope,

plan for the outlining of procurement decisions that are necessary for the goods and services needed along the timeline of the project.	information, Support of stakeholders, Scope remains aligned, Easily accessible information, Sufficient resources	Quality, Schedule, Risk, Resources, Budget
To create a communication management plan that outlines effective communication approaches within the project to the benefit of all stakeholders.	Collection of truthful information, Support of stakeholders, Scope remains aligned, Easily accessible information, Sufficient resources	Scope, Quality, Schedule, Risk, Resources, Budget

3.5 Deliverables

A deliverable is "…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, 2013, p. 537).

The following chart describes the deliverables of the DFPI project plan.

Chart 5: Deliverables

(Author of this study & Project Management Institute)

Objectives	Deliverables
To create a Project Charter for the DFPI project as the basis for an integrated management approach during the future implementation of the project.	A Project Charter is a formal document issued by the project sponsor authorizing the existence of the project, which then gives the project manager the authority to apply resources to project activities.
To create a stakeholder management plan which identifies all stakeholders and outlines the commitment to effective engagement of them all.	A Stakeholder Management Plan: A subsidiary of the Project Plan that outlines the methods and resources used to engage stakeholders.
To create a scope management plan that outlines the scope of the project in order to realize the planned successful completion of the project.	A Scope Management Plan: A subsidiary of the Project Plan that outlines how the scope of the project will be defined, developed, monitored, controlled, and verified.
To develop a schedule management plan to ensure the timely completion of the project through the	A Schedule Management Plan: A subsidiary of the Project Plan that outlines the processes necessary to

development and management of a project schedule.	ensure the timely completion of the project.
To create a cost management plan to outline the development and management of a project budget to ensure that the project is completed within the established budget.	A Cost Management Plan: A subsidiary of the Project Plan that shapes the planning, structure, and controlling of project costs.
To develop a quality management plan to outline the quality requirements in order to meet expectations within the scope of the project.	A Quality Management Plan: A subsidiary of the Project Plan that shapes the quality policies of the project.
To develop a human resource management plan to identify and effectively manage the processes that lead the project team.	A Human Resource Management Plan: A component of the Project Plan that outlines roles and responsibilities, reporting relationships, and management of staff will be handled.
To create a risk management plan outlining ways to conduct risk management activities to minimize risks throughout the project life cycle.	A Risk Management Plan: A subsidiary of the Project Plan that outlines the how risk management activities will be undertaken.
To develop a procurement management plan for the outlining of procurement decisions that are necessary for the goods and services needed along the timeline of the project.	A Procurement Management Plan: A subsidiary of the Project Plan that outlines processes necessary to acquire resources needed for the project, from an external source to the project team.
To create a communication management plan that outlines	A Communication Management Plan: A subsidiary of the Project Plan that

effective communication approaches within the project to the benefit of all stakeholders.	outlines how, when, and whom any information relative to the project will be handled and/or disseminated.

RESULTS

4.1 Project Integration Management

This knowledge area outlines the processes and activities that makes the project a success. They include "…activities to identify, define, combine, unify, and coordinate the various processes and project management activities" (Project Management Institute, 2013, p. 63).

In creating the Project Management Plan for DFPI, one template was used as a guide to develop the project charter and project integration management table. The charter serves to formally authorize the project by providing the Project Manager with authority to engage resources to create the Project Plan. The Project Integration Management table serves to highlight and help coordinate plans to increase the likelihood that the project is executed efficiently and that the project team work together as planned to realize the completion of the project.

In addition to the charter and project plan, Integration Management allows for project directing and management, monitoring and control, performance of integrated change control, and the finalizing of project activities.

Integration management is widely understood to be a critical success factor in project management.

The following chart illustrates the project integration management aspect of the DFPI.

Chart 6: Project Integration Management

(Source: W. McIntyre, the Author, October 2018)

PROJECT INTEGRATION MANAGEMENT	
Date	**Project Name:**
August 1, 2018	Diamond Farms Permaculture Initiative (DFPI)
Location	**Application Area (Sector / Activity)**
Diamond, St. Mark, Grenada	Permaculture
Start date	**Finish date**
August 1, 2018	December 30, 2018
Project Objectives	
Business Objective Presently, the farm is in operation, but it is without a plan to strategically lead it to a place where consistent returns on the investment are being realized. The following business objectives have been created to address this need. They are as follows: I. To create a farm that serves as a business venture that creates opportunity for all investors and other stakeholders. II. To create a self-sustaining permaculture investment initiative that serves as a model farm both locally and beyond Grenada. III. To create a permaculture initiative that also serves as an eco-tourism	

destination.

IV. To respond to the growing need for fresh and organically grown fruits and spices.

Project purpose or justification (merit and expected results)

This project seeks to develop a suitable project management plan for investment in permaculture in the rural area of Diamond, St. Mark. There is increasing demand for locally grown organic agriculture products, and DFPI intends to capitalize on this opportunity to realize return on investments. This plan ensures that quality control is maintained.

To primarily investment in this permaculture initiative to put the once productive agricultural land back on a sustainable and regenerative production path.

The benefits of this investment include: revenue generation, employment generation, and it will serve as a case study for additional investments within the sector with the feasibility study and data collection that will take place.

The entire project management team understands the need for a comprehensive plan. Therefore, the project manager is tasked with the responsibility to develop ten subsidiary plans that will be integrated to form the overall management plan for the DFPI.

Description of Product or Service to be generated by the Project

The DFPI project is to be carried out in accordance with the plan provided. It will be a project that follows the strict guidelines for the creation of a 100% permaculture based farm.

Assumptions

Weather

It is assumed that it will rain during the project timeline. Therefore, provisions will be made for safeguarding all tools and equipment as well as providing shelter for workers.

Finance

It is assumed that the project budget will be sufficient and no unforeseen situations present themselves that may lead to the need for additional funding.

Workforce

It is assumed that all workers maintain an acceptable level of work ethic which is consistent with the standards required by the project plan.

It is assumed that the skilled labor acquired will be competent

Schedule

It is assumed that the project will be completed within the stipulated time.

Budget

It is assumed that the project will be completed within the budget of $150,000.

Stakeholders

It is assumed that all stakeholders and investors will support the project from inception to completion.

Constraints

The creation of this project is constrained by the established timeline and budget.

Preliminary risks

Financial

- Increase in prices of supplies
- Damage to materials stored on the site
- Underestimation of project resources

Stakeholders

- Investor disagreements
- Breach of contracts by subcontractors, suppliers, investors

Delays

- Weather conditions
- Delays in supply of resources for the project

Budget

It is assumed that the project will be completed within the budget of $150,000.

Items	**Costs (XCD)**
Administration, land clearance, planting, maintenance	$145,000
Contingency (4%)	$ 5,000
Grand Total	**$150,000**

MILESTONES AND DATES

Project Start	Aug 1 2018
Farm Layout Completed	Aug 1 2018
Project Defined	Aug 3 2018
Environmental Impact Assessment (EIA) Begins	Aug 3 2018
Environmental Impact Assessment (EIA) Ends	Aug 15 2018
Project Charter Approved	Aug 15 2018
Project Baseline Completed	Aug 16 2018
Farm layout accepted	Sept 18 2018
Project Management Plan approved	Sept 20 2018
Procurement	Sept 20 2018
Employees selected and contacted	Sept 21 2018
Contract work tendering process	Sept 21 2018
Contracts awarded	Sept 22 2018
Employees hired	Sept 23 2018
Approval of roles and responsibilities	Sept 23 2018
Mobilization of resources begins	Sept 24 2018
Work on project begins	Sept 25 2018
Selective clearing of vegetation	Sept 25 2018
Pruning of mature trees	Nov 10 2018
Planting of young trees	Nov 20 2018
Drainage work	Dec 20 2018
Miscellaneous works done	Dec 27 2018
Final Inspection and Report Submission	Dec 29 2018
End of Project	Dec 30 2018

Relevant historical information

DFPI is registered company in the state of Grenada that has been in operation since 2013. It is comprised of six persons – some landowners and others investors – engaged in incremental investment in permaculture across five acres of prime agricultural land once part of the prosperous Diamond estate. This initial investment saw the company realize steady returns from 2014 to present with an increased demand for organic produce and a reputation in the market for quality and reliability. For this reason, a decision was made to develop a project management plan to increase investment over another ten acres.

In the past, a number of persons have expressed interest in other parts of the said property to do short term farming, horticulture, apiculture, and exploit eco-tourism possibilities. For this reason, there are also forthcoming plans to invest in all four investment interests.

Stakeholders

Direct stakeholders:

- Wayne McIntyre – Project Manager / Land Owner
- Andy Sharper – Partner / Land Owner
- George Andrew – Partner / Land Owner
- Phillip Paul – Partner / Land Owner
- Maurice Joseph – Partner / Land Owner
- Anthony McIntyre – Partner / Investor

Indirect stakeholders: Contracted Workers

- Worker #1
- Worker #2
- Worker #3
- Worker #4
- Worker #5

Sub - Contracted workers

- Chainsaw operator
- Transporter

Vendors/Suppliers

- Wholesale locations
- Retail locations

Consultants

a. Ministry of Agriculture
b. Environmental Impact Assessment expert
c. Experienced farmers
d. Experienced investor in agriculture

Clients

a. Supermarkets
b. GCNA/GCA
c. Spice Markets

Project Approval

In order for the project to be considered complete, the entire 15 acres of land must be under cultivation, which would be consistent with the project plans, and delivered as complete to investor within budget and time.

Project Manager	
The Project Manager is Wayne McIntyre. The Assistant Manager is George Andrew. Mr. Andrew is officially the Operations Manager, but operate as Project Manager in the absence of Mr. Wayne McIntyre.	

3.3 Project Stakeholder Management

Introduction

The Stakeholder Management Strategy for the Diamond Farms Permaculture Initiative (DFPI) will be used to identify and classify project stakeholders; determine stakeholder power, interest, and influence; and analyze the management approach and communication methodology for project stakeholders. This will allow the management team to identify key influential stakeholders to solicit input for project planning and gain support as the project progresses. This will benefit the project by minimizing the likelihood of encountering competing objectives and maximizing the resources required to complete the project.

Early identification and communication with stakeholders is imperative to ensure the success of the DFPI Project by gaining support and input for the project. Some stakeholders may have interests which may be positively or negatively affected by the DFPI Project. By initiating early and frequent communication and stakeholder management, we can more effectively manage and balance these interests while accomplishing all project tasks.

The stakeholder Management Plan is not a static document. It will be routinely reviewed and updated as needed by the Project Management Team.

Identify Stakeholders

The Project Management Team of DFPI will conduct a brainstorming session in order to identify stakeholders for the project. The brainstorming session will include the primary project team and project sponsor. The session will be broken down into two parts. The first part will focus on internal stakeholders within DFPI. These stakeholders may include landowners and investors. The second part of the session will focus on external stakeholders. These may include suppliers, trial customers, partners, or any other individuals who reside outside of the DFPI project.

The following criteria will be used to determine if an individual will be included as a stakeholder:

I. Will the person or their organization be directly or indirectly affected by this project?

II. Does the person or their organization hold a position from which they can influence the project?

III. Does the person have an impact on the project's resources (material, personnel, funding)?

IV. Does the person or their organization have any special skills or capabilities the project will require?

V. Does the person potentially benefit from the project or are they in a position to resist this change?

Any individual who meets one or more of the above criteria will be identified as a stakeholder. Stakeholders from the same organization will be grouped in order to simplify communication and stakeholder management.

Key Stakeholders

As a follow on to Identify Stakeholders, the project team will identify key stakeholders who have the most influence on the project or who may be impacted the most by it. These key stakeholders are those who also require the most communication and management which will be determined as stakeholders are analyzed. Once identified, the Project Manager will develop a plan to obtain their feedback on the level of participation they desire, frequency and type of communication, and any concerns or conflicting interests they have.

Based on the feedback gathered by the project manager, the determination may be made to involve key stakeholders on steering committees, focus groups, gate reviews, or other project meetings or milestones. Thorough communication with

key stakeholders is necessary to ensure all concerns are identified and addressed and that resources for the project remain available.

Stakeholder Analysis

Once all DFPI Project stakeholders have been identified, the project team will categorize and analyze each stakeholder. The purpose of this analysis is to determine the stakeholders' level of power or influence, plan the management approach for each stakeholder, and to determine the appropriate levels of communication and participation each stakeholder will have on the project.

The project team will categorize stakeholders based on their organization or department. Once all stakeholders have been categorized, the project team will utilize a power/interest matrix to illustrate the potential impact each stakeholder may have on the project. Based on this analysis the project team will also complete a stakeholder analysis matrix which illustrates the concerns, level of involvement, and management strategy for each stakeholder.

The chart on the following page will be used to establish stakeholders and their levels of power and interest for use on the power/interest chart as part of the stakeholder analysis.

Chart 7: Stakeholder Interest Analysis

(Source: W. McIntyre, the Author, October 2018)

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Stakeholder ID	Position	Name	Contact Information	Power (1-5)	Interest (1-5)
1	Project Manager/Land Owner	Wayne McIntyre	TBA		
2	Investor/Land Owner	Andy Sharper	TBA		
3	Investor/Land Owner/ Assistant Project Manager	George Andrew	TBA		
4	Investor/Land Owner	Phillip Paul	TBA		
5	Investor/Land Owner	Maurice Joseph	TBA		
6	Investor	Anthony McIntyre	TBA		
7	Worker	Worker #1	TBA		
8	Worker	Worker #2	TBA		
9	Worker	Worker #3	TBA		

Below is the power/interest chart for the DFPI Project stakeholders. Each letter represents a stakeholder in accordance with the key in the chart above.

Chart 8: Power / Interest Chart

(Source: W. McIntyre, the Author, October 2018)

Power	High	Keep satisfied 1,2,3,4,5	Manage closely 7,8
	Low	Monitor 9	Keep informed 6
		Low	High
	Influence		

Based on the power and interest analysis and chart above stakeholders 1,2,3,4, and 5 will require minimal management effort as they reside in the top left quadrant of the matrix. These stakeholders must be kept satisfied by ensuring concerns and questions are addressed adequately; they are the key stakeholders (financiers) in the DFPI. Stakeholder 6, in the lower right quadrant, must be kept informed through frequent communication on project status and progress. Stakeholders 7 and 8 in the upper right quadrant, are to be management closely since they are hired help/sub-contractors. Stakeholder 9 at the lower right must be monitored. The stakeholder analysis matrix will be used to capture stakeholder concerns, level of

involvement, and management strategy based on the stakeholder analysis and power/interest matrix above. The stakeholder analysis matrix will be reviewed and updated throughout the project's duration in order to capture any new concerns or stakeholder management strategy efforts.

