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Report No: PAD2329

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED GRANT

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

AND

GLOBAL ENVIRONMENT FACILITY

PROPOSED GRANT

IN THE AMOUNT OF US\$ 6.2 MILLION

TO THE

REPUBLIC OF HAITI

FOR A

RESILIENT PRODUCTIVE LANDSCAPES PROJECT IN HAITI  
{RVP/CD CLEARANCE DATE}

Agriculture Global Practice  
Latin America And Caribbean Region

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## CURRENCY EQUIVALENTS

(Exchange Rate Effective {xxx, 2017})

Currency Unit = Haitian Gourdes

HTG = US\$1

US\$ = SDR 1

## FISCAL YEAR

October 1 – September 30

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## 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> )
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
ERC	Emergency Response Contingency
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
EX-ACT	Ex-Ante Carbon Balance Tool
FFS	Farmers Field School
FSS	Farmer Subsidy Scheme
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHG	Green House 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
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
INDC	Intended Nationally Determined Contribution
IPF	Investment Project Financing
IPMP	Integrated Pest Management Plan
IPPC	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 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> )
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> )
NPATF	National Protected Area Trust Fund
NT	National Trust
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	Unified Procurement Unit ( <i>Unité de Passation des Marchés Publics</i> )
USAID	United States Agency for International Development
USD	United States Dollar
WB	World Bank



**Note to Task Teams:** The following sections are system generated and can only be edited online in the Portal.

## BASIC INFORMATION

Is this a regionally tagged project?

No

Country(ies)

Financing Instrument

Investment Project Financing

☒ Situations of Urgent Need of Assistance or Capacity Constraints

☐ Financial Intermediaries

☐ Series of Projects

Approval Date

28-Feb-2018

Closing Date

Environmental Assessment Category

B - Partial Assessment

Bank/IFC Collaboration

No

## Proposed Development Objective(s)

The Project Development Objectives are to: (i) to improve the adoption of resilient-enhancing agriculture and landscapes management practices in selected sub-watersheds; and (ii) 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 promote agriculture and ecosystems resilience

15.70

Project Coordination and Monitoring and Evaluation

3.50

Emergency Response Mechanism

0.00



## The World Bank

Resilient Productive Landscapes in Haiti (P162908)

### 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
Global Environment Facility (GEF)	0.00
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	● Substantial
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

### Conditions

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**The World Bank**

Resilient Productive Landscapes in Haiti (P162908)

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



HAITI  
RESILIENT PRODUCTIVE LANDSCAPES IN HAITI

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## I. STRATEGIC CONTEXT

**Note to Task Teams:** *Formatting instructions for this document.*

### A. Header

1. *[All sub-sections must have a continuous paragraph numbering for the entire main text or for each annex per institutional standard.]*
  - (a) This is the sub-para numbering for this level. This is the sub-para numbering for this level. This is the sub-para numbering for this level.
  - (i) This is the sub-para numbering for this level. This is the sub-para numbering for this level.
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### 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 and one of the poorest countries in the world, 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 areas<sup>1</sup>, inequality is high, with wealth and economic opportunity concentrated around Port-au-Prince. Access to basic services is limited, particularly in rural areas, which has translated into low human development indicators (Haiti ranks 168th out of 187 countries in the Human Development Index).

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 the rural households, and involves more than 70 percent of them. This production is critical for food security<sup>2</sup>, in a context where more than half of the population is affected by undernutrition (2016, FAO); around a third of the production is being used for subsistence<sup>3</sup>, while the rest

<sup>1</sup> 75% fall below poverty line in rural areas compared to 40% in urban areas

<sup>2</sup> Undernutrition concerns more than half of the population (FAO)

<sup>3</sup> Traditionally, rural Haitians take advantage of seasonal, nutrient rich productions, to complement their diet (fruits, vegetables, legumes, small livestock), yet this diversity is at risk due to the deterioration of natural resources that decreases the availability



of productions is sold generating much needed income.

**3. Climate change is significantly impacting agriculture and will increasingly do so in the future.**

Climate change is projected to manifest itself in Haiti the following ways: a) increases in temperatures: it is likely that temperatures will increase by 0.8-1 °C by the year 2030 and by 1.5-1.7 °C by the year 2060, with the highest increases expected in the months of June or July; b) decreases in precipitation: precipitation is expected to decrease by 5.9-20 percent by 2030 and by 10.6-35.8 percent by 2060, with the greatest decreases also expected in the months of June or July<sup>4</sup>. 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, especially in June and July, 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.

**4. Haiti's population and territory are extremely vulnerable to natural disasters and exposure is expected to increase as climate change impact intensifies.**

Haiti has the highest index of vulnerability to hurricanes (12,9 on a scale of 13) among small Low Income Countries (LIC) Island States and is the third country hardest hit by climatic events in the world<sup>5</sup>. Ninety-six (96) percent of the population is considered at risk. Climate change predictions for 2050 and beyond suggest that more than 50 percent of the total area of Haiti will be in danger of desertification largely due to climate variability and change. Extreme weather events, according to the Intergovernmental Panel on Climate Change (IPCC)<sup>6</sup>, indicate that the Caribbean region is likely to be exposed in the future to more intense and frequent extreme weather events. On average, each disaster costs two percent of GDP per year, and occasionally much more (in 2008, tropical storms' economic impact reached 15 percent of GDP), and significantly affects the agriculture sector<sup>7</sup>. The country is highly mountainous with more than half of Haiti's territory having slopes over 20 degrees, that centuries of deforestation have rendered particularly vulnerable to climatic events. Exposed agricultural fields which are now commonly exploited on slopes<sup>8</sup> further exacerbates the issues. Deforestation, and inappropriate agricultural practices have produced predictable interlinked environmental and social consequences: the loss of topsoil, decreasing soil fertility, rain water run-off and depletion of aquifers, droughts, agricultural productive capacity decline, farmers' losses of incomes and rural out-migration. In a context of climate change, extreme weather events and their average intensity and frequency are expected to increase, and will further accelerate land and population vulnerability trend<sup>9</sup> : identified climate related hazards in Haiti include flash flooding, salt water intrusion, drought, intense rainfall, landslides, severe soil erosion, and hurricanes<sup>10</sup>.

of many of these sources of supplementation.

<sup>4</sup> <http://unfccc.int/resource/docs/natc/presentations/haitipres.pdf>

<sup>5</sup> Global index on Climate Change, 2016 : from 1993 to 2012 the country faced 2 droughts, 1 earthquake, 31 floods and 26 tropical storms/hurricanes.

<sup>6</sup> <https://www.ipcc.ch/report/ar5/wg2/>

<sup>7</sup> In the case of tropical storms, almost 50 % of damages and losses in productive sectors have been concentrated in the agriculture sector (PDNA, Feb 2017)

<sup>8</sup> 63 percent of agricultural land is on more than 20 degrees' slopes, and 40 percent of cultivated land in mountains is on slope of more than 50 degrees.

<sup>9</sup> Based on available projections, major climatic changes expected to occur in Haiti include a reduction in rainfall of 6 to 20 percent by 2030 and 11 to 36 percent by 2060. While annual precipitation is projected to decrease, the more limited rainfall events are expected to become more intense. Temperatures are also expected to increase by 0.8°C to 1.0°C by 2030, and by 1.5°C to 1.7°C by 2060.

<sup>10</sup> Source: Review of Current and Planned Adaptation Action : The Caribbean (Nov, 2011)



5. **Addressing intertwined human and ecological vulnerabilities requires a holistic landscape-level “productive” approach.** The above-mentioned context provides a rationale for integrating a landscape approach within watersheds (or sub-watershed) in Haiti to address major soil erosion and water retention capacity, prioritizing interventions helping to reduce downstream impacts. Improving the natural resource base through the promotion of climate-smart productions and practices best adapted to the agro-ecological context<sup>11</sup>, and, as importantly, the capacity to generate sustainable incomes out of these, is expected to have a significant positive impact on agriculture and the many people who derive their livelihoods and income from, together with the provision of nutritious food, and jobs. It will also contribute to protect in a sustainable way communities at large against the risks of flash flooding and landslides linked to soil erosion and water runoff.

## B. Sectoral and Institutional Context

### 1. Sectoral context

6. **Agriculture in Haiti is beset with problems, despite its importance in local food security and contribution to GDP:** Production is highly dependent on rainfall, with around five percent of farmers using irrigation. Most farmers have poor access to tools, machinery, and purchased inputs including improved seeds and fertilizer. Access to credit in rural areas is not a viable option either for poor farmers. In addition, there is little organization among producers and underdeveloped value chains, further compounded by a lack of rural infrastructure to access markets e.g. rural roads for connectivity with buyers, water storage and irrigation for production in dryer seasons and mitigation of drought impacts, 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. The lack of value addition along value chains, reliability and sustainability of sources of incomes for farmers generated from tree-crops and other types of resilient agricultural productions constitutes a major impediment to the maintenance and sustainable expansion of such systems. This also drives their choices towards higher demanded/less perishable productions, often at the expense of the environment (e.g. peanuts production on slopes, trees cutting for land expansion and/or cash generation with fire wood or charcoal production and sales), contributing to the vicious circle of land degradation and increasing population vulnerability. In addition, women play a major role in the post-harvest marketing of products in Haiti, and the improvement of these value chains is a critical factor for women’s economic empowerment, livelihoods and resilience, which offers opportunities for vulnerable population- such as women and youth- to increase rural income and jobs diversification.

7. **In a country that is already densely populated, steady population growth and land inheritance rules<sup>12</sup> continues to put pressure on land, and drives land use changes.** Haiti has 961 inhabitants per square kilometer of arable land, the highest pressure density on arable land in the Western Hemisphere. Farm sizes have shrunk dramatically over time: 85 percent of farms now have less than one hectare. The main food crops produced are rice (in lowlands), maize, bananas, yams, cassava, beans, and millet, and main export crops include coffee and mangoes. 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

<sup>11</sup> 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, conservation tillage, among others.

<sup>12</sup> All land is inherited bilaterally and equally between siblings, with arable land being usually divided immediately.





some livestock) but is becoming harder to implement in increasingly smaller plots. In addition, the traditional practice of creole garden (or “jardin creole”<sup>13</sup>) corresponding to small but highly diversified agro-forestry systems, providing fresh and nutritious food throughout most of the year among other benefits (high biodiversity, higher productivity linked to species associations, soil protection and quality), have tended to decrease to give way to annual crops. Yet these resilient systems are particularly adapted to face harsh topographic and climatic conditions and are now recognized as a typical climate-smart/agro-ecological best practices. Restoring these agro-forestry systems is however not affordable for the vast majority of farmers.

**8. The natural resource base and agriculture are linked by a negative feedback loop.** Unsustainable farming practices such as agriculture on slopes and marginal areas, lack of agriculture conservation technologies, are driven by land pressure, low farmers’ education level, and poor farmers’ economic conditions. These have contributed to the severe degradation of around 85 percent of watersheds<sup>14</sup> with wide ranging impacts, namely on (i) yields -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 .5 to 1.2 percent per annum (WB, 2005). Stagnating or shrinking yields in turn further exacerbate land pressure, causing more degradation and deforestation; and (ii) on critical habitats such as mangroves<sup>15</sup> - run off from denuded slopes and gullies leading to soil washed away and settling into valleys, rivers and eventually into the sea. Soil erosion caused by water, either as direct rainfall on the soil surface, or indirectly through gullies and channels, causes an annual loss of land for the whole country estimated at about 37 million metric tons (MT). This corresponds to an average loss of about 15 MT/ha/year across the country. Without trees’ complex root systems to hold Haiti’s mountainous terrain in place, protect gullies from serious erosion and prevent water resources depletion, vulnerability of landscapes and people living on them is doomed to increase. Reducing poverty and building system resilience will require an integrated management approach that considers the complex interactions between the environment and agriculture and turns the negative- into a positive feedback loop. Climate change is expected to increase these negative feedback loops.

