

Document of

The World Bank
FOR OFFICIAL USE ONLY

Report No: PAD2329

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED GRANT

IN THE AMOUNT OF SDR 10.6 MILLION
(US\$ 15.0 MILLION EQUIVALENT)

AND

GLOBAL ENVIRONMENT FACILITY

PROPOSED GRANT

IN THE AMOUNT OF US\$ 6.21 MILLION

TO THE

REPUBLIC OF HAITI

FOR A

RESILIENT PRODUCTIVE LANDSCAPES PROJECT

January 31, 2018

Agriculture Global Practice
Latin America And Caribbean Region

This document is being made publicly available prior to Board consideration. This does not imply a presumed outcome. This document may be updated following Board consideration and the updated document will be made publicly available in accordance with the Bank's policy on Access to Information.

CURRENCY EQUIVALENTS

(Exchange Rate Effective December 31, 2017)

Currency Unit = Haitian Gourdes

HTG 62.49597 = US\$1

US\$ = SDR 1 = 0.70218309

FISCAL YEAR

October 1 – September 30

Regional Vice President: Jorge Familiar

Country Director: Anabela Abreu

Senior Global Practice Directors: Juergen Voegele, Karin Kemper

Practice Managers: Preeti S. Ahuja, Valerie Hickey

Task Team Leaders: Caroline Plante, Nyaneba Nkrumah

ABBREVIATIONS AND ACRONYMS

AEZ	Agro-ecological Zone
AFD	French Development Agency (<i>Agence française de Développement</i>)
BAC	Agriculture Municipal Office (<i>Bureau Agricole Communal</i>)
CBF	Caribbean Biodiversity Fund
CERC	Contingency Emergency Response Component
CEO	Chief Executive Officer
CNIGS	National Geographic and Spatial Information Center (<i>Centre National de l'Information Géo-Spatiale</i>)
DA	Designated Account
DDA	Departmental Agriculture Directorate (<i>Direction Départementale de l'Agriculture</i>)
DDE	Departmental Environmental Directorate (<i>Direction Départementale de l'Environnement</i>)
DIA	Agricultural Infrastructure Directorate (<i>Direction des Infrastructures Agricoles</i>)
EIRR	Economic Internal Rate of Return
EMP	Environmental Management Plan
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
EX-ACT	Ex-Ante Carbon Balance Tool
FFS	Farmer-Field-School
FSS	Farmer Subsidy Scheme
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHG	Greenhouse Gas
GIS	Geographic Information System
GIZ	German Society for International Cooperation
GoH	Government of Haiti
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
Ha	Hectare(s)
HNT	Haiti National Trust/Haiti National Trust Fund
HTG	Haitian Gourde
HTR	Haiti Takes Root
IBRD	International Bank for Reconstruction and Development
ICR	Implementation Completion Report
IDA	International Development Association
IDB	Inter-American Development Bank
IFAD	International Fund for Agricultural Development
IPF	Investment Project Financing
IPMP	Integrated Pest Management Plan
IPCC	Intergovernmental Panel on Climate Change
IRM	Immediate Response Mechanism
IRR	Internal Rate of Return

J/P HRO	J/P Haitian Relief Organization
KfW	German Development Bank
LIC	Low Income Country
LDCF	Least Developed Countries Fund (of the GEF)
M	Million
MARNDR	Ministry of Agriculture, Natural Resources and Rural Development (<i>Ministère de l'Agriculture, des Ressources Naturelles et du Développement Rural</i>)
MdE	Ministry of Environment (<i>Ministère de l'Environnement</i>)
MoU	Memorandum of Understanding
MSF	Market Support Facility
MT	Metric ton
M&E	Monitoring and Evaluation
NAPA	National Adaptation Plan of Action (<i>Plan d'Action National d'Adaptation</i>)
NDC	Nationally Determined Contribution
NPATF	National Protected Area Trust Fund
NT	National Trust/National Trust Fund
NPF	New Procurement Framework
NPV	Net Present Value
NRM	Natural Resources Management
OECS	Organisation of Eastern Caribbean States
PA	Protected Area
PDO	Project Development Objective
PIM	Project Implementation Manual
PIU	Project Implementation Unit
PIU-C	Project Implementation Unit at Central Level
PIU-L	Project Implementation Unit at Local Level
PPDO	Project Procurement Development Objectives
PPSD	Project Procurement Strategy for Development
RAP	Resettlement Action Plan
RESEPAG	Relaunching Agriculture: Strengthening Agriculture Public Services Project
RPLP	Resilient Productive Landscapes Project
RPF	Resettlement Policy Framework
RSA	Regional Safeguards Advisor
STEP	Systematic Tracking and Exchanges in Procurement
TNC	The Nature Conservancy
TOR	Terms of Reference
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UPMP	Procurement Unit (<i>Unité de Passation des Marchés Publics</i>) of MARNDR
USAID	United States Agency for International Development
USD	United States Dollar
WB	World Bank



BASIC INFORMATION

Is this a regionally tagged project? No	Country(ies)	Financing Instrument Investment Project Financing
<input type="checkbox"/> Situations of Urgent Need of Assistance or Capacity Constraints <input type="checkbox"/> Financial Intermediaries <input type="checkbox"/> Series of Projects		
Approval Date 01-Mar-2018	Closing Date	Environmental Assessment Category B - Partial Assessment
Bank/IFC Collaboration No		

Proposed Development Objective(s)

The Project Development Objectives are: (i) to improve the adoption of resilience-enhancing agricultural and landscape management practices in selected sub-watersheds; and (ii) to enable the Government to respond promptly and effectively to an eligible emergency.

Components

Component Name	Cost (US\$, millions)
Strengthening of institutional and organizational capacities for landscape level interventions	7.00
Investments to strengthen resilient agricultural production and practices	15.71
Project Coordination and Monitoring and Evaluation	3.50
Contingency Emergency Response Component	0.00

**Organizations**

Borrower :	Ministry of Economy and Finance
Implementing Agency :	Ministry of Agriculture, Natural Resources and Rural Development (MARNDR) Ministry of Environment

PROJECT FINANCING DATA (US\$, Millions)**SUMMARY**

Total Project Cost	26.21
Total Financing	26.21
Financing Gap	0.00

DETAILS

International Development Association (IDA)	15.00
IDA Grant	15.00
Trust Funds	6.21
Least Developed Countries TF for Climate Change Activities	6.21
Cofinancing - Other Sources (IFIs, Bilaterals, Foundations)	5.00
Non-Government Organization (NGO) of Borrowing Country	5.00

Expected Disbursements (in US\$, millions)

Fiscal Year	2019	2020	2021	2022	2023	2024
Annual	1.50	3.50	4.50	3.00	2.00	0.50
Cumulative	1.50	5.00	9.50	12.50	14.50	15.00



INSTITUTIONAL DATA

Practice Area (Lead)

Agriculture

Contributing Practice Areas

Environment & Natural Resources

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

Gender Tag

Does the project plan to undertake any of the following?

a. Analysis to identify Project-relevant gaps between males and females, especially in light of country gaps identified through SCD and CPF

Yes

b. Specific action(s) to address the gender gaps identified in (a) and/or to improve women or men's empowerment

Yes

c. Include Indicators in results framework to monitor outcomes from actions identified in (b)

Yes

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	● Substantial
2. Macroeconomic	● Moderate
3. Sector Strategies and Policies	● Substantial
4. Technical Design of Project or Program	● Substantial
5. Institutional Capacity for Implementation and Sustainability	● High
6. Fiduciary	● High
7. Environment and Social	● Moderate
8. Stakeholders	● Substantial



9. Other

10. Overall

● Substantial

COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

Yes No

Does the project require any waivers of Bank policies?

Yes No

Safeguard Policies Triggered by the Project

Yes No

Environmental Assessment OP/BP 4.01

✓

Natural Habitats OP/BP 4.04

✓

Forests OP/BP 4.36

✓

Pest Management OP 4.09

✓

Physical Cultural Resources OP/BP 4.11

✓

Indigenous Peoples OP/BP 4.10

✓

Involuntary Resettlement OP/BP 4.12

✓

Safety of Dams OP/BP 4.37

✓

Projects on International Waterways OP/BP 7.50

✓

Projects in Disputed Areas OP/BP 7.60

✓

Legal Covenants

Sections and Description

SCHEDULE 2, Section I., A. 1. of the Grand Agreements: Project Implementation Units

The Recipient shall operate and maintain, throughout Project implementation, a Project Implementation Unit (PIU) under the administrative authority of both MARNDR and Mde, to be established not later than three month after the Effective Date and to be located at the central and local level through two sub-units, i.e. :

- (a) the Project Implementation Unit at the Central Level (the PIU-C) located in Port-au-Prince, responsible for the overall implementation, management, monitoring and evaluation of the Project at the national level; and
- (b) the Project Implementation Unit at the Local Level (the PIU-L) located in the Nippes Department ; responsible



for the implementation, management, monitoring and evaluation of Part 2 of the Project at the local level, both with qualified and experienced staff in sufficient numbers, as well as with adequate funds, facilities, services and other resources acceptable to the World Bank, as further detailed in the Project Implementation Manual.

Sections and Description

SCHEDULE 2, Section I., A. 2. of the Grand Agreements: Steering and Advisory Committees

The Recipient shall:

- (a) establish not later than six months after the Effective Date and thereafter operate and maintain in form and substance satisfactory to the World Bank, as further detailed in the Project Implementation Manual and throughout Project implementation, a Project Steering Committee to be co-chaired by MdE and MARNDR, and with representatives from all line ministries and other key stakeholders in charge of the overall strategic guidance and oversight of the Project; and
- (b) establish not later than six months after the Effective Date and thereafter operate and maintain in form and substance satisfactory to the World Bank, as further detailed in the Project Implementation Manual and throughout Project implementation, an Advisory Committee to be chaired by the PIU-C coordinator, and with representatives from key stakeholders in charge of operational guidance and regular follow-up on the implementation of the Project activities.

Sections and Description

SCHEDULE 2, Section I., B. of the Grand Agreements: Project Implementation Manual

The Recipient shall carry out the Project, and/or cause the Project to be carried out, in accordance with the Project Implementation Manual, which consists of different schedules setting forth, respectively, rules, methods, guidelines, specific development plans, standard documents and procedures for the carrying out of the Project. The Project Implementation Manual may only be amended from time to time in consultation with, and prior approval of, the World Bank.

Sections and Description

SCHEDULE 2, Section I., I. of the Grand Agreements: Safeguards

1. The Recipient, through the PIU, shall ensure that the Project is carried out in accordance with the Safeguard Documents, including the guidelines, rules and procedures defined in said Safeguard Documents.
2. The Recipient shall include in the Project Reports adequate information on the implementation of the ESMF, the RPF, the Pest Management Plan, any EMP or any RAP.

Sections and Description

SCHEDULE 2, Section II., A. of the Grand Agreements: Project Reports

The Recipient shall furnish to the Association each Project Report not later than forty-five days after the end of



each calendar quarter, covering said calendar quarter.

Conditions

Type	Description
Effectiveness	Financing Agreement: Art IV, 4.01. (a): the GEF Grant Agreement has been executed and delivered and all conditions precedent to its effectiveness (other than the effectiveness of this Agreement) have been fulfilled.
Effectiveness	Financing Agreement: Art IV, 4.01. (b): the Project Implementation Manual has been adopted in form and substance satisfactory to the Association.
Effectiveness	Grant Agreement: Art IV, 4.01. (a): The execution and delivery of this Agreement on behalf of the Recipient has been duly authorized or ratified by all necessary governmental action.
Effectiveness	Grant Agreement: Art IV, 4.01. (b): the Financing Agreement has been executed and delivered and all conditions precedent to its effectiveness (other than the effectiveness of this Agreement) have been fulfilled.
Effectiveness	Grant Agreement: Art IV, 4.01. (c): the Project Implementation Manual has been adopted in form and substance satisfactory to the World Bank.

PROJECT TEAM**Bank Staff**

Name	Role	Specialization	Unit
Caroline Aurelie Plante	Team Leader(ADM Responsible)	Livestock	GFA04
Nyaneba E. Nkrumah	Team Leader	Natural Resources Management	GEN04
Danilo Pereira de Carvalho	Procurement Specialist(ADM Responsible)	Procurement	GGOPL
Rose Caline Desruisseaux-Cadet	Procurement Specialist	Procurement	GGOPF



Lydie Madjou	Financial Management Specialist	Financial Management	GGOLF
Asli Gurkan	Social Safeguards Specialist	Social Development	GSU04
Behnaz Bonyadian Dehkordi	Team Member	Operations	OPSSR
Benjamin Billard	Team Member	Operations	GFA01
Christophe Frederic Robert Grosjean	Team Member	Agriculture	GFA04
Darshani De Silva	Peer Reviewer	Environment	GEN06
Diego Arias Carballo	Peer Reviewer	Agricultural Economics	GFA07
Erick C.M. Fernandes	Peer Reviewer	Agriculture	GFAGE
Faly Diallo	Team Member	Finance	WFACS
Felipe Jacome	Social Safeguards Specialist	Social Development	GSU04
Garry Charlier	Team Member	Agriculture	GFA04
Isabella Micali Drossos	Counsel	Lawyer	LEGLE
Katie Kennedy Freeman	Team Member	Agricultural Economics	GFA04
Klas Sander	Team Member	Environmental Economics	GEN04
Mario I. Mendez	Team Member	Operations	GFA04
Nicolas Kotschoubey	Environmental Safeguards Specialist	Environment	GEN07
Philippe Eric Dardel	Peer Reviewer	Environment	GEN01
Robert H. Montgomery	Environmental Safeguards Specialist	Environment	GEN04
Tobias Baedeker	Team Member	Agricultural Economics	GFAGE
Extended Team			
Name	Title	Organization	Location
Barbara Coello	Economist	Consultant	Washington DC,United States
Roble Sabrie	Economist	FAO	Rome,Italy
Yerania Sanchez	Economist	FAO	Panama,

Note to Task Teams: End of system generated content, document is editable from here.



HAITI
RESILIENT PRODUCTIVE LANDSCAPES IN HAITI

TABLE OF CONTENTS

I. STRATEGIC CONTEXT	10
A. Country Context	10
B. Sectoral and Institutional Context.....	11
C. Higher Level Objectives to which the Project Contributes	13
II. PROJECT DEVELOPMENT OBJECTIVES.....	14
III. PROJECT DESCRIPTION.....	15
A. Project Components.....	15
B. Project Cost and Financing	18
C. Lessons Learned and Reflected in the Project Design.....	18
IV. IMPLEMENTATION.....	19
A. Institutional and Implementation Arrangements	19
B. Results Monitoring and Evaluation	20
C. Sustainability	21
D. Donor Coordination and the Role of Partners	21
V. KEY RISKS	22
A. Overall Risk Rating and Explanation of Key Risks.....	22
VI. APPRAISAL SUMMARY	24
A. Economic and Financial (if applicable) Analysis	24
B. Technical.....	25
C. Financial Management	25
D. Procurement	25
E. Social (including Safeguards).....	26
F. Environment (including Safeguards)	26
G. World Bank Grievance Redress.....	27
VII. RESULTS FRAMEWORK AND MONITORING	28
ANNEX 1: DETAILED PROJECT DESCRIPTION	39
ANNEX 2: IMPLEMENTATION ARRANGEMENTS.....	56
ANNEX 3: IMPLEMENTATION SUPPORT PLAN	68
ANNEX 4: ECONOMIC AND FINANCIAL ANALYSIS SUMMARY	72
ANNEX 5: EXECUTIVE SUMMARY FOR PPSD.....	80
ANNEX 6: CLIMATE CO-BENEFITS AND NET CARBON BALANCE.....	81
ANNEX 7 : THE CARIBBEAN BIODIVERSITY FUND AND THE HAITI NATIONAL TRUST FUND.....	83



ANNEX 8 : LIST OF OTHER ONGOING RELEVANT PROJECTS FOR RPL.....89
ANNEX 9 : MAP OF RPL.....91



I. STRATEGIC CONTEXT

A. Country Context

- 1. Haiti is a densely populated island state, the third largest nation by area and population (10.4 million) in the Caribbean and benefits from a rich economic endowment.** Assets include proximity and access to major markets, a young labor force, a dynamic diaspora, and substantial geographic, historical, and cultural assets. The country possesses untapped markets and unmet demand for the private sector to explore, including agribusiness, light manufacturing, and tourism. Yet, Haiti remains the poorest country in the Western Hemisphere, with a GDP per capita of US\$820. Almost 60 percent of the population lives below the national poverty line with marked differences between urban and rural areas¹.
- 2. Agriculture continues to play a dominant role in the Haitian economy, contributing over 20 percent of GDP and most rural Haitians rely on agricultural production as their primary livelihood strategy.** The agriculture sector also accounts for around 50 percent of overall employment, 66 percent of employment in rural areas, and 75 percent of employment in low income households. Agriculture is the sole economic activity for 55 percent of rural households, and involves more than 70 percent of them. This production is critical for food security, in a context where more than half of the population is affected by undernutrition (2016, FAO); around a third of the production is used for subsistence, while the rest of production is sold to generate much needed income.
- 3. Haiti's population and territory are extremely vulnerable to natural disasters and exposure is expected to increase as the impacts of climate change intensify.** Haiti has the highest index of vulnerability to hurricanes (12,9 on a scale of 13) among Low Income Countries (LIC) Island States and is the third country hardest hit by climatic events in the world (Global index on Climate Change, 2016). On average, each disaster costs two percent of GDP per year, and significantly affects the agriculture sector². The country is highly mountainous with slopes of over 20 degrees over more than half of the territory. These are commonly exploited for agricultural production, and their deforestation has increased vulnerability to climatic events. In a context of climate change, the average intensity and frequency of extreme weather events are expected to increase, thereby increasing the vulnerability of the land and population.
- 4. Addressing intertwined human and ecological vulnerabilities requires a holistic landscape-level "productive" approach,** which focuses on landscape in watersheds to address major soil erosion and improve water retention capacity, prioritizing interventions to help reduce downstream impacts. Improving the natural resource base through the promotion of climate-smart production and practices adapted to the agro-ecological context³, and enhancing the capacity to generate sustainable incomes, is expected to have a significant positive impact on agriculture and on the many people who derive their livelihoods from it, as well as on the provision of nutritious food, and jobs. It will also contribute to sustainably protecting communities at large against risks of flash flooding and landslides linked to soil erosion and water runoff.

¹ 75% fall below the poverty line in rural areas, compared to 40% in urban areas

² The Post Disaster Needs Assessment (PDNA) report done in February 2017 following Hurricane Matthew mentioned an average of 50% of damages and losses concentrated in the agriculture sector between 1971-2014.

³ These would seek to improve the stability and quality of the soil substrate through measures such as agroforestry, live fences, hedgerows intercropping, vegetative wind breaks, soil vegetative cover and conservation tillage, among others.



B. Sectoral and Institutional Context

1. Sectoral context

5. Agriculture in Haiti is beset with problems, despite its importance in local food security and its contribution to GDP. Production is highly dependent on rainfall; most farmers have poor access to agricultural inputs and knowledge; and access to credit in rural areas is not a viable option for most poor farmers. In addition, there is little organization among producers and value chains are underdeveloped, which is further compounded by a lack of rural infrastructure to access markets. Among other factors, the lack of value addition along value chains, and the unreliability and weak sustainability of sources of farmers' incomes generated from tree-crops and other types of resilient agricultural production constitutes a major impediment to the maintenance and sustainable expansion of such systems. This also drives their choices towards higher demanded/less perishable production, often at the expense of the environment, contributing to the vicious circle of land degradation and increasing population vulnerability.

6. In a country that is already densely populated, steady population growth and land inheritance rules⁴ continue to put pressure on land and to drive land use changes. Haiti has 961 inhabitants per square kilometer of arable land, the highest density pressure on arable land in the Western Hemisphere⁵. Farm sizes have shrunk dramatically over time. Diversification, which is an important risk mitigation strategy for farmers, has become increasingly difficult to apply in this context. The traditional practice of creole gardens (or "*jardin creole*"), i.e. small but highly diversified agro-forestry systems which provide fresh and nutritious food throughout most of the year, among other benefits (including high biodiversity, higher productivity linked to species associations, and soil protection and quality), have tended to decrease to give way to annual crops. Restoring these agro-forestry systems is not affordable for the vast majority of farmers.

7. The natural resource base and agriculture are linked by a negative feedback loop. Unsustainable farming practices, driven by land pressure, combined with farmers' low education levels and difficult economic conditions, have contributed to the severe degradation of around 85 percent of watersheds⁶. These continue to cause wide ranging impacts, notably on yields, which in turn further exacerbate land pressure, causing more degradation and deforestation, and affecting critical habitats such as mangroves. These impacts are expected to worsen with climate change. Reducing poverty and building system resilience will require an integrated approach that protects the environment while seeking to ensure adequate returns from agricultural production, so as to create a positive feedback loop.

2. Institutional context

8. The Ministry of Environment (MdE) and the Ministry of Agriculture Natural Resources and Rural Development (MARNDR) recognize the interdependency between natural resources management and agricultural production. In its policy framework for 2010-2025, MARNDR identifies watershed degradation as a major issue and establishes the reduction of environmental vulnerability as a long-term objective requiring the protection of the environment and natural resources. It also establishes preparedness to and management of natural disasters as a priority. In 2006, the Government submitted its National Adaptation

⁴ All land is inherited bilaterally and equally between siblings, with arable land usually being divided immediately.

⁵ Three times higher than the average density in the Western Hemisphere

⁶ According to Ministry of Agriculture, Natural Resources, and Rural Development (MARNDR), 2016



Program of Action (NAPA, 2006) (*Plan d'Action National d'Adaptation - PANA*), which lays out the most urgent risks from climate change and proposes a way forward. It points to soil erosion and its relationship with the agricultural sector's vulnerability as a key risk. Also, in a recent update of the National Action Plan against Desertification (2015), MdE establishes the collaborative development of management plans for the most vulnerable watersheds in the country as an objective. However, the operationalization of these plans has yet to unfold. The need for stronger cross-sectoral collaboration is mutually recognized, but little concrete actions have taken place in a context of institutional weaknesses, absence of joint planning and insufficient budget to operationalize actions plans.

9. Collaborative efforts are underway to boost the implementation of watershed approaches to strengthen the management of natural resources (wood, water, soil). In 2015, in the context of the COP21 process and resulting Paris Agreement, a Haiti-based NGO, the J/P Haitian Relief Organization (J/P HRO), together with MdE and MARNDR, developed a proposal for a broad initiative called Haiti Takes Root (HTR). This was conceived as a conduit to operationalize the government of Haiti (GoH)'s plans to improve watershed management and reforestation in key areas of Haiti and to facilitate engagement, coordination, learning, monitoring and synergies in a programmatic approach, bringing key actors together, and establishing long term strategies and mechanisms. The proposed Resilient Productive Landscapes Project (RPLP) is envisaged as a "proof of concept" under HTR, testing this approach in selected watersheds with a view to scaling it up in other (sub)watersheds of the country.

10. RPLP builds on solid analytical work, as well as lessons learned from other IDA, Global Environment Facility (GEF), LDCF, and donor-funded projects. An in-depth review of landscape management-related interventions⁷ emphasizes, in particular, the need for collaborative efforts including strong participatory community engagement throughout a project process and continuous institutional commitment and support, as well as the necessary generation of revenues for farmers out of the supported investments. Recent and ongoing IDA investments in the country have also provided insights with regard to the most effective implementation arrangements. On the environment side, the GEF and LDCF co-funded several projects in Haiti and the Caribbean that focused on increasing the resilience of agriculture and ecosystems to adapt to climate change. Yet, in Haiti, sustaining results after completion has proven challenging, in a context of absence of stable financing mechanisms.

11. In the context of climate change, sustainable financing over time is an important tool to address environmental and social vulnerability, and to support climate adaptation and mitigate climate change impacts. Ministries and other institutions in Haiti face significant financial resource constraints. Sustaining programs with short term financing has consistently been challenging. To address a similar problem faced by five other Caribbean islands, a GEF-financed project, the *Sustainable Financing and Management of Eastern Caribbean Marine Ecosystem Project (P103470)* (closed June 2016), set up and endowed a Caribbean Biodiversity Fund (CBF) mechanism to ensure sustainable financing over time to combat threats to biodiversity from human, climate or other sources. Under the RPLP, Haiti, which is an observer and has taken steps to become a full member of the CBF, would use LDCF financing (and co-financing from other donors) to join the CBF by contributing to the endowment, and establish a National Trust, which would enable Haiti to access long term sustainable financing for climate adaptation and biodiversity conservation into perpetuity. This longer-term source of predictable financing would mean that when a natural disaster strikes

⁷ Landscape-level Land Management Efforts in Haiti. Lessons Learned from Case Studies Spanning Eight Decades. World Bank, 2016



Haiti, the current practice of diverting government funding earmarked for longer term programs to address the immediate crisis will not impact this fund. As such it presents a key long-term stabilizing mechanism for addressing adaptation. (See Annex 7 for more details).

C. Higher Level Objectives to which the Project Contributes

12. **The Project is consistent with the climate agenda in IDA 18⁸, as well as the national climate change action plan submitted by the GoH to the UN Framework Convention on Climate Change (UNFCCC)⁹.** It will contribute to IDA 18 commitments to increase the share of adaptation and mitigation co-benefits, and improve resilience by promoting climate smart agriculture, inter alia. It will be aligned with the national Action Plan which identifies natural resource management within watersheds, use of agricultural technologies adapted to climate change, use of drought-resistant crops, soil conservation, reducing disaster risk in areas most vulnerable to drought, and reforestation of upstream areas as priorities for adaptation.

13. **The Project responds directly to strategic objectives laid out in the GEF Programming Strategy on Adaptation to Climate Change for the Least Developed Countries Fund and the Special Climate Change Fund (June 11, 2014) and Haiti's National Adaptation Program of Action (NAPA, 2006)** by helping the country reduce its vulnerability to soil erosion, which is exacerbated through increasing volatile climatic events (floods, cyclones, hurricanes) and human (agriculture) activity. The Project will directly contribute to the LDCF strategy Objective 1 (Reduce the vulnerability of people, livelihoods, physical assets and natural systems to the adverse effects of climate change) and Objective 2 (Strengthen institutional and technical capacities for effective climate change adaptation); and indirectly to Objective 3 (Integrate climate change adaptation into relevant policies, plans and associated processes)¹⁰. It will also support the achievement of objectives set forth under the NAPA, which served as the basis for the plan submitted to the UNFCCC in 2015. The document weighted adaptation options based on their impact on vulnerable natural resources and groups, and ranked "watershed management and soil conservation" at the top (five on a one to five scale).