The following is the outline of the DFPI stakeholder analysis matrix

Chart 9: Stakeholder Analysis Matrix

(Source: W. McIntyre, the Author, October 2018)

Stakeholder	Concerns	Quadrant	Strategy
Supplier	Timely delivery of material	Minimum effort	Effective communication

The stakeholder Management Plan is not a static document. It will be routinely reviewed and updated as needed by the Project Management Team.

3.4 Project Scope Management

Introduction

The Scope Management Plan provides the overall framework for the project. This plans documents: the approach to manage the project scope, roles and responsibilities – as it pertains to the scope, the definition of the project scope, control measures, change control, the Work Breakdown Structure (WBS) of the project, and the project communication that pertains to the scope.

Scope Management Approach

The management of the scope of this project will be the responsibility of the Project Management Team. The scope will be considered as the Scope Statement, The Work Breakdown Structure (WBS), and Work Breakdown Structure (WBS) Dictionary. The Project Management Team will establish and approve documents for measuring the project scope. These documentations will include: deliverables quality checklists and work performance measurements.

Any changes to the scope can be initiated by anyone (Project Manager, Stakeholders, Project Management Team) using the established channels for consideration. All scope changes will be submitted to the Project Manager who will then evaluate the request and then pass it on to the Project Management Team for consideration. If the change is approved, all relevant project documents will be updated and the change will then be communicated to the relevant stakeholders.

Roles and Responsibilities

The entire Project Management Team will be responsible for managing the scope of the project. Therefore, the relevant persons must be aware of their responsibilities in order to ensure that responsibilities are carried out within the confines of the scope for the duration of the project.

The table below outlines the roles and responsibilities for the management of the project scope.

Chart 10: Roles and responsibilities of scope management (Source: W. McIntyre, the Author, October 2018).

Name	Role	Responsibilities
DFPI	Sponsor	Approve or deny scope change requests as appropriate
		Evaluate need for scope change requests
		Accept project deliverables
Wayne	Project Manager	Measure and verify project scope
		Facilitate scope change requests
		Facilitate impact assessments of scope change requests
		Organize and facilitate scheduled change control meetings
		Communicate outcomes of scope change requests
		Update project documents upon approval of all scope changes
George	Team Lead	Measure and verify project scope
		Validate scope change requests
		Participate in impact assessments of scope change requests
		Communicate outcomes of scope change requests to team

		Facilitate team level change review process
Worker #1	Team Member	Participate in defining change resolutions
		Evaluate the need for scope changes and communicate them to the project manager as necessary
Worker #2	Team Member	Participate in defining change resolutions
		Evaluate the need for scope changes and communicate them to the project manager as necessary

Scope Definition

The scope for this project was defined through a comprehensive information collection process. Firstly, a thorough analysis was performed on the farm's current state of operations based on past records, investor responses, and worker's contributions. From this information, the project team developed the project plan which included the requirements documentation, the requirements management plan, and the requirements traceability matrix for what the new project will accomplish.

The project description and deliverables were developed based on the requirements collection process and input from subject matter experts in business development and farming. This process of expert judgment provided feedback on the most effective ways to meet the original requirements of providing a new operational platform from which the company can improve its returns on investments.

Project Scope Statement

Product Scope Description

The DFPI project involves the establishment of a 15-acre permaculture farm. The farm will boast the growing of local produce and spices for local and foreign market consumption.

Product Acceptance Criteria

The acceptance criteria is the completion of the project, as stipulated by the project plan.

Project Deliverables

The deliverables for the project will be the successful completion of each phase of work that is assigned.

Project Exclusions

The project will not include the ongoing operations of the already cultivated 5 acres of farmland

Project Constraints

The project is not to exceed the 6 month timeline established. The project must also remain within the budget of the project plan.

Project Assumptions

I. Weather:
   a. It is assumed that the weather will be favorable for the entire duration of the project

II. Finances
   a. It is assumed that the project will remain within budget

III. Labor
   a. It is assumed the labor will be competent, reliable, and professional

IV. Schedule
   a. It is assumed the project will remain within the timeline established

V. Stakeholders
   a. It is assumed that all stakeholders will be supportive and remain onboard throughout the project process

Scope Outline View of Work Breakdown Structure (WBS)

1. Diamond Farms Permaculture Initiative Project
    1.1 Initiation
        1.1.1 Evaluations & Recommendations
        1.1.2 Develop Project Charter
        1.1.3 Submit Project Charter
        1.1.4 Project Management Team Reviews Project Charter
        1.1.5 Project Charter Signed/Approved

    1.2 Planning
        1.2.1 Create Preliminary Scope Statement
        1.2.2 Finalize Project Team
        1.2.3 Project Team Kickoff Meeting
        1.2.4 Develop Project Plan
        1.2.5 Submit Project Plan
        1.2.6 Project Plan Approval

    1.3 Execution
        1.3.1 Project Kickoff
        1.3.2 Verify project requirements
        1.3.3 Communicate requirements
        1.3.4 Procure project resources
        1.3.5 Selective Land clearance
        1.3.6 Pruning of mature trees
        1.3.7 Planting of young trees
        1.3.8 Maintenance of young trees

    1.4 Control
        1.4.1 Project Management
        1.4.2 Project Status Meetings

1.4.3 Risk Management

1.4.4 Update Project Management Plan

1.5 Closeout

1.5.1 Audit Procurement

1.5.2 Document Lessons Learned

1.5.3 Update Files/Records

1.5.4 Gain Formal Acceptance

1.5.5 Archive Files/Documents

The following chart illustrates the WBS of DFPI

Chart 11: Work Breakdown Structure of Diamond Farms Permaculture Initiative

(Source: W. McIntyre, the Author, 2018)

Level	WBS Code	WBS Code	Definition
1	1	DFPI Project	All work to implement the DFPI project plan
2	1.1	Initiation	The work to initiate the project
3	1.1.1	Evaluations & Recommendations	Evaluation and presentation of solutions
3	1.1.2	Develop Project Charter	Developed by Project Manager
3	1.1.3	Submit Project Charter	Delivered to Project Management Team
3	1.1.4	Project Management Team Reviews Project Charter	Project Management Team reviews Charter
3	1.1.5	Project Charter Signed/Approved	Charter signed signaling authorization to begin the planning process
2	1.2	Planning	The work of the planning process
3	1.2.1	Create Preliminary Scope Statement	Project Manager creates scope statement
3	1.2.2	Finalize Project Team	Project team is created and resources are requested

3	1.2.3	Project Team Kickoff Meeting	The planning process is officially started with a project kickoff meeting which includes the Project Manager, Project Team and Project Sponsor (optional)
3	1.2.4	Develop Project Plan	Under the direction of the Project Manager the team develops the project plan
3	1.2.5	Submit Project Plan	Project Manager submits the project plan for approval
3	1.2.6	Project Plan Approval	The project plan is approved and the Project Manager has permission to proceed to execute the project according to the project plan
2	1.3	Execution	Work involved to execute the project
3	1.3.1	Project kickoff	Project begins
3	1.3.2	Verify project requirements	Resources are verified
3	1.3.3	Communicate requirements	Requirements are communicated to relevant stakeholders
3	1.3.4	Procure project resources	Acquire resources for the project
3	1.3.5	Selective Land clearance	Selective clearance of old and overgrown brush and grass
3	1.3.6	Pruning of mature trees	Mature trees are pruned

3	1.3.7	Planting of young trees	Young trees are planted out
3	1.3.8	Maintenance of young trees	Young trees are maintained
2	1.4	Control	The work involved for the control process of the project.
3	1.4.1	Project Management	Overall management of the project
3	1.4.2	Project Status Meetings	Required operations meetings
3	1.4.3	Risk Management	Risk management efforts as set forth by the Risk Management Plan
3	1.4.4	Update Project Management Plan	Project Manager updates the Project Management Plan as the project progresses.
2	1.5	Closeout	The work to close out the project
3	1.5.1	Audit procurement	Process where all hardware products are accounted for
3	1.5.2	Document Lessons Learnt	Project Team meet and discuss lessons learnt and document lessons
3	1.5.3	Update files/records	All records are updated
3	1.5.4	Gain formal acceptance	The Project Sponsor formally accepts the project by signing the acceptance document included in the project plan.
3	1.5.5	Archive files/documents	All project related files and documents are formally archived

Glossary of Terms

Level of Effort: Level of Effort (LOE) is how much work is required to complete a task.

WBS Code: A unique identifier assigned to each element in a Work Breakdown Structure for the purpose of designating the element's hierarchical location within the WBS.

Work Package: A Work Package is a deliverable or work component at the lowest level of its WBS branch.

WBS Component: A component of a WBS which is located at any level. It can be a Work Package or a WBS Element as there is no restriction on what a WBS Component is.

WBS Element: A WBS Element is a single Work Breakdown Structure component and its associated attributes located anywhere within a WBS. A WBS Element can contain work, or it can contain other WBS Elements or Work Packages.

3.5 Project Schedule Management

Introduction

Project schedules serves as a schedule management guide for the project. The project schedule provides stakeholders with an illustration of the current state of the project, the previous stages of the project, and the forthcoming phases of the project, at any given time. The Schedule Management Plan (SMP) is created to afford management the ability to monitor the project's schedule and manage changes after the baseline schedule has been approved. This includes: identifying, analyzing, documenting, prioritizing, approving or rejecting, and publishing all schedule-related changes.

Schedule Management Approach

Project schedules will be created using MS Project 2016 starting with the deliverables identified in the project's Work Breakdown Structure (WBS). Activity definition will identify the specific work packages which must be performed to complete each deliverable. Activity sequencing will be used to determine the order of work packages and assign relationships between project activities. Activity duration estimating will be used to calculate the number of work periods required to complete work packages. Resource estimating will be used to assign resources to work packages in order to complete schedule development.

Once a preliminary schedule has been developed, it will be reviewed by the project team and any resources tentatively assigned to project tasks. The project team and resources must agree to the proposed work package assignments, durations, and schedule. Once this is achieved the project sponsor will review and approve the schedule and it will then be baselined.

The following are established milestones for the project schedule of Diamond Farms Permaculture Initiative:

I. Project initiation
II. Project Management Plan begins
III. Design of farm layout begins
IV. Project defined
V. Environmental Impact Assessment begins
VI. Design completed
VII. Feasibility study begins
VIII. Feasibility study completed
IX. Environmental Impact Assessment Completed
X. Approval of Project Charter
XI. Project Schedule baseline
XII. Stakeholder approval
XIII. Project Management Plan Complete
XIV. Procurement process begins
XV. Plants ordered
XVI. Subcontractor contracts commence
XVII. Subcontractor contracts completed
XVIII. Contracts awarded
XIX. Roles and responsibilities approved
XX. Mobilization commencement
XXI. Mobilization complete
XXII. Work at site begins
XXIII. Selective clearing of vegetation of vegetation begins
XXIV. Selective clearing of vegetation of vegetation completed
XXV. Clear cutting of large trees begins
XXVI. Clear cutting of large trees completed
XXVII. Pruning of mature trees begins
XXVIII. Pruning of mature trees completed
XXIX. Planting of new trees begins

XXX. Planting of new trees completed

XXXI. Fertilization of mature trees begin

XXXII. Fertilization of mature trees completed

XXXIII. Miscellaneous work completed

XXXIV. Final inspection my management team

XXXV. Acceptance of all deliverables

XXXVI. End of project

The following is the DFPI project schedule Gantt chart

ID	Task Mode	Task Name	Duration	Start
1				
2		Project Start	1 day	Wed 8/1/18
3		Farm Layout Completed	1 day	Wed 8/1/18
4		Project Defined	1 day	Fri 8/3/18
5		Environmental Impact Assessment (EIA) Begins	9 days	Fri 8/3/18
6		Environmental Impact Assessment (EIA) Ends	1 day	Wed 8/15/18
7		Project Charter Approved	1 day	Wed 8/15/18
8		Project Baseline Completed	1 day	Thu 8/16/18
9		Farm layout accepted	1 day	Sat 8/18/18
10		Project Management Plan approved	1 day	Thu 9/20/18
11		Procurement	1 day	Thu 9/20/18
12		Employees selected and contacted	1 day	Fri 9/21/18
13		Contract work tendering process	1 day	Fri 9/21/18
14		Contracts awarded	1 day	Sat 9/22/18
15		Employees hired	1 day	Sun 9/23/18
16		Approval of roles and responsibilities	1 day	Sun 9/23/18
17		Mobilization of resources begins	1 day	Mon 9/24/18
18		Work on project begins	1 day	Tue 9/25/18
19		Selective clearing of vegetation	1 day	Tue 9/25/18
20		Pruning and fertilizing of mature trees	8 days	Sat 11/10/18
21		Planting of young trees	22 days	Tue 11/20/18
22		Drainage work	5 days	Thu 12/20/18
23		Miscelleneous works done	2 days	Thu 12/27/18
24		Final Inspection and Report Submission	1 day	Sat 12/29/18
25		End of Project	1 day	Sun 12/30/18