**9. The unique challenge to building resilience in the Haitian Agriculture sector arises from the combination of climate change adding further stress to a system already engaged in a negative feedback loop between the agriculture production and the natural resource base.** As described above, the depleting natural resource base and lack of landscape level management increase the *sensitivity* of agricultural production and ecosystems to weather and climate events. Climate change is expected to further amplify the *exposure* to such events. With both sensitivity and exposure set to increase, *vulnerability* will follow suit. The weather and climate events that today’s depleted natural resource base offers much reduced protection against are congruent with priority issues for resilience building in the climate change context: 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

<sup>13</sup> A Creole garden is a multi-storied agro-forestry system including a mix of perennial and annual crops, i.e. woody perennials, tree crops (i.e. bread fruit, mango, avocado, bananas, citrus, coffee), vegetable and staple crops, playing multiple roles, including household’s food security and providing ecosystems benefits

<sup>14</sup> According to Ministry of Agriculture, Natural Resources, and Rural Development (MARNDP), 2016

<sup>15</sup> Mangroves are essential for maintaining fish nursing sites, protecting coasts against storms, and lowland crops from soil salinization (e.g. rice production) which are ultimately important for livelihoods



include water storage facilities and water is being retained for longer periods in upstream forests. As a result, any effort to build resilience to climate change in Agriculture will need to take an integrated approach taking into account both *sensitivity* due to a diminished natural resource base and *exposure* due to climate change.

### Institutional context

**10. Ministry of Environment (MdE) and Ministry of Agriculture Natural Resources and Rural Development (MARNDR) recognize the interdependency between Natural Resources Management and Agriculture Production.** In its policy framework 2010-2025, MARNDR identifies watersheds degradation as a major issue, and establishes the reduction of environmental vulnerability as a long-term objective requiring the protection of environment and natural resources. It also establishes the prevention and management of natural disasters as a priority<sup>16</sup>. In 2006, the Government submitted their National Adaptation Program of Action (NAPA, 2006) (*Plan d'Action National d'Adaptation* - PANA). In this document, the Government lays out their most urgent risks from climate change and propose a way forward. One of the key risks outlined is that of soil erosion<sup>17</sup> and its relationship with the agriculture sector vulnerability. In a recent update of the National Action Plan against Desertification (2015), MdE establishes as one objective the collaborative development of management plans for the most vulnerable watersheds in the country. However, the operationalization of the 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.

**11. Collaborative efforts are underway to boost the implementation of watershed approaches to strengthen the management of natural resources (wood, water, soil).** In the context of the COP21 process and resulting Paris Agreement, and in order to relieve the agriculture and population pressure on forests and landscapes, as well as adapt to the effects of climate change, a Haiti-based NGO, the J/P Haitian Relief Organization (J/P HRO), together with MdE and MARNDR, developed in 2015 a proposal for a broad initiative – Haiti Takes Roots (HTR) – focused on watershed management and reforestation in key areas of Haiti<sup>18</sup>. Its objective is to facilitate engagement, coordination, learning, monitoring and synergies in a programmatic approach. This platform would be a conduit to operationalize Ministries' plans, helping to bring key actors together around the issue, and establish long term strategies and mechanisms to sustain and implement its objectives. Supported by seed funding from J/P HRO and the French

<sup>16</sup> The MARNDR Triennial Plan for Relaunching Agriculture 2013-2016 also identifies as a strategic pillar the watershed integrated approach (ridge to reef).

<sup>17</sup> "Haiti is a mountainous country whose peaks reach up to 2684 meters over altitude. Poor farming practices weaken the soil capital and weaken the productive capacity as they lead the arable land towards the sea. Land erosion, under the effects of some natural factors. Drought, wind, rain and some anthropogenic factors: excessive deforestation and uncontrolled construction in urban areas leads to a country's land desertification processes. **The vulnerability of the agricultural sector is closely linked to that of water and soil.** Climate change by acting on water resources also influence agricultural production. On the other hand, **winds, floods, droughts have direct impacts on agriculture given the level of soil erosion leading to their aridity.** In addition, 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 desertification risk due to climatic conditions."

<sup>18</sup> The mission of HTR is to contribute to a more rational management of Haiti's natural, renewable through the management of watersheds, the restoration of soils, increasing forest cover, and the promotion of agroforestry – most notably in vulnerable watersheds – therefore breaking the vicious cycle of poverty and deforestation.



government, HTR has shaped its governance mechanisms<sup>19</sup>. The Inter-American Development Bank (IDB) and the World Bank (WB) participate in this initiative and more partners are expected to join. Two studies have been financed under the HTR umbrella by the WB together with J/P HRO to develop a participatory watershed management planning methodology and a post-hurricane Charcoal and Arboreal Assessments<sup>20</sup>, contributing to the development of a body of knowledge and resources. The proposed Resilient Productive Landscapes Project (RPLP) is envisaged as a proof of concept under HTR aimed at being scaled-up in other (sub)watersheds of the country. For this reason, and in order to also benefit from the WB project management experience, J/P HRO has committed to provide a parallel financing to the tune of US\$ 5 million to RPLP, which will be blended with IDA and LDCF co-financing.

**12. RPLP builds on solid analytical work, as well as the lessons learned from other Global Environment Facility (LDCF) funded and donor-funded project, including the World Bank's own projects.** Key lessons learned are reflected in the section III C. They emphasize in particular the need for collaborative efforts including strong communities' participatory 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. Since the 2010 Earthquake, the WB's portfolio in Agriculture expanded with RESEPAG I and RESEPAG II,<sup>21</sup> supporting MARNDR's capacity to deliver public goods and piloting incentives schemes to support farmers' improved productions through vouchers mechanisms and the strengthening of agricultural value chains through matching grants. RPLP would take advantage of the experience gained and use the same approaches, adjusted to the specificities of RPLP. On the environment side, the GEF and LDCF co-funded several projects in Haiti and in the Caribbean, that focused on increasing the resilience of agriculture and ecosystems, and boosting food security through climate change adaptation. Several of these projects have also focused specifically on the Grand Sud (greater south area), given its increased vulnerability to climate shocks. While many of these projects were financially supported for the duration of the project, there was little effort to ensure that this financing was sustainable.

**13. 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 impact.** Ministries and other institutions in Haiti face significant financial resources constraints. Sustainability of short term programs have consistently been challenging. To address a similar problem faced by five other Caribbean islands, a GEF financed project, *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 that arise through human, climate or other sources. Under the proposed Project, 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 will enable Haiti to access long term sustainable financing for climate adaptation and biodiversity conservation into perpetuity. While the CBF has for various reasons retained this name, it will create a climate change adaptation window under RPLP to address climate change adaptation

<sup>19</sup> HTR shall be governed by a Steering committee chaired by the Prime Minister and supported by a Secretariat, a technical platform, a Monitoring and Evaluation Committee, a Geographical Platform, and a virtual Resource Centre ; it will include members from concerned ministries, institutional partners, international organizations, civil society and private sector.

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

<sup>21</sup> Relaunching Agriculture: Strengthening Agriculture Public Services Project – Phase II (P126744) is ongoing and will close on December 31, 2019.



priority needs. This National Trust shall use the interests raised by the CBF from the LDCF funding to continue to fund sub-projects that would support primarily the sustainability of interventions financed under RPLP, and other future climate change adaptation related investments. The interest raised, however, will be off the total amount in the CBF (over US\$ 34 million currently) to allow all the CBF countries to benefit from economies of scale (See Annex 7 for more details). This longer-term source of predictable financing will mean that when a disaster strikes in Haiti, the current practice of diverting government funding to address that crisis will not impact this fund. As such it presents a key long-term stabilizing mechanism for addressing adaptation.

### C. Higher Level Objectives to which the Project Contributes

14. **The Project is consistent with the climate change action plan submitted to the UN Framework Convention on Climate Change (UNFCCC),** in the context of the Paris meetings in 2015 (Intended Nationally Determined Contribution – INDC)<sup>22</sup>. The Action Plan specifically names 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, reforestation of upstream areas, as priorities for adaptation within the plan.

15. **It responds directly to strategic objectives laid out in the GEF Programming Strategy on Adaptation to Climate Change: Least Developed Countries Fund 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 are 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)<sup>23</sup>.

16. The Project, using LDCF funds jointly with IDA financing and J/P HRO parallel financing, will (i) contribute towards building an increased awareness of climate change impacts, vulnerability and adaption, and directly reducing the vulnerability of farmers to climate change through investment in more resilient agricultural practices. These will occur in (sub)watersheds areas by financing climate-smart agricultural production practices (agroforestry, conservation agriculture, slope management, etc.) ; the project will also finance improvement of the product value chains to generate higher and more sustainable income, and reinforcement of climate resilient infrastructure assets ; (ii) support the enabling environment by strengthening institutional capacities to develop and implement sound cross-sectoral policies and action plans integrating climate change adaptation considerations in national and local level strategies ; access to and analyze geo-spatial and other climate related data to better address climate risks and inform decision processes ; and support a mechanism aimed at sustaining long term financing of adaptation technologies and practices; and (iii) it will provide extensive trainings programs to increase skills and knowledge tailored to the key stakeholders and audiences. RPLP will support the achievement of objectives set forth under the NAPA, which served as the basis for the plan submitted to the UNFCCC

<sup>22</sup> [http://www4.unfccc.int/submissions/INDC/Published%20Documents/Haiti/1/CPDN\\_Republique%20d'Haiti.pdf](http://www4.unfccc.int/submissions/INDC/Published%20Documents/Haiti/1/CPDN_Republique%20d'Haiti.pdf)

<sup>23</sup> 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



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).

**17. RPLP is consistent with the World Bank Group’s Haiti Country Partnerships Framework (CPF) 2016-2019.** 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 market. RPLP will support value chains to access to new and better markets and reduce production risks while decreasing vulnerability to the effects of prices and climate shocks. The CPF’s Objective 2 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, increase 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.

**18. RPLP will work closely and coordinate actions with other development partners, especially through the HTR platform.** Given the challenges with fragmented donor contributions to all sectors in Haiti as identified by the CPF, the HTR platform will be important for the sector to bring all partners around critical development themes, and coordinate efforts for broader impact. In addition to ongoing projects (See also Annex 8), new projects with similar objectives are under development that RPLP will coordinate with. These include projects financed through the IDB, the French Development Agency (AFD), and the International Fund for Agricultural Development (IFAD).

## II. PROJECT DEVELOPMENT OBJECTIVES

### A. PDO

19. 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.

20. 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).

21. Selected areas for intervention. While Component 1 addressing institutional and organizational capacity would have a nationwide coverage, Component 2 would be implemented in selected sub-watershed. In the process of selection of these sub-watersheds, specific aspects were considered: (i) Agro-ecological criteria; (ii) Socio-economic criteria; (iii) Environmental vulnerability criteria; and (iv) Institutional criteria. Using a ranking scale of one to five for each of these criteria to prioritize areas, and based on available funding from the Project, four sub-watersheds were selected. These 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. They offer a diversity of agro-ecological conditions, yet geographically



close, within the department of Nippes, under three municipalities.

22. 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 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.

23. 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.

## **B. Project Beneficiaries**

24. **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. In a context of high poverty prevalence, extensive land use for agricultural production including on steep slopes including gullies, very small size plots, degraded or at risk for degradation, all farmers and communities can be considered vulnerable. They will benefit individually from improved agricultural production practices adapted to the agro-ecological context, improving soil conditions and becoming more resilient to extreme weather events, as well as from improved marketing conditions; and collectively from reduced soil erosion, improved water retention capacity, enhanced field level productivity linked to ecosystems services generated collectively and synergies created between differed production systems at the watershed level.

25. Interventions will also benefit key actors along the agriculture value chains, including service and input providers, buyers, processors, and retailers. Lastly, it will benefit the national, regional and local institutions in providing with essential tools, knowledge, and management capacity of landscape level interventions. Direct beneficiaries would include: (i) producers who have benefited from the voucher mechanism (3,000 of which minimum 33 percent are female); (ii) Service Providers (100 of which minimum 10 percent are headed by female); (iii) members of producers' groups that benefit from co-financing in selected value chains (800 of which minimum 50 percent are groups headed by female)<sup>24</sup>; and, (iv) persons trained in Ministries and local / regional authorities (100). In order to strengthen the role of women, they will receive

<sup>24</sup> The share of women participation in the voucher scheme has been inputted in a manner that the project is representative of women share in the Haitian Agricultural census. The rest was estimated given the results provided by RESEPAG II, in particular for the producer groups.



preferential support to benefit from the Project's interventions.