14. **RPLP contributes to two areas of focus of the World Bank Group's Haiti Country Partnership Framework (CPF) 2016-2019: promoting inclusive growth and improving resilience.** Objective 1 of the CPF aims to enhance economic activities and income-generation opportunities, including in the agricultural sector through improving agricultural productivity by reinforcing the ability of farmer's groups to bring quality products to markets. RPLP will support value chains to access new and better markets, and reduce production risks while decreasing vulnerability to the effects of prices and climate shocks. The CPF's Objective 9 targets improving disaster prevention and strengthening climate resilience through a number of avenues, including the analysis of land management practices and definition of entry points for investment in the promotion of resilient productive landscapes. RPLP will directly tackle the issue of improving disaster prevention, reducing the vulnerability to the adverse impacts of climate change, increasing adaptive capacity to respond to the impacts of climate change, and strengthening climate resilience. It will target four sub-watersheds within hydrological zones hard-hit by Hurricane Matthew in the Department of Nippes, and help mitigate the impact of future extreme weather events.

⁸ <http://documents.worldbank.org/curated/en/661931467989537070/pdf/106108-BR-IDA-SecM2016-0108-PUBLIC.pdf>

⁹ in the context of the Paris meetings in 2015 (Intended Nationally Determined Contribution – INDC):

http://www4.unfccc.int/submissions/INDC/Published%20Documents/Haiti/1/CPDN_Republique%20d'Haiti.pdf

¹⁰ Updated Results-Based Management Framework For Adaptation To Climate Change Under The Least Developed Countries Fund And The Special Climate Change Fund", GEF/LDCF.SCCF.17/05/Rev.01 October 15, 2014



II. PROJECT DEVELOPMENT OBJECTIVES

A. PDO

15. The Project Development Objectives are: (i) to improve the adoption of resilience-enhancing agricultural and landscape management practices in selected sub-watersheds¹¹; and (ii) to enable the Government to respond promptly and effectively to an eligible emergency.

16. The crisis or emergency referred to in the PDO reflects a legal requirement that relates to the Contingency Emergency Response Component (Component 4 of the Project).

B. Project Beneficiaries

17. **The primary beneficiaries of RPLP will be smallholder farmers - women and men - and communities living in the selected sub-watersheds targeted by the Project that depend on agricultural production for their livelihoods.** They will get access to inputs, services and knowledge to adopt resilient agriculture practices. Interventions will also benefit key actors along the agriculture value chains, including service and input providers, buyers, processors, and retailers, who will be involved in the farmer subsidy and value chain schemes. Lastly, it will benefit the national, regional and local institutions by providing essential tools, knowledge, and management capacity for landscape-level interventions.

18. **Direct beneficiaries** would include: (i) producers who have benefited from the voucher mechanism (3,000, of whom a minimum of 33 percent are women); (ii) Service Providers (100, of which a minimum of 10 percent are headed by women); (iii) members of producers' groups that benefit from co-financing in selected value chains (800, of which a minimum of 50 percent are groups headed by women); and, (iv) persons trained in Ministries and local / regional authorities (100). To strengthen their role, women will receive preferential conditions to benefit from the Project's interventions.

19. **Gender and Nutrition.** Mainstreaming gender and nutrition into the different investments as well as in the monitoring and evaluation (M&E) mechanisms will ensure that the Project contributes to reducing gender gaps when building resilience and contributing toward improving food security. The Project will build on experience and knowledge developed through the RESEPAG II Project (P126744). Gender gaps include, inter alia, lower level of education in rural areas for women (1.9 year of schooling relatively to 3.4 years for men), smaller plots (0.9 ha compared to 1.1 ha for men), higher unemployment rate (20 percentage points more likely than men to be unemployed), and lower wages (32 percent lower than wages among men). In order to address gender gaps in the areas of interventions, notably with regard to access to opportunities for women farmers to boost their incomes, further analysis, gender planning, focused outreach and monitoring will be conducted during Project implementation.

C. PDO-Level Results Indicators

20. **The following PDO level results indicators have been identified:**

- Land area under sustainable landscape management practices (2000 Ha) – Corporate Result Indicator

¹¹ See Annex 1 for more definitions of “resilience” and “landscape” in the context of the Project.



- Farmers adopting improved agricultural technology (3000), of whom female (33%) – Corporate Result Indicator
- Share of targeted farmers with improved market access (40%, i.e. 1200 farmers)

21. **The land area would represent around a quarter of the selected sub-watersheds’ area (8000 Ha) while beneficiary farmers would account for around a third of farmers producing in these areas.** Of all these beneficiary farmers, close to half would be expected to get improved market access through better equipment and infrastructure in particular.

III. PROJECT DESCRIPTION

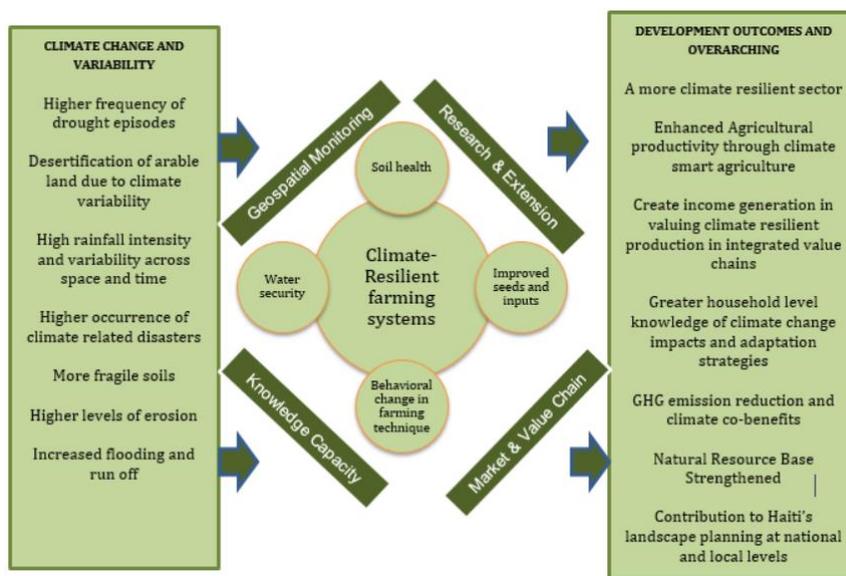
A. Project Components

22. **RPLP is designed to restore ecosystem services at sub-watershed level** to safeguard and enhance agricultural production, reduce the vulnerability of economic and ecological systems to external shocks, and strengthen capacities for the long-term sustainable management of those landscapes. In terms of geographic coverage, four specific zones have been selected in the department of Nippes based on detailed criteria (environmental, socio-economic, vulnerability, institutional, budget availability as well as relevance in view of proposed interventions). These zones are: (i) Rivière Froide watershed; (ii) Petite Rivière de Nippes watershed; (iii) Piémont area and Baconnois Plain; and (iv) Bondeau sub-watershed and its mangrove.

23. **RPLP will include four components:** (i) Strengthening of institutional and organizational capacity for landscape level interventions; (ii) Investments to strengthen resilient agricultural production and practices; (iii) Project coordination, monitoring and evaluation; and (iv) Contingency Emergency Response Component.

24. The figure below illustrates the links between the proposed interventions and their expected contribution to specific outcomes and impacts.

Fig. 1: Theory of Change/Strategic Overview, Thematic Linkages and expected Achievements of RPLP





25. **Component 1: Strengthening of institutional and organizational capacities for landscape level interventions** (US\$ 7.0 M total -US\$ 1.4 M IDA, US\$ 4.2 M LDCF- plus parallel financing of US\$ 1.4 M from J/P HRO). This component will support national efforts to: create Agriculture/Environment joint landscapes policy and action plan towards resilient agriculture and ecosystems; fill skills and knowledge gaps required to implement respective mandates; foster partnerships and communication; strengthen institutional capacity to analyze climate-related data for improved planning and climate-related disaster risk prevention; fund the set-up of a Haiti National Trust Fund that will provide financing for climate adaptation in perpetuity with resources from the CBF; and pave the way for Component 2 interventions that will rely on participatory community planning exercises in all selected sub-watersheds. Specifically, the component will support:

26. *Sub-component 1.1. Institutional capacity building.* This sub-component will support: (i) the development of a joint MdE/MARNDR Master Plan for Resilient Landscapes Development, building on respective policies and action plans¹², and international commitments under Climate Change/Climate Adaptation global agendas; (ii) intensive technical training within key line Ministries, including MARNDR and MdE, at the national and local level, as well as for local governments and other relevant stakeholders (in the selected sub-watersheds); exchange visits in-country and abroad; and student sponsorships for Masters degrees related to landscapes/ecosystems/environmental fields; and (iii) development of dynamic decision support tools driven by geospatial and hydro-meteorological data and capacity building in cartography, satellite imaging, data collection and analysis.

27. *Sub-component 1.2. Support to national level sustainable landscape management approach to agriculture and watershed management.* This sub-component will support: (i) HTR to develop/update its strategic and action plans, and operate its secretariat; (ii) the establishment and operation of the National Committee for Climate Change in charge of steering, monitoring and reporting on activities to be implemented under the NDC; and (iii) the development of detailed participatory sub-watershed management plans in the four selected sub-watersheds and their update.

28. *Sub-component 1.3. Sustainable Financing of Resilient Productive Landscapes and Environmental Investments.* This sub-component will be financed entirely through LDCF financing. As indicated in section I.B, it will support Haiti's participation in the CBF, so that Haiti can benefit from CBF financial resources towards climate adaptation and biodiversity conservation objectives in perpetuity. In the context of RPLP, it will specifically contribute to ensuring the long-term sustainability of interventions financed under Component 2. This sub-component will finance: (i) remaining activities required to set up the Haiti National Trust Fund to receive funds from the CBF on a yearly basis, complementing other donors' contributions; and (ii) an initial endowment of US\$3 million to the CBF, earmarked for climate adaptation related interventions, complemented by a US\$7 million endowment for biodiversity to be provided through the German Development Bank (KfW) (See also Annexes 1 and 7).

29. **Component 2: Investments to strengthen resilient agricultural production and practices** (US\$ 15.7 M total -US\$ 10.1 M IDA, US\$ 2.0 M LDCF- plus parallel financing of US\$ 3.6 M from J/P HRO). This component will support: (i) individual farmers, agricultural entrepreneurs and communities within selected sub-watersheds to establish more resilient agricultural productions and practices, adapted to the local agro-ecological contexts; (ii) actions aimed at improving revenues and livelihoods via better market access and

¹² Relation to policies and mandates from other relevant institutions shall be included as well, e.g. CIAT (*Comité Interministériel d'Aménagement du Territoire*).



improved food availability and nutritional quality (support to nutrient-rich produce such as legumes, fruits and vegetables); and (iii) the establishment or rehabilitation of small infrastructure for increased resilience of both landscapes and of farmers' enterprises.

30. *Sub-component 2.1. Investments in resilient, sustainable agriculture and ecosystems.* This sub-component will support investments at individual and community levels that focus on increasing climate resilience of agricultural production systems in the selected sub-watersheds. Specifically, it will finance: (i) the development of participatory investment plans for each watershed; (ii) inputs and services to selected beneficiaries, adapted to specific agro-ecological zones, to allow the implementation of climate smart production and practices; and (iii) Farmer-Field-Schools (FFS) for producers, to teach climate resilient productions and practices as well as organizational and marketing approaches to add value to the production (related to sub-component 2.2). This sub-component will build on the experience of RESEPAG I and II with the "Farmers Subsidy Scheme" (FSS), which effectively supported producers to access inputs and services with vouchers; and private sector suppliers to deliver such inputs or services at market prices and in compliance with minimum quality criteria.

31. *Sub-component 2.2. Intensification, diversification and commercial agriculture.* This sub-component will: (i) provide matching grants to groups of producers or small enterprises to increase their capacity to generate additional value to climate smart products produced in the selected sub-watersheds, through improved business/marketing skills, as well as improved infrastructure and equipment to be co-financed through the project. For this activity, the Project will use the experience of the "Market Support Facility" (MSF) implemented under RESEPAG II, which allowed producer groups to co-finance investments required to improve the quality and add value to agriculture production; and (ii) training to key actors along the value chains to increase their agri-business/marketing capacities. The Project will also seek to facilitate the mobilization of commercial credit.

32. *Sub-component 2.3. Protection of infrastructure and watersheds.* This sub-component will support investments based on participatory investment plans that will focus on building infrastructure assets in the selected sub-watersheds. These would consist of works to: (i) protect/rehabilitate small public infrastructure (e.g. rural and access roads, river crossing structures); and (ii) enhance water management in the selected areas (e.g. building small water harvesting infrastructure in gullies or slopes, and rehabilitating small water catchments or small irrigation systems in plains).

33. **Component 3: Project Coordination and Monitoring and Evaluation (M&E)** (US\$ 3.5 M total – 100% IDA). The objective of this component is to support Project coordination and M&E as well as all aspects of management (including fiduciary matters, knowledge management, communication, gender and citizen engagement as well as monitoring implementation of safeguards-related measures). It will finance staff costs, goods, equipment and vehicles, incremental operating costs, assessments and studies, audits, construction and/or rehabilitation of Project Implementation Unit offices and in general eligible expenses associated with the overall management of the Project implementation. It will also provide resources to monitor progress and evaluate results and impact. For this purpose, an impact evaluation baseline will be established by no later than year one of Project implementation.

34. **Component 4: Contingency Emergency Response Component** (US\$ 0 M - only IDA if activated). A Contingency Emergency Response Component (CERC) with zero allocation will be created to allow the



Government to respond quickly in case of an eligible emergency. Its detailed mechanism will be defined in a specific CERC Operational Manual that will clearly outline the triggers, eligible expenditures and procedures for using part of IDA resources of the Project to respond quickly in the event of an eligible emergency.

B. Project Cost and Financing

35. **Total Project cost is estimated at US\$ 26.21 M equivalent.** The overall program blends various sources of financing including IDA Grant (US\$ 15.0 M equivalent), LDCF Grant (US\$ 6.21 M Least Developed Countries Fund Resources – LDCF¹³), and parallel financing from a J/P HRO Grant (US\$5.0M), as detailed in the table below. The Project includes a US\$ 0 M Component 4, which will serve as a Contingency Emergency Response mechanism. The Project also expects to leverage additional resources from donors for the capitalization of the Caribbean Biodiversity Fund (CBF).

Table 1: Detailed financial information per component and source of financing

Project Components	Total Project cost (including parallel financing)	% IDA	IDA Financing	LDCF Trust Fund	J/P HRO parallel financing
1: Strengthening of institutional and organizational capacities for landscape level interventions	7,000,000	20%	1,400,000	4,200,000	1,400,000
2: Investments to strengthen resilient agricultural production and practices	15,710,046	64%	10,100,000	2,010,046	3,600,000
3: Project Coordination and Monitoring and Evaluation	3,500,000	100%	3,500,000	-	-
4: Contingency Emergency Response Component	0	-	0	0	0
Total Project Costs	26,210,046	57%	15,000,000	6,210,046	5,000,000

C. Lessons Learned and Reflected in the Project Design

36. **Historically, public sector finance has invested in land management projects often within the geographic delineation of a watershed, providing a catalogue of lessons learned and best practices.** The “Landscape-level Land Management Efforts in Haiti – Lessons Learned from Cases Spanning Eight Decades” produced by the World Bank in 2016 took stock of landscape-level projects implemented in the past, providing trends and policy options for developing sound projects. Lessons learned from other efforts at watershed management tend to revolve around several critical issues summarized below.

37. **Shortcomings of top down strategies.** Outsider analysis alone, and the imposition of new land use practices by fiat from the top down, have shown little or no success in initiating landscape level shifts. To the contrary, top down interventions without local consultation have commonly been ignored or actively resisted by local inhabitants. RPLP would ensure a strong community engagement and consensus around the prioritized needs and mechanisms of intervention. Local stakeholders should be integrated into the full cycle

¹³ The exact amount of the LDCF Grant is US\$ 6,210,046



of project identification, implementation and ownership through solid participatory approaches.

38. **Economic strategies for protecting the land.** Haiti's watersheds are actively used. Consequently, reforestation efforts geared to protecting land units without regard to livelihood concerns and economic aspects have not been successful. RPLP would particularly support agroforestry systems and the associated value chains to ensure a higher value to tree-crops and other resilient, climate adapted production.

39. **Whole landscapes and whole watersheds.** Macro-level approaches have had a tendency towards overly ambitious goals and interventions, which have not proven achievable within the limited timeframes of project cycles. As noted above, achieving landscape level shifts has proven elusive in Haiti. This is due in part to the overly ambitious scale of whole watershed initiatives, too many actors, too much land, too many parameters, and also the sheer diversity of agro-ecological zones within a single watershed, including zones that show little promise for a rate of return that would justify the investment. RPLP has been dimensioned around a few areas considered to be of a manageable scale based on such prior experiences, yet sufficient to provide the expected benefits for the population and the environment. These areas have also been selected taking into account the diversity of conditions, in order to provide a range of examples for future *scale-up*.

40. **Watershed governance.** Governance issues have mostly been constrained by weak administrative capacity for enforcement, which may include the absence of political will for enforcement. At local levels, the issue of political will tends to vary from one site to another. Where watershed governance has worked best, it has reflected active citizen support and active collaboration between local people and local elected officials. Consequently, watershed interventions should build on the most local feasible level of planning in keeping with tangible local interests, including economic incentives, using principles of subsidiarity. RPLP will work from a participatory planning base, and will involve existing local level governance mechanisms during all project phases to ensure ownership and common responsibility over landscape management interventions.

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

41. **Joint Implementation, Project Duration and Geographic Coverage.** The Project will be implemented jointly by the MARNDR and the MdE, with an expected duration of five years. This proposed duration (expected over calendar years 2018-2023) is set to allow a realistic timeframe for implementation. In terms of areas for intervention, while Component 1 addressing institutional and organizational capacity would have a nationwide coverage, Component 2 would be implemented in the four selected sub-watersheds.

42. **MARNDR and MdE Experiences.** The MARNDR began implementing the US\$ 5M RESEPAG I project in 2009. Within MARNDR, the Project will leverage the existing capacity, specifically on safeguards and fiduciary aspects, of the coordination unit currently supporting RESEPAG II and other donor projects. Conversely, MdE has no experience in the implementation of Bank-funded projects, and would develop its capacity building by drawing on MARNDR experience, including through hands-on participation of staff in PIU activities. The Project will collaborate closely with other development partners and parallel financing will be provided by the NGO J/P HRO.



43. **Implementation arrangements.** The Project will be jointly implemented by MARNDR/MdE through one Project Implementation Unit split in two locations: at the Central Level (PIU-C or *Unité de Gestion de Projet Centrale*) based in Port-Au-Prince, as well as one at the local level (PIU-L or *Unité de Gestion de Projet Locale*), located in the Nippes Department, close to the areas of intervention. The two units will be staffed as needed (i.e. staff hired and paid for by Project resources and supported by civil servants from MARNDR/MdE paid for by the Government) with appropriate skills, taking into account existing human resources and arrangements as well as existing staff from active World Bank-financed operations when relevant (i.e. RESEPAG II). All staff paid using Project resources will be hired on a competitive basis under terms of reference and qualifications acceptable to the World Bank.

44. **The PIU-C and PIU-L will ensure timely and effective coordination of activities in order to monitor progress towards the PDO.** The implementation arrangements will enable joint technical coordination between MARNDR and MdE and will capitalize on the MARNDR's existing capacity and experience with managing fiduciary aspects of World Bank-financed projects. The PIU-C will be responsible for: (i) the overall management of the project, including financial management and procurement in accordance with World Bank guidelines and procedures, safeguards compliance and M&E; (ii) coordination of activities related to Component 1; (iii) producing Project progress reports; and (iv) Project communication. The PIU-L will coordinate the activities related to Component 2, in close collaboration with the local offices of MARNDR and MdE at Departmental and Communal levels, as well with the other local stakeholders.

45. **A Project Steering Committee (PSC) will provide strategic guidance for the Project** and also serve as an information exchange body. In addition, a Project Advisory Committee (PAC) will be established and ensure operational guidance of RPLP activities implementation. The detailed composition and mandates of the PSC and PAC will be provided in the Project Implementation Manual (PIM).

46. **The PIM will incorporate detailed TORs for PIU staff and all operational details at the national and local levels,** including procedures for the implementation of technical activities, M&E, safeguards, and administrative and fiduciary functions. A specific Operational Manual for the management of the CERC will also be prepared. In addition, a Memorandum of Understanding (MoU) between MARNDR and MdE and J/P HRO will guide the planning, implementation, reporting, fiduciary and safeguards management of activities financed by J/P HRO. It was agreed in particular that the safeguards mechanisms to be applied for activities financed through J/P HRO's parallel financing would be in line with the Bank's safeguards requirements. Detailed Project implementation arrangements are found in Annex 2.

B. Results Monitoring and Evaluation

47. **In addition to the Project Results Framework (RF), a simple yet robust M&E system will provide high quality data** and allow the Bank to react immediately when issues arise.

48. **The PIUs, working in close cooperation with the Direction Départementale de l'Agriculture (DDA) and Direction Départementale de l'Environnement (DDE) support staff, will be in charge of M&E activities** and compliance with the agreed reporting requirements under the responsibility and guidance of the specialized M&E staff recruited by the Project. The M&E system will be designed to link technical and financial data regarding Project progress. It will serve as a mechanism to assess Project results and as a day-to-day management tool. It will ensure that baseline and follow-up surveys and data collection for the key



performance indicators are available and regularly updated. It will also serve to report on the LDCF tracking tool (at baseline/mid-term/end of the Project).

49. **M&E reports will be issued every six months for physical implementation and results monitoring.** Semi-annual joint implementation support missions with representatives from the World Bank, and the Government will assess the status of key Project outcomes and ensure compliance with legal agreements. A Mid-Term Review (MTR) will be conducted no later than three years after the first disbursement. A final independent evaluation will be conducted in the last semester of Project implementation to assess overall achievement of expected Project results.

50. **Other RPLP parameters will be measured at the start, mid-term, and end of the Project to provide additional data to assess tangible success,** and to communicate and create lessons given the expected replication of the Project under HTR and beyond. A household baseline survey will be conducted before the Project starts disbursing investments toward direct beneficiaries to allow the project to measure progress with the Results Framework Indicators as well as changes in household wealth (benefits, income, consumption, etc.) and labor dynamics, the degree of value chain integration, food security and specific gender-related aspects that could be attributed to the Project. RPLP will also seek to leverage additional funding to measure in a more precise manner specific climate co-benefits related to the Project's interventions.

C. Sustainability

51. **Haiti is a fragile state, so there is some risk that results achieved during Project implementation may not be entirely sustained after its closure.** Cognizant with this fact, factors that would best contribute to the sustainability of the Project's investments were included in its design, and they are summarized below.

52. **An important aspect that would contribute to sustaining Project outcomes lays in the overall improved capacity for integrated landscape management** and in the resulting natural resources and economic benefits at the local level through improved planning and monitoring capacity; knowledge and awareness created through trainings of institutions, Farmer Field Schools, etc.; services and inputs provided to promote the adoption of climate smart, resilient agricultural technologies; improved capacity to access markets and better integrate into value chains; a larger supply of quality inputs and services from local suppliers; and better quality (resilience to climatic events) of small infrastructure.

53. **The Government's commitment reflected in its launching of the HTR initiative and its participation in the CBF will also contribute to anchoring the Project's activities in the longer term.** The HTR initiative (See next section D), should play a critical role in leveraging additional funds and facilitating the scaling-up of successful approaches and replication of best practices. The CBF, with its capacity to provide a sustainable flow (in perpetuity) of resources to the Haiti National Trust Fund to support activities that will contribute substantially to the adaptation to climate change will be important to contribute to sustain and/or complement RPLP achievements.

D. Donor Coordination and the Role of Partners

54. **The HTR Initiative.** HTR is an ambitious, long-term commitment by an initial group of partners including



the Haitian and French governments, the Parker Foundation, J/P HRO, the World Bank and the Inter-American Development Bank (IDB). More partners are expected to engage. The initiative piloted by the Haitian Government will coordinate stakeholders within a national strategy and the NDC. Alongside RPLP, a few other projects are being developed and implemented under the HTR umbrella, including AFD- and IDB-financed projects¹⁴. USAID also finances a landscape related project which, even if not through HTR, will coordinate with other HTR initiatives. HTR will serve as a sharing platform which will help inform and coordinate actions around common objectives and strategies, take stock of various initiatives to learn from and inform future investments.

55. **The CBF Initiative.** Various partners are supporting the CBF initiative in Haiti. These include The Nature Conservancy (TNC), Société Audubon Haiti, the Swiss Cooperation, IDB, UNEP, UNDP, which have committed some seed funding to start the development of the legal framework and other necessary documents required to comply with CBF requirements. These funds will allow Haiti to progress towards compliance with CBF requirements. These efforts will be continued with the support of LDCF funding to finalize the legal processes and operationalize the CBF in Haiti. With regard to Haiti's endowment of the CBF, the German Development Bank (KfW) will also contribute on behalf of Haiti (with an estimated US\$7 million in financing). A close dialogue will be maintained with these partners to ensure the full complementarity and seamless financing required to establish a fully operational National Trust Fund, and leverage other donor funding to keep capitalizing upon CBF (See also Annex 7).

56. **Other relevant projects in the area of intervention.** In the department of Nippes, mention should also be made of the Project PPI III¹⁵ financed by IFAD, which is closing soon, and under which some micro-watershed stabilization activities have been carried out recently following Cyclone Matthew. In case an additional financing of this project were to materialize, the coordination of activities between the RPLP and PPI III (or PPI IV) would be ensured under the leadership of the ministries, DDA, and DDE. These actors would also take part in the Project Advisory Committee.

57. **Role of J/P HRO in RPLP.** J/P HRO has participated since the identification of the RPLP and has committed to provide parallel financing of US\$5 million to support activities that will contribute to the Project Development Objective. The Participatory Watershed Management Planning Methodology developed by J/P HRO was piloted in one of the four selected sub-watersheds and has informed the design of the RPLP (under Component 1). The activities which will be supported by J/P HRO are: the development of such participatory plans in all selected sub-watersheds; support to the HTR secretariat and the operation of the National Committee on Climate Change; training, facilitation, and communication activities related to access to markets for climate smart products, and infrastructure improvements.

V. KEY RISKS

A. Overall Risk Rating and Explanation of Key Risks

58. The overall risk of the Project is Substantial.

¹⁴ AFD is implementing a €9M project on cacao production/value chain (since 2016), has committed €6M for 2018, and expects an additional US\$24M from the Green Climate Fund; IDB will finance US\$55M; and USAID has launched a project of US\$45M.

¹⁵ Projet de Développement de la Petite Irrigation – Phase 3.



59. **Political and Governance risk is Substantial.** Haiti continues to be affected by political uncertainty, weak governance and enforcement capacity. Political and Governance risk is partially mitigated through dialogue and close collaboration with Government entities, as well as proactive engagement by the Global Practices and the Country Management Unit as issues arise. The team will closely monitor the situation to adjust its interventions as needs be.