Project: Simple Project Plan
Date: Fri 11/2/18

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
Progress
Manual Progress

Page 1

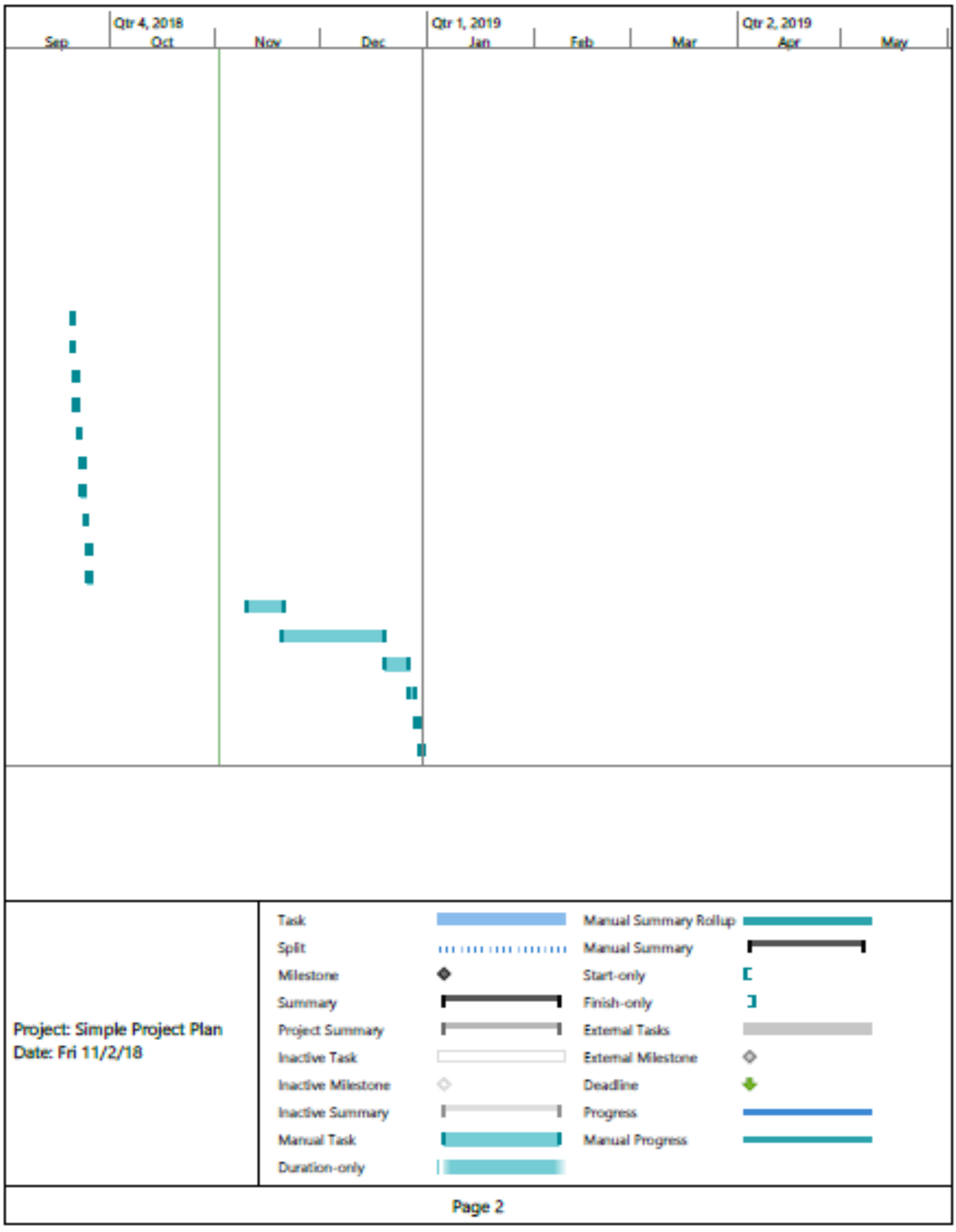

Figure 1-5: DFPI Schedule Gantt Chart (Source: W. McIntyre, the Author, 2018)

Roles and responsibilities for schedule development are as follows:

1. The project manager will be responsible for facilitating work package definition, sequencing, and estimating duration and resources with the project team. The project manager will also create the project schedule using MS Project 2016 and validate the schedule with the project team, stakeholders, and the project sponsor. The project manager will obtain schedule approval from the Project Management Team.
2. The PMT is responsible for participating in work package definition, sequencing, and duration and resource estimating. The team will also review and validate the proposed schedule and perform assigned activities once the schedule is approved.
3. The PMT will participate in reviews of the proposed schedule and approve the final schedule before it is baselined.
4. The relevant project stakeholders will participate in reviews of the proposed schedule and assist in its validation.

Schedule Control

The project schedule will be reviewed and updated as necessary on a weekly basis with actual start, actual finish, and completion percentages which will be provided by task owners.

The project manager is responsible for holding the weekly schedule updates/reviews; determining impacts of schedule variances; submitting schedule change requests; and reporting schedule status in accordance with the project's communications plan.

The PMT is responsible for participating in all weekly schedule updates/reviews; communicating any changes to actual start/finish dates to the project manager; and participating in schedule variance resolution activities as needed.

The PMT will maintain awareness of the project schedule status and review/approve any schedule change requests submitted by the project manager.

Schedule Change and Thresholds

If any member of the project team determines that a change to the schedule is necessary, the project manager and team will meet to review and evaluate the change. The project manager and PMT must determine which tasks will be impacted, variance as a result of the potential change, and any alternatives or variance resolution activities they may employ to see how they would affect the scope, schedule, and resources. If, after this evaluation is complete, the project manager determines that any change will exceed the established boundary conditions, then a schedule change request must be submitted.

Submittal of a schedule change request to the PMT for approval is required if either of the two following conditions is true:

1. The proposed change is estimated to reduce the duration of an individual work package by 10% or more, or increase the duration of an individual work package by 10% or more.
2. The change is estimated to reduce the duration of the overall baseline schedule by 10% or more, or increase the duration of the overall baseline schedule by 10% or more.

Any change requests that do not meet these thresholds may be submitted to the project manager for approval.

Once the change request has been reviewed and approved the project manager is responsible for adjusting the schedule and communicating all changes and impacts to the project team, project sponsor and stakeholders. The project manager must also ensure that all change requests are archived in the project records repository.

Scope Change

Any changes in the project scope, which have been approved by the PMT, will require the project team to evaluate the effect of the scope change on the current schedule. If the project manager determines that the scope change will significantly affect the current project schedule, he/she may request that the schedule be re-

baselined in consideration of any changes which are required to be made as part of the new project scope. The PMT must review and approve this request before the schedule can be re-baselined.

Diamond Farms Permaculture Initiative Schedule Management Plan. Adapted from Project Management Docs. Retrieved October 5, 2018 from https://www.projectmanagementdocs.com/template/project-planning/schedule-management-plan/#ixzz5FLerjcah

3.6 Project Cost Management

Introduction

The PM is responsible for managing the allotted finances of the project and reporting to the management committee on all financial matters throughout the duration of the project. These reports will be delivered on a weekly basis, at the end of work packages, or upon request. A hard copy can be delivered, or it can be communicated electronically at least 24 hours before scheduled meetings.

During the fortnightly project progress report meeting, the PM will outline the performance measures that are to be measured using the Earned Value Management (EVM). The PM will also prepare the Cost Management Plan and the Cost Baseline.

Cost deviations and proposals to get the project back within budget will be the responsibility of the PM. The PM can seek expert advice from other sources beyond the project. The project management team has the authority to take whatever measures it deems necessary to bring the project back within the budget, or to keep it within budget.

Cost Management Approach

Managing Project Cost

The measurement of the performance of the project will be effected using the Earned Value Management (EVM) technique. The following four EVM matrices will be utilized to measure the project's cost performance:

I. Schedule Variance (SV)
II. Cost Variance (CV)
III. Schedule Performance Index (SPI)
IV. Cost Performance Index (CPI)

In the event of the Schedule Performance Index (SPI) or Cost Performance Index (CPI) having a variance of between 0.1 and 0.2 the PM must account for the

inconsistency and furthermore propose corrective remedial action to get performance to an acceptable level.

The chart below represents a schedule performance and cost performance comparison of the DFPI

Chart 12: Schedule Performance and Cost Performance Comparison (Source: W. McIntyre, the Author, October 2018).

Performance Measures	Yellow	Red
Schedule Performance Index (SPI)	Between 0.9 and 0.8 or Between 1.1 and 1.2	Less Than 0.8 or Greater than 1.2
Cost Performance Index (CPI)	Between 0.9 and 0.8 or Between 1.1 and 1.2	Less Than 0.8 or Greater than 1.2

Reporting Format

The fortnightly project performance review meetings will require reports on the management of project costs. Within these reports will be a section assigned for cost management which will contain the above illustrated Earned Value Matrices. Any deviation from the limitations of the Cost Management Plan has to be reported, along with proposed corrective action. Change requests will be done based on cost overruns will be identified and tracked.

Cost Variance Response Process

The control limitations for this project is a CPI or SPI of less than 0.95 or greater than 1.15. In the event of the project reaching one of these control thresholds, corrective action is required through the creation of a Cost Variance Corrective Action Plan (CVCAP). The PM would be responsible for presenting remedial options to the management team within five working days from the time the variance was first identified. The management team will then communicate their selected corrective action option to the PM. Within three business days of receiving

the decision, the PM will present a formal Cost Variance Corrective Action Plan (CVCAP). This action plan will outline the steps necessary to bring the project back within budget. It will also show the means to which the effectiveness of the actions will be measured. The accepted CVCAP will be considered part of the project plan after it is updated to include the corrective actions.

Cost Change Control Process

The Cost Change Control Process will follow the same dictates of the project change control process. Approvals of any adjustment in project budget or cost changes must be approved after consideration by the project management team. The following chart illustrates the budget of the DFPI project.

Chart 13: Project Budget. (Source: W. McIntyre, the Author, October 2018).

Items	Costs (XCD)
Administration	$ 25,000
Land Clearance	$ 50,000
Planting	$ 40,000
Maintenance	$ 30,000
Contingency (4%)	$ 5,000
Grand Total	**$ 150,000**

3.7 Project Quality Management

Quality Management Approach

The Quality Management Plan is created during the planning phase of the project. It serves as a guide as it ensures that the required level of quality assurance is maintained during execution of the project and upon completion. Its creation and delivery is primarily for: the Project Manager, the rest of the project team, the project sponsor/sponsors, and any other stakeholder involved in the execution of the project.

The Project Quality Management Plan assures that standards of quality are adhered to during the execution of the venture, which ensure the completion of an acceptable project. It outlines quality processes, policies, procedure, roles, and responsibilities. These results are realized through Quality Management Planning, the performance of quality assurance routines, and the controlling of quality through instituting necessary changes.

Project Quality Management entails the managing of process quality and project quality. Product quality involves the delivery of a quality product – in this case the rehabilitated farmland, and project quality – the quality of the process to realize an end product delivered consistent with the plan. The focus on product quality will be a result of standards and criteria established that meet acceptable quality standards. Likewise, process quality will ensure all project activities conform to established standards which is expected to result in the completion of an acceptable project.

As a result, both the Project Manager and the Project Foreman will document all organizational and project standards in relation to the endeavor. This documentation then becomes a submission into the overall project plan, which will be held for future reference as part of DFPI operations plan.

Quality Improvement can be highlighted by anyone on the project team. Recommendations will be received and reviewed objectively. The review will be done in a timely manner using the cost benefit analysis process. If positive results

emerge from this process, the Project Manager will update all project documentation to incorporate improvement. The entire team will then be informed of the changes.

The creation of the Project Quality Plan (PQP) for Diamond Farms Permaculture Initiative (DFPI) intends to institute the standards to ensure the delivery of a completed quality project within the scope set out. The objective of this plan is to:

1. Formulate quality management tools and techniques
2. Ensure quality requirements are documented
3. Stipulate how quality assurance will be managed
4. Outline activities of quality assurance
5. Document acceptable quality standards
6. Define quality control activities and standards

The benefits of a Quality Management Plan are:

1. Achievement of project scope
2. Stakeholder satisfaction
3. Consistent results
4. Implementation of best practices & process improvements
5. Increased productivity
6. Improved internal communication
7. Decreased chance of rework

Tools and Techniques for Quality Management are:

1. Field Monitoring
2. Inspections
3. Reports
4. Meetings

Quality Control Measurements

All processes and deliverables of the Diamond Farms Permaculture Initiative must be in line with the stipulated quality standards. The following tables illustrate the quality assurance procedure that are to be followed for quality audit purposes. They will also be used as supporting documentation for project acceptance and delivery. Illustrates below is a generic quality assurance log outline to be used by the DFPI.

Quality Assurance Log

Trial #	Date	Process Measured	Required Value	Actual Measured	Acceptable? (Y/N)	Recommendation	Date Resolved

Figure 1-6 Quality Assurance Log. Retrieved on October 5, 2018 from https://www.projectmanagementdocs.com/template/project-planning/quality-management-plan/#axzz5BNelMK6H

Illustrated below is the quality control log to be used on the DFPI project.

Quality Control Log

Trial #	Date	Process Measured	Required Value	Actual Measured	Acceptable? (Y/N)	Recommendation	Date Resolved

Figure 1-7: Quality Control Log. Retrieved on October 5, 2018 from https://www.projectmanagementdocs.com/template/project-planning/quality-management-plan/#axzz5BNelMK6H

The chart below is the quality assurance and quality control outline for DFPI.

Chart 14: Quality Assurance & Quality Control Management

(Source: W. McIntyre, the Author, 2018)

Quality Assurance & Quality Control Management
QA & QC Manager ● Plans the project quality management ● Directs and manages the activities of the department ● Coordinates activities with other disciplines ● Reviews the outputs of the departments ● Proposes and implements process improvements where advisable

Quality Control	Quality Assurance	Document Control
QC Manager – Site Manager • Inspects materials and equipment • Verifies compliance with methodologies and appropriate working conditions • Inspects ongoing and results of activities (on and off site) • Produces checklists, forms and records	QA Manager – Project Manager • Reviews material submittals and method statements • Verifies compliance with quality criteria • Evaluates inspection records • Identifies training needs including supplier and sub-contr. personnel • Evaluates project records • Audits project procedures	Project Manager • Updates project records and registers • Compiles the quality file • Receives and registers relevant documents from other departments etc. • Distributes documents to other departments

Quality Requirements and Standards

Product Quality

All product quality standards will be determined by the Project Manager. These standards will be made in relation to the scope of the project, resources available, and documented standards. In the event of new standards and procedures arising, the Project Manager will consider them and document any decision made. All relevant stakeholders will be informed of changes in a timely manner.

Process Quality

All process quality standards will be determined by the Project Manager. Many standards will be based on existing process standards. However, it is anticipated that the project may require changes within the process. The project team will work

with the Project Manager to finalized acceptable standards, document those standards, and incorporate them into the project. These changes will be communicated to all relevant stakeholders in a timely manner.

Quality Assurance

The quality assurance of the DFPI highlights the procedures used in the completion of the project. An iterative quality process will be employed throughout the entire project life cycle. This process includes: measuring process matrices, analysis of process data, and continuous improvement of the processes.

Planned assessment will be a feature of operations, conducted by both the assistant Project Manager and the Project Manager. These planned inspections of operations serve to ensure that all processes are implemented and executed in accordance to plan.

The following chart illustrates a quality assessment form of the DFPI

Chart 15: Quality Assessment Form

(Source: W. McIntyre, the Author, 2018)

Process Action	Acceptable Process Standards	Process Phase	Assessment Interval
Pruning of mature trees	As stated by the manual		Daily

The Assistant Project Manager will oversee the day to day quality management operations, in addition to conducting intermittent process audits as needed, monitor process performance matrices, in addition to ensuring all processes comply with project standards. In the event of any concerns arising from the audits, a meeting with the Project Manager is commenced to review the discrepancies.

The Project Manager will have regularly scheduled performance review meetings. In these meetings, reviews are made of the entire project and its management, along with a review of all documents. Project processes are evaluated, discrepancies highlighted from audits are noted, and process improvement initiatives are tabled.