26. **Cascade/Private sector.** Investments of RPLP look at poor to extremely poor segments of the population. Access to rural credit is not an option for an already vulnerable population. In addition, changing practices, even if expected to provide longer term gains and reduction of vulnerability, involves an important level of risk in a context of frequent natural disasters, occurrence of pests, and markets uncertainties. No insurance mechanism exists either to cover for such types of high frequency, high impact types of risks. RPLP would therefore provide technical packages to producers (including knowledge/services and inputs on a one-off basis) required for them to move towards a less vulnerable category, and doing so in a concentrated manner in a determined area to produce the expected broader ecosystems benefits. The Project would strengthen the private sector actors related to agricultural production valorization, critical to develop economically viable and sustainable businesses as well as job opportunities; the voucher mechanism involves systematically private sector beneficiaries, which supply such inputs and services at market price. Matching grants for groups of producers or other actors along the value chains will also aim at filling access to finance gaps to increase agricultural production valorization. The Project will also work with the Ministries to strengthen their capacity to deliver on their public good mandates, and establish the enabling environment for supporting resilient landscapes management.

27. **Gender and Nutrition.** RPLP acknowledges that women and men are not given the same opportunities towards climate adaption and raising of incomes. Women face supplementary constraints -such as less access to information, to assets, to credit, to inputs- that have to be taken into account. Mainstreaming gender and nutrition into the different investments as well as in the monitoring and evaluation (M&E) mechanisms will ensure that the Project contribute to reducing gender gaps when building resilience and contributing toward improving food security. The Project will build on experience and knowledge developed through RESEPAG II Project, which will be facilitated by the fact that RPLP core actions to support climate smart practices adoption and value chains improvement will use similar instruments as RESEPAG II. Namely the design of selection mechanisms of beneficiaries and co-financing rules for matching grants, the tailoring of participatory and training activities, including related to nutrition, and gender-disaggregated data collection in M&E and grievances, will be embedded into RPLP. In order to address any possible outstanding gender gaps in the areas of interventions, further analysis and gender planning will be conducted prior to Project implementation by the RESEPAG II gender specialist.

### C. PDO-Level Results Indicators

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

- Land area under sustainable landscape management practices (Ha) – Corporate Result Indicator
- Farmers adopting improved agricultural technology (number), of which female (in percentage) – Corporate Result Indicator
- Share of targeted farmers with improved market access (%)

## III. PROJECT DESCRIPTION

### A. Project Components

29. RPLP is designed to restore ecosystem services at sub-watershed level to safeguard and enhance



agricultural production, reduce vulnerability of economic and ecological systems to external shocks, and to strengthen capacities for the long-term sustainable management of those landscapes. 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.

30. RPLP will include four components: (i) Strengthening of institutional and organizational capacity for landscape level resilience; (ii) Investments to strengthen the establishment of resilient agricultural production and practices; (iii) Project coordination, monitoring and evaluation; and (iv) Emergency Response Component. The core of the investments and expected impact from RPLP shall be seen under Component 2 that will finance agricultural, value chains and infrastructure related activities to reduce land and farmers' vulnerability in the four selected sub-watersheds; while Component 1 shall establish the enabling environment for Component 2 to achieve its objectives and contribute to longer term implementation of sustainable productive landscapes approach by key institutions, in particular through the CBF mechanism to provide financing for climate adaptation into perpetuity.

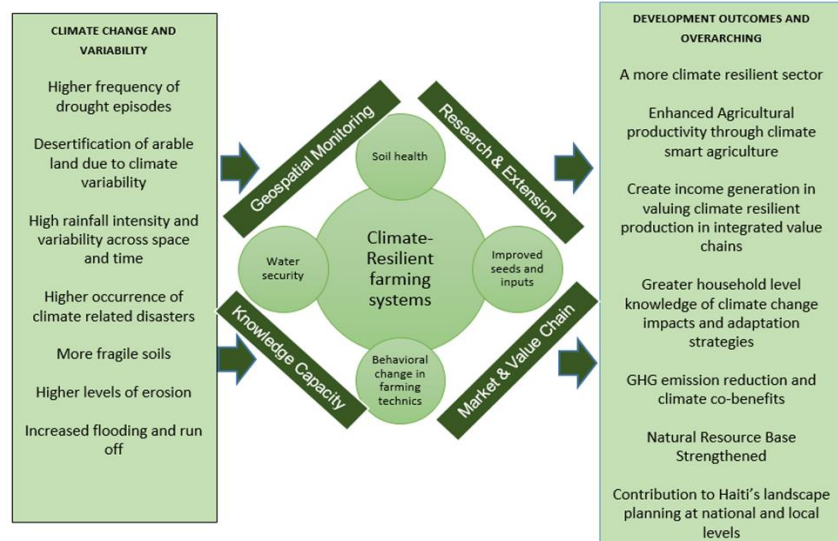
31. Resilience-enhancement from RPLP in the selected sub-watersheds will result from actions allowing to decrease the vulnerability of (i) farmers linked to increasing soil degradation and subsequent continuous reduction of production capacity, and insufficient capacity to sell productions in a profitable and sustainable manner, including due to poor infrastructure condition; and (ii) landscapes, linked to the lack of holistic, participatory planning capacity, 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 reducing water run-off.

32. The figure below illustrates some important issues and the links between the proposed interventions and their expected contribution to specific outcomes and impacts. A detailed theory of change table is also provided in section VII.





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



33. **Component 1: Strengthening of institutional and organizational capacities for landscape level interventions** (US\$ 5.6 M total -US\$ 1.4 M IDA, US\$ 4.2 M LDCF- and 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 into perpetuity through the CBF; and will also 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:

34. *Sub-component 1.1. Institutional capacity building.* Activities under this sub-component will be financed through IDA and LDCF co-financing, and J/P HRO parallel financing. It will support: (i) the development of a joint MdE/MARNDR Master Plan for Resilient Landscapes Development, building on respective policies and action plans<sup>25</sup> and recent international commitments under Climate Change/Climate Adaptation global agendas (including NAPA and INDC implementation), establishing areas of synergies, joint action plan and related M&E, that will be field-tested under Component 2, and serve as a reference under HTR ; ii) intensive technical trainings within key line Ministries, including MARNDR and MdE, at national and at local level with the branches of line ministries, as well as local governments and other relevant stakeholders (in the selected sub-watersheds), to carry out their

<sup>25</sup> Relation to policies and mandates from other relevant institutions shall be included as well, e.g. CIAT (*Comité Interministériel d'Aménagement du Territoire*).



mandate towards sustainable landscapes management; exchange visits in-country and abroad to share landscapes restoration and management experiences ; and students 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. Informed by 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: soil health & erosion risk monitor; 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 (a) help establish a baseline in project areas on critical variables and (b) inform project implementation at farm and landscape level.

35. *Sub-component 1.2. Support to national level sustainable landscape management approach to agriculture and watershed management.* Activities under this sub-component will be financed entirely through parallel financing from J/P HRO. They 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 INDC; and (iii) the development of detailed participatory sub-watersheds management plans in the four selected sub-watersheds and their update. The development of these plans will follow the methodology piloted by J/P HRO, in close collaboration with MARNDR and MdE through the PROFOR study referred to in section I.B. They will serve as a basis for the development under Component 2 of detailed participatory investments plans focused on RPLP interventions out of which the selection of investments financed under Component 2 will be made. The participatory sub-watersheds management plans will be prepared during project preparation.

36. *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 the participation of Haiti in the CBF to benefit from financial resources towards climate adaptation and biodiversity conservation objectives into 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 National level Trust Fund to receive funds from the CBF on a yearly basis, complementing other donor's 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).

37. **Component 2: Investments to strengthen the establishment of resilient agricultural production and practices** (US\$ 12.1 M total -US\$ 10.1 M IDA, US\$ 2.0 M LDCF- and parallel financing of US\$ 3.6 M from J/P HRO). This component will support (i) individual farmers and communities within selected sub-watersheds to establish more resilient agricultural productions 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 infrastructures supporting (i) and (ii) for increased farmers and landscape level resilience.

38. *Sub-component 2.1. Investments in resilient, sustainable agriculture and ecosystems.* This sub-component will be financed through IDA and LDCF co-financing. It will support investments at individual and community levels that focus on increasing climate resilience of agricultural production systems in the selected sub-watersheds. Specifically, the sub-component 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 investments 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 participatory investments 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 productions and practices ; and (iv) the set-up of Farmer-Field-Schools (FFS) for producers focusing on transferring knowledge and know-how on climate resilient productions and practices (such as planting following contour lines, improved tillage, boundary/live fences planting for wind and water erosion protection, soil coverage, inter-cropping, agroforestry systems management, soil and water conservation and so on)<sup>26</sup>, as well as organizational and marketing approaches to add value to these productions (related to sub-component 2.2). This sub-component will use RESEPAG II experience with its "Farmers Subsidy Scheme (FSS)" using a voucher mechanism, and be implemented with the support of an operator (consulting firm). It will also benefit from the registry of farmers and inputs and services suppliers being developed with the support of RESEPAG II.

39. *Sub-component 2.2. Intensification, diversification and commercial agriculture.* This sub-component will be financed through IDA and J/P HRO parallel financing. It will improve access to inputs and services from farmers, as well as marketing capacities and options, considered essential to ensure the profitability of investments, improve livelihoods and thereby contribute to sustain resilient landscapes. Under this sub-component, the Project will also seek to facilitate the mobilization of commercial credit both during and after project implementation. During preparation stage, a market/value chains analysis for productions likely to be supported under sub-component 2.1, as well as an analysis of relevant inputs and services suppliers, will be carried out through J/P HRO financing. J/P HRO will also contribute to support these latter in order to meet expected quality and quantity of such inputs and services. This sub-component will both support (i) groups of producers within the selected watersheds to develop basic investments plans identifying key inputs (equipment/services) to be financed under RPLP aimed at improving the quality and quantity of products sold to intermediaries or directly placed on markets ; and (ii) more advanced constituted groups of producers or small enterprises to increase their capacity to generate additional value to climate smart productions produced in the selected sub-watersheds (e.g. addressing logistics, agro-processing, reduction of food losses aspects), through improved business/marketing skills, as well as improved infrastructures 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

<sup>26</sup> The Farmer-Field-Schools will also be a vehicle to promote food diet-nutrition education which will be built from (i) the material being compile in the context of J/P HRO arboretum, where a women repertoire of traditional plants used for medicine and diets is being created, and (ii) also re-use the food practice diet training developed under RESEPAG II.



used.

40. This sub-component will also finance trainings that will provide more capacity in technical, financial as well as management and strategy, to improve market access for inputs suppliers' and services providers' organizations, as well as producers and other actors along the value chains. The same operator as sub-component 2.1 would support the implementation of this sub-component to facilitate coordination between these complementary activities.

41. *Sub-component 2.3. Protection of infrastructure and watersheds.* This sub-component will be financed by both IDA and J/P HRO parallel financing. It will support investments based on participatory investments plans 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 infrastructures (e.g. rural and access roads, river crossing structures); and (ii) enhance water management in the selected areas (building small water harvesting infrastructures in gullies or slopes, rehabilitating small water catchments or small irrigation systems in plains).

42. **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 (including technical and financial 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.

43. **Component 4: 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. A particular attention would be paid to ensure 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. An Emergency Response Operational Manual, acceptable to the WB, will be prepared and adopted during the first year of project implementation and clearly outline the triggers, eligible expenditures and procedures for tapping into the CERC.