60. **Sector Strategies and Policies risk is Substantial.** Both Ministries involved in the Project have seen a high turnover of high level officials over the past years, hampering the development and implementation of their sector strategies. The Project will mitigate this risk by engaging in active policy dialogue at the Ministerial level and embedding the Project's actions, including a joint Master Plan for Resilient Landscapes Development, within a broader framework supported by many partners (HTR) and linked to Haiti's international commitments (post COP21).

61. **Technical Design risk is Substantial.** The Project will require certain conditions to fully achieve its objectives but will face constraining factors. These include a limited number of input suppliers (in particular for seedlings for tree-crops), the uncertainty over the capacity of value chains to absorb the boosted productions, and the adequacy of technical packages to meet both agro-ecological requirements and individual or group needs. These risks have been assessed and will be mitigated by an ex-ante analysis of suppliers' capacities and of market potential, and by drawing on the experience of agro-forestry technical packages implemented under RESEPAG II. The limited scope of the project reflects its pilot nature, and adjustments are expected to be needed as it involves learning by doing.

62. **Institutional capacity risk is High.** Both Ministries involved have limited human (skills and number of staff) and financial resources, particularly within the MdE. These risks are partially mitigated by a significant investment of resources and effort in building Ministries' capacities at both the central and local level on resilient productive landscape management and filling other critical knowledge gaps to improve the areas of policy development, planning, monitoring, and communications. Some residual risks, related to staff and political turnover and their impact on sustainable capacity transfers, cannot be mitigated within the project.

63. **Stakeholder risk is Substantial.** The high number of stakeholders involved, with possibly diverging interests, but with joint commitment necessary to achieve Project objectives, justifies a substantial rating. Farmers, producers and other professional organizations along the value chains are also poorly linked or organized. This risk will be mitigated through inclusive discussions and an adequate level of representation from relevant stakeholders, and tailored communication and capacity building during project preparation and implementation.

64. **Fiduciary risk is High.** For procurement, key risks include weak contract management capacity and slow execution of procedures. The key risks for financial management include a lack of capacity and experience at the central government level to manage World Bank funds, and low capacity for budget management and monitoring. These risks will be mitigated through specific fiduciary controls that are outlined in detail in the Project Procurement Strategy for Development (PPSD) and in Annex 2. Experienced staff will be recruited to support the procurement and financial units of RESEPAG II and their capacity will be strengthened with Bank support as needed.

65. **Climate and Disaster Risk.** Haiti is highly vulnerable to the negative impact of climate change. Extreme



heat, floods, cyclones, sea level rise and salinization as well as increasingly irregular rainfall all affect livestock production, ranging from moderate to severe impacts. The project activities focusing on climate resilient production and climate resilient value chain development, and the institutional capacity development for improved monitoring, planning and response to climatic events will contribute to mitigating these risks. The CERC will also serve as a mitigation tool to respond to possible disasters.

VI. APPRAISAL SUMMARY

A. Economic and Financial (if applicable) Analysis

66. **The economic and financial analysis (EFA) of RPLP is an ex-ante evaluation of the Project's future performance**, taking into account the projected outreach to beneficiaries, hectares, returns from improved productivity, post-harvest handling, processing and marketing in the selected crops, and projected cost streams associated with the interventions. It has been undertaken taking into account the activities of Component 2 only¹⁶. On the cost side both Components 2 and 3 have been included. The EFA Annex provides the detailed hypothesis and results of the analysis.

67. **The economic rate of return (ERR) is estimated at 20.8 percent.** The net present value (NPV) of the net economic cash flow generated by the Project is approximately US\$ 7.5 million discounted at 12 percent. The sensitivity analysis shows robustness to both decreases in benefits and increases in costs. The financial analysis has been developed both for the agriculture production and the processing/marketing activities supported through matching grants. Increases in gross profits for all agricultural activities under the with-Project scenario are substantial, ranging from 20 to 50 percent. The financial analysis for the processing and marketing activities foresee positive returns and cash flows with internal rate of return (IRR) ranging from 21 to 78 percent depending on activities and positive NPV. This underlines that using matching grants to encourage producers to adopt new technologies provides them with additional financial space, particularly during the first years when they are working their way further along the technology adoption learning curve.

68. **It is important to underline that the Project's productive activities with the LDCF co-financing will support the adoption of sustainable practices and technologies**, including agro-forestry systems and sustainable management of land, integrated soil fertility management and a range of soil conservation technologies in agricultural landscapes. The Project will also contribute to ensuring the long-term financing of such interventions through the CBF mechanism. This approach will further increase the resilience of the socioeconomic systems and ecosystems in the targeted areas and beyond, thereby improving their capacity to adapt effectively to the effects of climate change and variability.

69. **Co-benefits of these interventions, will include carbon sequestration and mitigated/avoided greenhouse gas emissions**, as well as conservation of biodiversity, reduction in tree cover reduction and forest degradation, improved sustainable livelihoods for local communities and improved climate change resilience. The initial assessment of IDA's share of financing of the RPLP that contributes to climate co-benefits is 81%. An update of this assessment is expected to raise this value. In addition, an EX-ACT analysis was conducted, as for all agriculture related projects (See Annex 6).

¹⁶ Activities associated with Component 1 do not foresee quantifiable economic benefit at this stage, as productive activities under the CBF mechanism are not yet known and will not represent important financial volumes with respect to the overall investment of RPLP, while capacity building activities will not contribute directly to the Component 2-related activities.



B. Technical

70. **RPLP's design is strongly rooted in the lessons learned from various landscape-related approaches and operations in the past in the country**, and is further informed by solid preparatory studies. RPLP will also use recent and ongoing experience gained from the RESEPAG II Project to design RPLP's instruments and mechanisms. It has from its origin included the two line Ministries in the dialogue so as to get a clear consensus on actions to be carried out for both agricultural production and ecological co-benefits.

71. **RPLP is aligned with CPF and GoH's objectives** and will contribute to climate adaptation, income generation for poverty reduction, and disaster risk mitigation. It is envisaged as a proof-of-concept type of Project under the HTR umbrella, to be further scaled-up. It has carefully selected four sub-watersheds in one Department hit by Hurricane Matthew, using agro-ecological, environmental vulnerability, socio-economic, and institutional criteria, as well as budget considerations.

C. Financial Management

72. **The financial responsibilities of the project will be managed using existing MARNDR capacity in Haiti, established under the current RESEPAG II Project.** An assessment was carried out to evaluate the adequacy of MARNDR's capacities to implement all Financial Management under the Project. The RESEPAG II PIU has a Senior Accountant and is well established and experienced in carrying out all financial management, in compliance with World Bank policies and procedures. The financial management unit of RESEPAG II is managing two projects financed by the Bank: RESEPAG II and HYDROMET (*Strengthening Hydrometeorological Services Project - P148259*).

73. **Based on a preliminary assessment of the capacity of the RESEPAG II PIU and taking note of its role and responsibility, it was deemed to have sufficient experience to manage financial management under the Project.** Consequently, financial management will be attached to the existing RESEPAG II PIU. However, PIU personnel will need to be reinforced by the addition of at least one accountant to help manage the upcoming workload. In addition, because MdE is not familiar with implementing World Bank-funded projects, and in order to develop its own capacity to manage other projects in the future, one qualified civil servant staff should be assigned to the PIU for intensive hands-on training and knowledge sharing. With this strengthening, MdE shall fully benefit from exposure to the World Bank financial management policy, procedures and guidelines and have first-hand experience of implementing World Bank-funded projects.

D. Procurement

74. **A procurement assessment was carried out to evaluate the adequacy of procurement arrangements** and MdE and MARNDR's capacities to implement all procurement under the Project. Just as for financial management, the Project would use capacities and mechanisms existing in MARNDR, which has a centralized procurement unit (*unite de passation des marches publics* or *UPMP*) headed by a senior Procurement Officer, which is well established and experienced in carrying out all procurement, in compliance with the World Bank regulations (July 2016), and Haitian regulations (June 2009), and applies them in conjunction with the associated Procurement Manuals. The procurement unit is undertaking all procurement for 14 projects financed by donors, including two by the World Bank: RESEPAG II, and HYDROMET.



75. **Based on a preliminary assessment of the capacity of UPMP and taking note of its role and responsibility, it was deemed to have sufficient experience to manage procurement under the Project.** Consequently, Procurement would be centered at the existing procurement unit UPMP under the MARNDR, irrespective of the agencies implementing activities under the Project. However, UPMP personnel will need to be reinforced by the addition of at least one senior procurement specialist to help manage the upcoming workload. As for financial management, one qualified civil servant staff from MdE should be assigned to UPMP for intensive hands on training and knowledge sharing.

76. **The overall public procurement system in Haiti remains relatively weak.** Despite some reforms in the legal and institutional framework for procurement, human and physical capacity constraints have delayed the adoption of improved contracting practices in most Government agencies. Mitigation measures have been identified and are reflected in the PPSD.

E. Social (including Safeguards)

77. **The Project triggers the policy on Involuntary Resettlement (OP 4.12).** The Project will be funding small scale rehabilitation of existing rural roads and possibly new small infrastructure for water harvesting/storage which are usually placed along the roads or in gullies. This may lead to some land acquisition, or loss of economic assets, such as crops and fruit trees. A Resettlement Policy Framework (RPF) has been prepared by the GoH with guidance from the World Bank to comply with OP 4.12, reviewed by the World Bank and found to be adequate, and disclosed in the country and on the World Bank website on November 13, 2017.

78. **Any activity that may potentially lead to changes in land-tenure agreements, result in the establishment of protected areas, or may cause restriction access to resources will be excluded from the project.** RPLP will also avoid or minimize land acquisition, and potential resettlement impacts through the application of good construction and management practices. However, should a case of involuntary resettlement be identified, Resettlement Action Plans (RAPs) or Abbreviated Resettlement Action Plans (Abbrev. RAPs) would be prepared, consulted and disclosed in accordance with the policy and the above mentioned RPF.

79. **Risks linked to labor influx are expected to be limited.** They will be mitigated by prioritizing local labor and ensuring clarity regarding the origin of external laborers who will be hosted throughout their stay in the host community, and by ensuring that contracts are consistent with ESMF and RPF provisions.

80. **Feedback mechanisms will be developed to ensure transparency, accountability and learning as well as a continuous dialogue with local level beneficiaries and other stakeholders.** These aspects will be included in the Project's framework for citizen engagement to mitigate social risk and increase the chances of success.

F. Environment (including Safeguards)

82. **RPLP is expected to have overwhelmingly positive environmental impacts from improved land management, erosion control and reforestation, inter alia.** Some potential negative impacts could however arise from the possible use of agrochemicals linked to increased agricultural production. Potential risks and respective mitigation measures were included in the Environmental and Social Management Framework



(ESMF) and Integrated Pest Management Plan (IPMP), which include in particular guidelines to promote alternatives such as biological control methods and to avoid the use of agrochemicals; and to ensure the health and safety of farmers and communities at large should such use be necessary. The Project will also support the development of a joint Master Plan for Resilient Landscapes Development and will facilitate the participation of Haiti in the Caribbean Biodiversity Fund (CBF) mechanisms, including through the endowment of the fund. The ESMF and IPMP will also apply to these activities. Both the ESMF and IPMP include capacity building measures which will be essential to ensure their implementation.

83. The ESMF and IPMP have been reviewed by the World Bank and found to be adequate, and disclosed in the country and on the World Bank website on November 13, 2017. They will be included in the PIM, and ensure that all plans and strategies prepared under the Project are sustainable; support the preservation, maintenance and rehabilitation of the environment; take into account cumulative effects; and include measures to strengthen environmental management. For the CBF related investments, which are not yet clearly defined, and in order to ensure that the Project will not indirectly finance activities with possible negative environmental impacts, the Project's ESMF will also apply. The PIM will include a measure to ensure that the CBF adopts the ESMF as part of its screening mechanism.

84. Summary of Climate Co-Benefits and Carbon balance. Quantification of the Green House Gas (GHG) mitigation potential using the EX-ACT tool provided estimates of GHGs emitted or sequestered as a result of the Project compared to the without-project scenario. Over 20 years (4 years for actual project implementation and 16 years for capitalization of its effects), the Project's carbon emissions reductions are estimated at 572,397 tons of CO₂ equivalent (tCO₂-eq), or 28,620 tCO₂-eq per year (See Annex 6).

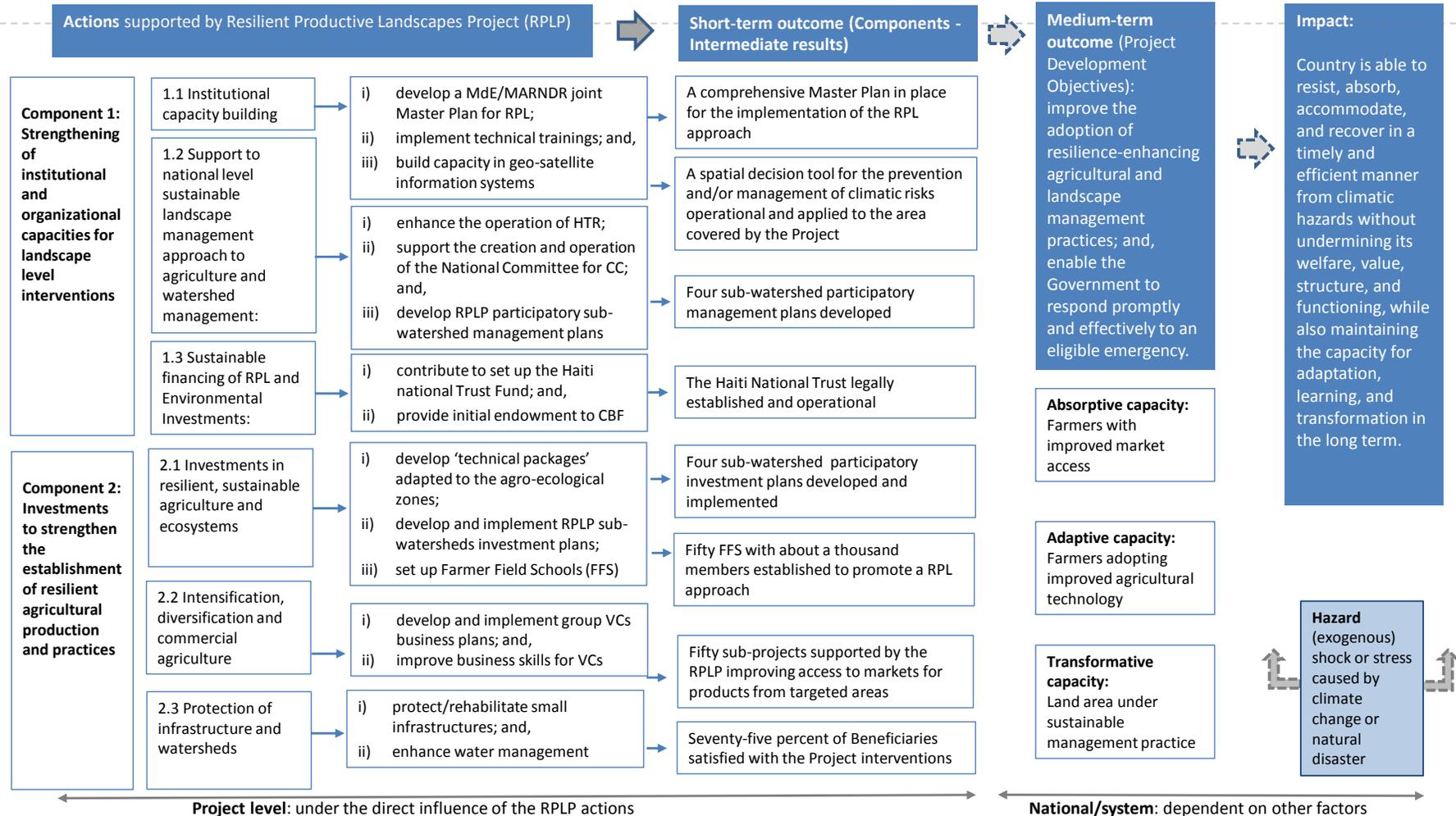
G. World Bank Grievance Redress

85. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported Project may submit complaints to existing Project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address Project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit <http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service>. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.



VII. RESULTS FRAMEWORK AND MONITORING

Table 2: Theory of Change





Results Framework

COUNTRY : Haiti

Resilient Productive Landscapes

Project Development Objectives

The Project Development Objectives are: (i) to improve the adoption of resilience-enhancing agricultural and landscape management practices in selected sub-watersheds; and (ii) to enable the Government to respond promptly and effectively to an eligible emergency.

Project Development Objective Indicators

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: Land area under sustainable landscape management practices	✓	Hectare(Ha)	0.00	2000.00	Semi-Annual	Admin records from the Operator / DDA / DDE	PCU-L
<p>Description: The indicator measures, in hectares, the land area for which new and/or improved sustainable landscape management practices have been introduced. Land is the terrestrial biologically productive system comprising soil, vegetation, and the associated ecological and hydrological processes; Adoption refers to change of practice or change in the use of a technology promoted or introduced by the project; Sustainable landscape management (SLM) practices refers to a combination of at least two technologies and approaches to increase land quality and restore degraded lands for example, agronomic, vegetative, structural, and management measures that, applied as a combination, increase the connectivity between protected areas, forest land, rangeland, and agriculture land.</p>							
Name: Farmers adopting improved agricultural technology	✓	Number	0.00	3000.00	Semi-Annual	Admin records from the Operator / DDA / DDE	PCU-L
of which female (in		Percentage	0.00	33.00	Semi-Annual	Admin records from the	PCU-L



Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
percentage)						Operator / DDA / DDE	

Description:

Name: Share of targeted farmers with improved market access (%)		Percentage	0.00	40.00	Semi-Annual	Sample based value chain survey Reports from the MARNDR/MdE/ Operator / DDA / DDE	PCU-L
--	--	------------	------	-------	-------------	---	-------

Description: This indicators measures the proportion of farmers supported through the incentive scheme who benefit from an increase of production sold to the markets and/or an increase of income from marketed products, generated through investments from RPLP. It will be measured through a sample based value chain survey.

Intermediate Results Indicators

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: 1.1. Comprehensive Master Plan (MARNDR / MdE) in place for the implementation of the Resilient Productive Landscapes approach		Yes/No	N	Y	Annual	Admin records from MARNDR/MdE	PCU-C



Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
<p>Description: The Master Plan will guide the institutional and operational implementation of the resilient productive territories approach at the national level. It will include (i) the results of institutional capacity assessments (baseline and final), (ii) the capacity building plan for key stakeholders, (iii) a proposal for a national territorial management policy and plan (iv) a five-year investment plan, and a monitoring and evaluation framework for the implementation of the investment plan.</p> <p>This indicator is linked to the LDCF/SCCF Results Framework (i) indicator 12 "Regional, national and sector-wide policies, plans and processes developed and strengthened to identify, prioritize and integrate adaptation strategies and measures" under its Objective 3.2 'Policies, plans and associated processes developed and strengthened to identify,prioritize and integrate adaptation strategies and measures' ; and (ii) indicator 10 "Capacities of regional, national and sub-national institutions to identify, prioritize, implement, monitor and evaluate adaptation strategies and measures" under its Objective 2.3 'Institutional and technical capacities and human skills strengthened to identify, prioritize, implement, monitor and evaluate adaptation strategies and measures'.</p>							
Name: 1.2a. Number of sub-watersheds with participatory plans developed		Number	0.00	4.00	Semi-Annual	Admin records from the MARNDR/MdE/ Operator / DDA / DDE	PCU-L
<p>Description: This indicator will measure the number of plans that were developed (according to the Participatory Watershed Management Planning Methodology developed through PROFOR study – P162352); the subsequent investments plans developed with prioritized interventions and costing in the context of RPLP ; and their actual implementation (at least 50% of the plan implemented).</p>							
Name: 1.2b. Number of sub-watersheds with investments plans developed		Number	0.00	4.00	Semi-Annual	Admin records from the MARNDR/MdE/ Operator / DDA / DDE	PCU-L
<p>Description: This indicator will measure the number of business plans developed, based on participatory plans, with prioritized interventions and costing in the context of RPLP</p>							
Name: 1.3a. Spatial decision		Yes/No	N	Y	Semi-Annual	Admin records from CNIGS /	PCU-C



Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
support tool for the prevention and / or management of climatic risks operational						MARNDR/ MdE	
<p>Description: The operationalization is defined as the setting up and/or access by the CNIGS to selected spatial decision support tools and the connection between CNIGS and units in MARNDR and MdE (soil health and erosion risk monitor; drought risk monitor)</p>							
Name: 1.3b. Spatial decision support tool for the prevention and / or management of climatic risks applied to the area covered by the Project.		Hectare(Ha)	0.00	8000.00	Semi-Annual	Admin records from CNIGS / MARNDR/ MdE	PCU-C
<p>Description: Spatial decision support tools referred to in 1.3.a are applied to the area of intervention under Component 2 of the project.</p> <p>This indicator is linked to the LDCF/SCCF Results Framework indicator 7 "Number of people/geographical area with access to improved, climate information services" under its Objective 2.2 'Access to improved climate information and early-warning systems at regional, national, sub-national and local level'.</p>							
Name: 1.4a. Haiti National Trust legally established		Yes/No	N	Y	Semi-Annual	Admin records from CBF/secretariat of Haiti National Trust	PCU-C
<p>Description: The Legal Establishment will be confirmed once the Official Status of the Haiti National Trust will have been published in "Le Moniteur".</p>							



Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Name: 1.4b. Haiti National Trust operational		Yes/No	N	Y	Semi-Annual	Admin records from CBF/secretariat of Haiti National Trust	PCU-C
<p>Description: The TF will be considered Operational when a Sub-Account will have been opened in CBF, and interests from the GEF/LDCF endowment disbursed to the Haitian National Trust</p>							
Name: 2.1a. Farmers’ field schools promoting a RPL approach established FFS		Number	0.00	50.00	Semi-Annual	Admin records from the Operator	PCU-L
<p>Description: Under the Project, the FFS approach is a participatory learning process for agricultural producers. It aims at strengthening capacities, through small groups, to better understand their agro-ecological constraints in a context of climate change, to test and to set up resilient productive systems applicable to their environment.</p> <p>This indicators is linked to the LDCF/SCCF Results Framework indicator 5 "Public Awareness activities carried out and population reached" under Objective 2.1 ‘Increased Awareness of climate change impacts, vulnerability and adaptation’. FFS will facilitate actions to increase farmers’ comprehension of their vulnerability to projected climate change impacts and application of available measures to enhance their resilience.</p>							
Name: 2.1b. Farmers participating in the FFS		Number	0.00	1000.00	Semi-Annual	Admin records from the Operator	PCU-L
of which female (in percentage)		Percentage	0.00	33.00	Semi-Annual	Admin records from the Operator / DDA / DDE	PCU-L



Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
<p>Description: Under the Project, the FFS approach is a participatory learning process for agricultural producers. It aims at strengthening capacities, through small groups, to better understand their agro-ecological constraints in a context of climate change, to test and to set up resilient productive systems applicable to their environment.</p> <p>This indicators is linked to the LDCF/SCCF Results Framework indicator 5 "Public Awareness activities carried out and population reached" under Objective 2.1 'Increased Awareness of climate change impacts, vulnerability and adaptation'. FFS will facilitate actions to increase farmers' comprehension of their vulnerability to projected climate change impacts and application of available measures to enhance their resilience.</p>							
Name: 2.2a. Sub-projects supported by the RPL Project improving access to markets for products from targeted areas		Number	0.00	50.00	Semi-Annual	Admin records from the Operator	Operator/MARNDR/MdE
<p>Description: This indicator refers to sub-projects that will have received matching grants from RPLP.</p>							
Name: 2.2b. Members of the groups benefiting from sub-projects		Number	0.00	800.00	Semi-Annual	Admin records from the Operator	Operator/MARNDR/MdE
of which female (in percentage)		Percentage	0.00	50.00	Semi-Annual	Admin records from the Operator / DDA / DDE	Operator/MARNDR/MdE
<p>Description: This indicator refers to sub-projects that will have received matching grants from RPLP.</p>							
Name: 3. Percentage of beneficiaries satisfied with		Percentage	0.00	75.00	Mid-term and final evaluations	Household surveys (report from a consultancy)	PCU-L



Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Project interventions (disaggregated by gender)							
<p><i>Description:</i> This indicator measures the opinion of beneficiaries over Project interventions based on the quality of the services, inputs and/or assets provided under Component 2 as well as on the perceived effects in various dimensions of their livelihoods and environment. A household survey will be carried out on a representative sample of the beneficiaries of Component 2.</p>							

**Target Values****Project Development Objective Indicators**

Indicator Name	Baseline	YR1	YR2	YR3	YR4	YR5	End Target
Land area under sustainable landscape management practices	0.00	0.00	500.00	1000.00	1500.00	2000.00	2000.00
Farmers adopting improved agricultural technology	0.00	0.00	200.00	1000.00	2000.00	3000.00	3000.00
of which female (in percentage)	0.00	33.00	33.00	33.00	33.00	33.00	33.00
Share of targeted farmers with improved market access (%)	0.00	0.00	10.00	20.00	30.00	40.00	40.00

Intermediate Results Indicators

Indicator Name	Baseline	YR1	YR2	YR3	YR4	YR5	End Target
1.1. Comprehensive Master Plan (MARNDP / MdE) in place for the implementation of the Resilient Productive Landscapes approach	N	Y	Y	Y	Y	Y	Y
1.2a. Number of sub-watersheds with participatory plans developed	0.00	4.00	4.00	4.00	4.00	4.00	4.00
1.2b. Number of sub-watersheds with investments plans developed	0.00	3.00	4.00	4.00	4.00	4.00	4.00



Indicator Name	Baseline	YR1	YR2	YR3	YR4	YR5	End Target
1.3a. Spatial decision support tool for the prevention and / or management of climatic risks operational	N	N	Y	Y	Y	Y	Y
1.3b. Spatial decision support tool for the prevention and / or management of climatic risks applied to the area covered by the Project.	0.00	0.00	0.00	8000.00	8000.00	8000.00	8000.00
1.4a. Haiti National Trust legally established	N	N	Y	Y	Y	Y	Y
1.4b. Haiti National Trust operational	N	N	N	Y	Y	Y	Y
2.1a. Farmers' field schools promoting a RPL approach established FFS	0.00	0.00	10.00	30.00	40.00	50.00	50.00
2.1b. Farmers participating in the FFS	0.00	0.00	200.00	600.00	800.00	1000.00	1000.00
of which female (in percentage)	0.00	33.00	33.00	33.00	33.00	33.00	33.00
2.2a. Sub-projects supported by the RPL Project improving access to markets for products from targeted areas	0.00	0.00	10.00	20.00	30.00	50.00	50.00
2.2b. Members of the groups benefiting from sub-projects	0.00	0.00	150.00	300.00	450.00	800.00	800.00
of which female (in percentage)	0.00	50.00	50.00	50.00	50.00	50.00	50.00
3. Percentage of beneficiaries satisfied	0.00			60.00		75.00	75.00



Indicator Name	Baseline	YR1	YR2	YR3	YR4	YR5	End Target
with Project interventions (disaggregated by gender)							



ANNEX 1: DETAILED PROJECT DESCRIPTION

1. Project rationale and approach

1. **Climate change's impacting on agriculture.** As mentioned in the sectoral context, Haiti is extremely vulnerable to natural disasters: over the past three decades, from 1993 to 2012, the country has faced two droughts, one earthquake, 31 floods and 26 tropical storms/hurricanes (Global index on Climate Change, 2016). In addition, climate change is projected to manifest itself in the country in the following ways: increases in temperatures and decreases in precipitation. This will affect agriculture in general, and subsistence agriculture in particular, which is primarily rain-fed and therefore highly vulnerable to rainfall patterns. A combination of increasing temperatures and decreasing precipitation is likely to impose particularly severe stresses on agricultural systems, especially given the highly-degraded nature of soils and vegetation in the target sub-watersheds. In addition, according to the Intergovernmental Panel on Climate Change (IPCC)¹⁷, the Caribbean region is likely to be exposed in the future to more intense and frequent extreme weather events, which deeply impact the agriculture sector. Identified climate related hazards in Haiti include flash flooding, salt water intrusion, drought, intense rainfall, landslides, severe soil erosion, and hurricanes¹⁸.