Because quality assurances involves process improvement, all process improvement efforts will be finalized, documented, communicated to relevant stakeholders, and implemented.

Quality Control

Quality Control will be a regular feature of the DFPI. Inspections/Audits will be conducted in a three part process, with a preparatory meeting preceding it. The steps include: Initial inspection, follow-up inspections, and final inspections.

Quality Control inspections will be routinely carried out regardless of whether the item of work is assigned to the project team or a sub-contracted professional.

The implementation of this three phase quality control process facilitates compliance with the project requirements and plans. Every control phase is imperative to success since it helps achieve established quality. The preparatory meeting and initial inspection are particularly important to prevent any rework, which affects the limited resources of the project.

Preparatory Meeting

Preparatory meetings will be coordinated by the Project Manager before the start of a new work item and all accompanying activities. All relevant stakeholders will be in attendance. The purpose of the preparatory meeting is to verify plans, to confirm that all relevant information is communicated, and additionally confirm all resources are available before commencement of activities. The project team communicates lessons learned from previous comparable activities, and offer suggestions to mitigate and avoid future challenges. All identified discrepancies must be resolved before a new work item begins.

The preparatory meetings will address:

1. The review of work plans
2. Review of all operational procedures
3. Review of working conditions
4. Audit of tools, supplies, and equipment
5. Revision and assessment of work sequences
6. Revision and assessment of work methodology

Initial Inspection

Initial Inspection are to be carried out by the Assistant Project Manager. The manager verifies the work to be performed is in compliance with the project plan and also within the specifications and procedures established with required workmanship.

This inspection process will be conducted by an Initial Inspection Checklist. The results of this inspection will then be documented in the Inspection Register.

Any differences of opinions during the inspection processes with regards to stipulated requirements and/or adjustments, specifications, and methodologies will be dealt with objectively. The Project Manager has the final decision.

Follow-Up Inspection

The purpose of this stage of inspection is to confirm continuous compliance of established specifications and requirements, together with methodologies and acceptable workmanship.

This inspection will be carried out by the Assistant Project Manager, or by another assigned team member. It shall be carried out at variable intervals, covering all different stages of the work activity including: activity, preparation, activity execution, results.

This inspection process will be conducted by means of Initial Inspection Checklist. The results of this inspection will then be documented in the Inspection Register.

Any differences of opinions during the inspection processes with regards to stipulated requirements and/or adjustments, specifications, and methodologies will be dealt with objectively. The Project Manager has the final decision.

Final Inspection

At the end of the work activity, a pre-final inspection shall be carried out by the APM. If the work was sub-contracted, the APM will carry out the inspection in the presence of the sub-contracted authority and/or their representative.

This stage serves to validate the stipulated work results projected.

All outstanding and non-conforming issues shall be identified and documented. The issues are then addressed and remedied.

Upon rework – if needed, another inspection will be timetabled. This inspection process will be conducted by means and Initial Inspection Checklist. The results of this inspection will then be documented in the Inspection Register.

Inspection Procedures

All products and services carried out or produced by the project team, sub-contractors or suppliers, shall be produced through the implementation of processes previously approved. This will involve appropriate use of equipment, control and management of materials, and technical services.

Control procedures will be applied to serve to limit actions that may lead to less cost effective timeline and a product or service that isn't in accordance to specifications and required quality.

Inspection upon receiving stage

The APM shall inspect all items received on the farm upon delivery. In the event inspection cannot be done at the time of delivery, a 24 hour window is extended.

In order to have timely and reliable inspection processes, the APM will continuously update the delivery schedule. All results shall be documented in the Material Receiving Register.

All discrepancies identified must be addressed and resolved prior to a second inspection, if decided upon. Otherwise, the delivered items have to be returned to the supplier immediately.

If the APM is unavailable to inspect at the time, a representative is assigned. If they are both unavailable, the items are set aside and labelled as uninspected, and team members are made aware no use is to be made of the items until inspection is complete.

Items Inspection Storage

Even if the APM is charged with inspection duties, the project team members shall continuously oversee the delivered items in storage. Inspection criteria shall be established and followed to preserve the investment in the stored items.

Off-Site Inspection

If needed, items for purchase or delivery shall be inspected off-site by the APM or PM to confirm specification requirements. This limits the chances of delivery of unspecified items being brought to the project site.

Workmanship Inspection

APM or PM shall intermittently inspect and verify workmanship on and off the project site, to confirm compliance with specifications and requirements. This inspection is particularly important since the rework of some work items are costly in terms of resources needed to complete.

Inspection includes on and off-site engagements.

Tools, supplies, and equipment inspections

The entire project team shall be responsible for all tools, supplies, and equipment; and they shall be routinely inspected by the Assistant Project Manager to ensure responsible use.

1. All items received onsite shall be listed on an Inventory Register
2. Maintenance of tools and equipment shall be a routine procedure
3. All unsuitable tools and equipment will be tagged and disposed of, as agreed by the PM

Management and Service Review

The APM and PM will periodically review project plan compliance. In the event of a need for an adjustment, the following Process Improvement Steps (PIS) will be followed:

I. What need is fulfilled by this process?

II. What is the goal in updating this process?

III. What is the compliance level at this stage?

IV. What is its present state of the process?

V. Who is responsible for this stage?

VI. Where are the current processes defined?

VII. What limitations exist to the changes?

VIII. What rippling effects may occur from changes?

IX. What can assist with the proposed change?

X. What needs to be maintained?

XI. What needs to be adjusted?

XII. What needs to change?

XIII. Do the same work project team members remain?

XIV. What shall be the list of activities in the future?

XV. What limitations exist for the new process?

XVI. Will the goal of the project be met with this update?

XVII. Have all relevant stakeholders understood the changes?

XVIII. Is it executable?

XIX. Who is authorized to approve changes?

3.8 Project Human Resource Management

Introduction

A comprehensive Human Resource Management Plan contributes directly to project success. This plan links the human resource element with the strategic goals of the project. It guides the project team on the staffing, managing, and eventual release of project human resources – from project inception to project completion.

Benefits of a Human Resource Management Plan include:

1. Human Resources documentation: The identification, documentation, and communication of project roles, responsibilities, skills sets required, reporting relationships, and creation of a staffing management document.
2. Project Team creation: Confirming and obtaining the personnel available to execute project activities.
3. Project Team Development: investing in team development to positively influence team performance
4. Project Team Management: Tracking performance, issuing feedback, resolving issues, managing project changes.

The Human Resource Management Plan for DFPI includes:

1. **Roles and Responsibilities**
    I. Documents the function assigned to each member of the project team with clarity
    II. Documents the right team members have to apply resources to advance the project
    III. Documents the assigned duties to each project team member with clarity
    IV. Documents the skills and competence level required at each position with project team

2. Project organizational chart and RACI Chart

The following organizational chart and RACI Chart are graphic representations of the project team members of the DFPI and their reporting relationships with other project team members. Any adjustments to the charts must be submitted respecting the established change control process. It will then be reviewed and approved by the Project Manager. The approved updates will then be documented and communicated to the relevant stakeholders.

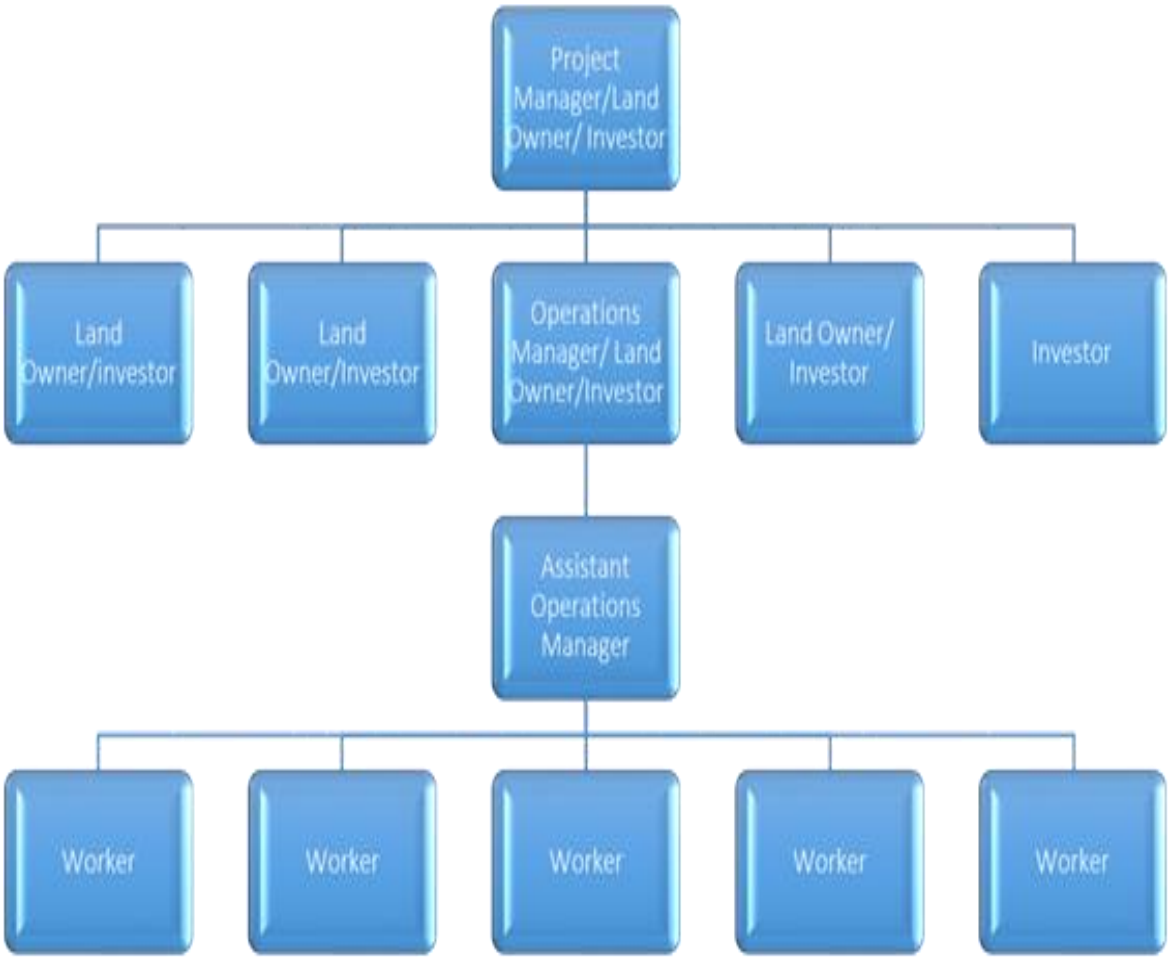

Figure 1-8: Organization Structure of Diamond Farms Permaculture Initiative (Source: W. McIntyre, the Author, 2018).

The following chart is the RACI Matrix for the DFPI

DFPI RACI Matrix

Chart 16: DFPI RACI Matrix (Source: W. McIntyre, the Author, 2018)

Diamond Farms Permaculture Initiative RACI Matrix					
	Project Manager	**Assistant Project Manager**	**Laborer**	**Accountant**	**Sub-Contractor**
Activity or Decision	A	R	I		I
Contract Administration	A	R		I	I
Charter Creation	A			I	
Stakeholder Management	A		I	I	
Operations Management	A	R	I		
Procurement Management	A	R		I	
Site Management	A	R	I		I
Change Requests	A	R		I	I

RACI Matrix Key:

1. R : Responsible for completing task or makes decision
2. A: Accountable for ensuring tasks are completed
3. C : Consult before decision is made or activities are completed
4. I : Inform of decisions made or activities completed

3. Staff Management Plan

Staffing

The project team for the DFPI will be comprised of resources from within the project planning team together with contracted external expertise. Most of the work will be subcontracted to external sources. The outsourcing fulfills the need for labor more experienced in the operational areas of project.

All requests for changes to the project team are to be submitted to the Project Manager who will then schedule an extraordinary meeting to inform the entire team and discuss the implications. All changes will be handled professionally and requests for changes will be respectfully considered and examined. Any team member can at any time request to discontinue their commitment to the project through formal communication, or an initial personal communication followed by a timely official document. The entire project team considers the change request and a decision is reached with the agreement of a simple majority. After the decision is taken, the Project Manager will formally communication to the person(s) requesting the changes, copied to all members of the project team. The decision of the project team is final.

The outsourcing duties reside with the expertise and experience of the Project Manager and the Assistant Project Manager; with the final decision left to the Project Manager.

All subcontracted resources must be thoroughly vetted and finalized with the signing of a formal contractual agreement. No resources are to be expended and no work commences by either the DFPI or the external party before this arrangement is made final.

Resource Calendars

The timeline for the DFPI is six months. All resources are to be sourced and finalized before commencement of project. The following Resource Histogram illustrates the timeline of project execution.