## B. Project Cost and Financing

44. Total Project cost is estimated at US\$ 26.21 M. The overall program blends various sources of financing including IDA Grant (US\$ 15.0 M), LDCF Grant (US\$ 6.21 M Least Developed Countries Fund Resources – LDCF<sup>27</sup>), and parallel financing from a J/P HRO Grant (US\$5.0M). The largest amount of IDA

<sup>27</sup> The exact amount of the LDCF Grant is US\$ 6,210,046



financing will go to Component 2 “Investments to promote agriculture and ecosystems resilience” (US\$ 15.71 M, out of which 10.1 M of IDA financing), followed by Component 3 “Project Coordination and Monitoring and Evaluation” (US\$ 3.5 M, entirely financed through IDA financing) and Component 1 “Strengthening of institutional and organizational capacities for landscape level interventions” (US\$ 7.0 M, out of which US\$ 1.4 M of IDA financing). In addition, the Project includes a US\$ 0 M fourth Component, which will serve as 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	Project cost	IDA Financing	% IDA Financing	LDCF Trust Fund	(I/P HRO) parallel financing
1: Strengthening of institutional and organizational capacities for landscape level interventions	7,000,000	1,400,000	20%	4,200,000	1,400,000
2: Investments to promote agriculture and ecosystems resilience	15,710,046	10,100,000	64%	2,010,046	3,600,000
3: Project Coordination and Monitoring and Evaluation	3,500,000	3,500,000	100%	-	-
4: Contingency Emergency Response Component	0	0	-	0	0
<b>Total Project Costs</b>	<b>26,210,046</b>	<b>15,000,000</b>	<b>100%</b>	<b>6,210,046</b>	<b>5,000,000</b>

### C. Lessons Learned and Reflected in the Project Design

45. 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 done in the past providing trends and policy options to develop sound projects. Lessons learned from other efforts at watershed management tend to revolve around several critical issues summarized below.

46. *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. In other words, adoption has been poor. In addition, local stakeholders should be integrated into the full cycle of project identification, implementation and ownership through solid participatory approaches. *RPLP would ensure a strong community engagement and consensus around the prioritized needs and mechanisms of intervention. The Participatory watershed planning discussions that were already held in a few areas of the Project confirmed the high relevance of proposed*



*sets of interventions under RPLP.*

47. *Economic strategies for protecting the land.* Haiti's watersheds are actively used. Consequently, reforestation efforts geared to protect 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 productions.*

48. *Whole landscapes and whole watersheds.* A common feature of macro-level approaches has been a tendency towards overly ambitious goals and interventions. Goals have not proven achievable within the limited timeframes of three to five-year funding cycles. As noted above, it has proved elusive in Haiti to instigate landscape level shifts. This is due in part to the overly ambitious land 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 manageable scale based on such prior experiences, yet sufficient to provide the expected benefits on 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.*

49. *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 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

50. *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 view of proposed interventions). The zones are the following 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.

51. *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 and other donor 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.

52. *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 one at the local level (PIU-L or *Unité de Gestion de Projet Locale*) located at the Agricultural Communal Office (*Bureau Agricole Communal – BAC*) Anse-à-Veau, close to the areas of intervention, and providing sufficient space to accommodate RPLP team. 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 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 by the World Bank.

53. 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 as well as capitalizing on the MARNDR's existing capacity and experience with World Bank projects' fiduciary aspects management. In addition, the PIU-L will allow to coordinate with the local offices of MARNDR and MdE at Departmental and Communal levels, as well with the other local stakeholders. 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, and M&E; (ii) coordination of activities related to Component 1; (iii) producing Project progress reports; and (iv) Project communication.

54. *Staffing.* The PIU-C will be located at Port-Au-Prince and headed by one (1) General Coordinator. Other members of the PIU-C will include the fiduciary staff: one (1) principal accountant and one (1) procurement specialist, receiving support and oversight from existing fiduciary staff from RESEPAG II (financial and procurement management)<sup>28</sup>. All PIU-C staff, including the General Coordinator, will be hired on a competitive basis and paid for by Project resources. Support Staff will also be hired. All other staff will be based in the field at the PIU-L in the BAC of Anse-à-Veau, 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. 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 admin) should also be in place not later than February 2018 to support the MARNDR and MdE RPLP focal points carry out these tasks among others contributing to swift implementation post declaration of effectiveness.

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<sup>28</sup> In addition, MdE may appoint civil servants to support the fiduciary team and get hands-on experience.



55. In terms of governance mechanisms, a Project Steering Committee – PSC will be created at 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, and facilitate the coordination among key stakeholders. 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 assure the role of PSC Secretariat. In addition, a Project Advisory Committee - PAC- will be established and ensure operational guidance of RPLP activities implementation (Meeting Frequency: three times per year, generally 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, CASEC, 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.). Finally, to ensure planning and technical implementation of Component 2, a Permanent Technical Committee, consisting of the PIU-L Coordinator, DDA, DDE, J/P HRO, and the operator(s), will allow to coordinate implementation and supervision of activities..

56. 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 key RPLP/PIU-C/PIU-L staff. A specific Immediate Response Mechanism (IRM) Operational Manual for the management of the CERC would also be prepared and validated no later than three months after the Project effectiveness. A detailed Memorandum of Understanding between MARDNR and MdE and J/P HRO will also be signed and guide the planning, implementation, reporting, fiduciary and safeguards management of activities financed by J/P HRO, and included in the PIM. Detailed Project implementation arrangements are found in Annex 2.

## **B. Results Monitoring and Evaluation**

57. The Project will operate in four selected sub-watersheds. A key instrument to report on progress and Project achievements is the Results Framework (RF), which defines the performance indicators for key Project outcomes and will be documented in Implementation and Status Results Reports (ISRs). A robust yet simple M&E system will be implemented to provide high quality data and allow the Bank to react immediately in the event of any issues that may arise.

58. The PIUs, working in close cooperation with DDA and 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 support Project supervision by ensuring 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).





59. 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.

60. The M&E manual included in the PIM will provide details on the definition of the Results Framework, 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 Mechanisms (GRM), and the mechanism to be used for disseminating information. It will inform a communications strategy that will be developed and implemented by the PIUs. An M&E specialist will be placed in the PIU-L who will be responsible for all M&E activities of the RPL. Moreover, an M&E mechanism will be set up to monitor emergency-response activities.

61. 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 of Results Framework Indicators as well as changes in the household wealth (benefits, income, consumption, etc.) as well as labor dynamics, level of value chains integration, food security and specific gender related aspects that could be attributed to the Project.

62. 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**

63. Haiti is a fragile State, with comes with some risk to achieve results during Project implementation that 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.

64. An important aspect that would contribute to sustain the Project outcome lays in the overall improved capacity for integrated landscape management and 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 agriculture technologies ; improved capacity to access to market and better integrate into value chains ; larger offer of quality inputs and services from local suppliers ; better quality (resilience to climatic events) of small infrastructure.

65. Another important aspect that is expected to contribute to the sustainability of the Project is the high-level commitment of the GoH to pursue the objectives of the Project at larger scale namely under the HTR initiative, as well as the GoH becoming party to the CBF, two initiatives that will be supported by



the Project. 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 (to perpetuity) of resources to support activities that will contribute substantially to either the adaptation to Climate Change or to the conservation protection and maintenance of biodiversity, will be critical to sustain and/or complement RPLP achievements.

#### D. Donor Coordination and the Role of Partners

66. **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, the World Bank and the IDB. 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 INDC. RPLP is a multi-sector, multi-partner Project developed under the HTR umbrella, implemented by MARNDR and Mde. It is considered as a strategic operation under HTR. A few other projects are being developed and implemented under the HTR umbrella, including AFD and IDB financed projects<sup>29</sup>. USAID also finances a landscape related project which, even in not under 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.

67. **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 (up to US\$220,000 in parallel financing plus some in-kind human resources). With regards to the endowment of the CBF, the German Development Bank (KfW) will also contribute (estimates standing at US\$7 million financing). These funds will allow Haiti to progress towards compliance with CBF requirements before RPLP effectiveness. These efforts 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 a fully operational National Trust, and leveraging other donor funding to keep capitalizing CBF (See also Annex 7).

68. **Other relevant projects in the area of intervention.** In the department of Nippes, mention should also be made of the Project PPI II<sup>30</sup> financed by IFAD, which is in closing phase. Some small micro-watershed stabilization activities have recently been carried out following Cyclone Matthew with the support of the NGO Welthungerhilfe. In case of additional financing of this project, the coordination of activities between the proposed Project and PPI II (or PPI III) would be ensured under the leadership of the ministries, DDA, and DDE. These actors would also take part in the Project Advisory Committee.

69. **Role of J/P HRO in RPLP.** J/P HRO participated as from the identification stage of RPLP and follow-up dialogue with the GoH and the WB. It committed to provide a parallel financing of US\$5 million to the IDA and LDCF funds under RPLP that would support the Project activities and contribute to the Project

<sup>29</sup> AFD already finances a €9M project on cacao production/value chain (since 2016), committed €6M for 2018, and expects an additional US\$24M from the Green Climate Fund; IDB will finance US\$55M; and USAID started a project of US\$45M.

<sup>30</sup> Projet de Développement de la Petite Irrigation – Phase 2



Development Objective. J/P HRO have 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 parallel financing. In general, the cost-sharing of other activities under RPLP with J/P HRO were decided on the basis of (i) their capacity to accelerate implementation readiness (e.g. studies and analysis required during project preparation, provision of support staff before the establishment of PIU); (ii) specific experience (e.g. support to the development of participatory plans, communication activities); and (iii) addition of design flexibility (e.g. capacity to reallocate funds towards other relevant activities prioritized by the participatory plans, should the amount necessary for infrastructures be less than estimated at preparation stage).

## V. KEY RISKS

### A. Overall Risk Rating and Explanation of Key Risks

70. The overall risk of the Project is Substantial.

71. *Political and Governance risk is Substantial.* Haiti continue to be marked by civil unrest, weak governance and enforcement capacity. While the selected area of intervention of the Project has not been as affected as other areas of the country, and shows a greater level of social cohesion, the team will closely monitor the situation to adjust as need be its interventions. In addition, the project will develop Grievance Redress Mechanism (GRM) and strengthen capacities among the various stakeholders involved, including public servants, beneficiaries, and service providers.

72. *Sector Strategies and Policies risk is Substantial.* Both Ministries involved in the Project, which have seen a high turnover of high level officials over the past years, have not in the recent past been able to develop, apply and sustain their strategies. The Project will mitigate this risk by embedding its actions, including a joint Master Plan for Resilient Landscapes Development within a broader framework supported by many partners (HTR), and linked with international commitment (post COP21).

73. *Technical Design risk is Substantial.* The Project will require certain conditions to fully achieve its objectives; constraining factors include a limited number of inputs suppliers (in particular seedlings for tree-crops), the uncertainty over the capacity of value chains to absorb the boosted productions, the complexity to design tailored technical packages meeting both agro-ecological requirements and individual or group needs. This will be mitigated by a deep ex-ante analysis of suppliers' capacities and of market potential, the use of the experience of agro-forestry technical packages implemented under RESEPAG II to improve the voucher mechanism, the selection of a single operator (consulting firm) to implement activities related to production and value chains to ensure a seamless coordination between these two areas of interventions, and a flexible mechanism to support suppliers.

74. *Institutional capacity risk is High.* Both Ministries involved have limited human (skills and number of staff) and financial resources, even more so within the MdE. The Project will invest a significant amount in building Ministries' capacities at both central and local level on resilient productive landscapes management and fill other critical knowledge gaps to improve areas of policy development, planning, monitoring, and communication.



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

76. *Fiduciary risk is High.* For procurement key risks include: (i) lack of capacity to undertake and manage World Bank procurement; (ii) lack of use of the procurement plan as a monitoring tool, lack of coordination between World Bank Project Implementation Units and dedicated Procurement Units, lack of use of evaluation and management tool, therefore lacking solid data to reflect procurement performance; (iii) Delays in evaluation of Bids and Technical Proposals and clearance process due to mainstreaming, signature of contracts and clearance from the *Cour Supérieure des Comptes et du contentieux administratif (CSCCA)*, as well as weak contract monitoring and administration. The key risks for Financial management include: lack of capacity and experience at central government level to undertake and manage World Bank Funds, low capacity for budget management and monitoring as well as contract management; lack of coordination within the fiduciary team. These risks will be mitigated through specific fiduciary control that are outlined in detail in the Project Procurement Strategy for Development (PPSD) and in annex 2.