2. **Agriculture as a steward of ecosystems.** Agriculture and the natural resource base are currently tied into a negative feedback loop of mutually reinforcing degradation of natural resources and declining yields. In a context where land is used extensively for agricultural production on slopes (63 percent of agricultural land is on more than 20-degree slopes, and 40 percent of cultivated land in mountains is on slopes of more than 50 degrees), deforestation and inappropriate agricultural practices (e.g. peanuts production on slopes, tree cutting for land expansion and/or cash generation through fire wood or charcoal production and sales) have produced predictable interlinked environmental and social consequences: the loss of topsoil, decreasing soil fertility, rain water run-off and depletion of aquifers, droughts, declining agricultural productive capacity, lower incomes for farmers and rural out-migration.

3. **The depletion of the natural resource base and high exposure and vulnerability to extreme weather events have driven an average rate of decline in yields** of between 0.5 to 1.2 percent per annum (WB, 2005). The weather and climate events, that today's depleted natural resource base offers little protection against, are congruent with priority issues for resilience building in the climate change context (e.g. extreme events, drought, extreme rainfall events, etc.). In each of these cases, the health of the natural resource base is a key determinant of farmer resilience. For example, the risk of drought is much reduced if the moisture retention capacity of soils is rehabilitated, micro-catchment areas include water storage facilities and water is being retained for longer periods in upstream forests. Also, critical habitats like mangroves are essential for maintaining fish nursing sites, protecting coasts against storms, and shielding lowland crops from soil salinization, and are particularly impacted by unsustainable agriculture practices, as soil is washed away and settles into valleys, rivers and eventually into the sea. As a result, any effort to build resilience to climate change in agriculture will need to take an integrated approach that considers both sensitivity, due to a diminished natural resource base, and exposure due to climate change. Without trees' complex root systems to hold Haiti's mountainous terrain in place, protect gullies from serious erosion and prevent water resources

¹⁷ <https://www.ipcc.ch/report/ar5/wg2/>

¹⁸ Source: Review of Current and Planned Adaptation Action : The Caribbean (Nov, 2011)



depletion, the vulnerability of landscapes and people living on them is doomed to increase. The box below illustrates that these issues are reflected in national policies, such as the NAPA.

Box 1. "Haiti is a mountainous country whose peaks reach up to 2684 meters of altitude. Poor farming practices weaken the soil capital and weaken the productive capacity as arable land is eroded and topsoil is carried towards the sea. Land erosion, driven by natural factors such as drought, wind and rain and by anthropogenic factors such as excessive deforestation and uncontrolled construction in urban areas, leads to a reduction in the country's agricultural potential. **The vulnerability of the agricultural sector is closely linked to that of water and soil, and climate change, by acting on water resources, which clearly impacts agricultural production.** A study conducted by the MOE (2000) argues that early in the second half of the 21st century, more than half of the area of land of Haiti will be at risk of desertification due to climatic conditions." Extract from NAPA (2006).

4. **Characteristics of farms and production.** 85 percent of farm holdings now have less than one hectare in Haiti. The main food crops produced are rice (in lowlands), maize, bananas, yams, cassava, beans and millet, and the main export crops include coffee and mangoes. While diversification has commonly been practiced by farmers as a risk-mitigation strategy (70 percent of farmers produce more than four crops and 75 percent raise some livestock), it is becoming harder to implement in increasingly smaller plots. The traditional practice of creole gardens (or "*jardins creoles*") in particular has decreased over time. This practice corresponds to a multi-storied agro-forestry system including a mix of perennial and annual crops, i.e. woody perennials, tree crops (e.g. bread fruit, mango, avocado, bananas, citrus and coffee), vegetables and staple crops, playing multiple roles, including contributing to household's food security and providing ecosystems benefits. These resilient systems are particularly adapted to face harsh topographic and climatic conditions, and are now recognized as typical climate-smart/agro-ecological best practices.

5. **Marketing constraints.** Important issues faced by producers in commercializing their production include, among others, the poor quality of rural roads reducing connectivity with buyers, insufficient water storage and irrigation for production in dryer seasons and mitigation of drought impacts, lack of food dryers and storage for reduction of vulnerability to prices volatility, reduction of post-harvest losses, improved quality for better marketability as well as accessibility of nutritious food all year long. Given that women play a major role in the post-harvest marketing of products in Haiti, improving these value chains is a critical factor for their economic empowerment and resilience. It also offers opportunities for other vulnerable populations, such as youth, to increase rural income and jobs diversification.

6. **The approach used by RPLP builds on a rich set of lessons learned** from past projects and evidence from analytical work. The Project will take a landscape approach and operate at sub-watershed level, combining a socio-economic and an ecological approach to landscape management.^{19 20}

7. **Resilience.** In the context of RPLP, resilience is defined as the ability of people, assets, and systems in selected areas of sub-watersheds to resist, absorb, accommodate, and recover in a timely and efficient manner from climatic hazards without undermining its welfare, value, structure, and functioning, while also

¹⁹ See also Section III C.

²⁰ PROFOR-funded work to develop (i) a Resilient Productive Landscape Planning Methodology (P162352), and (ii) Haiti Arboreal Assessments - post- hurricane tree counting and charcoal assessment (P164024).



maintaining the capacity for adaptation, learning, and transformation in the long term. The resilience-enhancing agricultural and landscape management practices promoted by RPLP correspond to the group of technologies, practices and systemic approaches under the climate smart agriculture and landscapes framework of the Global Alliance for Climate Smart Agriculture. These technologies, practices and systemic approaches are envisaged to strengthen the absorptive, adaptive and transformative capacity of people, assets and systems with interlinked actions at diverse levels - within the farms, along food value chains and at landscape level.

8. **Landscape.** Landscape is defined as “an area large enough to produce vital ecosystem services, but small enough to be managed by the people using the land which produces those services” (FAO 2013). A landscape can contain various ecosystems, and human activities and institutions are viewed as an integral part of landscapes. Ecosystems services include soil health, essential for sustainable and productive agriculture; water retention; biodiversity conservation; carbon sequestration; renewable energy sources; among others. In the context of the RPLP, the operational boundaries of the landscapes are those of the sub-watersheds covered by the Project.

9. **Resilience-enhancement from RPLP in the selected sub-watersheds will result from actions to decrease the vulnerability** of: (i) farmers, linked to increasing soil degradation and subsequent continuous reduction of production capacity, and insufficient capacity to sell products in a profitable and sustainable manner, including due to poor infrastructure conditions; and (ii) landscapes, linked to the lack of a holistic, participatory planning capacity that is required to establish a common understanding of problems, propose solutions, prioritize actions expected to have the larger positive impact on ecosystems and populations in a defined sub-watershed, including interventions aimed at reducing soil erosion and enhancing water retention capacities in gullies as well as around natural springs, mostly through intensification of vegetative and tree cover, as well as small water harvesting infrastructure to reduce water run-off.

10. **RPLP is designed to contribute to breaking the cycle of natural resources degradation and increasing population vulnerability** in the selected sub-watersheds by taking an integrated approach. Based on geographic concentration, the Project will work at both the farm and community level to simultaneously raise production and productivity using more resilient agriculture practices adapted to the hydro-geological context, which will directly contribute to rebuilding the natural resource base. By protecting and restoring top soil cover in particular, the Project will improve water retention capacity, reduce erosion and enhance soil quality, which are required to counter the soil quality loss/productivity loss/increasing vulnerability cycle. The Project will also work along the entire value chain from inputs via production to processing and marketing to ensure that the changes introduced result in income gains for farmers, which in turn are essential for Project sustainability. It will also support the construction or rehabilitation of small infrastructure considered critical to enhance landscapes resilience (e.g. related to water management or improved access to markets), taking care of their quality to ensure the best possible resistance to adverse climatic conditions.

11. **RPLP will also strengthen the institutional enabling environment and build capacity for landscape level governance and management** at both national and local levels as well as delivering a proof of concept of the approach by investing in selected watersheds to create the enabling conditions for subsequent scale-up.

12. **The core of the investments and expected impact from RPLP shall be seen under Component 2**, which will finance agricultural value chains and infrastructure-related activities to reduce land and farmers’



15. **Their agro-ecological characteristics can be grouped into three major agro-ecological systems** which correspond to an altitude range from the highlands to the sea and which will guide interventions under Component 2.1:

(i) The altitude zones are primarily fresh and humid highlands. These areas are mainly occupied by off-season vegetables with a high market value. In this zone, the Project could support the implementation of productive wood walls and hedgerows (“bocages”) to protect both soil and crops from the devastating effect of winds, provide additional income and feed the livestock. These hedgerows would also protect intensive crops against uncontrolled grazing of livestock. Additionally, the Project could improve the vegetable culture systems with some reconstitution of agroforestry highland gardens.

(ii) The second agro-ecological zone consists of several areas of intermediate altitude, and benefits from a warm and humid climate. This can be considered the most strategic zone. In this zone, climate adaptation interventions would best restore or densify agro-forestry systems, supporting the association of a number of annual and perennial species, commonly known as the "Creole gardens", which form the most resilient type of cultural association while offering great economic and nutritional benefits. The Project could support staggering and diversification, and combine cash crop production and food production by focusing on priority sectors such as cocoa, coffee, yam, plantain, avocado, mango, breadfruit, citrus and pineapple on basaltic soils.

(iii) Low-lying areas are characterized by a warm and dry micro-climate. These areas are characterized by unfavorable climatic and soil conditions. These areas were initially occupied by agricultural systems such as rotation systems between sorghum and pigeon peas offering very poor levels of resilience. The growing impact of climate change has resulted in further impoverishment of soils, increased dry season durations and generated a very precarious economic return on these crops. These systems can advantageously be replaced by dry, dense and fast-growing dry forest. The dry forests are predominantly composed of Neem (*Azadirachta Indica*) and Acacia (*Acacia and Prosopis sp.*), and tend to propagate naturally. The Project would support the diversification of products related to these dry forests by introducing other tree species (palm trees, cashew nuts trees and moringa oleifera), and by introducing fruit cultures (melon in particular, *Cucumis melo*), as well as improving the practices around livestock and honey production strongly associated with these agricultural products.

(iv) Specific interventions would be used for the most degraded and priority areas to allow soil and cover restoration (in particular in gullies and surrounding springs to maintain water natural resources), using hedgerows and the establishment of rapidly growing fruit trees (ex: Guava, *Psidium Guajava*).

16. **These types of improvement systems would all contribute to stabilizing the soil**, improving its quality and would have a favorable impact on the protection of low-lying areas that are heavily threatened, namely the mangrove zones, which play an essential ecological role (directly by reducing sedimentation affecting them, and indirectly by providing more profitable production alternatives to farmers, thereby reducing illegal mangrove wood harvesting), the dwellings (affected by flash flooding and potential landslide linked to deforested gullies), and the wet lowlands occupied by rice crops.

17. **RPLP sub-watershed approach.** Following the lessons learned presented in this PAD, the Project’s interventions in the selected sub-watersheds will build on the results of two watershed management



participatory planning exercises piloted within one of the selected sub-watersheds during Project preparation (Rivière Froide) that will be implemented in the entire area of the RPLP during Project preparation with the support of J/P HRO.

18. **The methodology includes a “ridge-to-reef” approach where applicable, and the targeting of high priority micro-catchment sites** that show promises of a positive rate of return on land use planning and investments. The approach prioritizes these critical sites for more intensive rather than equally distributed investments throughout all areas of the watersheds. Another guiding premise of the methodology is that successful programming of watershed interventions requires meaningful and continuous engagement of local populations in the implementation of more sustainable land use practices and more efficient management of water resources. In Haiti, this includes agricultural strategies that protect the resource base, for example an emphasis on agroforestry and expanded tree cover on fragile slopes. Accordingly, the critical incentive for more sustainable land use is the tangible economic interests of local people, linking livelihood pursuits with improved protection of the environment. A challenge of the exercise is to identify sites that incentivize collaborative efforts focused on high value natural assets such as springs, ravines, water courses, wetlands, and irrigable land, also coastal resources such as mangroves, fisheries and coconut groves.

19. **The guiding elements of this participatory watershed planning include:** collection of hydrology-geology and sociology data; rapid and cost-effective approaches; interactive field observations with experts; matching the science of experts with local knowledge and experience of watershed users and stakeholders; concentration of efforts rather than treating scattered plots, focusing on critical zones within watersheds; adaptation i.e. tailoring interventions to the sites, paying attention to the species introduced to match rainfall/soil type/patterns of land use, and build on the positive features of small farm systems including agroforestry associations, tree crops, and a broad diversity of cultigens: agro-ecological zones need to be mapped and taken into account in prioritizing interventions; manageable units (local resource management problems to be treated at the most local unit capable of handling the problem); taking livelihood imperatives, as Haiti’s watersheds are deeply marked by rural poverty; and target assets and opportunities (identify high value and high priority sites, ravines, springs, micro-catchments, and asset-based opportunities for more efficient water use; and link economic incentives





to environmental sustainability (e.g. high value perennials and value chains). The above figure summarizes these critical aspects.

20. The next critical step required to operationalize these plans is the development of sub-watershed investment plans that will provide more detailed information related to each category of intervention offered by the Project, with the volume of activities and types of instruments pre-identified during project preparation based on lessons learned and pilot participatory planning exercises (See Component 2), location, and the corresponding estimated budget. While J/P HRO's recruited consultants will support the development of participatory watershed management plans during Project preparation, an operator (consulting firm) to be recruited under Component 2 will be in charge of coordinating the development of the subsequent investment plans, under the guidance of the selected sub-watersheds' community' representatives, the PIU-L, DDA, and DDE.

21. Food Security co-benefits. Food insecurity is an important problem in Haiti. Undernutrition concerns more than half of the population (FAO) and is particularly high in rural areas. Traditionally, rural Haitians take advantage of seasonal, nutrient rich production to complement their diet (fruits, vegetables, legumes, small livestock), yet this diversity is at risk due to the deterioration of natural resources, which decreases the availability of many of these sources of dietary supplementation. The Project will tackle this problem at different levels. First, the promotion of activities contributing to the restoration of degraded areas and improvement of current practices in the different watersheds will have a positive impact on overall agricultural productivity as well as on the production of food with high nutritional value (mostly fruits and vegetables). Second, the Project will contribute to improving food security through the promotion of crop quality and diversity induced with agroforestry investments, named traditionally "*jardins creoles*" in Haiti. The project expects to promote several types of fruit trees, such as breadfruit, coconut, mango, guava, banana, citrus, as well as vegetables and yam. In addition, the combination of such investments combined with small infrastructure and support to commercialization (through groups of producers, intermediaries, or small enterprises) within the entire value chain will contribute to greater accessibility, availability and thus affordability of food, thereby creating more resilience of households toward food insecurity. Investments could be related not only to private but also institutional markets. The government has already been discussing possibilities with school feeding programs in the area of intervention. Such interventions would seek to help increase the accessibility to nutritious local food for Haitian students and guarantee stable market access via institutional markets for producers and groups.

22. Climate change adaptation co-benefits. RPLP activities are expected to yield significant adaptation co-benefits (as well as mitigation co-benefits described below). An initial assessment done at concept note stage indicated that IDA's share of financing of the RPLP contributing to climate co-benefits was 81%.The table below summarizes expected adaptation co-benefits:



Table 3: Climate change adaptation co-benefits

Current situation	Project interventions (selection)	Adaptation co-benefits
<p>Increasing vulnerability to climate change driven by:</p> <ul style="list-style-type: none"> - Increased exposure to climate change impacts such as: droughts, extreme heat, flash floods etc. - Increasing sensitivity of production to climatic phenomena due to reduced resilience driven by a degrading natural resource base - Increased sensitivity due to a lack of adaptive planning capacity at the micro-catchment level - Increased sensitivity due to lack of cross-sectoral adaptive institutional capacity to take informed decisions, guide, report, and monitor interventions on the ground in function of a changing climate 	<p>Capacity building:</p> <ul style="list-style-type: none"> - Development of Master Plan for Resilient Landscapes Development - Intensive technical trainings within key line Ministries, at national and local level and other relevant stakeholders - Capacity building in cartography, satellite imaging data collection and analysis for climate modeling, development and application of spatial decision support tools, forecasting and early-warning systems <p>Investments:</p> <ul style="list-style-type: none"> - Development of “technical packages” (including inputs, such as tree seedlings, seeds, stakes, fences; and services, such as grafting, and technical assistance)” adapted to specific agro-ecological zones - Development of participatory investments plans identifying priority investments and their geographical locations; - Development of participatory investments plans based on specific vulnerability criteria (including ecosystems and livelihoods) to allow the implementation of climate smart productions and practices; and - Set-up of Farmer-Field-Schools (FFS) for producers focusing on transferring knowledge and know-how on climate resilient production systems and practices 	<p>Strengthening of resilience through fortification of natural resource base at landscape level:</p> <ul style="list-style-type: none"> - Soil quality improvement in areas with high risks of erosion - Increased water retention capacity <p>Reduced sensitivity of agricultural production & livelihoods to climate impacts:</p> <ul style="list-style-type: none"> - Increased coverage of resilient agricultural practices, adapted to the topography and agro-ecological context - Improved adaptation capacity of agricultural production through increased diversification of productions practices to increase resilience - Improved livelihoods with additional and more diversified incomes <p>Improved adaptive capacity:</p> <ul style="list-style-type: none"> - Improved capacity for planning, implementing, monitoring, watershed-level interventions towards improved natural resources management and livelihoods.

23. **In terms of mitigation co-benefits, it is estimated that RPLP activities will lead to significant benefits compared to the baseline.** A quantification of the Green House Gas (GHG) mitigation potential using the EX-ACT tool estimated that over a duration of 20 years (4 years for actual project implementation and 16 years for capitalization of its effects), the Project’s carbon emission reduction is estimated at 572,397 tons of CO2 equivalent (tCO2-eq), or 28,620 tCO2-eq per year. These benefits will principally be achieved through improved landscape management, in particular through the promotion of afforestation, agroforestry systems and perennial agriculture cultivars (See also Annex 6).

2. Description by component

24. **The Project will include four components:** (i) Strengthening of institutional and organizational capacity for landscape level interventions; (ii) Investments to strengthen resilient agricultural production and practices; (iii) Project coordination, monitoring and evaluation, and (iv) Contingency Emergency Response Component.



25. **Component 1: Strengthening of institutional and organizational capacities for landscape level interventions** (US\$ 7.0 M equivalent total -US\$ 1.4 M equivalent IDA, US\$ 4.2 M LDCF - plus parallel financing of US\$ 1.4 M from J/P HRO). This component will support national efforts to: create an Agriculture/Environment joint landscapes policy and action plan towards resilient agriculture and ecosystems; fill skills and knowledge gaps required to implement respective mandates; foster partnerships and communication; strengthen institutional capacity to analyze climate related data for improved planning and climate related disaster risk prevention; fund the set-up of a Haiti National Trust Fund that will provide financing for climate adaptation in perpetuity with resources from the CBF; and pave the way for Component 2 interventions that will rely on communities' participatory planning exercises in all selected sub-watersheds. Specifically, the component will support:

26. *Sub-component 1.1. Institutional capacity building* (US\$ 2.6 M equivalent total -US\$ 1.4 M equivalent IDA, US\$ 0.8 M LDCF - plus parallel financing of US\$ 0.4 M from J/P HRO). Activities under this sub-component will be financed through IDA and LDCF co-financing, and J/P HRO parallel financing. It will finance: (i) the development of a joint MdE/MARNDR Master Plan for Resilient Landscapes Development, building on respective policies and action plans²¹, and recent international commitments under climate change/climate adaptation global agendas (including NAPA and NDC implementation), establishing areas of synergies, joint action plan and related M&E, that will be field-tested under Component 2, and serving as a reference under HTR; (ii) intensive technical training within key line Ministries, including MARNDR and MdE, at the national and local levels with the branches of line ministries, as well as local governments and other relevant stakeholders (in the selected sub-watersheds), to carry out their mandate of sustainable landscapes management; exchange visits in-country and abroad to share landscapes restoration and management experience; and student sponsorships for Masters degrees related to landscape/ecosystems/environmental fields; (iii) capacity building in cartography, satellite imaging, data collection and analysis for the development and dissemination of spatial decision support tools; and establishing linkages with global networks of expertise in this field offering options to get high resolution Agro-Meteorological data. Drawing on a background study supported by the WB, a set of dynamic decision support tools driven by geospatial and hydro-meteorological data were selected that would be supported by RPLP, namely a soil health & erosion risk monitor and a drought risk monitor. As capacity building efforts progress, further tools and information products will be added to this list. The creation of these tools would: (i) help establish a baseline in project areas on critical variables, and (ii) inform project implementation at the farm and landscape levels. The Project will in particular support the Haitian National Centre for Geospatial Information (*Centre National de l'Information Géo-Spatiale or C.N.I.G.S*) to access and use new cost-effective technologies and services. The Project will seek to link new skills and tools with the realization of analyses focused on the areas of intervention of the Project, while also building capacity, identifying priority information needs and high impact dissemination strategies to improve the ability of stakeholders to take landscape management decisions across the country. A strong connection between CNIGS, and units in MARNDR and MdE will be maintained to support national effective integration of relevant information into policy development and program implementation. In addition, under this sub-component, J/P HRO will contribute to developing communication and outreach material on resilient landscapes, and organize training for targeted non-governmental audiences, primarily in the selected areas of the Project.

²¹ Relation to policies and mandates from other relevant institutions shall be included as well, e.g. CIAT (*Comité Interministériel d'Aménagement du Territoire*).



27. *Sub-component 1.2. Support to national level sustainable landscape management approach to agriculture and watershed management* (US\$ 1.0 M total cost – entirely funded by parallel financing of US\$ 1.0 M from J/P HRO). Activities under this sub-component will be financed through parallel financing from J/P HRO. They will aim to support: (i) the Haiti Takes Root platform, to develop/update its strategic and action plans, and operate its secretariat; (ii) the establishment, and operation of the National Committee for Climate Change in charge of steering, monitoring and reporting on activities to be implemented under the NDC; and (iii) the development of detailed participatory plans and their update in the selected zones of the Project.

28. The participatory plans under this Project will follow the methodology described above under the “RPLP sub-watershed approach”. They will serve as a basis for the development of detailed participatory investment plans focused on RPLP interventions, which in turn will drive the selection of investments financed under Component 2. These plans will be developed in all four sub-watersheds selected by the Project. This approach combines: 1) co-leadership of the Minister of Agriculture and the Minister of the Environment in order to best associate the environmental and agricultural priorities; 2) a “ridge-to-reef” approach taking into account the influence of different agro-ecological zones on each other; 3) consideration, within the determined priority value chains, of all aspects from production to commercialization; 4) the combination of an individual plot approach with a territorial approach; 5) a holistic reflection on watersheds management that integrates the national and regional policies, specialists’ expertise, integration of new technologies in geographic information system (GIS) and takes into account priorities and local needs on the basis of a community-based approach. The participatory plans would also take into account the context and risks from wandering livestock, land tenure, and small infrastructure development needs to improve access to markets, water management through small scale irrigation and soils rehabilitation, as well as the protection of fragile areas. These elements will inform subcomponents 2.1., 2.2 and 2.3.

29. *Sub-component 1.3. Sustainable Financing of Resilient Productive Landscapes and Environmental Investments* (US\$ 3.4 M total - US\$ 3.4 M LDCF). The Project will facilitate the accession of Haiti to the Caribbean Biodiversity Fund (CBF) in order to allow the country to benefit from revenues generated from the CBF endowment and contribute to sustaining and further developing RPLP’s interventions in perpetuity. Annex 7 provides further details on this mechanism and the relevance of Haiti’s participation in the CBF. The CBF was established under the LDCF/World Bank funded regional project (the *Sustainable Financing and Management of Eastern Caribbean Marine Ecosystems Project*, which closed in December 2016), as a mechanism to provide a perpetual source of financial support to Caribbean member countries to protect biodiversity as a primary objective. However, the objectives are broader and can include specific funds earmarked for actions related to climate adaptation, an option that would be used in the case of Haiti. Five national trust funds in the participating States from the Organization of Eastern Caribbean States (OECS) were also established under the same project in order to access the funds generated through CBF. The CBF is currently managed by a Chief Executive Officer (CEO) and a Board comprising of The Nature Conservancy (TNC), the German Development Bank (KfW) and members of the OECS member countries that have signed agreements with the CBF. At the time of RPLP preparation, the total endowment stood at US\$ 32 M, which had already generated approximately US\$ 2.4 M of interest. The revenue generated for participating countries is estimated at approximately US\$ 180,000 per annum (for a US\$ 3 M endowment). The interest rate earned by the CBF for its members on their contributions has been approximately 7 percent per annum.

30. Efforts to access the CBF have been led so far by TNC and Société Audubon Haiti. Haiti has an observer status in the CBF and is a full member of the Caribbean Challenge Initiative (CCI). Haiti has been working



actively on establishing its national trust fund (called Haiti National Trust - HNT). Progress at the time of RPLP preparation included the establishment of a working group of key stakeholders including government, international development institutions, and other partners, as well as the establishment of the legal status of the Haiti National Trust. Haiti has received the commitment of a group of donors (Swiss Cooperation, UNEP, UNDP, IDB and TNC) to finance a secretariat and required studies to the tune of US\$220,000 that will allow the CBF accession process to further move forward until June 2018. KfW has also committed US\$7 million to endow the CBF for Haiti.