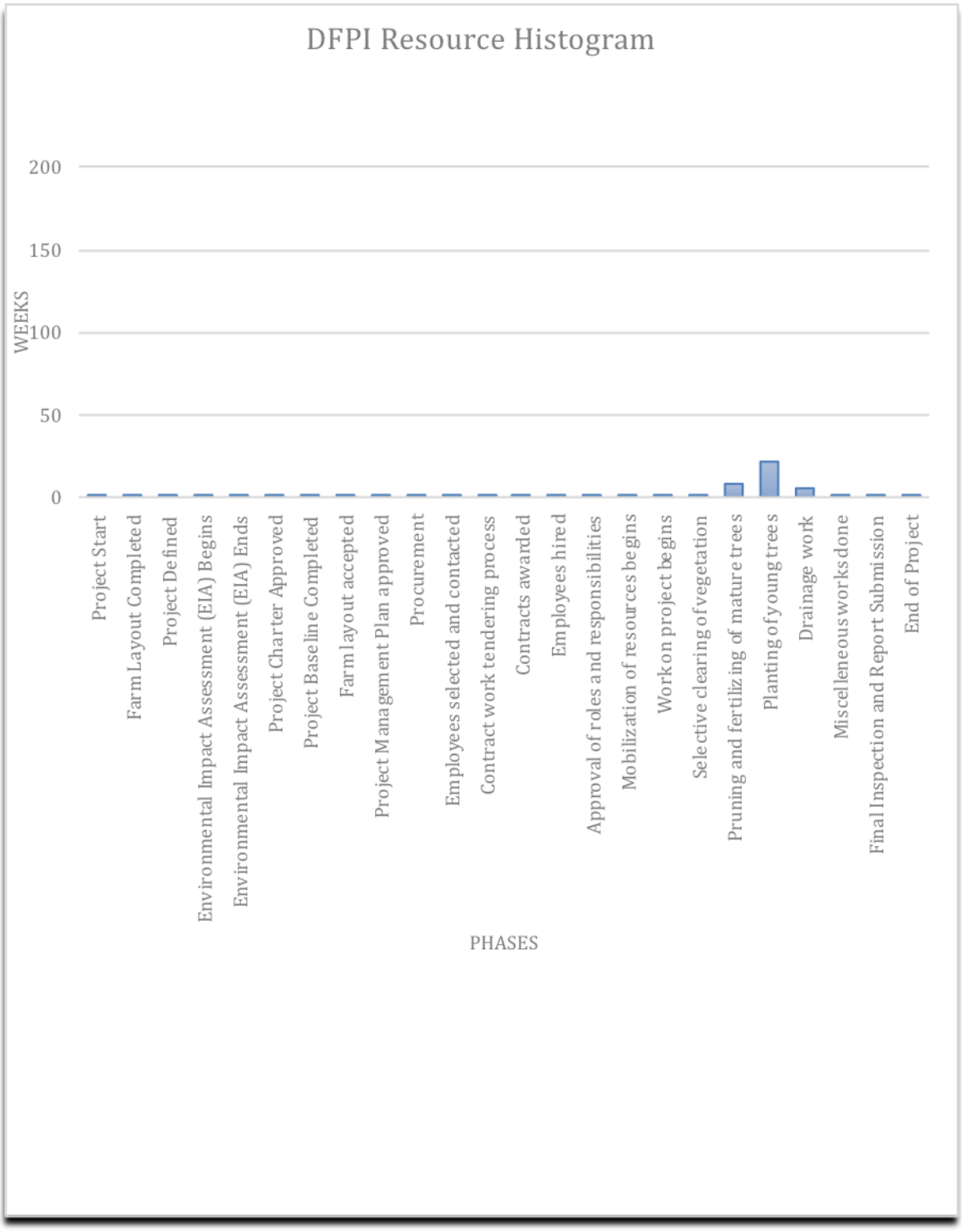

Figure 1-9: DFPI Resource Histogram (Source: W. McIntyre, the Author, 2018)

Training

Training will be an ongoing feature of the DFPI project. These exercises will impart knowledge and also serve as a refresher for persons directly involved in operations. A team of agronomists will be on island to carry out training sessions in new and improved methods of investing and maintaining fields including planting, harvesting, pruning, and pest control techniques. Attending these sessions will be mandatory.

Performance Review

The Project Manager is ultimately responsible for the performance of workers and is tasked with carrying out periodic reviews of the project progression, and report to the investors in a timely manner. Official reports will be required at the end of every major task, or at the end of each week; whichever comes first. The Project Manager is also responsible to report to investors, the progression of work throughout the project timeline as requested.

The Assistant Manager is responsible for the direct performance review of the workers on the project. Reviews can also be executed by the Project Manager, but the daily performance review responsibilities belong to the Assistant Project Manager.

On a weekly basis, performance review reports are finalized and placed in a ledger for examination by the Project Manager and other relevant stakeholders. Upon weekly review of the reports, the Project Manager is allowed to consider other options available with respect to human resource management, or continue with the current labor.

With respect to specialized contracted labor, the Assistant Manager will assess the work being carried out, document findings, make a final assessment, then after satisfactory completion, the contract is fulfilled and project resources are released.

Recognition and Reward

A criteria for reward and recognition will be decided upon by the Project Management team. These measures will be contained in a plan and is established to recognize and encourage notable performances of duty.

1. Upon successful completion of any work package or phase of the project - well before the projected completion time and after quality assurance checks are factored in, the employee/employees are recognized for their accomplishment and a monetary reward is afforded them. The amount disbursed will be decided by the Project Manager.
2. Upon completion of the project, employees are given the opportunity to invest in the project by means of monetary support, work hours, or expert analysis and guidance.
3. An employee of the week and month recognition program will recognize and celebrate employee accomplishments.

Description of roles and responsibilities

The creation and understanding of the roles and responsibilities for the project team, by the entire team of the DFPI, is imperative for success completion of the project. Every team member is afforded the opportunity to be enlightened on their duties in the endeavor and their obligations to conform to the requirements of the project plan.

The DFPI established the following positions and responsibilities accompanying them.

Project Manager – Wayne McIntyre

1. Holder of BSc in Business Administration & MSc in Project Management
2. Experienced investor in Agriculture Sector
3. Registered farmer

The following list outlines the roles and responsibilities of the Project Manager:

1. Manages project planning activities
2. Prepares the Project Management Plan
3. Participates in project planning activities
4. Manages, reviews, and prioritizes work plans in order to stay within the resources assigned
5. Accountable to relevant stakeholders
6. Manages overall project team
7. Monitors compliance
8. Manages change orders and initiatives
9. Engages in risk management
10. Fulfills resource requirements
11. Motivates project team to perform optimally
12. Assigns relevant resources for project success
13. Reviews deliverables
14. Has overall responsibility of the project
15. Responsible for project procurement
16. Approves and communicates approved project supplies

Assistant Project Manager – Quality Control & Quality Assurance Manager

1. Develops and implements project quality management systems and procedures
2. Prepares the project quality management plan
3. Develops the process improvement plan
4. Communicates relevant project quality plans to relevant stakeholders
5. Monitors the effectiveness of established quality management systems and recommends improvements
6. Implements improvements in project quality as required
7. Performs routine project quality audits
8. Directs and manages all quality related processes. E.g. Inspections, tests, audits, approvals, etc.

9. Verifies work packages and deliverables are within requirements and resources
10. Maintains project quality documentation
11. Chairs QA and QC meetings with relevant stakeholders
12. Reviews human resource qualifications and performance; recommending training if needed
13. Monitors and controls events where remedial actions is needed
14. Coordinates all quality related communication with project team and sub-contractors
15. Supervises operations of the project
16. Archives project operations and progress
17. Supervises activities of subsidiary staff
18. Accountable to Project Manager
19. Establishes and maintains best practices
20. Contributes to change control measures
21. Ensures compliance
22. Communicates approved supplies to relevant stakeholders
23. Communicates approved changes to relevant stakeholders
24. Verifies the need for requested supplies and materials

QC inspector – Onsite & Offsite

1. Verifies quality of items received
2. Verifies quality of services provided by project team and sub-contractors
3. Inspect stages and processes during project timeline
4. Maintains documentation of work carried out
5. Identifies risks that may impact quality performance

3.9 Project Risk Management

Project Risks

I. Price increases
II. Tools, equipment, and supplies damaged on project site
III. Tools, equipment, and supplies stolen from project site
IV. Accidents on project site
V. Additional resources needed
VI. Disagreement between investors
VII. Investors unauthorized involvement in operations
VIII. Adverse weather conditions
IX. Disease
X. Praedial larceny
XI. Delay of supplies
XII. Non-compliance/ contract breach

When risks are identified, a two dimensional matrix is used to evaluate them using a qualitative rating of the likeliness of the risk occurring and the consequences of the risk. The risks are then analyzed through the combination of the risk consequences with its likelihood to produce a level of risk.

This graphical representation of risk analysis provides a fair illustration of how serious certain risks are and where risks ranks in the overall grouping of risks.

The assessing of potential risks provide critical information in determining risk response.

The following are a series of charts that offer responses to the inevitability of risks in the DFPI project.

Chart 17: Likelihood of risks

(Source: W. McIntyre, the Author, 2018)

Level	Descriptor	Description
A	Almost certain	Almost certain
B	Likely	Will probably occur
C	Moderate	Should occur
D	Unlikely	Could occur
E	Rare	May occur
F	Never	May not occur

Chart 18: Consequence of Risks

(Source: W. McIntyre, the Author, 2018)

Level	Descriptor	Description
1	Insignificant	No injuries Low financial loss
2	Minor	First Aid treatment Medium financial loss
3	Moderate	Medical treatment required High financial loss
4	Major	Extensive injuries Major financial loss
5	Catastrophic	Death Huge financial loss

Chart 19: Comparison of Risks

(Source: W. McIntyre, the Author, 2018)

Likelihood	Consequences				
	1	2	3	4	5
A	S	S	H	H	H
B	M	S	S	H	H
C	L	M	S	H	H
D	L	L	M	S	H
E	L	L	M	S	S

Legend:

H: High Risk – Managerial resources needed at senior level

S: Significant Risk – Senior management attention needed

M: Moderate Risk – Specify management responsibility

L: Low Risk – Manage by routine procedure

Chart 20: Risk Response Plan

(Source: W. McIntyre, the Author, 2018)

Risk ID	Risk Description	Consequences	Date	Likelihood	Consequence Rating	Likelihood Rating	Level of Risk	Risk Priority	Response
1A	Falling tree	Work stoppage Legal action	2/5/2018	Unlikely	3	D	Medium	1	

Compiled by: _____ Date: _____

Reviewed by: _____ Date: _____

Function / Activity: _____

Chart 21: Risk Treatment Schedule Plan

(Source: W. McIntyre, the Author, 2018)

Risk ID	Risk	Mitigation options	Preferred options	Risk Rating before risk mitigation	Risk Rating after risk mitigation	Cost/Benefit analysis (A: accept/ B: reject)	Party responsible	Timeline	How risk will be monitored
1A	Falling tree	(1) Do not cut the large trees (2) First aid training (3) Safety gear mandatory	2 & 4	3 + D = M	3 + E = L	A	George – Assistant Project Manager	Immediate and when needed arises	Project manager will ensure all safety procedures and rules are followed.

Compiled by: _____ Date: _____

Reviewed by: _____ Date: _____

Function / Activity: _____

Chart 22: Risk Action Plan

(Source: W. McIntyre, the Author, 2018)

DFPI Risk Action Plan	
Risk ID	1A
Risk	Tree collapse on laborer
Summary (Recommended response & Impact)	To ensure the subcontracted chainsaw operator completes a thorough check, submits it to the APM, and propose a way to fell the tress with minimum risk of injury.
Proposed Action	● Contact chainsaw subcontractor and request that the report be submitted to the APM before any work begins. ● Develop a procedure for felling the trees in the event of high winds
Resource Requirements	● Telephone ● Hard copy of letter
Responsibilities	The responsibility resides in the hands of the PM
Timing	● Report must be approved prior to commencement of work
Reporting/Monitoring	● PM to remind contracted labor of requested report within one (1) week of planned commencement of work

Quantitative Risk Analysis summary

I. Price increases
   a. Description: Increase in prices of tools, supplies, and materials as the project advances
   b. Prevention Strategy: Procurement contracts must be fixed. Apportion a percentage for extra costs
   c. Probable cause: Inflation
   d. Risk Response: Avoid/ mitigate
   e. Contingency plan: Dialogue with suppliers. Renegotiate contract
   f. Trigger events: Increase in purchase price of resources
   g. Risk Matrix

II. Tools, equipment, and supplies damaged on project site
   a. Description: Resources damaged once accepted by the project
   b. Prevention Strategy: Ensure the proper storage of procured resources in the best way possible. Ensure the responsible use of the resources.
   c. Probable cause: Improper storage, adverse weather conditions, human error
   d. Risk Response: Avoid, mitigate, transfer
   e. Contingency plan: Reserve of finances
   f. Trigger events: Physical injuries, waste of material, and unplanned purchase
   g. Risk Matrix

III. Tools, equipment, and supplies stolen from project site
   a. Description: Resources stolen once accepted by the project
   b. Prevention Strategy: Ensure the proper storage of procured resources in the best way possible. Ensure the responsible use and storing of resources.

c. Probable cause: Theft by member of project team. Theft by someone outside of project team
d. Risk Response: Avoid, mitigate.
e. Contingency plan: Reserve of finances
f. Trigger events: Missing resources
g. Risk Matrix

IV. Accidents on project site
a. Description: Incidents that occur that result in bodily harm
b. Prevention Strategy: Contract experienced and responsible workers.
c. Probable cause: Negligence. Human error
d. Risk Response: Avoid. mitigate
e. Contingency plan:
f. Trigger events: Increase in purchase price of resources
g. Risk Matrix

V. Additional resources needed
a. Description: Increase in prices of tools, supplies, and materials as the project advances
b. Prevention Strategy: Procurement contracts must be fixed. Apportion a percentage for extra costs
c. Probable cause: Inflation. Change a source of resources
d. Risk Response: Avoid/ mitigate
e. Contingency plan: Dialogue with suppliers. Renegotiate contract
f. Trigger events: Increase in purchase price of resources
g. Risk Matrix

VI. Disagreement between investors
a. Description: Disagreements among management team members
b. Prevention Strategy: Effective communication
c. Probable cause: Differences of opinion.

d. Risk Response: Avoid/ mitigate
e. Contingency plan: Objective communication and analysis
f. Trigger events: Unresolved issues creating contentious discussions
g. Risk Matrix

VII. Investors unauthorized involvement in operations

a. Description: Investors making unauthorized decisions within operations
b. Prevention Strategy: Clearly outline the need for adherence to the chain of command. Allow investors to be aware of the consequences of their actions.
c. Probable cause: Ineffective stakeholder management
d. Risk Response: Avoid/ mitigate
e. Contingency plan: Enforce agreed upon disciplinary action
f. Trigger events: Investors directly communicating with lower level employees and giving unauthorized directives.
g. Risk Matrix

VIII. Adverse weather conditions

a. Description: Extreme drought and persistent rain
b. Prevention Strategy: No prevention strategy possible; The risk will be accepted and mitigated
c. Probable cause: Acts of God
d. Risk Response: Mitigate. Apportion funds for rework of work packages
e. Contingency plan: Rework of affected work packages
f. Trigger events: Weather reports from established sources
g. Risk Matrix

IX. Disease

a. Description: Pests and diseases affecting the new and mature plants

b. Prevention Strategy: Training of workers to spot pests and diseases early. Use of environmentally friendly pest control techniques.
c. Probable cause: Acts of God
d. Risk Response: Avoid/ mitigate. Apportion funding for correction action
e. Contingency plan: Destroy/ prune affected trees and replant new ones
f. Trigger events: Identification of harmful pests
g. Risk Matrix

X. Praedial larceny

a. Description: Stealing of crops on the farm
b. Prevention Strategy: Security. Regular, unplanned visits to the farm.
c. Probable cause: Criminal activity
d. Risk Response: Avoid/ mitigate
e. Contingency plan: Installation of cameras
f. Trigger events: Increase in stolen crops
g. Risk Matrix

XI. Delay of supplies

a. Description: Delay in availability of tools, supplies, and materials as the project advances
b. Prevention Strategy: Outline consequences for delays within the contractual arrangements
c. Probable cause: Oversight on part of supplier.
d. Risk Response: Avoid/ mitigate – acquire the resources at least five days before the work is due to begin
e. Contingency plan: Dialogue with suppliers. Add lead to work packages
f. Trigger events: Missed delivery time
g. Risk Matrix

XII. Non-compliance/ contract breach

a. Description: Contractor performance inconsistent with what is required
b. Prevention Strategy: Clearly outline the requirements of contractor. Acquire labor that is reliable and reputable
c. Probable cause: Underestimation of resources needed
d. Risk Response: Avoid/ mitigate -
e. Contingency plan: Objective dialogue with contractor. Acquire new contractor
f. Trigger events: Information indicating the contractor is falling short of what is required
g. Risk Matrix

3.10 Project Procurement Management

Introduction

The Project Procurement Management Plan (PPP) outlines the framework for procurement over the course of the project. This guide will be updated as the needs of the project are acquired and/or change over time. The PPP confirms the importance of coordination of procurement activities, the establishment and adherence to contract deliverables, and the matrices in measuring procurement activities.