77. *Environmental and Social risk is Moderate.* The project has substantial positive environmental benefits. These include the promotion of conservation agriculture, agroforestry, soil and water conservation, water harvesting, sustainable grazing and so on. Negative impacts are likely to be small and highly localized, and are largely related to the commune level infrastructure activities that will be financed under the project (rural roads, small bridges, and so on). Impacts related to these activities may relate to worker health and safety, waste disposal, noise and so on. The Environmental and Social Management Framework (ESMF) contains a screening tool to screen out works that could have a significant social and/or environment impact as well as a table of potential environmental impacts and associated mitigation measures. Other negative impacts may be related to improper technology transfer (e.g. inadvertent propagation of exotic species, expansion of plantations in natural forests, water harvesting that impacts the water table) and so on. These will be mitigated by having a robust technical and monitoring team in place.

78. *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 productions, climate resilient value chain development, and institutional capacity development for improved monitoring, planning and response to climatic events are important in mitigating these risks.

79. *Parallel financing risk is low.* J/P HRO is committed to support the project to the tune of US\$ 5 million. Activities financed through J/P HRO for RPLP started as from preparation stage of the Project, including the preparation of community participatory watershed management plans. Other activities under J/P HRO responsibility will provide a strong additionality to the Project but should not interfere with results reflected in the results framework nor achievement of its development objective.



## VI. APPRAISAL SUMMARY

### A. Economic and Financial (if applicable) Analysis

80. The economic and financial analysis (EFA) of RPL 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.

81. The analysis has been undertaken taking into account the activities of component 2 only, which is the productive investment one. On the cost side both components 2 and 3 have been included. The EFA Annex provides the detailed hypothesis and results of the analysis.

82. 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 decrease in benefits and increase 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 agriculture activities under the with-Project scenario are substantial from 20 to 50 percent. The financial analysis for the processing and marketing activities foresee positive returns and cash flows with IRR ranging from 21 to 78 percent depending on activities and positive NPV. This underlines that using matching grant to encourage producers to adopt new technologies provides them with an additional financial space, particularly during the first years when they are working their way further along the technology adoption learning curve.

83. It is important to underline that the project productive activities with the LDCF/LDFC 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. It will also contribute to ensure 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.

84. 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 tree cover reduction and forest degradation, improved sustainable livelihoods for local communities and improved climate change resilience, which have not been included in the analysis. These will be calculated separately through the EX-ACT analysis (See Annex 6).

### B. Technical

85. RPLP design is strongly rooted in the lessons learned from landscapes types of approaches and operations in the past in the country, and is further informed by solid preparatory studies. 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 agriculture production and ecological co-benefits.



86. RPLP is aligned with CPF and GoH's objectives and will contribute to high level objectives related 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, considering also budget availability.

87. RPLP has been designed around two main components that aim, on the one hand, at supporting the foundation of an enabling environment with the strengthening of relevant institutions, at both national level (required for further scale-up, in particular under HTR) and local level (related to the selected sub-watersheds management). It will provide significant support to the consolidation of policies and capacity building around the concept of resilient productive landscapes, including tools to improve climate risk analysis and decision making. RPLP will also ensure the participation of Haiti as full member of the Caribbean Biodiversity Fund which will also contribute to support long term funding for and sustainability of climate adaptation interventions.

88. On the other hand, the Project will work within the selected watersheds with communities, local authorities, MARNDR and MdE, using a participatory approach, to address the nexus of land and people vulnerabilities through a conjunction of promotion of more resilient, adapted agriculture productions and practices to the hydro-geological context (which will directly contribute to restore the natural resource base and improve productivity); improvement of local climate smart productions value chains (which will generate sustainable incomes); and improvement of small rural infrastructures (required to both facilitate access to markets and support the improvement of natural resources management, water in particular).

89. RPLP will use recent and ongoing experience gained from the RESEPAG II Project to design the instruments and mechanisms that will be used under RPLP. This includes an incentive scheme using a voucher mechanism for producers, that leverages and contributes to strengthen the private sector base (inputs and services suppliers); a matching grant mechanisms to support value chains; and local workers' employment under a cash-for-work system (when possible) for simple infrastructure rehabilitation or construction. The parallel financing provided from J/P HRO will provide additional flexibility over certain activities, such as for the recruitment of experts required to provide technical support to inputs and services suppliers, for markets' analysis and support, and the rehabilitation of some of the small infrastructures.

### **C. Financial Management**

90. 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 proposed project. The RESEPAG II PIU, comprises a Senior Accountant, 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, (including RESEPAG II-AF) and HYDROMET (Projet de renforcement des services hydrométéorologiques - P148259).



91. Based on a preliminary assessment of the capacity of the RESEPAG II PIU and taking note of its role and responsibility, it appears to have sufficient experience to manage financial management under the proposed 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 in implementing 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 Bank-funded projects.

#### D. Procurement

92. 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 proposed project. Same as for financial management, the proposed 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 Bank regulation (July 2016), and Haiti 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 of which 2 by the Bank: RESEPAG II (including its additional financing), and HYDROMET.

93. Based on a preliminary assessment of the capacity of UPMP and taking note of its role and responsibility, it appears to have sufficient experience to manage procurement under the proposed Project. Consequently, Procurement would be centered at the existing procurement unit UPMP under the MARNDR, irrespective of the agencies implementing activities under the proposed 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. In addition, because MdE is not familiar in implementing Bank-funded project, one qualified civil servant staff should be assigned to UPMP for intensive hands on training and knowledge sharing. With this strengthening, MdE shall fully benefit from exposure to the World Bank procurement system in terms of new procurement framework, policy and guidelines and held first-hand experience of implementing World Bank-funded projects.

94. However, 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)

95. The proposed 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 infrastructures 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. It was consulted and disclosed by appraisal. 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.

96. 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 these questions, to screen out potential social impacts upfront. The PIU responsible staff will receive a training on how to screen out these impacts. Potential resettlement impacts are expected to be avoided or minimized through the application of good construction and management practices and with close supervision of contractor performance by field engineers and in close consultation with local communities. If there is land acquisition, a potential risk (as observed in other projects in Haiti) may be delays in land acquisition processes and compensation due to insufficient availability of legitimate titles and complicated national land ownership procedures. The Project will avoid or minimize land acquisition as much as possible based on the lessons learned on other projects in Haiti. 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.

97. Beyond safeguards risks, a potential social risk such as social tensions, particularly in the post-Matthew context, may arise by perceived inequities in the selection of beneficiaries. In addition, the literature has shown that landscape approaches have 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 include the following elements of the framework for citizen engagement to mitigate social risk and increase the chances of success: (i) engaging in pro-active communication strategy in the planning and management of landscapes including monitoring to local governments, beneficiaries and public at large the benefits from the Project for various communities and municipalities; (ii) engaging communities in determining the mechanisms for investments - including for example criteria for the selection of sub-projects, (iii) developing robust information requests and grievance redress measures for Project activities as a whole.

#### **F. Environment (including Safeguards)**

98. RPLP is expected to have both positive and negative environmental impacts from improved land management, erosion control, forestation, etc., and increasing agricultural production, including potentially the use of agrochemicals, respectively.

99. The instrument developed by the Client to mitigate these impacts is an Environmental and Social Management Framework (ESMF), which includes a screening mechanism and prescribes mitigation measures for negative impacts. 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 producers, operators and the public.

100. 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 fund endowment. The Master Plan to be developed is intended to





articulate the objectives of the Government in terms of sustainable development, as well as the approaches, mechanisms, criteria to be respected; and create a sustainable development framework for the entire territory. While the intention is to promote sustainability, there is always the risk that a well-intentioned plan or policy may be developed and have negative impacts. Thus the ESMF that will be prepared, and the PIM, will include 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. For the CBF, for which activities are not yet clearly defined, and in order to ensure that the Project will not indirectly finance activities with negative environmental impacts, the project ESMF will also apply. The PIM will include a measure to ensure that the CBF adopts the ESMF as part of its screening mechanism.

101. The draft ESMF and IPMP have been reviewed by the Bank and found to be adequate, and will be disclosed in country, consulted, and final versions will be disclosed both in country and on the World Bank website. Both the ESMF and IPMP include capacity building measures which are essential to their implementation.

102. **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 proposed 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 are estimated at 572,397 tons of CO<sub>2</sub> equivalent (tCO<sub>2</sub>-eq), or 28,620 tCO<sub>2</sub>-eq per year (See Annex 6).

#### **G. Other Safeguard Policies (if applicable)**

Not applicable

#### **H. World Bank Grievance Redress**

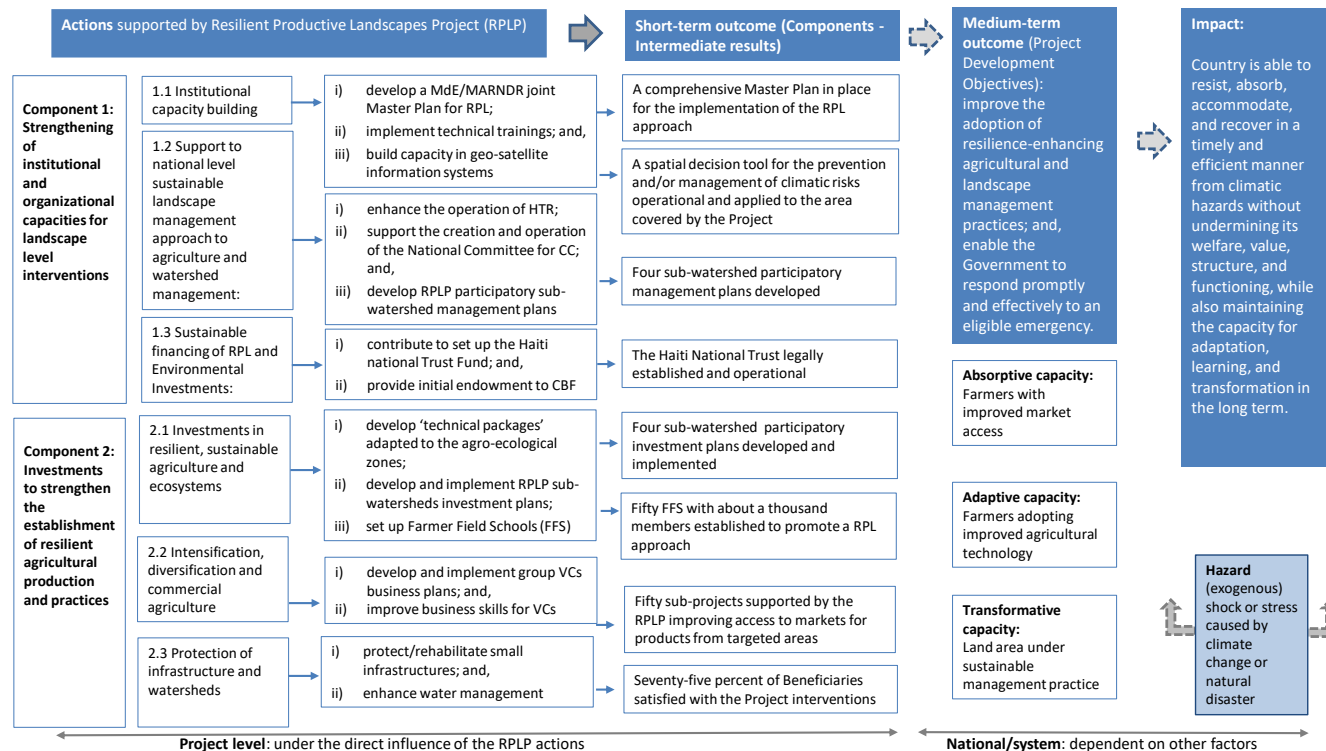
**Note to Task Teams:** Inclusion of the following text is mandatory in all IPF PADs. No additional text should be added in this section.

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](http://www.inspectionpanel.org).