31. Under this sub-component, and in order to finalize the accession process and operationalize HNT, RPLP would finance: (i) pending legal and administrative requirements to set up the fund as a not-for-profit organization; (ii) operational costs of the HNT (secretariat); (iii) technical assistance to develop fundraising (in order to identify other income streams to support the CBF fund), communication strategies, an operating manual, auditing procedures, etc.; (iv) endowment of the CBF on a specific sub-account earmarked for climate adaptation objectives; and (v) a call for proposals and award process for selected sub-projects that benefit climate change adaptation and landscape management practices. It is expected that within a maximum of two years, the whole preparatory process would be completed, allowing Haiti to endow the CBF and receive its first transfer of interest at the end of the third year of RPLP implementation (see Annex 7).

32. **Component 2: Investments to strengthen resilient agricultural production and practices** (US\$ 15.71 M equivalent total -US\$ 10.1 M equivalent IDA, US\$ 2.01 M LDCF- and parallel financing of US\$ 3.6 M from J/P HRO). This component will support: (i) individual farmers, agricultural entrepreneurs and communities within selected sub-watersheds to establish more resilient agricultural production and practices, adapted to the agro-ecological contexts, and prioritized according to participatory planning exercises (management plans under sub-component 1.2 and investments plans under 2.1), supported by scientific expertise, in order to provide individual and, to the maximum extent possible, landscape-level collective co-benefits from increased soil quality, water retention capacity and biodiversity; (ii) actions aimed at improving the revenues and livelihoods from better market access and improved food availability and nutritional quality required to reduce people and consequently ecosystems vulnerability; and support the establishment or rehabilitation of small infrastructure for increased farmer and landscape level resilience.

33. The interventions under this component will be grouped under three main types of interconnected actions: (i) those that will directly contribute to reducing soil erosion and providing other ecosystem co-benefits (e.g. water retention capacity, enhanced biodiversity), corresponding to sub-component 1; (ii) those that will facilitate or improve the capacity to generate revenues from these types of production, or other related production with important environmental/climate adaptation benefits (e.g. composting, honey production), corresponding to sub-component 2; and (iii) those that will provide critical small infrastructure in these sub-watersheds, corresponding to sub-component 3. These groups of activities per sub-watershed will be detailed in the respective investment plans mentioned above in the *RPLP sub-watershed approach* section, and prioritized accordingly. One or more operators (consulting firms) will be recruited to support the PIU in the management of these three sub-components. This process will build on the experience of RESEPAG II, which adopted a farmer subsidy scheme using a voucher-based mechanism offering a menu of “technical packages” (including a combination of inputs and/or services and/or equipment), providing an incentive to individual farmers to adopt improved agriculture practices, inputs, and technologies; a Farmer-Field-School approach to disseminate knowledge and know-how through hands-on practices; and a market support facility using a matching grant mechanism to support value chains. In the case of RESEPAG II, various



operators are in charge of the management of these activities.

34. Under RPLP, beyond the participatory investment plans, the interventions will be informed by preliminary studies carried out during project preparation consisting of: (i) the establishment of a registry of farmers, as well as inputs and services suppliers (financed under RESEPAG II, which will prioritize RPLP areas of intervention for this task), that will provide detailed information on each farmer and farm in the selected sub-watersheds; (ii) an assessment of relevant input and services suppliers in the sub-watersheds (and beyond i.e. Department of Nippes and neighboring ones) in order to determine the current offer in terms of type, quantity and quality of relevant inputs and services available (e.g. nurseries, agro-dealers, grafters, etc.) which will be important for the implementation of sub-component 2.1 and will inform sub-component 2.2 on the expected gaps and support required that would be provided through RPLP ; and (iii) a market/value chain analysis looking at key value chains relevant for the Project (based on expected types of production to be developed in the sub-watersheds, with current status and opportunities). The latter will inform both sub-components 2.1, (guiding to some extent the choice of species to include in “technical packages”) and 2.2 (guiding the proposals of sub-projects for matching grants). All these studies will provide specific data on gender aspects (and possibly on youth).

35. *Sub-component 2.1. Investments in resilient, sustainable agriculture* (US\$ 8.56 M equivalent total -US\$ 6.55 M equivalent IDA, US\$ 2.01 M LDCF). This sub-component will support investments at individual and community levels that focus on increasing the climate resilience and sustainability of agricultural production systems in the selected sub-watersheds. Specifically, it will finance: (i) the development of a limited menu of “technical packages” (including inputs, such as tree seedlings, seeds, stakes, fences; and services, such as grafting, and technical assistance)” adapted to specific agro-ecological zones, and priority issues to be addressed, building on participatory planning documents, and experts inputs; (ii) the development of participatory investment plans identifying priority investments and their geographical locations, and costs to be financed out of RPLP under Component 2; (iii) the selection of beneficiaries according to investment plans based on specific vulnerability criteria (including ecosystems and livelihoods) and their access to one of these technical package over the course of the Project to allow the implementation of climate smart production and practices; and (iv) the establishment of Farmers-Field-Schools (FFS) for producers focusing on transferring knowledge and know-how on climate resilient production and practices (such as planting following contour lines, improved tillage, planting boundary/live fences to protect against wind and water erosion, management of agroforestry systems, water and soil conservation, promotion of water harvesting and small-scale irrigation techniques that enhance water stewardship, sustainable grazing and livestock management, plantations and afforestation, soil coverage, inter-cropping, and so on)²², as well as organizational and marketing approaches to add value to the production (related to sub-component 2.2).

36. With regard to the technical packages, an initial preliminary menu of a few packages will be developed by experts before project implementation, based on the knowledge of agro-ecological zones, characterized by factors of altitude, slope and temperature, and issues to be addressed. They will propose various options of plant species best adapted to these contexts. They are expected to systematically include inputs that have both a climate adaptation and a productive value, and will offer some flexibility for farmers in terms of species (as long as they match the agro-ecological criteria). These packages will be refined at the time of the

²² The Farmer-Field-Schools will also be a vehicle to promote food diet-nutrition education which will be built from: (i) the material being compiled in the context of the J/P HRO arboretum, where a women’s repertoire of traditional plants used for medicine and diets is being created, and (ii) also re-using the food practices diet training developed under RESEPAG II.



development of investment plans and informed by them, as well as by the market/value chains and suppliers analysis. The selection of beneficiaries will be carried out by sub-watershed, after having completed the investments plans that will provide information on key zones of interventions, and recommended approaches (individual or community). Additional criteria would be applied in order to prioritize beneficiaries in the selected areas, should the financial resources not be sufficient to ensure full coverage of the defined areas. These specific criteria will be detailed in the PIM, but would include positive discrimination in favor of women and highly vulnerable categories. On the delivery mechanisms, technical packages will be provided to selected individual farmers (one farmer – one technical package) through the same mechanism used under RESEPAG II (Farmers Subsidy Scheme -FSS), i.e. providing vouchers to the farmers to buy the determined inputs/services at market prices from eligible suppliers (private businesses vetted for the quality of their products), who in turn obtain payment for the services/products rendered from a commercial bank. This system is presented in the “Incentives Manual” of MARNDR (*“Manuel d’Incitations”*, a document produced and used by the main donors involved in agriculture in Haiti, namely French Cooperation, IDB, and the World Bank). Eligibility criteria for suppliers will also be laid down in the PIM, along principles established in the *Incentive Manual*. For specific interventions that would have an advantage of being managed in a homogeneous manner (larger zones, requiring a contiguous soil protection effect, such as in gullies, or in areas surrounding springs) the operator in charge could procure directly the required inputs, yet the communities would provide the manpower required to establish the systems. This would be in agreement with the participatory investments plans.

37. *Sub-component 2.2. Intensification, diversification and commercial agriculture* (US\$ 3.95 M equivalent total- US\$ 2.85 M equivalent IDA - plus parallel financing of US\$ 1.1 M from J/P HRO). This sub-component will improve access to inputs and services, as well as the value of “climate smart products” on the markets, considered essential to ensure the profitability of investments and thereby contribute to sustainable resilient landscapes. Under this sub-component, the Project will also seek to facilitate the mobilization of commercial credit both during and after project implementation. As mentioned before, a market/value chains analysis for relevant types of production to be supported under sub-component 2.1 will be prepared during the Project preparation phase, as well as an analysis of relevant inputs and services suppliers (through J/P HRO financing).

38. The sub-component will finance training programs for the groups of inputs suppliers and services providers, as well as producers and other value chains actors on technical and financial needs and strategies to run agri-businesses, and improve market access; and strengthen the capacities of cooperatives and other types of producers’ and other value chain actors’ organizations in management. J/P HRO will also contribute to support MdE, suppliers and the establishment of germplasm production /multiplication /conservation in the area of intervention.

39. This sub-component will also provide financial support in the form of matching grants for two categories: (i) small value/basic level investment for groups of producers in order to improve the quality/quantity of products sold to intermediaries or directly placed on markets (i.e. related to transport/conditioning /packaging /storage), or the value of by-products (i.e. composters, systems for drying, cutting, etc. for human consumption or animal feeding); and (ii) higher value for more advanced constituted groups of producers or small enterprises to increase their capacity to generate additional value to climate smart production in the selected sub-watersheds (e.g. addressing supply needs, logistics, agro-processing, reduction of food losses aspects, valorization of food waste), through improved business/marketing skills, as well as improved



infrastructure and equipment to be financed through a matching grant mechanism. For this activity, the experience of the “Market Support Facility” (MSF) implemented under RESEPAG II will be used. The level of matching required will be small to negligible in order to ensure accessibility to most of the interested groups. For the first category, only in-kind contributions would be required; for the second, in-kind and cash contributions would be required (for vulnerable groups, possibly only in-kind). The PIM will further detail the eligibility criteria. The operator(s) in charge will play an important role in supporting the groups to present subprojects (for which the requirements would be proportionate to the amounts to be granted).

40. The MSF mechanism has already been used under RESEPAG II and other projects, including to co-finance improved collection and storage infrastructure and equipment, and the development of transformation and processing units, when relevant, for groups of producers. Matching grants eligibility criteria and co-financing windows according to the nature of the organization, the number of members, and the type of activity would be defined in the PIM. The overall governance of the MSF will be provided through an *ad hoc* Committee at the local level with support of the PIU-L, the DDA DDE and the operator(s). The composition, mandate, and modus operandi of this Committee shall be detailed in the PIM. The first call for sub-project proposals to be considered for funding will be launched after the establishment of all governance mechanisms, awareness, and capacity building activities are undertaken to ensure the effective participation of all eligible stakeholders.

41. The MSF under RPLP would be managed following these co-financing principles: (i) leveraging of existing resources or development of new opportunities (both with possible partial non-monetary co-financing); (ii) facilitating the mobilization of commercial credit both during and after project implementation; (iii) promoting competition among service providers offering services under the sub-component 2.1; (iv) responding to identified and confirmed needs of sector stakeholders and contributing to climate resilience; and (v) building the recipients’ capacity to respond to changing sector needs and opportunities, especially access to new markets. Eligibility criteria would include, but not be limited to, value chain actors linked with the production supported under 2.1. Eligible structures may take the form of producer organizations, associations, cooperatives, or small private enterprises.

42. In order for matching grants to facilitate the mobilization of commercial credit, financial institutions will be associated with the project. Their role will be defined in the PIM, and could include: (1) deposit-taking, as beneficiaries are encouraged to save a specific amount and/or at a specific frequency from the proceeds of their activities; (2) provision of credit to finance part of the activities; (3) management of grants, including the appraisal and disbursements of grants; (4) provision of advice to beneficiaries in the preparation of their business plans²³.

43. *Sub-component 2.3. Protection of infrastructure and watershed* (US\$ 3.2 M equivalent total -US\$ 0.7 M equivalent IDA - plus parallel financing of US\$ 2.5 M from J/P HRO). This sub-component will finance investments that will focus on building infrastructure assets to support interventions under 2.1 and 2.2. These would consist in works to: (i) protect/rehabilitate small public infrastructure (e.g. rural and access roads or tracks, river crossing structures), and (ii) enhance water management in the selected areas (building small water harvesting infrastructure in gullies or slopes, rehabilitating small water catchments or small irrigation systems in plains).

²³ Financial institutions will be included if the interest rate proposed is not prohibitive for the potential beneficiaries.



44. The activities to be carried out under this sub-component will be based on the investment plans developed in each of the selected areas. This stage would be followed by technical studies to inform the detailed scope and nature of works to be supported under the Project. The DIA-N (*Direction des Infrastructures Agricoles* within the *Direction Departementale Agricole* of Nippes) would carry out these technical studies, with the support of a technical expert consultant recruited in the early stages of Project implementation. DIA-N would advise the Technical Committee on the final selection of works. These works would be grouped according to their typology and/or geographical location and would be supported either by J/P HRO or IDA funding. For IDA-funded infrastructure, one or more operators would be managing these works. DIA-N would ensure the overall supervision of the quality of works and delivery according to planning, and report to the Technical Committee.

45. Most of the works are expected to be simple, hence a community-based approach would be promoted using a labor-intensive workforce under a Community Participatory Works Program. This approach has been used various times by MARNDR successfully (including through RESEPAG II in response to Hurricane Matthew to restore some damaged infrastructure). A specific manual exists that would serve as a basis for RPLP.

46. **Component 3: Project Coordination and Monitoring and Evaluation** (US\$ 3.5 M total – 100% IDA). The objective of this component is to support Project coordination and M&E as well as all aspects of management (including fiduciary matters, knowledge management, communication, gender, grievance redress mechanism, citizen engagement as well as monitoring implementation of safeguards related measures). The component will finance costs related to the establishment of the Project Implementation Unit at Central level (PIU-C) and Local level (PIU-L) and cover staff-related costs, goods, equipment and vehicles, incremental operating costs, assessments and studies, audits, construction and/or rehabilitation of PIU-C and of PIU-L offices, and in general eligible expenses associated with the overall management of the Project implementation. Governance bodies will also be set up, namely a Project Steering Committee (PSC), a Project Advisory Committee (PAC), and a Permanent Technical Committee (PTC). It will also provide resources to monitor progress and evaluate results. For this purpose, a baseline will be established before the Project starts disbursing investments toward direct beneficiaries (i.e. Component 2).

47. **Component 4: Contingency Emergency Response Component** (US\$ 0.0 M - IDA only, if activated). A Contingency Emergency Response Component (CERC) with zero allocation will be created to allow the Government to respond quickly in case of an eligible emergency. Particular attention would be paid to ensuring the best possible alignment of the approaches and instruments used under CERC with those rolled-out by the Project. Should an eligible emergency occur, the inclusion of this component would provide a conduit for the use of uncommitted funds from the unallocated expenditure category and/or allow the government to request the Bank to re-categorize and reallocate financing from other Project components to partially cover emergency response via implementation of key activities by the appropriate agencies to respond to the emergency. The CERC could also be used to channel additional funds should they become available as a result of an eligible emergency.

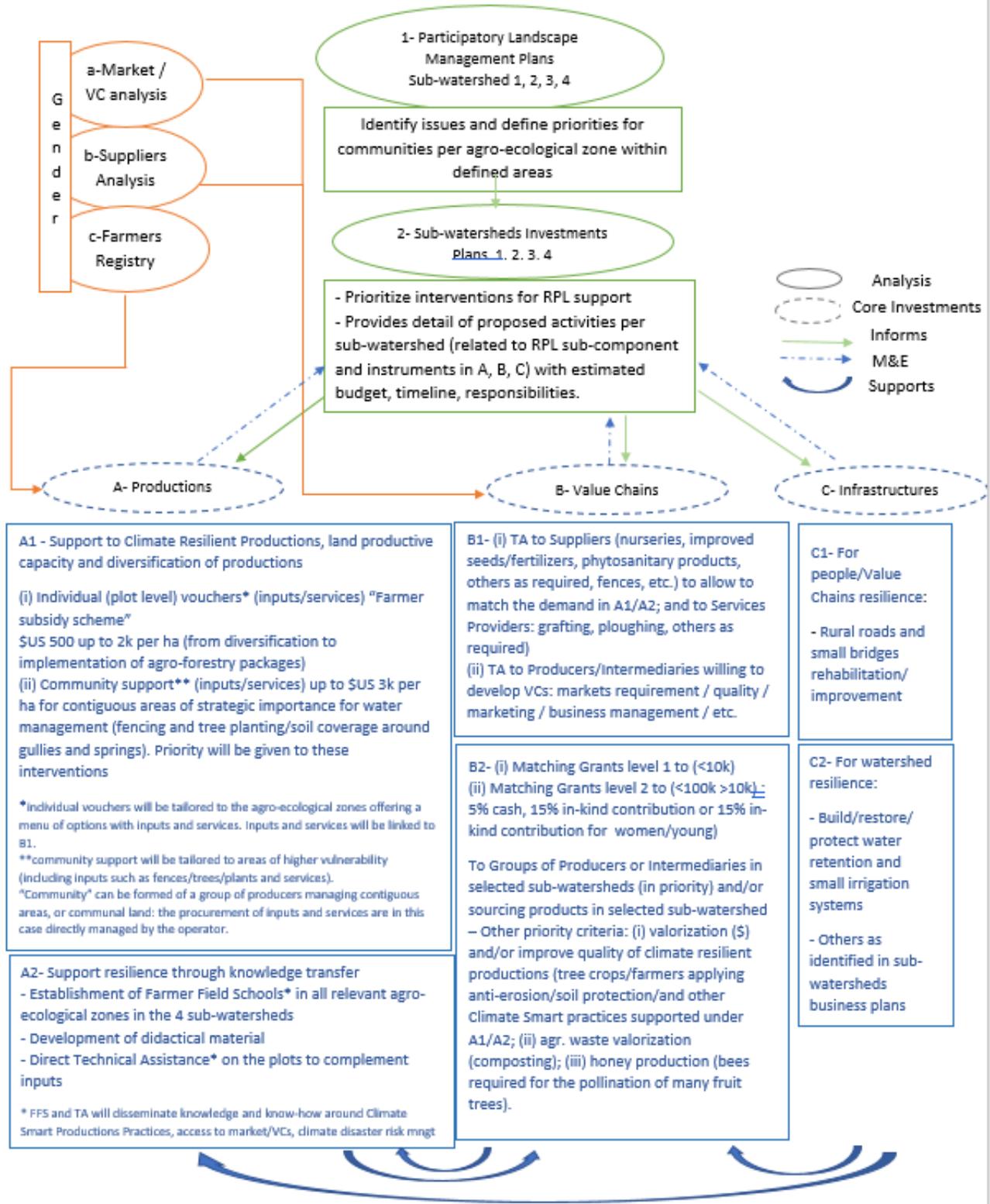
48. The CERC mechanism will be further defined in a CERC Operational Manual attached to the PIM which will include triggers and conditions for the use of funds. This Manual will clearly outline the triggers, eligible expenditures and procedures for tapping into the CERC. Most investment projects in Haiti do include CERC, in keeping with the recommendations of the 2011 World Development Report (WDR) on Conflict, Security and Development and with the operational experience acquired in Haiti since the 2010 earthquake.



49. Should the CERC be triggered, all expenditures will be made in accordance with paragraph 11 of OP 10.00 and will be reviewed and accepted by the Bank before any disbursement is made. In accordance with paragraphs 11 and 12 of OP 10.00, this component would provide immediate, rapidly disbursing support to finance goods (positive list agreed with the government), works, and services needed for response, mitigation, and recovery and reconstruction. Operating costs that are eligible for financing would include the incremental expenses incurred for early recovery efforts arising from the impact of a major crisis.



Fig. 2 : relation between core activities at sub-watershed levels





ANNEX 2: IMPLEMENTATION ARRANGEMENTS

Project Institutional and Implementation Arrangements

1. **Joint Implementation, Project Duration and Geographic Coverage.** The Project will be implemented jointly by the MARNDR and the MdE, with an expected duration of five years. This proposed duration (expected over calendar years 2018-2023) is set to allow a realistic timeframe for implementation. In terms of geographic coverage, four specific zones have been selected based on detailed criteria (environmental, socio-economic, vulnerability, institutional, budget availability as well as relevance in light of proposed interventions). The zones are the following sub-watersheds: (i) Rivière Froide watershed; (ii) Petite Rivière de Nippes watershed; (iii) Piémont area and Baconnois Plain; and (iv) Bondeau sub-watershed and its mangrove.

2. **MARNDR and MdE Experiences.** The MARNDR began implementing the US\$ 5 M RESEPAG I Project in 2009. Within MARNDR, the Project will leverage the existing capacity (specifically on safeguards and fiduciary aspects) of the coordination unit currently supporting RESEPAG II, HYDROMET, and other donor financed projects. Conversely, MdE has no experience in the implementation of Bank-funded projects, and would develop its capacity building on MARNDR experience. The Project will collaborate closely with other development partners and receive parallel financing from the NGO J/P HRO, with whom MARNDR and MdE shall sign a Memorandum of Understanding.

3. **Implementation arrangements.** It was agreed that the Project will be jointly implemented by MARNDR/MdE through one Project Implementation Unit split in two locations: at the Central Level (PIU-C or *Unité de Gestion de Projet Centrale*) based at Port-Au-Prince as well as at the local level (PIU-L or *Unité de Gestion de Projet Locale*) located in the Nippes Department. The two units will be staffed as needed (i.e. staff hired and paid for by Project resources and supported by civil servants from MARNDR/MdE paid for by the Government) with appropriate skills, taking into account existing human resources and arrangements as well as existing staff from active World Bank financed operations when relevant (i.e. RESEPAG II). The PIU-C will be responsible for: (i) the overall management of the Project, including financial and procurement management in accordance with World Bank guidelines and procedures, safeguards compliance and M&E; (ii) coordination of activities related to Component 1; (iii) producing Project progress reports; and (iv) Project communication. In order to ensure a swift implementation process, a local Bank account would allow for the PIU-L to finance local operational expenditures; it would receive advances from the PIU-C and report expenses according to procedures defined in the PIM.

4. **The PIU-C and PIU-L will ensure timely and effective coordination of activities in order to monitor progress towards PDO.** The implementation arrangements will allow a joint technical coordination by MARNDR/MdE (each within its respective mandates) as well as capitalizing on the MARNDR's existing capacity and experience with World Bank projects' management, especially on the fiduciary aspects. In addition, the PIU-L will enable coordination with the local offices of MARNDR and MdE at Departmental and Communal levels, as well with the other local stakeholders. All staff paid using Project resources will be hired on a competitive basis under terms of reference and qualifications acceptable to the World Bank.

5. **Staffing.** The PIU-C will be located at Port-Au-Prince and headed by one (1) General Coordinator. All PIU-C staff, including the General Coordinator, will be hired on a competitive basis and paid for by Project



resources. Other members of the PIU-C will include: one (1) principal accountant and one (1) procurement specialist. Fiduciary experts will receive support and oversight from existing fiduciary staff from RESEPAG II (financial and procurement management)²⁴. Support Staff will also be hired. All other staff will be based in the field at the PIU-L in the Nippes Department, hired on a competitive basis and paid for by Project resources. Staff will include one (1) Coordinator in charge of Component 2 as well as one (1) communication & grievance redress mechanism specialist, one (1) environmental safeguards specialist, one (1) social safeguard/gender/citizen engagement specialist, one (1) M&E specialist, one (1) accountant. Support Staff will also be hired. In order not to delay the start of the Project, the recruitment processes of these specialists will be launched during the preparation phase with the preparation of Terms of References (TORs), and selection, using the existing RESEPAG II fiduciary team to manage the recruitment process according to WB rules. Under the LDCF Project Preparation Grant, a core team of two persons (technical and administrative) should also be in place not later than February 2018 to support the MARNDR and MdE RPLP focal points in carrying out these tasks, among others that can contribute to swift implementation after the declaration of effectiveness.

6. PIU-L will work in close collaboration with the Departmental Direction for the Agriculture (DDA Nippes) and the Departmental Direction for the Environment of the Nippes (DDE Nippes) in Fond des Nègres, as well as relevant entities such as the research center of Salagnac. These structures will be strengthened through capacity building activities under Component 1, and will be involved in various activities under Component 2. These spaces will also serve as meeting places to facilitate exchanges between the various actors during the different stages of the Project implementation.

7. In terms of governance mechanisms, a Project Steering Committee (PSC) will be created at the national level and serve as a strategic guidance and information exchange body (Meeting Frequency: once a year, back to back with HTR Steering Committee meetings). It will confirm the alignment with national strategies and international commitments, facilitate coordination among key stakeholders, review and endorse RPLP progress reports and annual budget and work plans. The PSC will be co-chaired by MARDNR and MdE, and comprised of high level representatives of Ministry of Economy and Finance, Ministry of Interior, Ministry of Planning, HTR donors and partners, CBF/HNT donors and partners, and other key stakeholders including donors (with observer status). The detailed composition and mandate of the PSC will be provided in the PIM. The PIU-C General Coordinator will fulfill the role of PSC Secretariat.

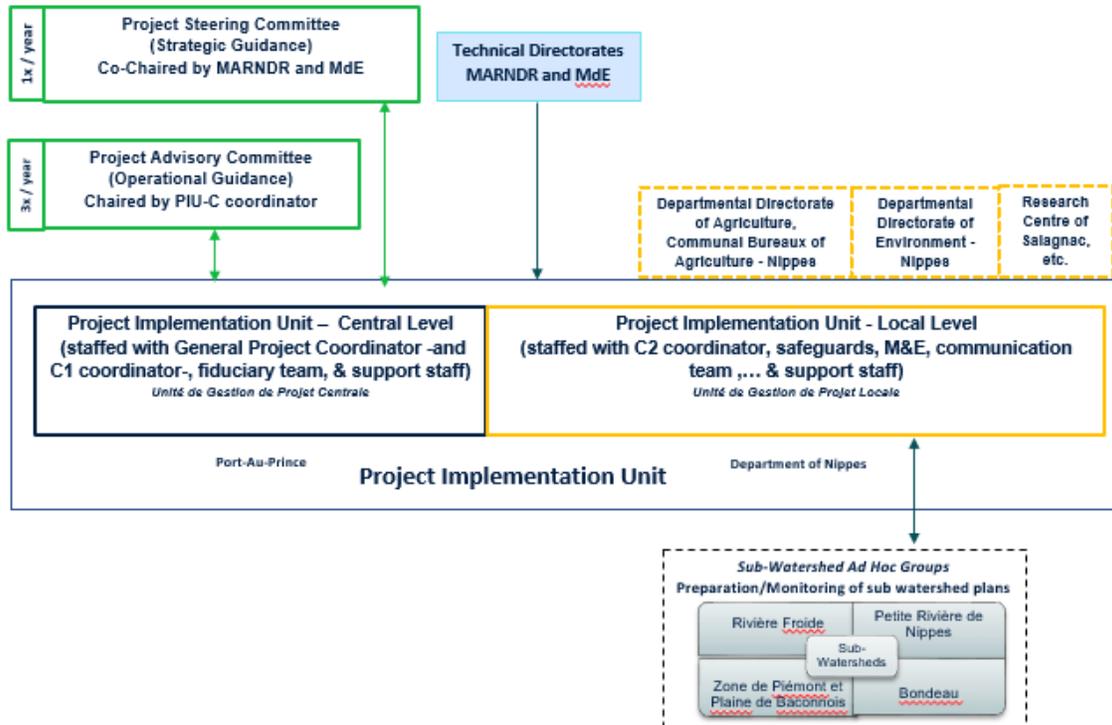
8. In addition, a Project Advisory Committee (PAC) will be established to provide operational guidance for the implementation of RPLP activities (Meeting Frequency: three times per year, preferably in Nippes Department). The PAC will be chaired by the General Coordinator of the PIU-C and comprised of national and local stakeholders and authorities (Municipalities, *Conseils d'Administration des Sections Communales* -CASEC- and *Assemblées des sections communales* -ASEC-, civil protection, selected sub-watersheds communities' representatives, value chains organizations and private sector representatives, local donors and partners, members of the Permanent Technical Committee, etc.). The format and exact composition of these consultation structures and committees will be finalized at the end of the preparatory phase when the universe of potential participants will have been fully identified, and included in the PIM. In order to coordinate planning, implementation and supervision of activities of Component 2, under the leadership of PIU-L Coordinator, DDA, DDE, J/P HRO, and the operator(s), will maintain a permanent

²⁴ In addition, MdE may appoint civil servants to support the fiduciary team and get hands-on experience.



stream of communication and meet as often as needed.