The Plan illustrates:

1. Contract types
2. Procurement management risks
3. Procurement risk mitigation
4. Cost estimation
5. Standardized procurement templates and documents
6. Supplier management
7. Contract approval
8. Decision criteria
9. Contract deliverables and deadlines
10. Coordination of procurement and contracts
11. Constraints pertaining to procurement
12. Direction to sellers on baseline requirements such as contract schedules and work breakdown structures (WBS)
13. Vendor Management
14. Performance matrices

Procurement Management Approach

The project management is solely responsible for project oversight, which includes all project procurement activities. The Assistant PM can be delegated responsibility, if directed by the PM. The PM will work with relevant stakeholders to

identify all resources needed for successful project completion. The procurement listing will be submitted to the management committee at the weekly management meeting. At this point, the management team will review the requests and decide on the way forward.

In the event that resources are needed promptly, the PM has the discretion to acquire the items and ultimately report in a timely manner to the management committee.

Purchases can only be authorized by:

I. Wayne McIntyre - Project Manager
II. George Andrew – Assistant Project Manager
III. Andy Smart – Project Accountant

Procurement Definition

The following is a listing of items and services that are to be procured for the completion of the project. The table consists of the names of the items and services, the justification for their acquisition, and the deadline for acquiring them.

Chart 23: Items and services listing

(Source: W. McIntyre, the Author, 2018)

Resources needed	Justification	Deadline
Fertilizer	Fertilization of the young plants	November 1, 2018
First Aid kit	Treatment of injury	August 1, 2018
Cellphones	To facilitate communication	August 1, 2018
Farmer IDs	Required by law	August 1, 2018
Produce crates	Tools needed on project	September 20, 2018
Cutlasses and files	Tools needed on project	September 20, 2018

Stationary	Administrative purposes	August 1, 2018
Young Plants	Investment in additional crops	November 1, 2018

Types of Contracts to be used

All resources to be procured for this project will be solicited under Fixed-Priced Contracts (FPC). The Project Manager will work together with the PMT and other relevant stakeholders to define what resources are needed, why they are needed, how they will be acquired, when they will be acquired, and the timeline they will be used. The Project Manager will solicit bids from various vendors, and shop prices from various retailers, before the information gathered is brought to the PMT for selection and decision making.

Details of the contracts will be decided by the PMT. The initiation of the process to procure all the resources will commence on June 1, 2018. Initial project research and stakeholder communication will be made before the August 1 project commencement date. Potential human resource personnel are informed, and application forms for sub-contracts are dispersed from the June 1 date, and consideration is given to applicants, shortlisting occurs, and submissions for final review and decisions are made by September 21. The project manager is responsible for procurement of information before the August 1 commencement date, and also throughout the timeline of the project.

Procurement Risks and Risk Management

Procurement risk is inevitable. The PMT is responsible for the risk management of procurement activities throughout the project. All risks are management in accordance to the Risk Management Plan, but there are risks directly within the scope of project procurement that must be highlighted and examined. They are as follows:

I. Subcontractor schedule and cost expectations
II. Vendor schedule and cost expectations
III. Reliability of supplies from vendors

IV. Reliability of labor from subcontractors
V. Reliability of quality work form subcontractors
VI. Contractual conflicts
VII. Delays in delivery of resources – supplies
VIII. Reputation of the vendor and subcontractor
IX. Risk that required specifications are not met

The industry standard risk management process of identifying, documenting, analyzing, mitigating, and managing risks will be used by the Project Management Team.

Cost Determination

For this project, costs will be determined from the feedback collected from the responses on three forms: the Request For Quote (RFQ) form, the Request For Proposal (RFP) form, and the Request For Bid (RFB) form. The RFQ information will be solicited from vendors and contractors with which the management team is familiar. The RFP and RFB information will be solicited from contractors who are less known, but are reputable enough to be considered.

Bidders submit responses detailing the goods and services available upon request. The costs submitted will influence the selections, but other factors also contribute to cost determination. The lowest bid will be considered first, but no cost and prices are to be taken in isolation. Cost can reflect a great deal – especially if active bidding is in play – or it can mean compromised quality. The PMT has to be shrewd and aware of this. They must select in accordance with best value by engaging in purposeful negotiations, when needed since quality is the primary consideration.

Procurement Constraints

The constraints of the PMP will be included in the RFP. These constraints will be communicated to all potential vendors and contractors so the PMT is able to make

an informed decision regarding these potential partners ability to fulfill their obligations.

The procurement constraints apply to several areas including: schedule, cost, scope, resources, and technology.

Schedule

The schedule of the project has no room for flexibility. Therefore, contractors and vendors must appreciate that overall procurement activities including: contract administration and contract fulfillment must be completed within the established schedule timeline.

Cost

The contingencies and reserves included in the project budget are not for procurement activities. Any reserves available are to be used exclusively in the event of PMT approved changes to project scope.

Scope

All procurement activities and approved contracts must be consistent with and support the overall project scope statement.

Resources

All procurement activities are to be performed and managed with current personnel. Any additional personnel hired to support the procurement activities of the project must have approval.

Technology

Tools and equipment have already been determined and will be included in the RFQ. Despite the proposals having alternative equipment and work processes, equipment specifications must match those outlined in the RFP.

Contract Approval Process

The first step in this process involves deciding what goods and services will require procurement from external suppliers. The listing is finalized by the PMT through the

analysis of costs associated with the items and services needed – price comparisons, deals, etc.

The second step involves soliciting suppliers and vendors. The project solicits bids from contractors, and prices from suppliers.

The third occurs when the PMT analyses the returned proposals/information. A comprehensive review is undertaken to see which proposal fits within the scope of the project.

Purchases less than $1,000 does not require the approval of the PMT. Purchases in excess of $1,000 requires the approval of the PMT.

Decision Criteria

The conditions for the selection and awarding of procurement contracts will be based on the following:

I. The ability of the vendor or subcontractor to deliver as required
II. Quality of products and services
III. Cost of products and services
IV. Comparison of externally sources resources versus internally sourced supplies
V. Past performances/ reputation

These criteria will be measured and reviewed by the Project Management Team. The decision will be based on the above criteria and available resources.

Vendor Management

The management of vendors is the responsibility of the PM. In order to be consistent with regards to delivery and quality, weekly meetings will be held with vendors and contractors to discuss progress and performance. These performance appraisals sessions are not limited to once a week; they are slated for once a week, but can occur as the need arises at the discretion of the PM. These meetings also serve to allow contractors and suppliers to communicate proposed

changes to the arrangement by which both parties are bound; in addition to addressing concerns that may lead to delays in delivery and schedule.

Performance Review

The following is a performance review outline for contracted suppliers of material and labor on the project. This document is confidential and only the PMT is privy to it.

<table>
<tr><td>Project</td><td>Date</td></tr>
<tr><td>Diamond Farms Permaculture Initiative</td><td></td></tr>
<tr><td>Supplier/Sub-contractor name & address</td><td>Ref. no.</td></tr>
<tr><td rowspan="5">[Name]

[Address]
[City]

[Contact/person in charge]</td><td>[Ref. no.]</td></tr>
<tr><td>Project manager</td></tr>
<tr><td>[designation.]</td></tr>
<tr><td>Order or contract no.</td></tr>
<tr><td>[Contract no.]</td></tr>
<tr><td colspan="2">Subject of the order or contract</td><td>total points given (%)</td></tr>
<tr><td colspan="2">[Supplier’/sub-contractor’s scope]</td><td>0%</td></tr>
<tr><td colspan="2">Summary</td><td>sub-total points given</td></tr>
<tr><td colspan="2">Health, Safety and Environment</td><td>0 / 25</td></tr>
<tr><td colspan="3">[Click here to enter text.]</td></tr>
<tr><td colspan="2">Summary</td><td>sub-total points given</td></tr>
<tr><td colspan="2">Quality</td><td>0 / 25</td></tr>
</table>

[Click here to enter text.]	
Summary	sub-total points given
Performance	0 / 25
[Click here to enter text.]	
Summary	sub-total points given

Area of evaluation	Contributor
Administration	*[Click here to enter name]*
Elements to consider	Grade (grade 5 & 1 require further explanation)
Financial aspects	5 = ☐ (excellent) 4 = ☐ (good) 3 = ☐ (average) 2 = ☐ (below average) 1 = ☐ (insufficient)
[Click here to enter text.]	
Knowledge of contract and associated documents	5 = ☐ (excellent)

[Click here to enter text.]	4 = ☐ (good) 3 = ☐ (average) 2 = ☐ (below average) 1 = ☐ (insufficient)
Documentation including reports, records, status updates etc. …	5 = ☐ (excellent) 4 = ☐ (good) 3 = ☐ (average) 2 = ☐ (below average) 1 = ☐ (insufficient)
[Click here to enter text.]	
Correspondence and adherence to communication channels	5 = ☐ (excellent) 4 = ☐ (good) 3 = ☐ (average) 2 = ☐ (below average) 1 = ☐ (insufficient)
[Click here to enter text.]	
Response to changing site conditions (SIs etc.)	5 = ☐ (excellent) 4 = ☐ (good) 3 = ☐ (average) 2 ☐ (below average) 1 = ☐ (insufficient)
[Click here to enter text.]	
sub-total:	*0* / 25

Overall satisfaction	
Would you generally recommend working with this supplier/sub-contractor in the future again?	A ☐ (yes, without limitations) B ☐ (depends – requires explanation below) C ☐ (no)
Comments	

Project Manager: _____

Reviewed by:_____

Authorized by:_____

Figure 1-10: Performance Review (Source: M, Arnecke, 2018)

Request For Quotation

The following is an outline of the quotation request form for contracted suppliers of material and labor on the project. This document is confidential and only the PMT is privy to it.

<table>
<tr><td>Project Name</td><td>[Project Name]</td><td colspan="4" rowspan="2">Request For a Quotation (RFQ)</td></tr>
<tr><td>Phase</td><td>[Phase]</td></tr>
<tr><td>Client</td><td>[Client]</td><td>Proj. Mngr.</td><td>[PM]</td><td rowspan="2">Date of RFQ</td><td rowspan="2">[Click here to enter a date].</td></tr>
<tr><td>Client’s Rep.</td><td>[Client’s Representative]</td><td></td><td></td></tr>
<tr><td>Contractor</td><td>[Contractor]</td><td>Requester</td><td colspan="3">WAYNE MCINTYRE</td></tr>
<tr><td>Sub-Contract.</td><td>[Sub-contractor]</td><td>RFQ No.</td><td colspan="3">[Click here to enter no.]</td></tr>
<tr><td colspan="6">This form shall be filled for all services or products acquired by DFPI from external sources.</td></tr>
<tr><td>RFQ Closing Date</td><td>Click here to enter a date.</td><td>Contact for Techn. Queries</td><td colspan="3"></td></tr>
<tr><td>Expected Delivery Start</td><td>Click here to enter a date.</td><td>Contact for Comm. Queries</td><td colspan="3"></td></tr>
</table>

Expected Delivery End	Click here to enter a date.		
Delivery Address			
Goods or Service Description / Scope of Works			
Requester Signature		Date	

Figure 1-11: Request For Quotation (RFQ). (Source: M, Arnecke, 2018)

RFQ Terms and Conditions

1. Supplier's response to this RFQ must be sent to [Company] via letter or E-mail to the attention of the requester, as specified above.
2. Any quantity specified above is provided as a best estimate only. [Company] reserves the right to order the quantity that it requires.
3. Prices shall be quoted in Eastern Caribbean Dollars (XCD).
4. Terms of payment shall be within 30 days from the receipt of the supplier's invoice by [Company] accounts department.

5. Supplier's quotation shall be valid for sixty (60) days from the date of supplier's submission.
6. Price may or may not be the determining factor in supplier selection process. The award may be made to the supplier(s) whose quotation(s) is (are) determined to be of highest value in terms of quality and price.
7. [Company] reserves the right to request the supplier(s) to demonstrate that adequate skills, equipment and resources are available for performance of the services.
8. [Company] reserves the right to request any additional information that it deems necessary in order to make a decision on any quotation.
9. [Company] reserves the right to reject any or all quotation(s) after evaluation. Rejection of all quotations will mean that [Company], in its own best interest at this time, has determined not to pursue the acquisition.
10. Supplier(s)/Sub-contractor(s) who submits a quotation to [Company] in response to this RFQ must be licensed and certified as required by the laws of XXX.
11. Any quotation not supported by the information requested in the RFQ, or not complying with the RFQ requirements, may not be considered.

Requisition Order

The following is a requisition order outline for contracted suppliers of material and labor on the project. This document is confidential and only the PMT is privy to it.

Project details		
[Project Name]	**Date:**	*[dd/mm/yyyy]*
	Requisition #:	*[ref. no.]*
	WBS ID:	*[WP123abc]*
[Sub-Project, Phase, etc.]	**Requisitioner:**	*[your full name]*

	Contact details: *[your phone & email]*		
Item		**U**	**QTY**
[description of material, service, scope]		*[m,*	*[1,234]*

Specifications: (techn. details)

[provide as much details such as dimensions, capacities etc., continue on separate page if necessary and attach dwgs. etc. if available]

Requirements: (grade of quality)

[describe as detailed as possible the required grade of quality such as finishings

etc., continue on separate page if necessary]	
Expectations:	
Preferred/approved supplier: *[ABC Supply Co.]*	**earliest delivery** *[dd/mm/yyyy]*
Place of delivery: *[project site]*	**latest delivery** *[dd/mm/yyyy]*
Remarks:	
Attachment: (drawings, data sheets, etc.)	
1 *[dwg. Number…]*	**4**
2	**5**

3	**(	
Approval & Registration:		
Prepared by:	**Reviewed by:**	**Approved by:**
Name: *[your full name]*	**Name:** *[QA/QC]*	**Name:** *[Project Mngr.]*
Date: *[dd/mm/yyyy]*	**Date:**	**Date:**
Sign:	**Sign:**	**Sign:**
Document control:		
Rcvd.:	**Reg.:**	**Subm.:**
Distribution: Original R/O - procurement dept., 1 copy - requisitioner, 1 copy - warehouse mngr., 1 copy - document control		

Requisition Order

Figure 1-12: Requisition Order. (Source: M, Arnecke, 2018)

Note. Project Procurement template, by Marc Arnecke, retrieved from http://project-management.magt.biz/free-templates/

3.11 Project Communication Management

For the use of this document and project, Communication will be defined as the meaningful exchange on project related information between stakeholders within the project scope. The information may be vertical, horizontal, formal or informal. It will encompass an exchange of ideas, concepts, requirements, directives, etc.