## VII. RESULTS FRAMEWORK AND MONITORING

Table 2: Theory of Change





**Note to Task Teams:** The following sections are system generated and can only be edited online in the Portal.

### Results Framework

COUNTRY : Haiti

Resilient Productive Landscapes in Haiti

#### Project Development Objectives

The Project Development Objectives are to: (i) to improve the adoption of resilient-enhancing agriculture and landscapes management practices in selected sub-watersheds; and (ii) 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
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.							
Name: Farmers adopting	✓	Number	0.00	3000.00	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
improved agricultural technology						Operator / DDA / DDE	
of which female (in percentage)		Percentage	0.00	33.00	Semi-Annual	Admin records from the Operator / DDA / DDE	PCU-L
Description:							

<b>Name:</b> 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 who benefit from a larger share of production and/or larger share of income from marketed resilient-enhanced agriculture 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
<b>Name:</b> 1.1. Comprehensive Master Plan (MARNDR / MdE) in place for the implementation of the		Yes/No	N	Y	Annual	Admin records from MARNDR/MdE	PCU-L



Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Resilient Productive Landscapes approach							
<p><b>Description:</b> 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>							
<b>Name:</b> 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><b>Description:</b> 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>							
<b>Name:</b> 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><b>Description:</b> This indicator will measure the number of plans that were developed (according to the Participatory Watershed Management Planning Methodology</p>							



Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
developed through PROFOR study – P162352) ; the subsequent business plans developed with prioritized interventions and costing in the context of RPLP ; and their actual implementation (at least 50% of the plan implemented).							
<b>Name:</b> 1.3a. Spatial decision support tool for the prevention and / or management of climatic risks operational		Yes/No	N	Y	Semi-Annual	Admin records from CNIGS / MARNDR/ MdE	PCU-L
<p><b>Description:</b> 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 to support national climate modeling, forecasting and early-warning systems, strengthening climate data collection and processing and supporting decision making for resilient productive landscapes development.</p>							
<b>Name:</b> 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	10000.00	Semi-Annual	Admin records from CNIGS / MARNDR/ MdE	PCU-L
<p><b>Description:</b> 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 to support national climate modeling, forecasting and early-warning systems, helping decision making for resilient productive landscapes development and climate-related reporting capacity.</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>							
<b>Name:</b> 1.4a. Haiti National		Yes/No	N	Y	Semi-Annual	Admin records from CBF/secretariat of Haiti	PCU-C



Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Trust legally established						National Trust	
<b>Description:</b> The Legal Establishment will be confirmed once the Official Status of the Haiti National Trust will have been published in “Le Moniteur”; and Operational when a Sub-Account will have been opened in CBF, and interests from the GEF/LDCF endowment disbursed to the Haitian National Trust.							
<b>Name:</b> 1.4b. Haiti National Trust operational		Yes/No	N	Y	Semi-Annual	Admin records from CBF/secretariat of Haiti National Trust	PCU-L
<b>Description:</b> The Legal Establishment will be confirmed once the Official Status of the Haiti National Trust will have been published in “Le Moniteur” ; and Operational when a Sub-Account will have been opened in CBF, and interests from the GEF/LDCF endowment disbursed to the Haitian National Trust							
<b>Name:</b> 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
<b>Description:</b> 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.  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.							
<b>Name:</b> 2.1b. Farmers		Number	0.00	1000.00	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
participating in the FFS						Operator	
of which female (in percentage)		Percentage	0.00	33.00	Semi-Annual	Reports from the Operator	PCU-L
<p><b>Description:</b> 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>							
<b>Name:</b> 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><b>Description:</b> This indicator refers to sub-projects that will have received matching grants from RPLP.</p>							
<b>Name:</b> 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	Reports from the Operator	Operator/ MARNDR/MdE





Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source/Methodology	Responsibility for Data Collection
Description: This indicator refers to sub-projects that will have received matching grants from RPLP.							
<b>Name:</b> 3. Percentage of beneficiaries satisfied with Project interventions (disaggregated by gender)		Percentage	0.00	75.00	Mid-term and final evaluations	Household surveys (report from a consultancy)	MARNDR/MdE
Description: 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.							



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	0.00	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 (MARNDR / 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	10000.00	10000.00	10000.00	10000.00
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	0.00	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	0.00	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)							

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



## ANNEX 1: DETAILED PROJECT DESCRIPTION

COUNTRY : Haiti

Resilient Productive Landscapes in Haiti

### Note to Task Teams:

*(Recommended length 2-4 pages.)*

1. *[All sub-sections must have a continuous paragraph numbering for the entire main text or for each annex per institutional standard.]*

(a) This is the sub-para numbering for this level.

(i) This is the sub-para numbering for this level. This is the sub-para numbering for this level.

### 1. Project approach

1. **Agriculture as a steward of Ecosystems.** As noted in the sectoral context, agriculture and the natural resource base are currently tied into a negative feedback loop of mutually reinforcing degrading natural resources and declining yields, in a context of extensive use of land for agricultural production on deforested slopes. The process is likely to further accelerate, as negative impacts from climate change will put intensifying pressure on the system.
2. 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.<sup>31</sup>
3. 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 productions in a profitable and sustainable manner, including due to poor infrastructure condition; and (ii) landscapes, linked to the lack of holistic, participatory planning capacity, 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 reducing water run-off.
4. RPLP is designed to contribute to break the natural resources degradation and the increasing populations' vulnerability cycle in the selected sub-watersheds by taking an integrated approach. Based on geographic concentration, the Project will work at both farm- and community level to simultaneously raise production

<sup>31</sup> Landscape-level Land Management Efforts in Haiti. Lessons Learned from Case Studies Spanning Eight Decades. World Bank, 2016



and productivity using more resilient, adapted agriculture practices to the hydro-geological context, which will directly contribute to rebuild the natural resource base; by protecting and restoring top soil cover in particular, the Project will improve water retention capacity, reduce erosion, 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 that are essential for Project sustainability. It will also support the construction or rehabilitation of small infrastructures considered critical to enhance landscape's 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.

5. It 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 into selected watersheds, to create the enabling conditions for subsequent scale-up.
6. The core of the investments and expected impact from RPLP shall be seen under Component 2 that will finance agricultural, value chains and infrastructure related activities to reduce land and farmers' vulnerability in selected sub-watersheds; while Component 1 shall establish the enabling environment for Component 2 to achieve its objectives and contribute to longer term implementation of sustainable productive landscapes approach by key institutions, in particular through the Caribbean Biodiversity Fund (CBF) to provide financing for climate adaptation into perpetuity.
7. **RPLP selected areas and their characteristics.** In the selection of sub-watersheds for this Project, a number of aspects have been considered: (i) Agro-ecological criteria, including water resources, existing tree cover, per capita cultivable land, level of hurricane damage, presence of high-value environmentally protected areas ; (ii) Socio-economic criteria, including infrastructure (roads, irrigation systems, markets in place), social capital, sustainable agro-economic activities, productive agroforestry systems promising value chains ; (iii) Environmental vulnerability criteria, including soil erosion risk, populations residing in flood plains ; and (iv) Institutional criteria, including existing investments and on-the-ground presence (GoH, WB, J/P HRO), accessibility, and visibility. Using a ranking scale of 1 to 5 for each of these criteria to prioritize areas, and based on available funding from the Project, four sub-watersheds were selected.
8. These 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 (map below).



(source: CNIGS)

9. These areas vary in size. 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) Altitude zones are primarily fresh and humid Highlands. These areas are mainly occupied by off-season vegetable with 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 cultural systems while some reconstitution of agroforestry highland gardens;

(ii) The second ago-ecological zone consists in several areas of intermediate altitude, and benefits from a warm and humid climate. This can be considered as the most strategic zone. In this zone, climate adaptation interventions would best restore or densify agro-forestry systems, supporting an association of a number of annual and perennial species, commonly known as the "Creole gardens", which forms the most resilient type of cultural association while offering a great economic and nutritional interest. The Project could support staggering and diversification, and combine, cash crop production and food production by using 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 peas (pigeon peas) offering very poor level of resilience. The growing impact of climate change has resulted in further impoverishment of soils, increased dry season durations and generating a very hypothetical economic interest for these crops. These systems can advantageously be replaced by dry, dense and fast-growing dry forest. The dry-forest are predominantly composed of Neem (*Azadirachta Indica*) and Acacia (*Acacia and Prosopis sp.*) and which tend to naturally propagate. The Project would support the diversification of productions related to these dry forests, by introducing other tree species (palm trees, cashew nuts trees, moringa oleifera), and by introducing fruits



cultures (melon in particular, *Cucumis melo*), and improving the practices around livestock and honey production strongly associated with these agricultural productions.

(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*).

10. These types of improvement systems would all contribute to stabilize the soil and improve its quality and 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 productions 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.
11. **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.
12. 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 livelihoods pursuits with improved protection of the environment. A challenge of the exercise is to identify sites that incentivizes 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.





13. The guiding elements of this participatory watershed planning include: collection of hydrology-geology and sociology data; rapid and cost-effective approach; 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 be matching rainfall/soil type/patterns of land use, and building on the positive features of small farm system 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 resources 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 with 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.



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

15. **Food Security co-benefits.** Food insecurity is an important problem in Haiti particularly in rural areas that the Project will tackle 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 of high nutritional value (mostly fruits and vegetables). Second, the Project will contribute to improve 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 therefore contribute to their greater accessibility, availability and thus affordability of food, 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 with school feeding program in the area of intervention. Such intervention would seek to help increase the accessibility of nutritious local food to Haitian students and guarantee a stable market access to institutional markets for producers and groups.

16. **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 at concept note stage indicated that more than 80 percent of RPLP financing would achieve climate co-benefits. The below table summarizes expected adaptation co-benefits:

*Table 3: Climate change adaptation co-benefits*

Current situation	Project interventions (selection)	Adaptation co-benefits
<b>Increasing vulnerability to climate change driven by:</b> <ul style="list-style-type: none"> <li>- Increased exposure to climate change impacts such as: droughts, extreme heat, flash floods etc.</li> <li>- Increasing sensitivity of production to climatic phenomena due to reduced resilience driven by a degrading natural resource base</li> <li>- Increased sensitivity due to a lack of adaptive planning capacity at the micro-catchment level</li> <li>- 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</li> </ul>	<b>Capacity building:</b> <ul style="list-style-type: none"> <li>- Development of Master Plan for Resilient Landscapes Development</li> <li>- Intensive technical trainings within key line Ministries, at national and local level and other relevant stakeholders</li> <li>- 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</li> </ul> <b>Investments:</b> <ul style="list-style-type: none"> <li>- 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</li> <li>- Development of participatory investments plans identifying priority investments and their geographical locations;</li> <li>- 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</li> <li>- Set-up of Farmer-Field-Schools (FFS) for producers focusing on transferring knowledge and know-how on Climate resilient production systems and practices</li> </ul>	<b>Strengthening of resilience through fortification of natural resource base at landscape level:</b> <ul style="list-style-type: none"> <li>- Soil quality improvement in areas with high risks of erosion</li> <li>- Increased water retention capacity</li> </ul> <b>Reduced sensitivity of agricultural production &amp; livelihoods to climate impacts:</b> <ul style="list-style-type: none"> <li>- Increased coverage of resilient agricultural practices, adapted to the topography and agro-ecological context</li> <li>- Improved adaptation capacity of agricultural production through increased diversification of productions practices to increase resilience</li> <li>- Improved livelihoods with additional and more diversified incomes</li> </ul> <b>Improved adaptive capacity:</b> <ul style="list-style-type: none"> <li>- Improved capacity for planning, implementing, monitoring, watershed-level interventions towards improved natural resources management and livelihoods.</li> </ul>

17. 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 40 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 CO<sub>2</sub> equivalent (tCO<sub>2</sub>-eq), or 28,620 tCO<sub>2</sub>-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

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

19. **Component 1: Strengthening of institutional and organizational capacities for landscape level interventions** (US\$ 5.6 M total -US\$ 1.4 M IDA, US\$ 4.2 M LDCF/LDFC- and 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 into perpetuity through the CBF; and will also 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:

20. *Sub-component 1.1. Institutional capacity building* (US\$ 2.6 M total -US\$ 1.4 M IDA, US\$ 0.8 M LDCF- and 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 plans<sup>32</sup> and recent international commitments under Climate Change/Climate Adaptation global agendas (including NAPA and INDC implementation), establishing areas of synergies, joint action plan and related M&E, that will be field-tested under Component 2, and serve as a reference under HTR ; ii) intensive technical trainings within key line Ministries, including MARNDR and MdE, at national and at local level 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 towards sustainable landscapes management; exchange visits in-country and abroad to share landscapes restoration and management experiences ; and students 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. Informed by 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: soil health & erosion risk monitor; drought risk monitor. As capacity building efforts progress, further tools and information products will be added to this list. The

<sup>32</sup> Relation to policies and mandates from other relevant institutions shall be included as well, e.g. CIAT (*Comité Interministériel d'Aménagement du Territoire*).



creation of these tools would (a) help establish a baseline in project areas on critical variables and (b) inform project implementation at farm and landscape level. 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, whilst 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 decision relevant information into policy development and program implementation. In addition, under this sub-component, J/P HRO will contribute to develop communication and outreach material on resilient landscapes, and organize trainings for non-governmental targeted audiences, in priority in the selected areas of the Project.