9. A detailed PIM will be adopted before Project effectiveness, which will incorporate all operational details at the national and local levels, including the implementation of technical activities, M&E, safeguard implementation and administrative and fiduciary procedures. It will include detailed TORs for all RPL/PIU-C/PIU-L staff. A harmonized Operational Manual for the management of the CERC will be prepared and validated no later than three months after the Project effectiveness.



Financial Management

10. As indicated in the Project Institutional and Implementation Arrangements, financial responsibilities will rely on existing Financial Management (FM) capacity of the RESEPAG II PIU at MARNDR. In order to maintain adequate FM arrangements to handle the activities generated by the proposed Project, MARNDR agreed to undertake the actions detailed below:

- (i) Finalize the implementation (installation, training, and maintenance) of the accounting system to allow reporting accordingly to World Bank’s format;
- (ii) Train new FM staff in World Bank’s FM policies and norms;
- (iii) Within four months of grant effectiveness, conclude an audit contract for the Project's financial statements based on TORs acceptable to the Bank.

11. **Supervision Arrangements.** As part of the proposed Project implementation support missions, risk based FM supervision will be conducted at least once a year. These missions will pay particular attention



to: (i) Project accounting and internal control systems; (ii) budgeting and financial planning arrangements; (iii) review of Interim Financial Reports (IFRs); (iv) review of audit reports, including financial statements, and remedial actions recommended in the auditor's Management Letter; and (v) disbursement management and financial flows. FM supervision will pay particular attention to any incidence of corrupt practices involving Project resources for Project implementation.

12. The proposed FM arrangements at the MARNDR for the proposed Project meet the minimum fiduciary requirements under OP/BP10.00. More details on implementation arrangements are detailed below:

13. Staffing. The FM functions of the RESEPAG II PIU/ MARNDR are under the responsibility of the Project's Coordinator. As of December 2017, the Accounting Unit of RESEPAG II PIU was composed of a Chief accountant, one accountant in each of the provinces, North and North-east, one administrative assistant and one part-time internal controller; the process is in place for the recruitment of one additional accountant. Currently, staff capacity and structure are adequate for Project FM purposes. The proposed Project will finance one additional FM staff to reinforce the team.

14. Budgeting Process. The budget process will be clearly stipulated in the administrative, financial and accounting procedures manuals. Annual budgets and work plans will be coordinated and prepared by the accounting unit together with the procurement team and submitted to the Bank for its no-objection before the beginning of the fiscal year and any changes in the budget and work plans will also be submitted to the Bank on a no-objection basis.

15. Accounting Policies and Procedures. The proposed Project will use Cash Basis Accounting for the preparation of the Project's semi-annual interim financial statements and audited annual financial statements, in accordance with the International Public Sector Accounting Standards (IPSAS) and the National Accounting Standards. The PIM will contain a financial management section, which will include appropriate accounting policies and financial reporting procedures. The FM capacities at RESEPAG II PIU/MARNDR will continue to review the current policies and procedures and the detailed systems of internal control and determine if any additional control measures need to be implemented for the proposed Project. The draft Project Implementation Manual will be subject to review and acceptance by the World Bank and will be finalized prior to effectiveness.

16. Accounting System. As at December 2017, RESEPAG II PIU was still using a computerized accounting software, SYSCOP, which does not fully meet the Project reporting needs. This system will be replaced with a better performing system (TOMPRO, ACCPAC or QUICKBOOKS) in order to ensure that Project financial reporting is in accordance with the World Bank's financial management requirements.

17. Internal Controls and Internal audit. RESEPAG II PIU/MARNDR will maintain strong systems of internal controls and procedures that will be documented in the PIM. RESEPAG II PIU has an internal auditor who is currently working on a part time basis on RESEPAG II and HYDROMET.

18. Reporting arrangements. For existing Projects implemented by RESEPAG II PIU /MARNDR, IFRs are regularly prepared and transmitted to the World Bank on time. Under the proposed Project, the PIU will prepare and transmit semi-annual IFRs to the World Bank for the components under their responsibilities.



The IFRs will be submitted to the World Bank no later than forty-five (45) days after the end of each calendar quarter.

19. Auditing Arrangements. Annual audited financial statements of the proposed Project will be transmitted to the World Bank not later than six (6) months after the end of each recipient's fiscal year. The external audit will be undertaken by a private firm selected in accordance with independence and competency criteria acceptable to IDA.

Disbursements

20. The primary disbursement methods will be Advances, Direct Payments, Reimbursements and Special Commitments. To facilitate timely disbursements for the proposed Project's eligible expenditures, the Recipient, through the PIU/MARNDR will open and operate two segregated Designated Accounts (DA) in US\$, one for IDA and one for LDCF, at the Central Bank (Banque de la République d'Haïti /BRH). Subsequently, the PIU will open two other accounts denominated in Haitian Gourdes (HTG) at BRH. PIU/MARNDR will also manage the accounts denominated in Haitian Gourdes (HTG) at BRH to process local payments. PIU/MARNDR will be responsible for the appropriate accounting of the funds deposited into the designated accounts, for reporting on the use of these funds and for ensuring that they are included in the audits of the financial statements. Ceiling of the DAs and the Minimum Application size for Direct Payment or Special Commitment will be communicated in the Disbursement Letter.

21. Summary Sheets with Records and Statements of Expenditures (SOE) will be required for documenting eligible expenditures paid from the DAs as well as reimbursements; Direct Payments will be documented by Records. Applications documenting the advances to the DAs will be made on a quarterly basis.

22. SOE limits for expenditures against contracts for works, goods, consultant services for consulting firms, and individual consultant services will be determined in the Disbursement Letter. Documentation supporting expenditures claimed against SOEs will be retained by the implementing agency and will be available for review when requested by the World Bank supervision missions and the proposed Project's auditors.

23. The proposed Project will have a Disbursement Deadline Date (final date on which the World Bank will accept applications for withdrawal from the Recipient or documentation on the use of Grant proceeds already advanced by the World Bank) of four months after the Closing Date of the proposed Project. This "Grace Period" is granted to permit orderly Project completion and closure of the Grant account via the submission of applications and supporting documentation for expenditures incurred on or before the Closing Date. Expenditures incurred between the Closing Date and the Disbursement Deadline Date are not eligible for disbursement, except as otherwise agreed with the World Bank. All documentation for expenditures submitted for disbursements will be retained at the PIU/MARNDR during the lifetime of the proposed Project and be made available to the external auditors for their annual audit, and to the World Bank and its representatives if requested. After Project closing, the relevant documentation will be retained for two years, following the Government's regulations on record keeping and archiving. In the event that auditors or the World Bank implementation support missions find that disbursements made were not justified by the supporting documentation, or are ineligible, the World Bank may, at its



discretion, require the Recipient to: (i) refund an equivalent amount to the World Bank, or (ii) exceptionally, provide substitute documentation evidencing other eligible expenditures.

24. Before the World Bank closes the Grant account (two months after the Disbursement Deadline Date), the Recipient will need to provide supporting documentation satisfactory to the World Bank showing the expenditures paid out of the DA, or refund any undocumented balance. If the Recipient fails to provide the documentation or refund required by the World Bank by this date (two months after the Disbursement Deadline Date), the World Bank will not permit the use of DAs under new Grants/Credits made to or guaranteed by the Recipient.

Procurement

25. Procurement activities for the proposed Project will be executed by UPMP/MARNDR for the overall Project activities. Assessments were conducted in July and September 2017 to evaluate UPMP's capacities to implement all procurement under the proposed Project. The assessment concluded that UPMP under the MARNDR would implement, coordinate and monitor all procurement activities, irrespective of the agencies implementing the Project activities. The Procurement unit will also prepare a Procurement Manual section which will clarify the step by step administration process in procurement as well as roles and responsibilities. The Bank will review and approve the Manual. UPMP procurement unit is headed by a Senior procurement officer, supported by additional Procurement staff of whom two (2) are dedicated to the 3 Bank-financed projects. For the proposed Project, UPMP personnel will be reinforced by the addition of at least one senior staff to help manage the increased workload. Although the procurement unit has exhibited good knowledge and experience in the execution of procurement under WBG policies, both Bank-funded projects are facing significant challenges. These are mainly due to insufficient capacity among the staff in decision-making and planning mechanisms in the execution of the procurement plans and delays in procurement awards. Therefore, due to all these inherent challenges, and as a short-term mitigation measure, expert consultants will be recruited from time to time to support the team in special circumstances as needed. In addition, the World Bank will provide procurement training and Hands-on Expanded Implementation Support (HEIS) to UPMP when required for critical and complex procurement.

26. Procurement for the proposed Project will be carried out in accordance with paragraph 5.9 of the "World Bank Procurement Regulations for IPF Borrowers" (July 2016) ("Procurement Regulations") and the Bank's Systematic Tracking and Exchanges in Procurement (STEP) system will be used to prepare, clear and update Procurement Plans and conduct all procurement transactions for the Project.

27. World Bank's Standard Procurement Documents. These shall be used for all contracts subject to international competitive procurement and those contracts as specified in the Procurement Plan tables in STEP.

28. National Procurement Arrangements. In accordance with paragraph 5.3 of the Procurement Regulations, when approaching the national market (as specified in the Procurement Plan tables in STEP), the country's own procurement procedures and standard bidding documents agreed with the CNMP (Commission Nationale des Marchés Publics) may be used. When the Borrower uses its own national open competitive procurement arrangements as set forth in *"la loi du 10 Juin 2009 fixant les règles générales aux marchés publics et aux conventions de Concession d'Ouvrages de Service Public"*, such arrangements



shall be subject to paragraph 5.4 of the Procurement Regulations.

Environmental and Social (including safeguards)

29. **Environmental.** The Project is rated Category “B”. The RPLP aims to improve land management, erosion control, forestation, etc., while at the same time increasing agricultural production (planting tree crops, increasing yam production, diversifying productions, etc.). Impacts will be both positive from improving the natural environment, and potentially negative from agricultural activities, including the use of agrochemicals. The RPLP will include four components, which can be summarized as: (i) strengthening of institutional and organizational capacity for landscape level interventions; (ii) investments to strengthen resilient agricultural production and practices; (iii) Project coordination and monitoring and evaluation, and (iv) Contingency emergency response component.

30. **Under Component 1, Sub Component 1.1, the Project will support the development of a Master Plan for Resilient Landscapes Development**, which is intended to articulate the objectives targeted by the Government, lay out the recommended approaches, define the mechanisms to be put in place to achieve them, outline the criteria to be respected, define monitoring and evaluation mechanisms; and create a sustainable development framework for the entire territory. While the intention is to promote sustainability, and therefore have a positive environmental and social impact, there is always the risk that a well-intentioned plan or policy may have negative impacts. To mitigate against these potential negative impacts, the Environmental and Social Management Framework (ESMF – see below) has included measures to ensure that all plans and strategies prepared under the Project are sustainable; support the preservation, maintenance and rehabilitation of the environment; are publicly consulted during their drafting process; take into account cumulative effects; and include measures to strengthen environmental management.

31. **Under Sub Component 1.3, the Project will facilitate the participation of Haiti in the Caribbean Biodiversity Fund (CBF) and will capitalize the Fund**, which will generate interests that will feed the climate adaptation window of HNT to finance climate adaptation sub-projects. Activities to be financed through HNT are not yet clearly defined. The Project will support the functioning of HNT’s secretariat; one of the objectives of this Secretariat is to define what activities can be supported. At this stage, it is not known if the HNT will support private-sector activities. In order to ensure that the Project does not indirectly, through the HNT, finance activities with negative environmental impacts without imposing an adequate mitigating mechanism, the Project’s ESMF will also apply to the HNT. The PIM will include a measure for the HNT to adopt the ESMF as its screening mechanism.

32. **Under Component 2, the Project will finance environmental and agricultural activities, some of which could have negative environmental impacts:** minor rehabilitation of existing rural roads/tracks, irrigation, new small infrastructure for water harvesting/storage, etc., for which specific locations are not yet known. The Client has prepared an ESMF, which includes a screening mechanism and prescribes mitigation measures. For this component, the Client has also prepared an Integrated Pest Management Plan (IPMP) to mitigate against the negative impacts of the excessive use of agrochemicals; promote alternatives such as biological control methods, and ensure the health and safety of farmers, operators and the public.



33. The ESMF includes clauses to ensure that plans and policies are sustainable. Both the ESMF and IPMP include capacity building measures which are essential to their implementation.

34. Social. The Social Safeguards Policy triggered is OP 4.12 on Involuntary Resettlement, given that the Project will be funding the rehabilitation of existing rural roads/tracks and possibly new small infrastructure for water harvesting/storage, which are usually placed along the roads or in gullies. These construction works may require land acquisition leading to involuntary resettlement, including the loss of income sources and means of livelihood, such as the loss of trees and crops. A Resettlement Policy Framework (RPF) has been prepared by the GoH with guidance from the Bank to address the triggering of OP 4.12. Upon the identification of cases of involuntary resettlement, Resettlement Action Plans (RAPs) or Abbreviated Resettlement Action Plans (Abbrev. RAPs) will be prepared, consulted and disclosed in accordance with the policy.

35. Any activity that may potentially lead to changes in land-tenure agreements, result in the establishment of protected areas, or may cause restriction access to resources will be excluded from the project. The environmental screening form, which will be part of the ESMF will also include questions to screen out social risks. In addition, the PIU responsible staff will receive training on how to screen out these impacts. In the event that involuntary resettlement could not be avoided by the necessary works, the Bank team will support the PIU to develop and implement Resettlement Action Plans. The Project will include a citizen engagement plan that includes a Grievance Redress Mechanism (GRM). The GRM ensures that complaints received are promptly reviewed in order to address project-related concerns.

36. MARNDR, the primary agency responsible for the implementation of the Project, has managed other Bank-funded projects in the past and they have experience with Bank safeguards policies and instruments, especially on the environment side. Under the proposed Project, a social safeguards specialist will be hired to monitor social risks and impacts under this Project. The second ministry that will be involved in this Project's implementation, MdE, does not have familiarity or capacity to implement social safeguards policies yet. However, it has been closely involved in the preparation of the ESMF and RPF. All relevant staff, including from the MdE, will be included in social safeguards training and the safeguards implementation under the leadership of MARNDR, which will house the proposed Project PIUs, including environmental and social safeguards specialists.

37. Gender. The Project will ensure a representative level of women beneficiaries in the Project by: (i) Collecting gender-disaggregated data on Project beneficiaries, grievances and client satisfaction; (ii) Recruiting a social/gender specialist who will be part of the PIU local team to ensure a gender lens is applied by the different actors involved in the Project. This staff will also be supported by the MARNDR gender specialist strongly involved under the RESEPAG II Project to provide overall guidance and ad hoc support if need be; (iii) Defining different mechanisms and procedures in the PIM to ensure that gender gaps will be taken into account to reduce them and provide women with the same set of support opportunities²⁵; (iv) Providing 50% of matching grants to women's groups; and (v) Offering 33 % of

²⁵ The selection criteria, targeting mechanism and communication strategy for the different investments supported by the project will use as a baseline those already defined in past intervention of the MARNDR who provided very encouraging results regarding women participation. In particular, the positive discrimination mechanisms used in the matching grant investments of RESEPAG II requesting lower amounts for women groups – which on average have less assets and weaker cash flows – would be used in the same manner under this Project.



vouchers for support to production, which is the average level of women's representation in agricultural production according to the last agricultural census in Haiti.²⁶ Known gender gaps include: lower level of education in rural areas for women (1.9 year of schooling relatively to 3.4 years for men), smaller plots (0.9 ha compared to 1.1 ha for men), a higher unemployment rate (women are 20 percentage points more likely than men to be unemployed), and lower wages (32 percent lower than wages among men). Besides, a greater proportion of male-headed households (81.4 percent) participate in agricultural activities than female-headed households (57.6 percent). There is also a significant difference in the use of non-household labor between households headed by women (59.4 percent) compared to those headed by men (70.7 percent), indicating that female-headed households face additional specific constraints in hiring workers, as they also do in acquiring additional land for cultivation. Female headed households are more likely to be credit-constrained and are in general single-headed households unlike male-headed households that are more likely to be dual-headed households. Nevertheless, female-headed households in rural areas experience only marginally higher rates of extreme poverty (54 percent vs. 53 percent) and food insecurity (38 percent vs. 34 percent) than male-headed households.

38. Citizen Engagement and Conflict Management. Beyond safeguards risks, other social risks include social tension, which may be exacerbated by perceived inequities in the selection of investments and the distribution of Project benefits. In addition, the literature has shown that a landscape approach has been successful when feedback mechanisms are developed to ensure transparency, accountability and learning as well as a continuous dialogue with local level beneficiaries and other stakeholders. The Project will explicitly seek to support engagement of stakeholders and beneficiaries through consultative processes, including their engagement in local level planning and feedback mechanisms to elaborate and adjust the integrated landscape management approach and access to economic opportunities, thus contributing to achieving sustainability and project outcomes.

39. The Project will include the following elements of the framework for citizen engagement to mitigate social risk and increase the chances of success: (a) engage in a pro-active communication strategy in the planning and management of landscapes, including monitoring, to local governments, beneficiaries and the public at large, informing about the benefits from the Project for various communities and municipalities; (b) engage communities in determining the mechanisms for disbursing investments, including for example criteria for the selection of sub-projects; (c) develop robust information request and grievance redress measures for the Project activities (not only for safeguards-related issues). Feedback mechanisms will be developed to ensure transparency, accountability and learning as well as a continuous dialogue with local level beneficiaries and other stakeholders. Particular attention will be given during implementation to the capacity of the local structures to close the feedback loop and report on action taken in this regard. The Project will draw on the participatory mechanisms developed and successfully applied under the Haiti RESEPAG II and the Business Development and Investment (BDI) Project²⁷. Given the strong focus on communities involved in the participatory planning process, and the continuous interaction between the PIU-L, the operator(s), and the representatives of the communities involved in the decisions and M&E of activities implemented, citizen engagement is embedded in RPLP's design. The protocols and mechanisms of this citizen engagement framework will be detailed in the PIM. The quality of its implementation and progress will be monitored both at regional and national levels through supervision and continuous dialogue between communities, PIU and operator(s).

²⁶ Ibid.

²⁷ <http://projects.worldbank.org/P123974/haiti-investment-climate-growth-project?lang=en>



Monitoring and Evaluation

40. **Project M&E will be undertaken** to: (i) strengthen planning, budgeting and execution of activities in targeted landscapes (under Components 1 and 2); (ii) establish a common environment for information sources describing targeted landscapes (spatial information system) (under Component 1); (iii) develop a tool for results-based management of the Project (Component 3); and (iv) meet routine reporting requirements as part of the WBG project cycle. The Project Results Framework (RF) is intended to provide a framework for accountability of progress towards the implementation of the Resilient Productive Landscapes Approach at local, regional and national levels in Haiti. This includes accountability of the two participating ministries (MARNDR and MdE). In terms of accountability towards citizens, demand-side social accountability of interventions will be captured through a citizen engagement indicator that will also measure gender aspects. The citizen engagement framework is based on a household perceptions survey.

41. **A robust M&E system will allow the Bank to react immediately in the event of any issues that may arise.** The M&E system will be designed to link technical and financial data regarding Project progress. It will serve as a mechanism to assess Project results and as a day-to-day management tool. It will support Project supervision by ensuring that baseline and follow-up surveys and data collection for the key performance indicators are available and regularly updated. A specific emergency response mechanism will be set up to monitor emergency-response activities if triggered. The M&E will also serve to report on the LDCF tracking tool (at baseline/mid-term/end of the Project).

42. **The PIU will have the overall coordinating role in M&E and responsibility for compliance with the agreed reporting requirements.** The M&E activities will be to: (i) generate information on Project progress per the results framework in Section 7; (ii) analyze and aggregate data generated at local, regional and national levels; and (iii) document and disseminate key information and lessons to all stakeholders. The PIU will have one recruited M&E specialist to ensure that quality data and information from all Project areas and institutions are produced and collected on time.

43. **M&E reports will be issued every six months for physical implementation and results monitoring.** For activities related to Component 2, the operator(s) which will support their implementation will have in its/their mandate the maintenance of an updated database providing the progress status of all activities implemented, that will be reported on a regular basis to M&E specialist in the PIU-L. Semi-annual and annual reports will be circulated among the sector ministries and development partners involved. Semi-annual joint implementation support missions with representatives from the Bank, and the Government will assess the status of key Project outcomes and ensure compliance with legal agreements.

44. **A Baseline survey will be conducted to verify the baseline data and targets presented in the Results Framework.** A Mid-Term Review (MTR) will be conducted no later than three years after the first disbursement. A final independent evaluation will be conducted in the last semester of Project implementation to assess overall achievement of expected Project results.

45. **In addition to M&E activities linked to the Result Framework, other impacts of the RPLP parameters will be measured** at the start, mid-term, and end of the Project to provide additional data to assess tangible success, communicate and create lessons given the expected replication of the Project under HTR



and beyond. Hence a household baseline survey will be conducted before the Project starts disbursing investments toward direct beneficiaries (i.e. Component 2) to allow the project to measure progress against Results Framework Indicators together with changes in the household wealth (benefits, income, consumption, etc.) as well as labor dynamics, the degree of value chains integration, food security and specific gender-related aspects that could be attributed to the Project. Value chains/market analysis conducted at the onset of the Project will also complement the body of information available for the Project, allowing for the measurement of additional effects on these aspects.

46. **RPLP will also seek to leverage additional funding** to measure in a more precise manner specific climate co-benefits related to the Project's interventions.

47. **An M&E section in the PIM will provide details regarding the definition of the results framework**, as well as the methodology and the instruments to be used for data collection, the institutional arrangements for M&E functions (identification of actors and definition of their respective responsibilities), the Grievance Redress Mechanism (GRM), and the mechanism to be used for communicating and disseminating information.

Role of Partners (if applicable)

48. **The HTR Initiative.** As mentioned previously, HTR is an ambitious, long-term commitment by an initial group of partners including the Haitian and French governments, the Parker Foundation, J/P HRO Haiti Relief Organization, the World Bank and the Inter-American Development Bank. More partners are expected to engage. The Initiative is being piloted by the Haitian Government and will pursue a multi-sector and integrated approach including the coordination of diverse stakeholders within a national strategy and the Nationally Determined Contribution (NDC). RPLP is a multi-sector, multi-partner Project developed under the HTR umbrella, implemented by MARNDR and MdE. It is considered a strategic operation under HTR. A few other projects are being developed and implemented under the HTR umbrella, including AFD- and IDB-financed projects²⁸. USAID is also financing a landscape-related project which, even if not through HTR, will coordinate with other HTR initiatives. HTR will serve as a sharing platform which will help inform and coordinate actions around common objectives and strategies, and take stock of various initiatives that can generate lessons and inform future investments.

49. **The CBF Initiative.** Various partners are supporting the CBF initiative in Haiti. These include The Nature Conservancy (TNC), Société Audubon Haiti, the Swiss Cooperation, IDB, UNEP and UNDP, which have committed some seed funding to start the development of the legal framework and all other necessary documents required to comply with CBF requirements (up to US\$220,000 in parallel financing plus some in-kind human resources). The German Development Bank (KfW) will also contribute to the endowment of the CBF (an estimated US\$7 million in financing). These funds will allow Haiti to progress towards compliance with CBF requirements during the RPLP preparation phase. This effort will be continued with the support of LDCF funding, to finalize the legal processes and operationalize the CBF in Haiti. A close dialogue will be maintained with these partners to ensure the full complementarity and seamless financing required to establish an operational National Trust and leverage other donor funding to keep

²⁸ AFD is already financing a €9M project on cacao production/value chain (since 2016), has committed €6M for 2018, and expects an additional US\$24M from the Green Climate Fund; IDB will finance US\$55M; and USAID has started a project of US\$45M.



capitalizing CBF (See also Annex 7).

50. Other relevant projects in the area of intervention. In the department of Nippes, mention should also be made of the PPI III²⁹ Project financed by IFAD, which is closing soon. Some micro-watershed stabilization activities have in particular recently been carried out following Hurricane Matthew under this project with the support of the NGO Welthungerhilfe. In the event of additional financing for this project, the coordination of activities between the proposed Project and PPI II would be ensured under the leadership of the ministries.

51. Role of J/P HRO in RPLP. J/P HRO has participated from the identification stage of RPLP and in the follow-up dialogue with the GoH and the WB. It has committed to provide parallel financing of US\$5 million to the IDA and LDCF funds under RPLP that would support the Project's activities and contribute to the Project Development Objective. J/P HRO has also been entrusted with the development of a Participatory Watershed Management Planning Methodology, commissioned by the WB to inform RPLP design, that was piloted in one of the four selected sub-watersheds and will be replicated in all Project areas (under Component 1), using J/P HRO's parallel financing.

²⁹ Projet de Développement de la Petite Irrigation – Phase 3.