The effective communication of information is the responsibility of the sender. This means the sender has to ensure the receiver acquires the information in a complete and timely manner. There must be virtually no chance of misunderstanding and miscommunication.

Persons involved in the sending and receiving of any form of communication are advised to take proactive measures to ensure efficient and effective communication.

Communication Standards and Modes

Standards

Effective communication will be upheld with the use of formal documentation processes. The Project Manager will be responsible for documentation of all internal to external and internal to internal communication.

In the event of formal communication being needed, documentation must be official and properly documented; with dates, times, subject matter, source, and recipient information noted.

All documents, plans or whatsoever must have a unique reference number. Multi-page documents, must have the number on each page on the header or footer.

All documents shall be signed and stamped by the authorized person.

Modes

1. Face to face: Meetings
2. Electronically: Skype, WhatsApp, E-Mail, Conference calls, etc.

In the event that the above modes of communication are unsuitable, the use of common/informal communication methods are advised. These must only be used in exceptional cases. This communication must not serve as a replacement for formal exchange or dissemination of information. Therefore, all communication affecting the scope or major objectives of the project must be transmitted subsequently in a timely manner.

Flow of Formal Communication

Dissemination of formal information, with implication aspects of the project including scope, time, cost, and quality must be through approved fixed lines of communication.

Internal

Within the company, information shall be circulated from department heads to department heads and registered by document controller if appropriate.

Internal communication of information shall be formal or informal – depending on the situation. As much as possible, communication is to remain formal and urgent issues, and those with significant scope, will be communicated formally. Overall discretion is advised with respect to internal communication.

The Project Manager is to be privy to all communication involving the project.

External Communication

All outgoing communication to external stakeholders will be of a formal nature. Whether it be electronic or hard copy, communicating with external stakeholders has to be of a formal nature. Documentation of the details of the communication is also vital.

Formal Communication

Submissions

Communication to the Project Manager by stakeholders, including the Assistant Project Manager, other investors and relevant stakeholders, must be done formally. Informal communication can occur if convenient or is best suited at the time, but a subsequent submission must be done for reasons of accountability. Submissions can include, but are not limited to, the following:

1. Reports
2. Change requests
3. Expert advice and recommendations
4. Directives
5. Change approvals/orders
6. Quotations
7. Invoices

Transmissions

Communication by the Project Manager to stakeholders, including the Assistant Project Manager, investors, and relevant stakeholders, must be done formally. Informal communication can occur if convenient or is best suited at the time, but a subsequent submission must be done for reasons of accountability. Transmissions can include, but are not limited to, the following documents:

1. Letters
2. Meeting Minutes
3. Quotations
4. Approvals
5. Schedules
6. Illustrations, designs, diagrams, etc.
7. Invoices, claims, etc.
8. Reports
9. Change orders/orders
10. Requests

Informal Communication

Meetings

A meeting will be considered a gathering of at least two persons with the expressed intent to discuss and conclude on a specified issue. They may be face to face or may be undertaken with the use of various communication platforms including: Cellular phones apps, Skype, or traditional telephone use.

Meetings will be held every Wednesday, on the completion of a Work Package, or upon the request of the Project Manager. Requests for meetings will be communicated no less than two days in advance. In the event of there being a need for an emergency meeting, the chairperson of the meeting will directly communicate to the participants, disclosing the urgency of the meet.

All agenda items will be outlined with the initial communication. Also communicated will be date, time, venue, and all participants attending – including the Chairperson. The first topic of the meeting will be a follow-up of the topics discussed at the last meeting, and the action plan executed since then.

Minutes from the meetings shall be distributed to all invited parties within 24 hours after the adjournment of the meeting. It will include any clarification formally submitted to the Project Manager within 24 hours of receipt of the minutes.

All participants will attend meetings prepared for meaningful and objective discussions.

Meeting minutes are a summary/record of the meeting and at least comprise of the date and duration of the meeting, the venue, a list of participants, the topics (item by item) along with actions to be taken, the owner of that action item and the schedule.

Meeting minutes shall be distributed to the meeting participants within 48 working hours after the meeting is finished. Any clarifications or comments must be transmitted to the chairperson, within 48 hours.

The following chart illustrates the DFPI meeting schedule.

Chart 24: Meeting Schedule

(Source: W. McIntyre, the Author, 2018)

	Type of meeting	**Chaired by** (name & role or designation)	**Frequency**	**Attendees**
01	Pre-commencement Meeting	Project Manager	Once, Upon finalization of Charter	- Project Investors - Project Manager - Subcontracted Labour - Relevant Stakeholders
02	Project Team Meeting	Project manager	Weekly, As needed	- Project team - Contracted Labour
04	Project Status Meeting	Project manager	Weekly, As needed	- Project Investors - Key stakeholders - Project team
05	Quality Meeting	Quality manager	Weekly, As needed	- Project team/part thereof, - Relevant Stakeholders

Reports

Reports are formal communications that are to be prepared, registered, and communicated to the relevant stakeholders of the DFPI. The frequency of report transmission and nature of information depend on the category of stakeholder – level of influence.

Hard copies and electronic copies of reports are to be maintained. Every report will be labelled with a number and corresponding name. Each hard copy and soft copy identified as the same, must therefore mirror each other when in storage. The content must be the same.

The following represents a log for report filings

ID #	Type of report	Responsible communicator	Communication method	Frequency
1	Weekly Report	Project Manager	Electronic & Hard Copy	Weekly

Figure 1-13: Report filing log outline (Source: W. McIntyre, the Author, 2018)

The following chart illustrates the DFPI communication matrix.

Chart 25: DFPI Communication Matrix (Source: W. McIntyre, the Author, 2018).

Communication Type	Deliverable	Target Audience	Medium of communication	Frequency of communication	Producer/ Communicator
Personal Communication	Project Updates	Relevant Stakeholders	Phone calls, meetings, e-mails, personal communication	As needed	Project Manager, Assistant Project Manager
Reports	Project status reports, incident reports, quality audits, etc.	Relevant Stakeholders	Phone calls, meetings, e-mails, personal communication	As needed	Project Manager, Assistant Project Manager
Meetings	Consultations, project team meetings, project status meetings	Relevant Stakeholders	Progress meetings, planning meetings	Monthly, as needed	Project Manager, Assistant Project Manager
Project Announcements	Project updates, change request/orders, etc.	Relevant Stakeholders	Phone calls, meetings, e-mails, personal communication	As needed	Project Manager, Assistant Project Manager
Presentations	Project forecast, financial position, project review	Relevant Stakeholders	Meetings	Monthly, as needed	Project Manager, Assistant Project Manager

4. CONCLUSIONS

The realization of returns on investment in the DFPI is difficult in the absence of a clearly defined project plan (process and methodology). The investors cannot influence the sort of changes needed on the project, if adequate planning and execution is only planned and executed at the management level, and said decisions are executed along the project timeline. This is why the promoting project management principles to the forefront of this DFPI is imperative.

The stakeholder management plan is important since it ensures that any person or group that can influence the project or can be affected by the project is identified and engaged in a way that contributes to the fulfillment of the project objectives. This plan is not a static document and is open for adjustments throughout the life of the project. Stakeholders are identified, assessed, categorized, and levels and methods of engagements are implemented to manage stakeholders. DFPI considers stakeholder engagements as very important to its success.

To illustrate the scope of the project, the scope management plan is created to define project objectives. It is an area where sustainable project objectives can be injected into the overall project objectives through the sensitization of stakeholders. Overall responsible land management is the hallmark of DFPI, and the current project will have to undergo an entire revamping of its operations to realize the land has in store; hence the scope management plan. This plan is key since it affords key stakeholders privy to the project details as project requirements are defined.

Schedule Management is another subsection in the project plan which deals with management of the time resource of the project. This subsection ensured activities are sequenced adequately, therefore maintaining the chances of project success within the time allotted. The DFPI will seek to ensure that the project processes are planned and adequately timed to decrease chances of waste and inefficiencies.

Specific objective number five indicates the creation of the cost management plan. This plan seeks to guide the cost management performance of the project, and documents relevant information. To achieve this, the finances of the project will be managed by qualified stakeholders in a transparent and accountable manner.

Quality management sees the incorporation of sustainable principles into the planning and execution of the project. As costly as it may be, without quality management, a project will suffer greatly since its outcome is compromised; either in the short, medium, or long term. Use of resources for this subsection should be seen more as an investment, and not as an expense. As the output of the sixth specific objective, the quality management plan illustrates: quality control and quality assurance requirements, in addition to other quality audit directives to ensure quality is incorporated into the project process and end results.

The seventh specific objective is the human resource management outline. This plan sets specific requirements of how the human resource element of the project is to be handled. This plan illustrates the effective ways to treat with the important human resource element of the project, through: staff acquisition guidelines, staff development, performance review formats, and roles and responsibilities. Also included is the organizational structure of DFPI and the RACI matrix of DFPI.

The risk management plan allows for the consideration of a broad range of risks to be considered and mitigated. All identified risks have a degree of probability of occurring, which can have an impact on the project. The apparent severity of the impact of the risks will determine the response strategies employed.

The ninth specific objective speaks to the procurement management plan. This plan outlines the procurement framework; which includes all procurement activities. It will serve as a guide for the management of procurement activities throughout the lifetimes of the project since the timely acquisition of quality resources is imperative to the success of DFPI. As with all other plans, this plan isn't a static document, but will be updated by the management team of DFPI.

The tenth specific objective is the creation of the communication management plan. Communication with stakeholders is imperative to the success of any project, and for this reason the DFPI created this plan to ensure the right information is communicated to the right people within the right time period to yield the right results. To facilitate this, the plan includes a number of elements including: communication standard and modes, requirements, and responsibilities of all parties involved.

From direct and indirect interaction and communication with stakeholders within the Agriculture sector, this business venture is poised for success. From research primarily done in collaboration with two major supermarkets, interaction was made with suppliers of agriculture produce, in addition to being privy to demand and supply indicators made available by the supermarket management.

The analysis of the findings suggested that there is an increasing need for direct business minded investment in the Agriculture Sector in Grenada. The information more directly indicated that the demand for local organic produce (bananas, citruses, plantains, cocoa, nutmegs, avocadoes, etc.) is rapidly increasing and local supply is not able to keep up with demand.

All things considered, the creative process involved for the document formation confirms that there is a dire need for the socio-economic revitalization of the rural economy in Grenada. This project cannot be seen as purely a business venture, but a venture to realize a positive effect on the socio-economic aspect of underserved rural communities.

5. RECOMMENDATIONS

Following the completion of the project plan, the following recommendations are to be considered:

1. The DFPI needs to implement this project plan as outlined to realize the manifest function of the business venture.
2. The DFPI needs to safely store and maintain project progress documentation through journalizing and proper record keeping since this unique permaculture initiative can serve as a case study for other future investments.
3. DFPI should use planning processes and all developed templates created during the creation of the project management plan as a basis for implementing an approach for future use to commence a similar project.
4. The Government of Grenada needs to do more to encourage potential investors in the Agriculture Sector – especially young, business savvy persons. The local farming community has repeatedly voiced their displeasure with the apparent lack of concern the Government has in the sector. The sector is reportedly underserved and underinvested, despite Grenada having a food import bill that is approximately $400 million per year. With incentives, subsidies, grant financing and other such programs, the sector can grow to be a major revenue generator for the island.
5. The DFPI needs to entertain additional investor interests in other business ventures that can be incorporated into the DFPI operations. E.g. Apiculture, eco-tourism, heritage tourism, and agro-tourism.
6. The DFPI needs to treat this project plan as an evolving document and not as a finished product. Development and expansion is inevitable, considering: the large acreage of land, the diverse investment possibilities in permaculture, and the projected revenue stream forthcoming. For these reasons, the management team is advised to be forward thinking and relentlessly seek to maximize the investment potential of the farm.

7. DFPI should outsource their expertise to other interested parties/investments, therefore adding to the revenue stream for the business.

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APPENDICES

Appendix 1: FGP Charter

PROJECT CHARTER	
Date	**Project Name:**
August 1, 2018	Project plan for development of the Diamond Farms Permaculture Initiative (DFPI)
Knowledge Areas / Processes	**Application Area (Sector / Activity)**
Knowledge areas: Project Integration Management, Project Stakeholder Management, Project Scope Management, Project Schedule Management, Project Cost Management, Project Quality Management, Project Human Resource Management, Project Risk Management, Project Procurement Management, and Project Communication Management **Process groups:** Initiating, Planning, Executing, Monitoring and Controlling, and Closing	Permaculture

Start Date	**Finish Date**
August 1st, 2018	December 14th, 2018

Project Objectives (general and specific)

General Objective:

To develop a Project Management Plan that integrates project management principles outlined by the Project Management Institute to manage the Diamond Farms Permaculture Initiative (DFPI).

Specific Objectives:

1. To create a Project Charter for the DFPI project as the basis for an integrated management approach during the future implementation of the project
2. To create a stakeholder management plan which identifies all stakeholders and outlines the commitment to effective engagement of them all.
3. To create a scope management plan that outlines the scope of the project in order to realize the planned successful completion of the project.
4. To develop a schedule management plan to ensure the timely completion of the project through the development and management of a project schedule.
5. To create a cost management plan to outline the development and management of a project budget to ensure that the project is completed within the established budget.
6. To develop a quality management plan to outline the quality requirements in order to meet expectations within the scope of the project.
7. To develop a human resource management plan to identify and effectively manage the processes that lead the project team.
8. To create a risk management plan outlining ways to conduct risk management activities to minimize risks throughout the project life cycle.

9. To develop a procurement management plan for the outlining of procurement decisions that are necessary for the goods and services needed along the timeline of the project.
10. To create a communication management plan that outlines effective communication approaches within the project to the benefit of all stakeholders.