21. *Sub-component 1.2. Support to national level sustainable landscape management approach to agriculture and watershed management* (US\$ 1.0 M total - 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 at supporting (i) the Haiti Takes Roots 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 INDC; and (iii) the development of detailed participatory plans and their update in the selected zones of the Project.

The participatory plans under this Project will follow the methodology described above under “RPLP sub-watershed approach”. They will serve as a basis for the development of detailed participatory investments plans focused on RPLP interventions out of which the selection of investments financed under Component 2 will be made. These plans will be developed in all four sub-watersheds select by the Project. This approach combines together: 1) a 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 for the determined priority value chains of all aspects from the production to the commercialization; 4) the combination of an individual plot approach with a territorial approach; 5) a holistic reflection on watersheds management which integrate the national and regional policies, specialists expertise, integration of new technologies in geographic information system (GIS) and taking 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, and the protection of fragile areas. These elements will be informing subcomponents 2.1., 2.2 and 2.3.

22. *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 in the Caribbean Biodiversity Fund (CBF) in order to allow the country to benefit from revenues generated from the CBF endowment and contribute to sustain and further develop RPLP's interventions into perpetuity. Annex 7 provides further details on this mechanism and the relevance of Haiti's participation to 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*, closed Dec, 2016), as a mechanism to provide a perpetual source of financial to support countries to protect biodiversity as a primary objective. However, 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 level Conservation Trust Funds (NTCF) 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\$ 34 M, including approximately US\$ 2.4 M of generated interest. The revenue generated to participating countries is estimated at approximately US\$ 180,000 per annum (for a US\$ 3 M endowment). The interest rate has been approximately 7 percent per annum.

23. 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 NTCF (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 others 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, TNC) to finance a secretariat and required studies to the tune of US\$220,000 that will allow to further move forward the CBF accession process, until June 2018. KfW has also committed US\$7 million to endow the CBF for Haiti.
24. 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 HNT (secretariat); (iii) technical assistance to develop fundraising (in order to identify other income streams to support the CBF fund), communication strategies, operating manual, auditing procedures, etc.; (iv) endowment of the CBF on a specific sub-account earmarked for Climate adaptation objectives; and (v) 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 achieved, allowing then Haiti to endow the CBF and receive its first interest at the end of the third year of RPLP implementation (see Annex 7).
25. **Component 2: Investments to strengthen the establishment of resilient agricultural production and practices** (US\$ 12.1 M total -US\$ 10.1 M IDA, US\$ 2 M LDCF- and parallel financing of US\$ 3.6 M from J/P HRO). This component will support (i) individual farmers and communities within selected sub-watersheds to establish more resilient agricultural productions 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 infrastructures for increased farmers and landscape level resilience.
26. The interventions under this Component will be grouped under three main types of interconnected actions: (i) those that will directly contribute to reduce soil erosion and provide 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 out of these productions, or other related productions with important environmental/climate adaptation benefits (e.g. composting, honey production), corresponding to sub-component 2; and (iii) those that will provide critical small infrastructures in these sub-watersheds, corresponding to sub-component 3. These groups of activities per sub-watershed will be detailed in the respective investments plans mentioned above in the *RPLP sub-watershed approach* section, and prioritized accordingly. An operator (consulting firm) 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 voucher-based mechanism offering a menu of “technical packages” (including a combination of inputs and/or services and/or equipment) corresponding to an incentive to support individual farmers’ adoption of improved agriculture practices, inputs, and technologies; a Farmers’ Field School mechanism to disseminate knowledge and know-how through hands-on practices; and 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.

27. Under RPLP, beyond the participatory investments plans, the interventions will be informed by preliminary studies carried out during project preparation consisting in : (i) the establishment of a registry of farmers and 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,...) 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 productions to be developed in the sub-watersheds, with current status and opportunities). This latter will inform both sub-components 2.1. (guiding to some extent the choice of species to include in “technical packages”) in the 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).

28. *Sub-component 2.1. Investments in resilient, sustainable agriculture* (US\$ 8.65 M total -US\$ 6.65 M IDA, US\$ 2M 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 investments 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 investments 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 productions and practices ; and (iv) the set-up of Farmers-Field-Schools (FFS) for producers focusing on transferring knowledge and know-how on climate resilient productions and practices (such as planting following contour lines, improved tillage, boundary/live fences planting for wind and water erosion protection, management of agroforestry systems, water and soil conservation, promotion of water harvesting and small-scale irrigation techniques allowing water stewardship, sustainable grazing and livestock management, plantations and afforestation, soil



coverage, inter-cropping, and so on)<sup>33</sup>, as well as organizational and marketing approaches to add value to these productions (related to sub-component 2.2).

29. On 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 and propose various options of plant species best adapted to these contexts. They are expected to systematically include inputs having both a climate adaptation and productive value and will offer some flexibility for the farmers in terms of species (as long as they would match the agro-ecological criteria). These packages will be refined at the time of the development of investments plans and informed by these latter, as well as the market/value chains and suppliers analysis. The selection of beneficiaries will be carried out per sub-watershed, after having completed the investments plans that will inform 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 a full coverage of the defined areas. These specific criteria will be detailed in the PIM, but would include a positive discrimination towards 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 allowing to buy the determined inputs/services to eligible suppliers at market price (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 *Incentive Manual* (a common document produced 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 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.
30. *Sub-component 2.2. Intensification, diversification and commercial agriculture* (US\$ 3.95 M total -US\$ 2.85 M IDA - and 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 sustain 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 productions 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, would be carried out (through J/P HRO financing).
31. 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 agribusinesses 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 germplasms production /multiplication /conservation in the

<sup>33</sup> The Farmer-Field-Schools will also be a vehicle to promote food diet-nutrition education which will be built from (i) the material being compile in the context of J/P HRO arboretum, where a women repertoire of traditional plants used for medicine and diets is being created, and (ii) also re-use the food practice diet training developed under RESEPAG II.





area of intervention.

32. 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 productions produced 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 infrastructures 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 will play an important role in supporting the groups to present a business plan (which level of requirement would be proportionate to the amount to be granted).
33. 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 group of producers. Matching grants eligibility criteria and co-financing windows according to the nature of the organization, the number of members, 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 and DDE and the selected operator. 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, will have been undertaken to ensure the effective participation of all eligible stakeholders.
34. The MSF under RPLP would be managed following these co-financing principles: (i) leveraging of existing resources or developing 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) build 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 productions supported under 2.1. Eligible structures may take the form of producer organizations, associations, cooperatives, or small private enterprises.
35. In order for matching grants to facilitate the mobilization of commercial credit, financial institutions will be associated to the project. Their role will be defined in the PIM, and could include: (1) Financial institutions are deposit-takers as beneficiaries are encouraged to save – a specific amount and/or at a specific frequency - from the proceeds of their activities; (2) Financial institutions are encouraged to provide credit to finance part of the activities; (3) Financial institutions are involved in the management of grants including the appraisal and disbursements of grants; (4) Financial institutions advise beneficiaries in the preparation of





their business plans<sup>34</sup>.

36. *Sub-component 2.3. Protection of infrastructure and watershed* (US\$ 3.1 M total -US\$ 0.6 M IDA - and 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 infrastructures (e.g. rural and access roads or tracks, river crossing structures) (ii) enhance water management in the selected areas (building small water harvesting infrastructures in gullies or slopes, rehabilitating small water catchments or small irrigation systems in plains).
37. The activities to be carried out under this sub-component will be based on the investments 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 infrastructures, the same operator in charge of sub-component 1 and 2 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.
38. Most of the works are expected to be simple, hence a community-based approach would be promoted using a labor-intensive workforce. This approach has been used various times by MARNDR successfully (including through RESEPAG II in response to Hurricane Matthew's to restore some damaged infrastructures). A specific manual exists that would serve as a basis for RPLP.
39. **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 (including technical and financial 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 -TC-. 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-.
40. **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. A particular attention would be paid to ensure 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

<sup>34</sup> Financial institutions will be included if the interest rate proposed is not prohibiting for the potential beneficiaries.

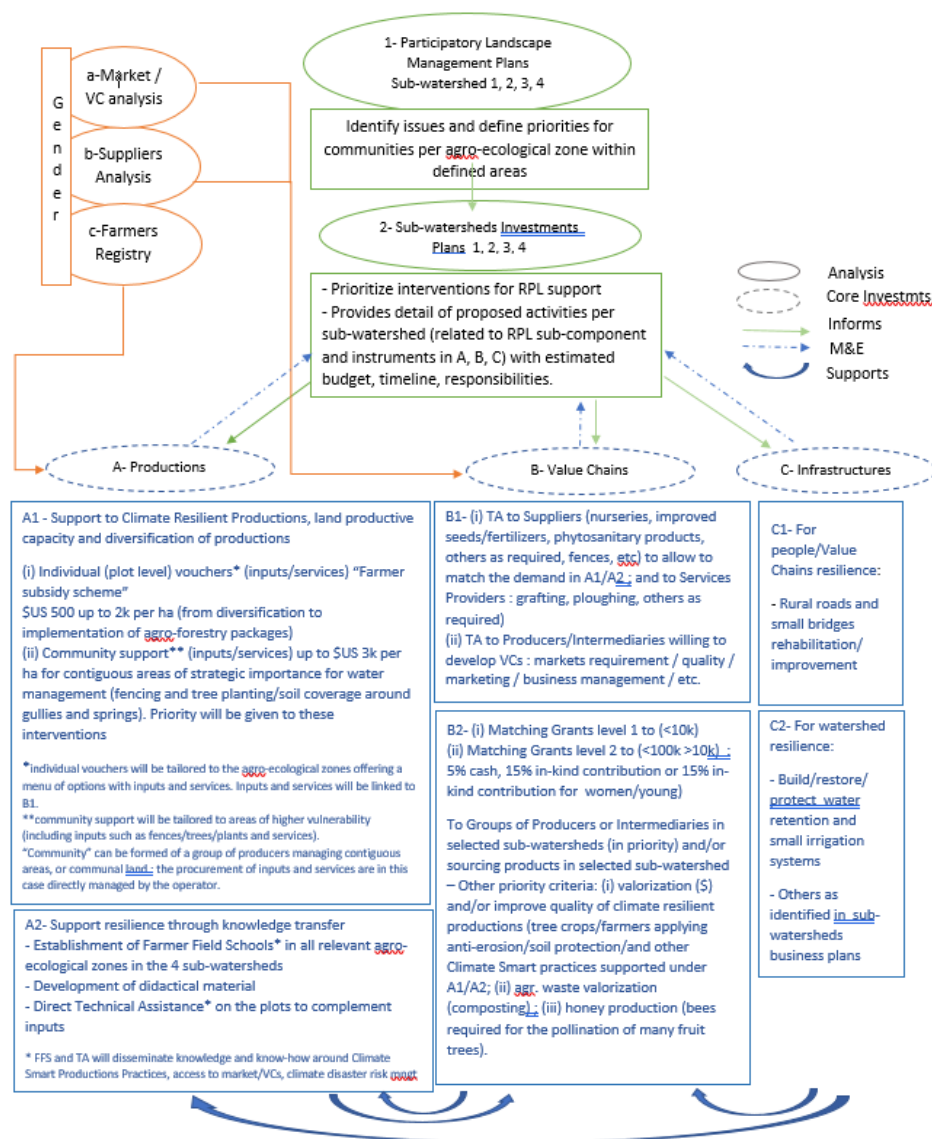


Bank to re-categorize and reallocate financing from other Project components to partially cover emergency response via implementation of key activities by the appropriate agencies to respond to the emergency. The CERC could also be used to channel additional funds should they become available as a result of an eligible emergency.