ANNEX 3: IMPLEMENTATION SUPPORT PLAN

Strategy and Approach for Implementation Support

1. The strategy for supporting Project Implementation Support (IS) has been developed based on the nature of the Project and its risk profile. It will aim at making implementation support to the Client more flexible and efficient, and will focus on implementation of the risk mitigation measures defined in the Systematic Operations Risk Rating Tool (SORT). It will consist of: (i) implementation support missions (carried out jointly with FAO when technical needs arise), and (ii) possible technical assistance in areas of weaknesses and where new approaches/procedures have been introduced, especially in the first two years.
2. **Implementation support.** The supervision strategy will use a number of instruments to review progress and respond to implementation issues; including:
 - a. *Implementation Support Missions (ISMs):* The World Bank Task Team will conduct at least two semi-annual implementation support missions to review overall RPL implementation performance and progress toward the achievement of the PDO. Support from technical partners, such as FAO, will be sought when needed.
 - b. *Mid-term review (MTR):* An MTR will be carried out mid-way through the implementation phase. It will include a comprehensive assessment of the progress in achieving RPLP objectives as laid out in the Results Framework. The MTR will also serve as a platform for revisiting design issues that may require adjustments to ensure satisfactory achievement of the Project's objective.
 - c. *Implementation completion:* At the close of the Project, the government and the World Bank will carry out separate implementation completion reviews to assess the success of the Project and draw lessons from its implementation.

Implementation Support Plan and Resource Requirements

3. **RPL Task Team set up.** The Bank team has representatives in HQ, so in order to ensure timely, efficient and effective implementation support to the Client, full ISMs and field visits will be carried out at least semi-annually with additional partial ISMs for the first two years. Detailed inputs from the Bank team are outlined below:
4. **Objective of Implementation Support Missions.** The implementation support and oversight missions would have the combined aim of reviewing the quality of implementation, providing solutions to implementation problems, and assessing the likelihood of achieving the PDO. More specifically, they would: (i) review implementation progress by component, including institutional development aspects; (ii) provide solutions to implementation problems as they arise; (iii) review with the PIU-C the action plan and disbursement programs for the next six months; (iv) review the Project's fiduciary aspects, including disbursement and procurement; (v) verify compliance of Project activities with the Bank's environmental and social safeguard policies; (vi) review case studies and survey results to measure results indicators to determine progress toward the PDO against the targets set within the Results Framework and the quality of implementation; and (vii) review the quality of capacity-building activities, which are crucial for an effective implementation of the program. The missions would combine some field visits (whenever



feasible, taking the security situation into account); field-based focus group discussions and interactive workshops with stakeholders for feedback; and regional workshops as well as national workshops to highlight implementation issues, pick up emerging implementation lessons, and share mission recommendations, including agreements on actions moving forward. It will also include reviews of quarterly/annual reports and various studies.

5. Fiduciary support: Training will be provided by the Bank's financial management specialist and procurement specialist during Project implementation. The team will also help the MARNDR identify capacity building needs to strengthen their financial management capacities and to improve procurement management efficiency. Fiduciary colleagues (procurement and financial specialists) will closely supervise the Project's fiduciary management. Formal IS of financial management will be carried out semi-annually, while procurement IS will be carried out on as often as required by the Client; at least once a year, the procurement specialist will organize a post review of procurement activities.

- a) **Procurement:** IS for procurement will include: (i) providing training to the executing agency; (ii) reviewing procurement documents and providing timely feedback to the Procurement Specialists in the executing agency; (iii) providing detailed guidance on the Bank's Procurement Guidelines to the Procurement Specialist within the executing agencies; and (iv) monitoring procurement progress against the detailed Procurement Plan and PPSD, which will be updated at least once a year (or as required) to reflect Project implementation needs and improvements in institutional capacity.
- b) **Financial Management:** The country-based Financial Management specialist will review the Project's FM system, including but not limited to accounting, reporting, capacity for continued adequacy; evaluate the quality of the budgets and implementing agencies' adherence thereto; review the cycle of transaction recording until the end of report generation; evaluate the internal control environment, including the internal audit function; review IFRs and/or annual Financial Statements; follow up on ageing of the advance to the Designated Account; follow up on both internal and external audit reports; and periodically assess the Project's compliance with the FM manual as well as the financing agreement.

6. Environmental and Social Safeguards: The Bank specialists in Social and Environmental Safeguards will closely follow implementation and compliance of the Environmental and Social Management Framework, the Resettlement Policy Framework and the Integrated Pest Management Plan, and will provide guidance to the PIU's safeguards team to address any issues as they may arise. Field visits, with the participation of the PIU's safeguards team and Bank's specialists, will take place on at least a semi-annual basis.

7. Global focus and specific areas of implementation. The following tables summarize the global focus and specific areas of implementation support for the duration of the Project.



Table: Global focus of implementation

Time	Focus	Skills Needed
First 12 months	<ul style="list-style-type: none"> Project start up Support to implementation activities (sensitization, community consultations and planning, institution building, strengthening implementation capacity including M&E) Support to finalization of IRM manual Guidance on applying safeguards instruments Development of impact evaluation methodology and oversight of baseline survey Procurement, FM, M&E and safeguards training of staff at all levels Establishing coordination mechanisms with complementary projects 	<ul style="list-style-type: none"> TTL+ Co-TTLs Agriculture NRM Operations FM Procurement Environment Social Development Citizen Engagement Communications Gender GRM M&E
12-48 months	<ul style="list-style-type: none"> Monitoring implementation performance including progress Review strength of grassroots institutions, quality of participatory processes, and capacity building initiatives Review of annual work plans and disbursement schedule Review quality of quarterly/annual reports, data and various produced studies Assess quality of implementation process and data collected Review of audit reports and IFR Review adequacy of the FM system and compliance with financial management covenants Assess quality of safeguards instruments as they are applied 	<ul style="list-style-type: none"> TTL+ Co-TTLs Agriculture NRM Operations FM Procurement Environment Social Development Citizen Engagement Communications Gender GRM M&E

Table: Specific areas of implementation and estimated number of Staff Weeks

Time	Focus	Resources Estimate	Partner Role
Year 1 (SW per year)	<ul style="list-style-type: none"> Technical and procurement review of the bidding documents 	<ul style="list-style-type: none"> NRM / Env. Specialist 6 SW Agriculture Expert 10 SW Procurement Specialist(s) 6 SW 	Technical review of TDR and bidding documents
	<ul style="list-style-type: none"> Procurement Training 	<ul style="list-style-type: none"> Procurement Specialist 2 SW 	
	<ul style="list-style-type: none"> FM supervision and training 	<ul style="list-style-type: none"> FM specialist 6 SW 	
	<ul style="list-style-type: none"> Social, Gender and Citizen Engagement supervision and training 	<ul style="list-style-type: none"> Social Specialist(s) 5 SW 	
	<ul style="list-style-type: none"> Communication Strategy and GRM support 	<ul style="list-style-type: none"> Communications GRM Expert 2 SW 	
	<ul style="list-style-type: none"> Environmental supervision and training 	<ul style="list-style-type: none"> Environmental Specialist(s) 5 SW 	
	<ul style="list-style-type: none"> Team leadership M&E support 	<ul style="list-style-type: none"> TTL 12 SW M&E specialist 7 SW 	
Year 2 to Year 5 (SW per year)	<ul style="list-style-type: none"> Project implementation and execution 	<ul style="list-style-type: none"> NRM / Env. Specialist 6 SW Agriculture Expert 10 SW Procurement Specialist 4 SW 	
	<ul style="list-style-type: none"> Environmental and social monitoring and reporting 	<ul style="list-style-type: none"> Environmental Specialist(s) 5 SW Social Specialist(s) 5 SW 	
	<ul style="list-style-type: none"> Financial management disbursement and reporting 	<ul style="list-style-type: none"> FM Specialist 4 SW 	
	<ul style="list-style-type: none"> Task leadership 	<ul style="list-style-type: none"> TTL 10 SW 	
	<ul style="list-style-type: none"> M&E support 	<ul style="list-style-type: none"> M&E specialist 4 SW 	

Note: SW – Staff-Week

8. Skills Mix Required

The following table summarizes the proposed skill mix and number of staff weeks during Project implementation. It is anticipated that this will change over time as demand increases.



Table: Proposed skill mix

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
NRM / Env. expert	6 SW first year 6 SW year 2-5	Field trips as required	
Agriculture expert	10 SW first year 10 SW year 2-5	Field trips as required	
Procurement Specialist	8 SW first year 4 SW year 2-5	Field trips as required	
Financial Management Specialist	6 SW first year 4 SW year 2-5	Field trips as required	
Social / Citizen Engagement Specialist	5 SW per year	Two	
Environmental Specialist	5 SW per year	Two	
Gender/Nutrition	3 SW until required	Field trips as required	
Communication Specialist/GRM expert	3 SW when required	Field trips as required	
M&E expert	7 SW first year 4 SW year 2-5	Field trips as required	
Task Team Leader	10 SW per year	Two	



ANNEX 4: ECONOMIC AND FINANCIAL ANALYSIS SUMMARY

I. Introduction

1. **The economic and financial analysis (EFA) of the Resilient Productive Landscape Project (RPLP) is an ex-ante evaluation of the Project's future performance**, taking into account the projected outreach to beneficiaries, hectares, returns from improved productivity, post-harvest handling and marketing in the selected crops, and projected cost streams associated with the interventions. The EFA of the Project is undertaken in order to assess the economic soundness of the Project's proposed intervention, and the likely impact on the beneficiaries. The analysis takes into account the estimated incremental benefits and costs of the Project-related investments to society as a whole. Crop and activity budgets have been prepared in order to assess the financial impact from the point of view of the beneficiaries and to provide the basis for the economic assessment.

2. **The analysis covers the different pre-selected areas separately, providing specific models for each of the agro-ecological zones (AEZs).** This choice has been made due to the different crops that will be grown and the different activities supported by the Project according to the AEZs. The overall analysis should be considered preliminary as financial and production data are still under collection and revision, and it has not been possible to update/verify them with field visits to all AEZs. Furthermore, the full pattern of activities to be financed is not yet known.

3. **RPLP is designed to restore ecosystem services at a watershed level** to safeguard and enhance agricultural production, reduce the vulnerability of economic and ecological systems to external shocks, and to strengthen capacities for the long-term sustainable management of those landscapes beyond the Project intervention area. The investment will result in the provision of environmental services, private and public goods, including enhanced watershed services encompassing soil conservation, hydrological services, and biomass supply.

4. **Co-benefits of these interventions, including important climate co-benefits**, will be carbon sequestration and mitigated/avoided greenhouse gas emissions, the conservation of biodiversity, reduction in forest loss and forest degradation, improved sustainable livelihoods for local communities and improved climate change resilience. These will be calculated separately through the EX-ACT analysis.

II. Overall Beneficiaries and Benefits of RPL

5. **Project Area.** Given the increased need in the Southern departments after hurricane Matthew, all of the intervention areas will take place in this region. The hydrological zones are selected within the Department of Nippes. Specific preliminary selection criteria have been discussed following field visits and government consultations (See Annex 1). The Project will target the hydrological zones of: (i) Rivière Froide watershed; (ii) Petite Rivière de Nippes watershed; (iii) Piémont area and Baconnois Plain; and (iv) Bondeau sub-watershed and its mangrove.

6. **The Project will focus on a wide range of crops** depending on the various agro-ecological zones: vegetable crops (cabbage, beans, yam peanut) fruit trees, and agro-forestry within areas with good potential for agricultural growth.

7. **The Project will also support a wide range of activities supporting agriculture production**, related to both services (e.g. mechanization) and processing (fruit transformation).



8. **The approach will consider people as central elements of the landscape;** take an integrated, spatial approach to the management of land, water and vegetation within a particular geographical area, taking account of upstream and downstream impacts; combine measures to support sustainable intensification on the most fertile land with landscape restoration and soil and water conservation on degraded land; aim to create resilience in agriculture through a balance of environmental, social, and economic benefits from the use of land, water, forests and trees within a broader pattern of land and water use; and monitor impacts and take into account lessons learned.

9. **The primary beneficiaries of the Project are the existing small-size farmers** (average farm size 0.5 to 3 ha). The Project will apply a sustainable landscape management approach at the (sub)watershed level. In the selected hydrological zones of the department of Nippes, the total number of farmers is estimated to be approximately 300,000. The direct Project beneficiaries are currently estimated to be 6,000 organized farmers and processing entrepreneurs in selected watersheds within the target hydrological zones. The total agriculture area that will directly benefit from the intervention will be around 4,850 ha.

10. **The Project would also indirectly benefit input retailers, traders and processors involved in the selected value chains** as the rehabilitation schemes will most likely increase the input requirements for farmers and the output they produce. The additional production would create the necessary critical mass of marketable surplus to attract larger scale, higher quality buyers. This would trigger a virtuous cycle of profitable production, improved productivity and increased purchases of inputs.

11. **Benefits expected from the Project include:** increased production; improved productivity; increased marketed production; reduced imports of selected crops; increased processed capacity of primary agriculture products; reduced post-harvest losses; and improvements in food security. These Project benefits will primarily result from: a) improving the quality of soil and vegetation; b) increasing tree canopy cover; c) promoting the use of sustainable agro-forestry and renewable energy; d) strengthening the overall preservation and protection of forests through alleviation of poverty and development of alternative livelihoods for communities; (e) improved water management; (f) reduced post-harvest losses; (h) reduced transaction costs; (g) improved product quality and producer (farm-gate) prices; and (i) improved economies of scale.

12. **Increased output, income, and employment in the targeted zones will result in increased demand for goods and services,** which is expected to generate additional income and employment effects, and increase government tax revenues. As the Project is supporting high-potential areas in the production of major food and commercial crops, the increased output from the targeted areas will increase national production, and thereby contribute to growth in overall GDP and national food security. In addition, possible reduced imports would result in foreign exchange savings. Furthermore, it is expected that consumers will benefit from reduced consumer prices and improved availability of better quality locally produced food commodities. Given the growing unmet domestic demand for food commodities targeted by the Project, it can be assumed that the Project will more than offset any potential negative effects of reduced producer and retail prices.

13. **Major institutional benefits expected from the Project are:** (a) producer and marketing groups are effectively functioning and linked to markets; (b) local communities are managing the watershed in a sustainable way; (c) the public institution responsible for overseeing watershed development is strengthened.



14. **The social benefits expected from the Project result from its focus on rural poverty reduction.** The Project will provide additional sources of incomes for poor rural households and serve to diversify rural incomes, thereby contributing to reduced vulnerability. The integrated watershed approach technology introduced by the Project and the associated technical know-how (on e.g. soil protection, water management and crop husbandry) will help further reduce weather related vulnerability of the targeted population.

15. **The total cost of the Project would be around US\$ 26.21 million.** This would include US\$6.21 M of Least Developed Country Resources (LDCF) as IDA co-financing and US\$5 M from J/P HRO as parallel financing.

16. **The objectives of the Project perfectly align with the LDCF-6 focal area objectives of climate change, biodiversity and land degradation.** The incremental LDCF support will generate environmental benefits by promoting the uptake of sustainable land use management and biodiversity conservation practices by agro-pastoral communities in order to reduce land degradation and support sustainable development. The global co-benefits of the Project activities will include climate change mitigation in the form of carbon sinks due to watershed-level reforestation, conservation of biodiversity, including rare and important flora and fauna, and soil conservation and restoration to prevent run-off into the ocean. Special attention will be given to protect the Mangrove forest that protects the highly productive valleys from water salinity and wind.

III. Financial Analysis

17. **Introduction.** The main objective of the financial analysis is to examine the financial viability of the main crops and economic activities, which will be supported by this intervention. It assesses their potential for increased profitability as a result of Project interventions and whether:

- a. Productive activities supported by the Project would offer sufficient financial incentives to attract participants amongst target group households; and
- b. Cash incomes generated by these activities would be adequate for the farmers to repay their additional investments.

18. **For the purpose of the analysis, representative financial crop budgets (based on one hectare) and post-harvest activity models (e.g. fruit processing) have been prepared.** The data are based on information available on the field and from similar projects and programs supported by the Government and other development partners.

19. **The analysis compares the situation without Project with the likely situation with Project.** Without the Project it is expected that farmers would continue with the existing low-input low-output production systems, with a decreasing output due to land degradation and climate change. The results have been analyzed and the benefits at farm/household level highlighted to give guidance for future analysis and investments.

20. **The average farm size, in the Project area, varies from 0.5 ha to 3.0 ha, for analysis purposes and average of 1 ha has been assumed.** Four main agro-ecological zones can be identified following the altitude in the Project area:



Table 1: Agro-ecological zones

Zone	Current production system	Potential Project Interventions
Altitude > 600 m.	Vegetable production with or without irrigation. Main crops: Cabbage; bean; yam	Post-harvest intervention: stocking; processing; marketing. Services: mechanization; vulgarization
Altitude 400-600 m.	Mixed cropping: Jardin Créole (fruit trees; vegetables; food crops); peanuts	Trees intensification for soil protection; cropping pattern adjustments; Post-harvest intervention: stocking; processing; marketing. Services: mechanization; vulgarization
Altitude 100-400 m.	Dry forest; maize; Congo Peas	Improved seeds; introduction of new varieties; Post-harvest intervention: stocking; processing; marketing. Services: mechanization; vulgarization
Altitude 0-100 m.	Scenario A) Rainfed agriculture: maize-sorghum; sorgo-pois; Congo-sweet potatoes	Improvement of existing crops: improved seeds; introduction of new varieties; Post-harvest intervention: stocking; processing; marketing. Services: mechanization; vulgarization.
	Scenario B) Small irrigation schemes: winter peas; vegetables; fruit trees	Improvement of existing crops: improved seeds; introduction of new varieties; Post-harvest intervention: stocking; processing; marketing. Services: mechanization; vulgarization.
	Scenario C) Rice	Improvement of existing crops: improved seeds; introduction of new varieties; Post-harvest intervention: stocking; processing; marketing. Services: mechanization; vulgarization.

21. Most important cultivated crops in the Project area include vegetable crops (cabbage, beans, yam, peanut), fruit trees (guava, mangoes, avocado), and agro-forestry. Fruit trees account for a good share of the whole cropping system due to the typical local organization of the farm: ‘jardin creole’. Irrigation is not very common in the area except in the valleys near the sea where extensive areas are under rice production. The Project will promote crops and cropping techniques that will prevent further erosion of the soil, encouraging, for example, the switch from peanuts and maize to fruit trees. The overall area developed under the Project will be 4850 ha with an additional 1500 ha of intercropping in the dry forest area.

22. Financial analysis assumptions and results.

23. **Crop Models.** The analysis has been developed following the crop model approach which examines average cropping patterns of farmers for the typical farm size (from 0.5 to 3 ha) in the specific area to be developed under RPL. The base case scenario, with Project, foresee no changes in the cropping pattern and only a conservative increase in production (yield and value) due to new services, training, improved seeds and crops varieties, and new markets, so as not to overestimate the potential benefit.

24. **The models present a realistic mix of culture over the year’s main seasons during which the crops rotate over the same area.** In addition to this rotation, a significant share of the land is under fruit tree crops and agro-forestry activities. Several crops will benefit from the RPLP interventions, however for the



purposes of this analysis only a sample of them (representing the major share of farmers’ area under production) has been subjected to an in-depth analysis.

25. Detailed benefits for major crops have been extrapolated from the crop models on a hectare basis. The strong impact of Project-promoted activities on crop yields is evident for all crops and leads to positive incremental revenues.

Table 2: Summary of representative crop financial results

Crop	Yield without project (T/ha)	Yield with project (T/ha)	Revenue without project (USD/ha)	Revenue with project (USD/ha)	Incremental Revenue (USD/ha)
Cabbage	4.5	7.8	1500	2950	1450
Melon	20	30	220	1380	1160
Yam	20	30	2830	3680	850
Jardin Creole	N.A.	N.A.	1485	3835	2350
Fruit trees	N.A.	15	N.A.	1235	1235
Dry forest	10	18	180	635	455

26. The exact mix of crop and rotation at the farm/household level will be determined during implementation according to the technical packages adopted by farmers. At appraisal stage, based on hypotheses agreed with the Haitian counterparts, the increase in revenues with the foreseen cropping patterns is significant and ranges from 455 USD/ha to 2350 USD/ha, depending on the crops grown.

27. Processing units. Furthermore, the Project will support the creation/upgrade of around fifty processing units, ranging from fruit processing to compost. For the purposes of this analysis, 4 models have been prepared using real data provided by an on-going World Bank-financed Project: RESEPAG II. Table 3 below summarizes the results of this support.

Table 3: financial results processing activities

Activity	IRR	NPV
Fruit Processing	21%	46,000 USD
Cocoa Processing	78%	36,000 USD
Yam Processing	30%	24,900 USD
Compost	64%	63,700 USD

28. The financial analysis for the processing and marketing activities mentioned in the table above foresees positive returns and cash flows, underscoring that using matching grants to encourage producers to adopt new technologies provides them with additional financial space, particularly during the early years when they are working their way further along the technology adoption learning curve.



29. **The processing/marketing subprojects will be identified through a demand-driven process during project implementation.** Thus, a precise detailed ex ante analysis of all the subprojects typology that will be funded is not possible. Moreover, these models do not limit the type of activity to be funded and clear criteria in the PIM will elaborate the requirements to qualify for project assistance. Thus, flexibility during the implementation process, leaving the choices of activity open, should not be undermined in any way by the fact that during project design some particular types of activities were considered to evaluate the viability of the project.

IV. Economic Analysis

30. Assumptions and results.

31. **The analysis uses a cash flow model over a 20-year period that includes all investment and operational costs of the RPLP sub-projects,** as well as the incremental net revenues derived from the financial models for the crops. The base case scenario makes assumption on cropping patterns and foresees some switches during project implementation. It also assumes a preliminary 70 percent adoption rate of new technologies. The final adoption rate will be based on experiences in Haiti and neighboring countries with similar agro-ecological conditions.

32. **The economic cost of RPLP has been calculated using a preliminary estimation of investment and maintenance costs.** Total Project investments have been estimated at 26.21 USD million over five years of implementation. The investment costs per ha related only to Component 2 are around 2,250 USD. The yearly costs to maintain the Project infrastructure fully productive after the last year of Project implementation (recurrent costs to ensure RPLP's sustainability) are assumed to be 10 percent of the total costs during the last year of implementation.

33. **For the economic analysis purposes, only the costs related to Components 2 and 3 have been taken into account** as Component 1 is neither related to production nor to Project implementation. The Financial costs have been converted to economic ones using a conversion factor of 0.8 to take into account taxes. The exchange rate USD/HGD is set at 66 for the analysis.

34. **The opportunity cost of labor (economic price) is 3 US\$ per day,** which is the bottom price for unskilled rural labor in rural areas of Haiti. The opportunity cost of capital is 12 percent.

35. **The overall program's economic cash flow and corresponding economic internal rate of return (EIRR) has been calculated** by aggregating the net incremental benefits obtained by the beneficiaries both as a result of additional production (yield increase) and processing.

36. **The overall area under production with Project is 6,350 ha** (of which 1,500 ha involve intercropping) and around 50 economic activities related to services to production, and processing. The economic analysis with Project implies improvements in the yields, reduction in post-harvest losses, changes in cropping patterns and related economic activities.

37. **An adoption rate of 70 percent has been assumed for the agriculture production, and a failure rate of 30% has been assumed for processing activities.** It is important to note that without Project intervention the current productive situation will most probably deteriorate as the soils in the area are highly deteriorated, inputs are not of the best quality and post-harvest handling of the production is poor. In the irrigated valleys, drainage problems will increase as well as salinity. Moreover, livestock has an important role in the family farming economy and it is expected that the farming improvement and



expansion will bring benefit to this window as well (e.g. in fodder production, water availability, increases in farm income to be invested in barn improvements). However, in order not to overestimate the quantifiable economic benefits and due to lack of specific data, livestock has been excluded from the computation.

38. **Economic values of targeted crops have been converted from financial ones** using the following conversion factor: 0.9. The economic analysis is based on direct costs and benefits. Social and indirect benefits will not be taken into account. These include for example creation of employment, enhanced competition in input markets, enhanced national food security, import substitution, foreign currency earnings, emergence of farmers’ organizations, etc., as well as a range of environmental benefits.

39. **Given the above assumption, the EIRR for the base case scenario is 20.8 percent and NPV is 7.5 USD million using a 12 percent discount rate.** These results indicate that, on the basis of an opportunity cost of capital of 12 percent, the Project shows a satisfactory EIRR and NPV, and is justified on economic grounds.

40. **Various scenarios have been tested to establish the economic viability of the Project in the event of adverse factors.** The sensitivity analysis confirms that EIRR and NPV are robust. Increases of investment costs by 10 and 20 percent bring the EIRR down to 19.1 and 17.6 percent, respectively, with positive NPVs in both cases.

41. **The Project is more sensitive to changes in benefits and adoption rates.** If the adoption rate were to fall to 45 percent or below (e.g. lower/no yields increases or hectares without production), then the EIRR would fall below the 12 percent threshold level and NPV would be negative. Decreases in expected benefits by more than 30 percent also lead to unsatisfactory economic indicators.

Table 4: Economic Internal Rate of Return sensitivity

Base case scenario	Project Benefits					Project Costs		Delay in benefits		Adoption rate	
	-30%	-20%	-10%	+10%	+20%	+10%	+20%	1 year	2 year	60%	50%
20.8%	14.7%	16.9%	18.9%	22.6%	24.3%	19.1%	17.6%	17.6%	15.1%	18.1%	15.0%
						Total costs		Total benefits			
Switching values						+69%		-30%			

42. **Based on the assumptions described above, the Project can be justified on economic grounds.** It should be kept in mind that not all potential economic benefits have been included in the analysis. Furthermore, the likely multiplier effects described above have not been quantified. Therefore, it is safe to assume that the estimated economic benefits are on the low side of the potential economic returns that can be expected.

43. **It is expected that in the medium- to long-term, this Project will have a substantial positive fiscal impact,** mainly due to: (a) increased output, income, and employment, resulting in increased tax revenues, and (b) multiplier effects due to increased economic activities in the targeted area, resulting in increased demand for goods and services, which is expected to generate additional income and employment effects. Furthermore, substantial foreign exchange earnings/savings can be expected, resulting from a reduction in imports of major staple crops grown of which Haiti is currently a net importer.