Project purpose or justification (merit and expected results)

This project seeks to develop a suitable project management plan for investment in permaculture in the rural area of Diamond, St. Mark. There is increasing demand for locally grown organic agriculture products, and DFPI intends to capitalize on this opportunity to realize return on investments.

The investment in this permaculture initiative primarily is to put the once productive agriculture land back under a sustainable and regenerative production path.

The benefits of this investment include: revenue generation, employment generation, and it will serve as a case study for additional investments within the sector with the feasibility study and data collection that will take place.

The entire project management team understands the need for a comprehensive plan. Therefore, the project manager is tasked with the responsibility to develop ten subsidiary plans that will be integrated to form the overall management plan for the DFPI.

Description of Product or Service to be generated by the Project – Project final deliverables

The DFPI project management plan intends to be a model permaculture investment plan. Upon completion of the project, DFPI will have accomplished:

- A plan that is readily available for implementation
- A plan that is a considered to be a well-crafted document that can be used as an objective feasibility study – for investment in eco-tourism and apiculture

To attain this, the project plan will include the following management plans: Project Integration Management, Project Stakeholder Management, Project Scope Management, Project Schedule Management, Project Cost Management, Project Quality Management, Project Human Resource Management, Project Risk Management, Project Procurement Management, and Project Communication Management.

Assumptions

- It is assumed that the project plan is able to be completed with all the established variables mentioned in the charter (time, budget, land space, stakeholders, etc) unadjusted by unforeseen developments, using expert judgment and acquiring data from valid sources.

Constraints

The creation of this project plan is constrained by the established timeline.

Preliminary risks

- Incorrect information from sources during research process
- Relevant information not being obtained in a timely manner

● Milestones not being completed within the established time. The project plan runs the risk of not being completed, or not being a properly done document ● Price changes - affecting the budget
Budget
This project manager is creating the management plan pro bono
Milestones and dates

Project Start	Aug 1 2018	Aug 1 2018
Project Charter	Aug 1 2018	Aug 3 2018
WBS	Aug 3 2018	Aug 8 2018
Chapter 1 : Introduction chapter	Aug 8 2018	Aug 15 2018
FGP Schedule	Aug 15 2018	Aug 23 2018
Chapter 2: Theoretical framework	Aug 23 2018	Aug 29 2018
Chapter 3 : Methodological framework	Aug 29 2018	Sept 4 2018
Executive Summary	Sept 4 2018	Sept 8 2018
Annexes – Bibliography, indexes	Sept 8 2018	Sept 16 2018
Signed Charter – Approval	Sept 16 2018	Sept 19 2018
Chap. 4: Development	Sept 19 2018	Nov 28 2018
a. Charter	Sept 19 2018	Sept 27 2018
b. Stakeholder Management plan	Sept 27 2018	Oct 2 2018
c. Scope Management plan	Oct 8 2018	Oct 14 2018
d. Schedule Management plan	Oct 14 2018	Oct 20 2018
e. Cost Management plan	Oct 20 2018	Oct 26 2018

f. Quality Management plan	Oct 26 2018	Oct 31 2018
g. HR Management plan	Oct 31 2018	Nov 5 2018
h. Risk Management plan	Nov 5 2018	Nov 11 2018
i. Procurement Management plan	Nov 11 2018	Nov 17 2018
j. Communication Management plan	Nov 17 2018	Nov 22 2018
k. Project Integration: Project Management Plan	Nov 22 2018	Nov 28 2018
Chap 5: Conclusions	Nov 28 2018	Dec 3 2018
Chap 6: Recommendations	Dec 3 2018	Dec 5 2018
Project plan submission for review	Dec 5 2018	Dec 6 2018
Adjustments	Dec 6 2018	Dec 9 2018
Second review	Dec 9 2018	Dec 11 2018
Completion of project plan	Dec 11 2018	Dec 14 2018

Relevant historical information

DFPI is a registered company in the state of Grenada that has been in operation since 2013. It is comprised of six persons – some landowners and others investors – engaged in incremental investment in permaculture across five acres of prime agricultural land once part of the prosperous Diamond estate. This initial investment saw the company realize steady returns from 2014 to present with an increased demand for organic produce and a reputation of the market for quality and reliability. For this reason, a decision was made to develop a project management plan to increase investment over another ten acres.

In the past, a number of persons have expressed interest in other parts of the said property to do short term farming, horticulture, apiculture, and exploit eco-tourism possibilities. For this reason, there are also forthcoming plans to invest in all four investment interests.

Stakeholders
Direct stakeholders: ● Wayne McIntyre – Project Manager / Land Owner ● Andy Sharper – Partner / Land Owner ● George Andrew – Partner / Land Owner ● Phillip Paul – Partner / Land Owner ● Maurice Joseph – Partner / Investor ● Anthony McIntyre – Partner / Investor Indirect stakeholders: ● Employees ● Customers ● Course Facilitator ● Academic Assistant ● Project Review Board ● Tutor

Project Manager:	**Signature:**
Authorized by:	**Signature:**

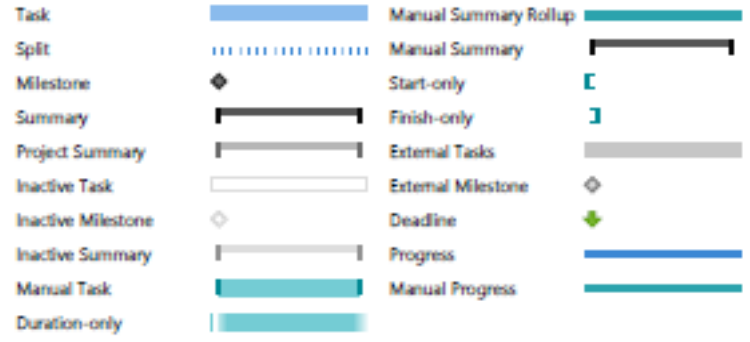
Appendix 2: FGP WBS

1. Project Start
1.1. Project Charter
1.2. WBS
1.3. Chapter 1 : Introduction chapter
1.4. FGP Schedule
1.5. Chapter 2: Theoretical framework
1.6. Chapter 3 : Methodological framework
1.7. Executive Summary
1.8. Annexes – Bibliography, indexes
1.9. Signed Charter – Approval
2. Chap. 4: Development (Results)
2.1. Charter
2.2. Stakeholder Management plan
2.3. Scope Management plan
2.4. Schedule Management plan
2.5. Cost Management plan
2.6. Quality Management plan
2.7. HR Management plan
2.8. Risk Management plan
2.9. Procurement Management plan
2.10. Communication Management plan
2.11. Project Integration: Project Management Plan
3. Chap 5: Conclusions
4. Chap 6: Recommendations
5. Project plan submission for review
6. Adjustments
7. Second review
8. Completion of project plan

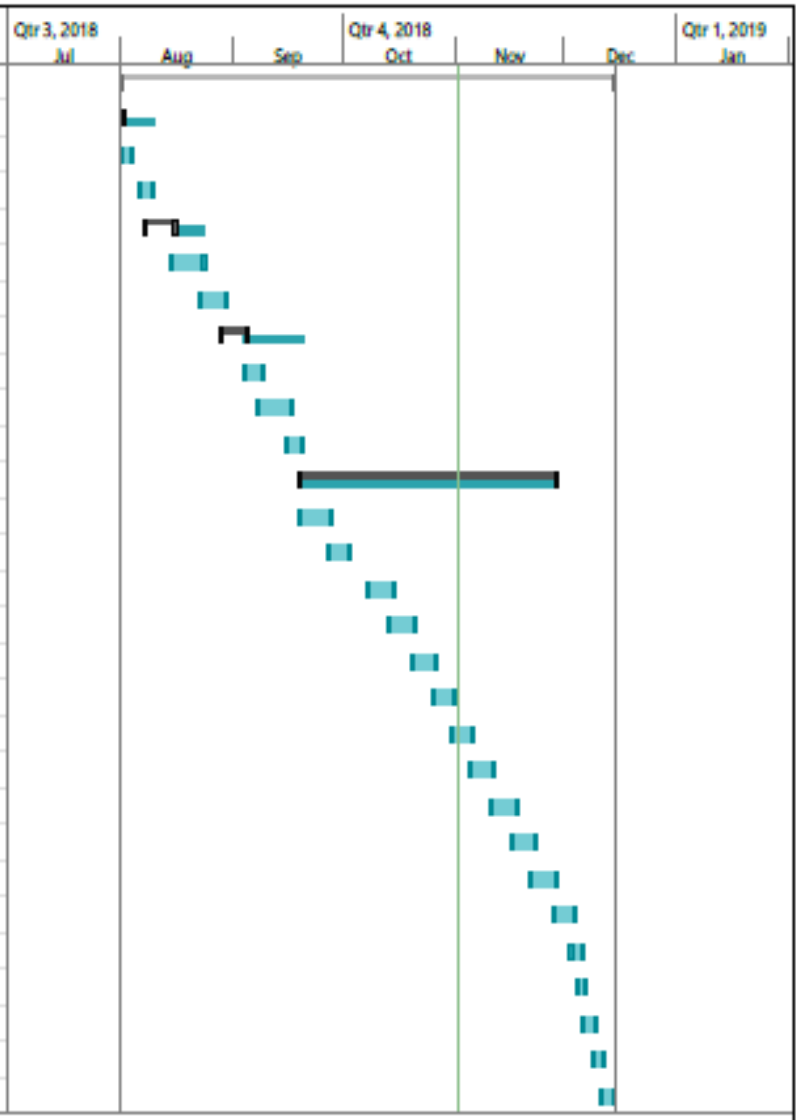
Appendix 3: FGP Schedule

ID	Task Mode	Task Name	Duration
0		**FGP PROJECT PLAN**	**98 days**
2		**Project Start**	**1 day**
3		1.1.Project Charter	3 days
4		1.2.WBS	4 days
5		**1.3.Chapter 1 : Introduction chapter**	**6 days**
6		1.4.FGP Schedule	7 days
7		**1.5.Chapter 2: Theoretical framework**	5 days
8		**1.6.Chapter 3 : Methodological framework**	**5 days**
9		1.7.Executive Summary	5 days
10		1.8.Annexes – Bibliography, indexes	7 days
11		1.9.Signed Charter – Approval	4 days
12		**2.Chap. 4: Development (Results)**	**51 days**
13		2.1. Charter	7 days
14		2.2. Stakeholder Management plan	4 days
15		2.3. Scope Management plan	6 days
16		2.4. Schedule Management plan	7 days
17		2.5. Cost Management plan	6 days
18		2.6. Quality Management plan	4 days
19		2.7. HR Management plan	4 days
20		2.8. Risk Management plan	6 days
21		2.9. Procurement Management plan	7 days
22		2.10. Communication Management plan	5 days
23		2.11. Project Integration: Project Management Plan	5 days
29		**3.Chap 5: Conclusions**	**4 days**
30		**4.Chap 6: Recommendations**	**3 days**
31		**5.Project plan submission for review**	**2 days**
32		**6.Adjustments**	**3 days**
33		**7.Second review**	**3 days**
34		**8.Completion of project plan**	**4 days**

Project: FGP PROJECT PLAN
Date: Sun 11/25/18



Start	Finish
Wed 8/1/18	**Fri 12/14/18**
Wed 8/1/18	**Wed 8/1/18**
Wed 8/1/18	Fri 8/3/18
Mon 8/6/18	Thu 8/9/18
Wed 8/8/18	**Wed 8/15/18**
Wed 8/15/18	Thu 8/23/18
Thu 8/23/18	Wed 8/29/18
Wed 8/29/18	**Tue 9/4/18**
Tue 9/4/18	Sat 9/8/18
Sat 9/8/18	Sun 9/16/18
Sun 9/16/18	Wed 9/19/18
Wed 9/19/18	**Wed 11/28/18**
Wed 9/19/18	Thu 9/27/18
Thu 9/27/18	Tue 10/2/18
Mon 10/8/18	Sun 10/14/18
Sun 10/14/18	Sat 10/20/18
Sat 10/20/18	Fri 10/26/18
Fri 10/26/18	Wed 10/31/18
Wed 10/31/18	Mon 11/5/18
Mon 11/5/18	Sun 11/11/18
Sun 11/11/18	Sat 11/17/18
Sat 11/17/18	Thu 11/22/18
Thu 11/22/18	Wed 11/28/18
Wed 11/28/18	**Mon 12/3/18**
Mon 12/3/18	**Wed 12/5/18**
Wed 12/5/18	**Thu 12/6/18**
Thu 12/6/18	**Sun 12/9/18**
Sun 12/9/18	**Tue 12/11/18**
Tue 12/11/18	**Fri 12/14/18**



Project: FGP PROJECT PLAN
Date: Fri 11/2/18

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
Progress
Manual Progress

Appendix 4: Dictum and Proof of Philological Corrections

GISELLE WHITEMAN
ATTORNEY-AT-LAW, LL.B (HONS) • NOTARY PUBLIC

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St. George's, Grenada, W.I.

Phone: (473) 435-5800, Fax: (473) 435-5801
Email: info@gwhitemanlaw.com

November 1, 2018

To Whom It May Concern

Re: Wayne Finlay

I would like to reference the Final Graduation Project as partial fulfillment of the requirements of the Master in Project Management Degree for Universidad Para La Cooperacion Internacional, produced by Wayne Finlay. I have worked closely with Wayne Finlay, editing grammar and style throughout the document. Any required changes and improvements suggested by myself have been duly corrected by Mr. Finlay. I am assured that the document is now accurate in the use of English Language.

I am an Attorney-at-Law practicing in Grenada. My qualifications are attached: Bachelor of Laws Degree, University of the West Indies; Legal Education Certificate of the Council of Legal Education, Hugh Wooding Law School.

Yours sincerely,

Giselle Whiteman

Appendix 5: Linguist Credentials

COUNCIL OF LEGAL EDUCATION

HUGH WOODING LAW SCHOOL
TRINIDAD & TOBAGO
WEST INDIES

Legal Education Certificate

Giselle Jerym Mary Whiteman

having completed the prescribed courses of study and training was, on the ....8th.... day of September ....2000.... awarded the Legal Education Certificate of the Council of Legal Education.

CHAIRMAN, COUNCIL OF LEGAL EDUCATION

Kathleen Rochford
REGISTRAR

COUNCIL OF LEGAL EDUCATION

HUGH WOODING LAW SCHOOL
TRINIDAD & TOBAGO
WEST INDIES

Legal Education Certificate

Giselle Jerym Mary Whiteman

having completed the prescribed courses of study and training was, on the 8th day of September 2000 awarded the Legal Education Certificate of the Council of Legal Education.

CHAIRMAN, COUNCIL OF LEGAL EDUCATION

Kathleen Rochford
REGISTRAR