ANNEX 5: EXECUTIVE SUMMARY FOR PPSD

1. **As per the requirement of the Regulations, a Project Procurement Strategy Document (PPSD) has been developed and finalized after review by the Bank.** Procurement of goods, works, non-consulting and consulting services contracts would be carried out in accordance with World Bank’s Procurement Framework 2016 and “Procurement Regulations for Borrowers 2016” will be applicable for procurement under the project. When approaching the national market, as agreed in the Procurement Plan approved by the Bank, the country’s own procurement procedures, such as Local Procurement Law of June 10 of 2009, will be applied. In this case, all methods and procedures shall be consistent with the Bank’s Core Procurement Principles and ensure that the Bank’s Anti-Corruption Guidelines and Sanctions Framework and contractual remedies set out in its Legal Agreement apply.
2. **A market analysis has been carried out for different packages of procurement** and based on the findings, decisions on the procurement approach for goods and non-consulting services are finalized to ensure adequate participation of bidders. Based on PPSD information, it can be concluded that the national environment is generally favorable for the acquisition of goods and services identified for the implementation of the project.
3. **Consulting services’ contracts are also framed based on market research,** and the packaging of the same in terms of scope of services and period are decided based on the market experience. Procurement and Selection processes should be subject to Bank’s prior review procedures in accordance with thresholds and methods established as follows:

Procurement and Prior Review Thresholds

Category	Procurement Threshold (USD thousand)	Procurement/Selection Methods	Prior Review Thresholds
1. Works	>3,000	ICB	All contracts
	from 1,000 to 3,000	NCB	None
	≤1,000	RFQ	None
2. Goods and Non-Consulting Services	>500	ICB	All contracts
	≤500	RFQ/NCB	None
	≤150	RFQ	None
3. Consulting Services 3.A Consulting Firms	> 300	QCBS, QBS, FBS, LCS	All contracts above USD 200,000
	≤300	CQS	All contracts above USD >100,000
	Any involved amount	Direct Selection	All contracts
3.B Individual Consultants	Any involved amount	3 CV Comparison and procedures in accordance with Section VII, Items 7.34 to 7.39 of Bank’s Procurement Regulations for Borrowers	All contracts above USD >100,000 and some key project’s posts



4. Based on the PPSD, the procurement plan has been prepared to set out the selection and procurement methods to be followed by the Borrower during project implementation in the procurement of goods, works, non-consulting and consulting services financed by the proposed operation.

#	Description	Budget (Millions US\$)	Procurement/Selection Method	Preferential Market Approach
1	Goods and non-consulting services	1.74		
1.1	Community Participatory Works Program for the rehabilitation of infrastructure and ecosystem management (watersheds, hydro-agricultural infrastructure, etc.) & ecosystem improvements through small natural resource protection schemes in project target areas.	0.42	Request for Bids (RFB)	Open International Approach with participation of national qualified service providers.
1.2	Financial institution for the management of the Farmer Subsidy Scheme (individual vouchers)	0.36	Request for Bids (RFB)	Open National Approach
1.3	Support to improve resilient agriculture through Farmer Field Schools	0.96	Request for Bids (RFB)	Open International Approach with participation of national qualified service providers.
2	Services	2.7		
2.1	Consulting services for the development of strategies and policies of resilient productive territories MARNDR/MdE	0.5	QCBS	Open International Approach with participation of national qualified consulting firms.
2.2	Hiring one or more Operator(s) -Firm(s)- to be in charge of the Farmer Subsidy Scheme, Farmer-Field-Schools, and the Market Support Facility	2.3	QCBS	Open International Approach with participation of national qualified consulting firms
2.3	Consulting services to develop a Master Plan for MARNDR/MdE	0.2	QCBS	Open International Approach with participation of national qualified consulting firms
Total		4.44		

ICB = International Competitive BID
 NCB = National competitive BID
 DC= Direct Selection
 RFB= Request for BID
 LCS= Least Cost Selection

QCBS = Quality and Cost-Based Selection
 QBS = Quality Based Selection
 RFQ= request for Quotations
 CQS= Consultant’s Qualification
 FBS= selection under a fixed budget



ANNEX 6: CLIMATE CO-BENEFITS AND NET CARBON BALANCE

1. **Corporate mandate.** The World Bank has adopted, in its 2012 Environment Strategy, a corporate mandate to conduct greenhouse gas (GHG) emissions accounting for investment lending in relevant sectors. The ex-ante quantification of GHG emissions is an important step in managing and ultimately reducing GHG emission, and it is becoming a common practice for many international financial institutions.

2. **Methodology.** To estimate the impact of agricultural investment lending on GHG emission and carbon sequestration, the World Bank has adopted the Ex-Ante Carbon-balance Tool (EX-ACT), developed by FAO in 2010. EX-ACT allows the assessment of a project’s net carbon balance, defined as the net balance of CO₂ equivalent GHG emitted or sequestered as a result of project implementation compared to a without-project scenario. EX-ACT estimates the carbon stock changes (emissions or sinks), expressed in equivalent tons of CO₂ per hectare and year.

3. **Project boundary and key assumptions**

- a) Cropping areas of annual crops and perennials and technical management and mitigation options will change during project implementation. The table below presents the details.

Table: Annual and Perennial Systems

Cropland	Area (ha)			Key Assumptions
	Start	Without	With	
Yam	400	400	400	Improved crop cultivation techniques will be introduced, particularly improved agronomic practices and manure management
Horticulture (cabbage, carrots, vegetables)	400	400	400	Improved crop cultivation techniques will be introduced, particularly improved agronomic practices and manure management
Fruit Trees (Goyave)	1000	1000	1000	Existing crop, intensification per ha, yield will improve.
Dry Forest	1000	1000	1500	Addition to dry forest from most likely sorghum or other rainfed cereals; On existing and new dry forest new varieties will be introduced, yield will improve. Residual biomass will be burned (charcoal production).
Melons	0	0	1500	Intercropped with the Dry forest for the first 12 months after replanting, will benefit from improved canopy.
Jardin Creole	750	750	1500	Additions before project most likely peanuts, maize or other rainfed cereals, to existing and newly formed Jardin Creole new varieties and techniques will be introduced, yield will improve.
Jardin Creole Jeune	0	0	50	Before project most likely peanuts, maize or other rainfed cereals.
Peanuts, maize, cereals	1300	1300	0	Converted into new dry forest and Jardin Creole and Jardin Creole Jeune.



- b) Yield of annual and perennial systems are expected to change following the intervention as shown in the table below.

Table: Annual yields in tons per ha

	Without project	With project
Horticulture (cabbage, carrots, vegetables)	4.5	7.8
Yam	20	30
Melon	20	30
Jardin Creole	N.A.	N.A.
Fruit trees	N.A.	15
Dry forest	10	18

- c) Inputs into agricultural production are largely limited to fertilizer and compost. Annually the project will use 1,385 metric tons of fertilizers (including manure, fertilizer, and NPK) and 1,650 metric tons of compost.

4. **Data sources.** The primary data sources were the *Manual for Subsidy Scheme* by the Ministry of Agriculture and Rural Development from 2015, The Post Hurricane Matthew Damage and Losses Assessment, an impact evaluation of PTTA (*Proposition de paquets techniques durables pour le ptt a ii et options pour le volet d'équipement des agriculteurs*) by the Inter-American Development Bank in 2016, and additional information on yields, unit prices and technical packages obtained from technicians in the Ministry of Agriculture and Rural Development.

5. **Regional and project characteristics.** The Project region has a tropical wet climate. The dominant soil type is High Activity Clay. The project actual field level productive investments phase is 4 years and the capitalization phase is assumed to be 16 years. The 20-year implementation period is standard in the use of EX-ACT.

6. **Results.** The net carbon balance quantifies GHGs emitted or sequestered because of the project compared to the without-project scenario. Over the project duration of 20 years, the project constitutes a carbon emission savings of 572,397 tCO₂-eq, equivalent to 28,620 tCO₂-eq additionally sequestered per year. See table below for a summary of these results.

Table: Results of the ex-ante GHG analysis

Project activities	Over the economic project lifetime (tCO ₂ eq)			Annual average (tCO ₂ eq/year)		
	GHG emissions of "without project" scenario (1)	Gross emissions of "with project" scenario (2)	Net GHG emissions (2-1)	GHG emissions of "without project" scenario (3)	Gross emissions of "with project" scenario (4)	Net GHG emissions (4-3)
Land Use Changes						
Afforestation	0	-641,835	-641,835		--31,029	--32,029
Other LUC	0	-44,715	-44,715		-2,236	2,236
Crop systems						
Annual	-44,640	-44,640	0	-2,232	-2,232	
Perennial	-37,487	-297,991	-260,504	-1,874	-14,900	-13,025
Inputs		374,657	374,657		18,733	18,733
Total	-82,127	-654,524	-572,397	-4,106	-32,726	-28,620



ANNEX 7: THE CARIBBEAN BIODIVERSITY FUND (CBF) AND THE HAITI NATIONAL TRUST (HNT)

1. **Approximately US\$3 million of LDCF funds are earmarked for a pre-existing fund set up in the Caribbean, the Caribbean Biodiversity Fund, to be used for climate change adaptation subprojects under a grants scheme.** The rationale for the use of the CBF is multifold: a) the CBF already exists and is supported by various donors including the Nature Conservancy and KfW. To set up a new fund would result in duplication and would cost considerably more than the project has available; (b) the LDCF's dual focus on adaptation and sustainable livelihoods is an important strategy for the CBF and is well within its scope and mandate; (c) adding the LDCF funds to the CBF's pool of invested funds (US\$32 million) will reduce investment risk as well as ensure that interest is accrued more quickly; (d) interest accrued on the US\$3 million will be used for climate adaptation activities; (e) use of the CBF will speed up the establishment of the Haiti National Trust since the CBF has been instrumental in the set-up of all the other trusts and offers the same assistance to Haiti; (f) the investment will result in a sustainable stream of income to Haiti for adaptation projects well into the foreseeable future; and (g) this longer term source of predictable financing will mean that when a disaster strikes in Haiti, the current practice of diverting government funding earmarked for longer term programs to address immediate crises will not impact this fund. As such it presents a key long-term stabilizing mechanism for addressing adaptation, and increases the likelihood that Haiti will have funding to address urgent and immediate adaptation needs.

2. **The Caribbean Biodiversity Fund (CBF) was established in September 2012 as an independent entity** (a not-for-profit company limited by guarantee incorporated in the United Kingdom and governed by a Board of Directors), and financed under the World Bank/LDCF-financed Sustainable Financing and Management of Eastern Caribbean Ecosystem Project (which closed in June, 2016). The CBF is a regional endowment fund whose main objective is to provide a sustainable flow of funds to support activities that contribute substantially to the conservation, protection and maintenance of biodiversity within the national protected areas systems and any other areas of environmental significance of its participating countries. The CBF defines its mandate broadly as it is clear that climate change is inextricably linked with biodiversity conservation. As such, the CBF does accept funding for adaptation activities (landscape management improvements, agroforestry, agriculture conservation practices, etc.). In 2016, KfW requested that the CBF manage US\$25 million dedicated to climate change in the region. This fund was opened as a dedicated sinking fund.

3. **The CBF was the first such regional endowment to channel support to multiple National Protected Area Trust Funds (NPATFs) established in participating countries.** So far, the Bahamas, Jamaica, Dominican Republic, Grenada, St Vincent and the Grenadines, Antigua and Barbuda, St Lucia, St Kitts and Nevis (See initial countries in the chart below), followed by Puerto Rico, British Virgin Islands and just recently, Haiti, have signed onto the Caribbean Challenge Initiative³⁰, which is a condition to join the CBF. Haiti is the latest Caribbean country to begin its process to join the CBF. Haiti will use the CBF to focus on both biodiversity and climate change. This project will therefore use the CBF's established mechanism (see the description below) to channel climate change adaptation funds to Haiti using the same processes and framework that have already been established for other CBF member countries.

³⁰ <http://www.caribbeanchallengeinitiative.org/>



*Other partners are expected to join the program including the Cartagena Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region.

4. **CBF Funding:** The CBF is currently capitalized by US\$32 million in initial financing, with plans to grow CBF capital to US\$42 million. Each OECS country that has joined the CBF has contributed US\$3 million to the endowment, which, in the case of the OECS countries, was contributed by GEF. Likewise, for Haiti, the funds from LDCF will be added to the US\$32 million already in the endowment. The funds are with an asset management company and, to date, the annual rate of return has been in the 6-7% annual range, resulting in accrued interest of more than US\$2.4 million as of September, 2017. Donors to the CBF include, so far, the Government of Germany (through KfW), the United Nations Development Programme (UNDP), UNEP, and The Nature Conservancy (TNC).

5. **CBF Secretariat:** The CBF Secretariat comprises a Chief Executive Officer (CEO), and a small staff comprising an accountant and an assistant. This skeletal staff is necessary to ensure that operational costs of running CBF are kept low. The office is located in Bahamas. From there, the CBF carries out its Annual Work Plan tasks which include updating the financing strategy, developing CBF Eligibility Approval Procedures, developing procedures to transfer funds, providing technical assistance to members of the CBF in the establishment of their national trusts, and so on (See www.caribbeanbiodiversityfund.org).

6. **CBF Governance:** The CBF is governed by the CBF Board of Directors, which is currently composed of two permanent members: KfW and TNC. Once the CBF-supported National Trusts (NTs) are established in each participating country and sign the Vertical Agreement with the CBF, each country will appoint a Director to the CBF Board. So far, St Lucia and Antigua and Barbuda have signed their vertical agreements. Each of the Participating Countries that have not yet signed their agreement is represented on the Board by an Observer who participates in board meetings and serves as a national focal point on CBF matters. In accordance with the terms of the CBF Articles of Association, a majority of the Board will not be affiliated with the governments of any of the Participating Countries and must be representatives of civil society.



7. **The characteristics of a NT include the following:**

- Purpose: The purpose should be aligned with the purpose of the CBF
- Board composition: Broad composition and representation, with majority civil society board membership and no single majority interest group dominating the board.
- Civil society board members: Board members representing civil society should not be solely selected by the government
- Asset control: Well-designed and independent asset control.
- Audit requirements: Well-defined annual external audit requirements.
- Grants: Ability to make grants to both government and civil society entities.
- Match: Ability to generate 1:1 match funding³¹. In Haiti's case, donor funding will be permitted to constitute this match, as well as any other measures.

8. **Funding Mechanism:** A portion of the CBF endowment is earmarked for each of the participating countries following the instructions contained in the financing agreements with each donor. Countries can also create various sub-funds under the CBF. In order to receive the interest generated through the CBF but specifically dedicated to climate change adaptation, Haiti, as in the case of all the other participating countries, will need to set up a National Trust and it is in the process of doing so at the moment. The National Trust governs and administers the funds received and sets up a mechanism to receive and select eligible proposals for the use of these funds. It is also responsible for additional fundraising to complement the CBF funds.

9. **NT Set-Up Requirements:** Each participating country has to establish via legislation a legally autonomous NT which can channel financing from domestic sources (which could include dedicated user fees and taxes, Payment for Environmental Services, government budget allocations, and donations as country conditions dictate) and revenues from the CBF. These funds can then be used according to the agreed principles; for Haiti it would be for climate change-related projects. Each NT has its own board, which approves an annual work plan to spend the available resources generated through CBF for its respective country. To ensure consistency with the CBF's funding objectives, this annual work plan is submitted to the CBF as a condition of disbursement. The CBF Board limits its review to ensuring that the use of funds transferred by the CBF is consistent with the criteria described in the CBF Operations Manual, and not used to pay for, among other things, the operating or administrative expenses of government ministries, salaries for officers or staff of NGOs, and/or natural resource extraction. The NT is to be managed by an independent Board as well as a secretariat that includes an executive director, secretary, and accountant. The board of the Haiti National Trust would make all decisions regarding Haiti's NT policies and annual work program, and report to the CBF. HNT would disburse the CBF investment proceeds and resources generated by national mechanisms at the national level.

10. **Structure and Responsibilities of the NT:** The steps for becoming eligible to receive funds from the CBF are summarized below.

- **Staffing.** Recruit an Executive Director. The single most important step toward operationalizing a national trust fund is to hire a highly capable Executive Director who can spearhead the activities described below and others. Additional support staff may also be needed.

³¹ Although some flexibility exists on this aspect.



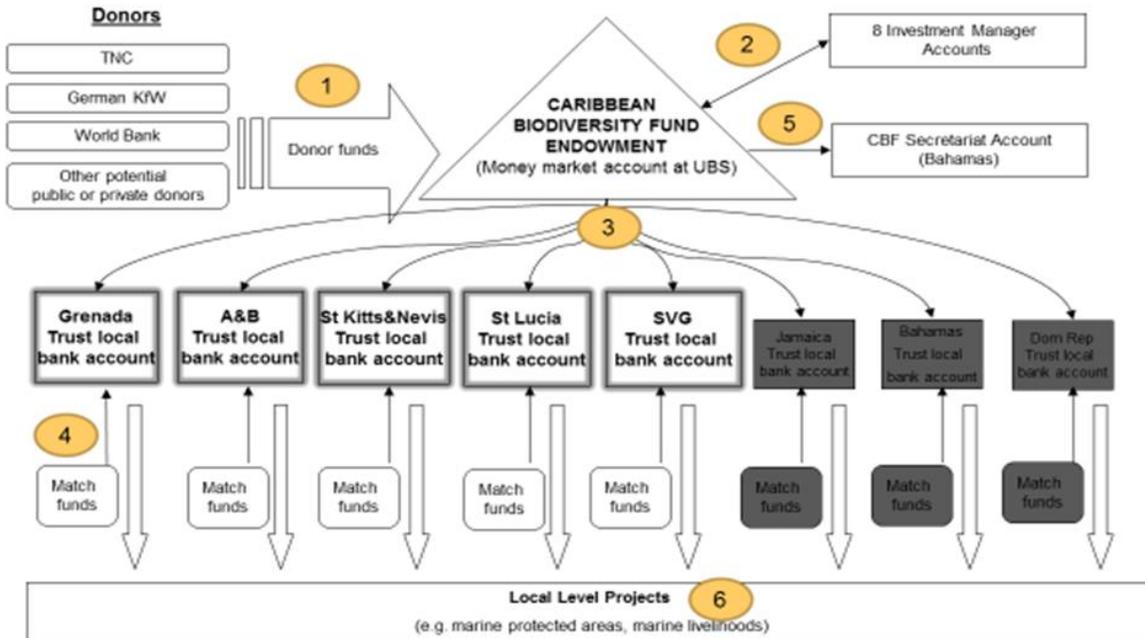
- Office. Set up initial office operations (e.g. office space, equipment, utilities, internet, company vehicle, etc.).
- Board. Establishment and training of the Board of Directors and Executive Director. This can entail development of terms of reference for Board members, convening of initial meetings, and a Board retreat to provide orientation sessions for Board members. Existing materials can be drawn upon and customized as needed.
- Finance and accounting. Open a bank account, select an accountant and accounting system, identify an auditor, purchase insurance, etc. Ideally, a Board member with relevant financial experience can assist in this process.
- First request for proposals (RFP). A first RFP will set the grant-making program in motion. This entails a Board decision on the scope of the first call, along with procedures for screening and selecting proposals; drafting of a short RFP document, and distribution of the RFP.
- Mentoring and overall organizational development. Strengthen the trust fund institution and mentor the Executive Director. In most or all of the eight countries, a new legal entity is being established, which will require institutional strengthening.

11. **Funds Flow from the CBF to the NT:** The figure below shows how the CBF currently allocates funds to the other countries that are eligible. The arrangement for Haiti would be just like that for any other country on the flow chart that receives funds, except that unlike the other countries, Haiti would have two sub-accounts: one for climate change adaptation and landscape management and the other for biodiversity conservation/PA management. The explanation of the figure below details the eligibility requirements.



SCHEMATIC OF CBF FUNDS FLOW (Annex 2)

(#s below refer to annotation points in the next slide)



12. **The case of Haiti:** The aim of the Project, under sub-component 1.3, is to facilitate the establishment of the NT (which in Haiti has been given the name of *Le Fonds Haitien pour la Biodiversite* -FHB- or *Haiti National Trust* -HNT) and to initiate the funding of the endowment. The process for this establishment is already ongoing, managed by The Nature Conservancy, which is providing the legal and administrative support for the legal establishment of HNT. Currently, Haiti’s National Trust has completed its draft by-laws and constitution and is now in the phase of legally creating the fund and establishing its Board. This process has been supported by TNC, UNEP, UNDP, GIZ, The Swiss Cooperation, the Ministry of Environment, Ministry of Tourism, J/P HRO and Société Audubon Haiti. Funds from these donors will provide \$220,000 to cover expenses from Dec 2017 until June 2018 (studies/continuing legal work/small secretariat). The RPLP would finance around \$210,000 the following year, and another \$180,000k the next which would end the process of establishment of the mechanism. Secretariat costs are estimated at \$150,000 per annum. In detail, the funds would:

- a. Finance the development of (i) the HNT fundraising and communication strategy, (ii) the strategic plan for the Fund, (iii) administrative and accounting procedures, (iv) the procedures of technical evaluation and monitoring of projects, (v) the development of the manual of operation (call for proposals); and as well as project administrative and financial audit procedures.
- b. Support to the administrative (secretariat) costs of the HNT during two years of operation.
- c. Contribute US\$3 million to the endowment fund earmarked for climate adaptation.



13. **A workplan for the establishment of the HNT has been articulated and shared with the Bank.** It indicates that by December 2017, all relevant legal documents would be developed for the establishment of the fund. In addition, the staffing and offices of the HNT secretariat will begin to be put in place. By 2019, the local trust will have all procedures, including a grants manual, in place. It is anticipated that by the end of year 3 of the RPL project, the HNT would be ready to initiate its first call for proposals using interest generated from the endowment funds (US\$7 million from KfW and US\$3 million from LDCF funding).

ANNOTATIONS TO SCHEMATIC OF CBF FUND FLOW (Annex 2)

- (1) All donor funds will initially be transferred to the UBS Money Market Account, as per terms in donor financing agreements (e.g. World Bank Subsidiary Agreement between TNC and CBF). UBS has been contracted to serve as the Investment Manager for the CBF.
- (2) As funds are received from donors, UBS will transfer these funds to 8 designated investment manager accounts (as approved by the CBF Board) corresponding to each country. These investment manager accounts will, in aggregate, reflect the asset allocation strategy defined in the CBF Operations Manual.
- (3) The Vertical Agreements between the CBF and national trust funds will govern the transfer and use of CBF funds, including: quarterly payments, the transfer and use of funds, and reporting requirements. Once national trust funds submit annual work plans based on an open and transparent call for proposals, in conformity with the CBF mission, the CBF CEO will instruct UBS to make the initial transfer of investment income to national trust fund accounts, as per the terms of the Vertical Agreements. Subsequent payments will be made on a quarterly basis for that given year based on submission and review of quarterly progress reports. Annual CBF disbursements to national trust funds will total 4.5% of the three-year monthly average of the endowment value allocated for that specific national trust fund.
- (4) Match funds refer to the 1:1 match required of the national trust funds starting in Year 3 to receive CBF funds. This must come from sustainable finance mechanisms such as tourism fees, debt swap revenues, etc. These match funds must pass through the national trust funds and be reflected in annual work plans.
- (5) On a quarterly schedule, CBF CEO will instruct UBS to transfer funds from the CBF Money Market Account to the CBF Bahamas Secretariat account, to cover CBF operations (this amount will be 0.5% of the three-year monthly average of all endowment funds under management).
- (6) Grants will be awarded by national trust fund boards to government agencies and NGOs to support specific projects that meet the general parameters in Vertical Agreements. Funds will be transferred (as per an agreed grant schedule) to government and NGO accounts, and grant recipients will report quarterly on the use of these funds.



ANNEX 8: LIST OF OTHER ONGOING RELEVANT PROJECTS FOR RPLP

- World Bank (WB) financed *Strengthening Hydro-Meteorological Services* project (2015-2020, US\$ 5 million), which aims to strengthen Haiti's institutional capacity to provide hydro-meteorological and climate information services customized to the needs of the civil protection and agriculture sectors, contributing to increasing disaster and climate resilience. The main counterpart agency is the Ministry of Agriculture, Natural Resources and Rural Development (MARNDR).
- WB financed *Relaunching Agriculture: Strengthening Agriculture Public Services Project Phase II - RESEPAG II* (2012-2019, US\$ 85 million) which aims to: (a) reinforce the capacity of the Ministry of Agriculture, Natural Resources and Rural Development to provide or facilitate access to services in the agricultural sector; (b) increase market access to small producers and food security in Selected Areas; (c) improve livelihood in areas affected by Hurricane Matthew; and (d) enable the Government to respond promptly and effectively to an eligible emergency. The project finances interventions in the North/North East, Centre, and South departments. It supports in particular a Farmer Subsidy scheme using various technical packages and implemented through individual vouchers to improve the adoption of improved agriculture inputs/technologies (with a particular emphasis on climate resilient production and practices); finances Farmer Field Schools as a vehicle to promote best practices (extension services mechanism); and a Market Support Facility, using matching grants to allow group of producers to add value to their productions (value chain development).
- Inter-American Development Bank (IDB)-financed *Natural Disaster Mitigation Program II* (2016-2020, US\$ 42 million), which aims to reduce rural economic losses through the improvement of climate risk management in selected watersheds. Some specific objectives include to: (i) increase capacities for adaptation to climate change and disaster risk management (DRM) in the agriculture sector; (ii) improve water and sediment conservation in selected gullies of priority watersheds; and (iii) reduce the risk of rural economic losses due to floods in targeted watersheds.
- United States Agency for International Development (USAID) *Reforestation Project* (2017-2021, US\$ 40 million), which aims to reduce the threat of deforestation, improve resilience to economic and natural shocks, increase tree cover in targeted areas, and improve environmental *governance* and coordination. It will be implemented in northern departments.
- International Fund for Agricultural Development (IFAD)-financed *Small Irrigation and Market Access Development Project in the Nippes and Goavienne Region (PPI II)* (2012-2017, US\$ 13.2 million), which aims to achieve a sustainable improvement in the livelihoods and incomes of rural poor households, especially those belonging to the most vulnerable groups. Its specific objectives include: (i) increasing agricultural production sustainably through efficient water management and the consolidation of both collective and individual irrigated agriculture; (ii) improving the value of irrigated agriculture production and increasing farmers' access to markets and financial services in order to raise the incomes of the poorest families; and (iii) strengthening the planning,



organizational and management capacities of grass-roots organizations in order to facilitate their access to markets and financial services.

- Food and Agriculture Organization (FAO) implemented, with LDCF co-financing, the *Strengthening Climate Resilience and Reducing Disaster Risk in Agriculture to Improve Food Security in Haiti Post Earthquake project* (2012-2017, US\$ 12 million), which aims to increase the resilience of vulnerable farmers including their livelihoods and agro-ecosystems against the impacts of climate variability and in the post-earthquake crises, through integration of disaster risk management and adaptation practices in the agricultural sector and replication of more hazard-resilient crop varieties and cultivation technologies.
- UNEP implemented, with GEF co-financing, the *Ecosystem approach on the South Coast of Haiti* (2015-2020, US\$ 6.2 million), which aims to strengthen the resilience of ecosystems in communities vulnerable to the impacts of climate change. This program advocates an integrated strategy encompassing all ecosystems and agricultural production areas from the mountains to the sea. The various components of the project will also try to address the whole issue of the destruction of the ecosystems of the Great South in a perspective of recovery and the fight against poverty.
- French Development Agency (AFD) and European Union have co-financed the *Project for Food Security (SECAL)* (2013-2017, 15 million euros), whose objective is to support agricultural sectors with high potential in southern Haiti, contribute to improving the food security of people in the South Department and generate additional revenue in the rural areas.



ANNEX 9: MAP of RPLP