41. The CERC mechanism will be further defined in the PIM and will include triggers and conditions for the use of funds; detailed operational guidelines acceptable to the Bank in the form of a harmonized IRM Operational Manual used for other projects in Haiti with the same component will be adopted. This Manual will be prepared during Project preparation and 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.
42. 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 eligible for financing would include the incremental expenses incurred for early recovery efforts arising from the impact of a major crisis.
43. Goods, works, and services under this component would be financed based on a review of satisfactory supporting documentation presented by the government, including adherence to appropriate procurement practices in an emergency context. All supporting documents for reimbursement of such expenditures will be verified by the internal auditors of the governments and by the Project coordinator, certifying that the expenditures were incurred for the intended purpose and to enable rapid recovery following the damage caused by adverse natural events, before the application is submitted to the Bank. This verification should be sent to the Bank together with the application. Specific eligible expenditures under the category of goods may include agricultural inputs, as well as transportation and communication means. Specific eligible expenditures under the category of works may include infrastructure rehabilitation to mitigate the risks associated with the disaster for affected populations. Specific eligible expenditures under the category of services may include urgent studies (technical, social, environmental, or other) needed as a result of the effects of the disaster (identification of priority works, feasibility assessments, delivery of related analyses, and so on).



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





## ANNEX 2: IMPLEMENTATION ARRANGEMENTS

COUNTRY : Haiti

Resilient Productive Landscapes in Haiti

### Note to Task Teams:

(Recommended length 2-4 pages.)

[All sub-sections must have a continuous paragraph numbering for the entire main text or for each annex per institutional standard.]

(a) This is the sub-para numbering for this level.

(ii) This is the sub-para numbering for this level. This is the sub-para numbering for this level.

### 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 view 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 at the Agricultural Communal Office (*Bureau Agricole Communal – BAC*) of Anse-à-Veau. 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, 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 allow to coordinate with the local offices of MARNDR and MdE at Departmental and Communal levels, as well with the other local stakeholders. The PIU-C will be responsible for: (i) managing the Project at national level, including financial management, procurement in accordance with World Bank guidelines and procedures, and M&E; (ii) finalizing the PIM before effectiveness; (iii) producing Project progress reports; and (iv) Project communication. All staff paid using Project resources will be hired on a competitive basis under terms of reference and qualifications acceptable by 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)<sup>35</sup>. Support Staff will also be hired. All other staff will be based in the field at the PIU-L in the BAC of Anse-à-Veau, 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 admin) should also be in place not later than February 2018 to support the MARNDR and MdE RPLP focal points carry out these tasks among others contributing to swift implementation post declaration of effectiveness.
6. PIU-L will work in close collaboration with the research center of Salagnac, the Departmental Direction for the Agriculture (DDA Nippes) and the Departmental Direction for the Environment of the Nippes (DDE Nippes) in Fond des Negres. 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 exchange 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 national

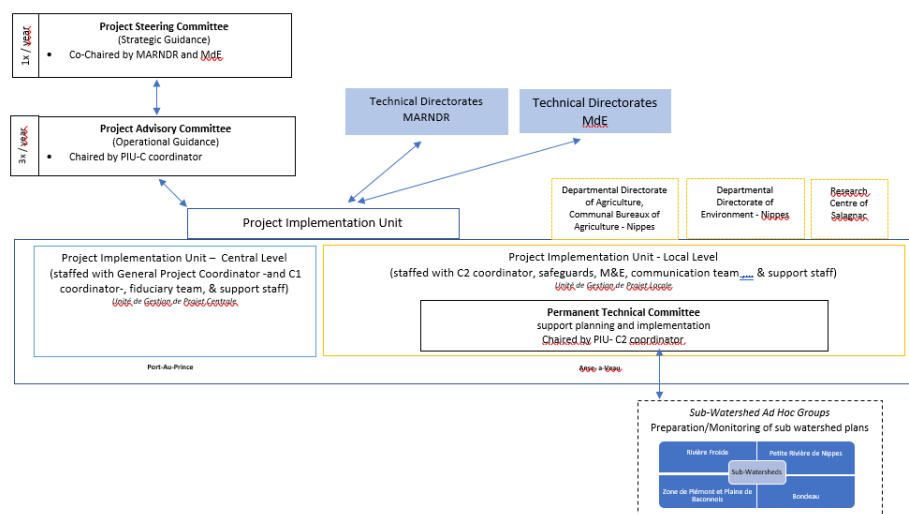
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<sup>35</sup> In addition, MdE may appoint civil servants to support the fiduciary team and get hands-on experience.



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, and facilitate the coordination among key stakeholders. 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 assure the role of PSC Secretariat.

8. In addition, a Project Advisory Committee - PAC- will be established and ensure operational guidance of RPLP activities implementation (Meeting Frequency: three times per year, in Nippes Department or Port-au-Prince). 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. Finally, to ensure planning and technical implementation of Component 2, a Permanent Technical Committee, consisting of the PIU-L Coordinator, DDA, DDE, J/P HRO, and the operator(s), will allow to coordinate implementation and supervision of activities.
9. In addition, a Technical Committee – TC will be established and ensure regular follow-up on the implementation of RPL activities (Meeting Frequency: quarterly, in Nippes Department). The TC will be chaired by the General Coordinator of the PIU-C and comprised of local stakeholders and authorities (DDA, DDE, other relevant Directorates, Civil Protection Committees, Municipalities, selected sub-watersheds communities' representatives, private sector representatives, etc.).
10. 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 IRM Operational Manual for the management of the CERC will be prepared and validated no later than three months after the Project effectiveness.



## Financial Management

11. 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.
12. **Supervision Arrangements.** As part of the proposed Project implementation support missions, risk based FM supervision will be conducted at least once a year. These 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 incidences of corrupt practices involving Project resources for Project implementation.
13. 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:



14. *Staffing.* The FM functions of the RESEPAG II PIU/ MARNDR are under the responsibility of the Project's Coordinator. As of October 2017, the Accounting Unit of RESEPAG II PIU was composed of a Chief accountant, accountant in each of the province 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.
15. *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.
16. *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 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.
17. *Accounting System.* As at October 2017, RESEPAG II PIU was still using a computerized accounting software, SYSCOP, which is does not fully meet to 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. At appraisal, the full functionality of the new system will be assessed.
18. *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 audit who is currently working on a part time basis on RESEPAG II and HYDROMET.
19. *Reporting arrangements.* For existing Project 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 the semester.
20. *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





21. 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 Republique 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.
22. 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.
23. 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.
24. 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.
25. 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 the DAs under new Grants/Credits made to or guaranteed by the Recipient.

#### Procurement

26. 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 which two (2) 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 upcoming workload. Despite the procurement unit exhibited good knowledge and experience in the execution of procurement under WBG policies, all the two Bank-funded projects are facing significant challenges. These outages are mainly due to insufficient capacity among the staff in decision making, planning mechanism in the execution of the procurement plans and delays in procurement awards. Therefore, due to all these inherent challenges and as short term mitigation, consultant expert 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.
27. 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.
28. *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.
29. *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)

30. *Environmental*. The Project is rated Category "B". The RPL 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. It will include four components which can be summarized as: (i) strengthen institutional and organizational capacity for landscape level interventions; (ii) investments to promote agriculture and ecosystems resilience; (iii) Project management, monitoring and evaluation, and (iv) Emergency Response Mechanism.

31. 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) that will be prepared, and the PIM, will include 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.
32. Under Sub Component 1.3, the Project will facilitate the participation of Haiti in the Caribbean Biodiversity Fund (CBF) and will capitalize the Fund. Under this Fund, activities are not yet clearly defined. The Project will support the functioning of the Fund'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 Fund will support private-sector activities. In order to ensure that the Project does not indirectly, through the CBF, finance activities with negative environmental impacts without imposing an adequate mitigating mechanism, the Project ESMF will also apply to the CBF. The PIM will include a measure for the CBF to adopt the ESMF as its screening mechanism.
33. 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 infrastructures 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.
34. The draft ESMF and IPMP have been reviewed by the Bank and found to be adequate, and will be disclosed in country, consulted, and final versions will be disclosed both in country and on the WB website. The ESMF includes clauses to ensure that plans and policies are sustainable; and the PIM will include the adoption of the ESMF by the Haiti CBF. Both the ESMF and IPMP include capacity building measures which are essential to their implementation.



35. *Socials*: 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 infrastructures 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. Resettlement Policy Framework (RPF) has been prepared by the GoH with guidance from the Bank to address the triggering of OP 4.12. RPF will be consulted and disclosed by appraisal. 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.
36. 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 a 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.
37. 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, they have been closely involved in the preparation of the ESMF and RPF. All relevant staff, including from MdE will be included in social safeguards trainings and the safeguards implementation under the leadership of MARNDR, which will house the proposed Project PIUs including environmental and social safeguards specialists.
38. *Gender*. The Project will ensure a representative level of women beneficiaries in the Project by: (i) Collecting gender-disaggregated data on Project beneficiaries, and grievances; (ii) Recruiting a social/gender specialist who will be part of the PIU local team to ensure a gender lens is followed by the different actors involved in the Project. This staff will also be supported by the MARNDR gender specialist strongly involved under RESEPAG II Project to provide overall guidance and ad hoc support if need be; (iii) Defining in the PIM different mechanism and procedures ensuring that the gender gap will be taken into account to reduce it and provide to women the same set of support opportunities<sup>36</sup>; (iv) Providing 50% of matching grants to women groups; and (v) Offering 33 % of vouchers for support to production which is the average level of women representation in agricultural production according

<sup>36</sup> 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- that has on average less assets and cash flows - would be used in the same manner under this Project.



to the last agricultural census in Haiti.<sup>37</sup>

39. *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, 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. 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 pro-active communication strategy in the planning and management of landscapes including monitoring to local governments, beneficiaries and public at large the benefits from the Project for various communities and municipalities; (b) engage communities in determining the mechanisms for investments disbursement- 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 in the project design 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 regards. The Project will draw on the participatory mechanisms developed and successfully applied under the Haiti RESEPAG II and Business Development and Investment (BDI) Project<sup>38</sup>. Given the strong focus on communities involved in the participatory planning process, and the continuous interaction between the PIU-L, the operator, and the representatives of the communities involved in the decisions (participatory investments plans) 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 Project Implementation Manual. 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).

## Monitoring and Evaluation

40. Project M&E will be undertaken to: i) strengthen planning, budgeting and execution of activities in targeted landscapes (under Component 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

<sup>37</sup> Ibid

<sup>38</sup> <http://projects.worldbank.org/P123974/haiti-investment-climate-growth-project?lang=en>



based on a perception household 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 level; 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 is 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 which will supporting their implementation will have in its 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 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 impact 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 of Results Framework Indicators as well as changes in the household wealth (benefits, income, consumption, etc.) as well as labor dynamics, level 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 to measure 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 with regard to the definition of the results framework, 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 Mechanisms (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 Intended Nationally Determined Contribution (INDC). RPLP is a multi-sector, multi-partner Project developed under the HTR umbrella, implemented by MARNDR and MdE. It is considered as a strategic operation under HTR. A few other projects are being developed and implemented under the HTR umbrella including AFD and IDB financed projects<sup>39</sup>. USAID also finances a landscape related project which, even in not under 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.
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, UNDP, which have committed some seed funding to start the development of the legal framework and other all necessary documents required to comply with CBF requirements (up to US\$220,000 in parallel financing plus some in-kind human resources). With regards to the endowment of the CBF, the German Development Bank (KfW) will also contribute (estimates standing at US\$7 million financing). These funds will allow Haiti to progress towards compliance with CBF requirements during 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 a full complementarity and seamless financing required to establish an operational National Trust, and leverage other donor funding to keep 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 Project PPI II<sup>40</sup> financed by IFAD, which is in closing phase. Some small micro-watershed stabilization activities have recently been carried out following Cyclone Matthew with the support of the NGO Welthungerhilfe. In case of additional financing of 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 participated as from the identification stage of RPLP and follow-up dialogue with the GoH and the WB. It committed to provide a parallel financing of US\$5 million to the IDA and LDCF funds under RPLP that would support the Project activities and contribute to the Project Development Objective. J/P HRO have 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

<sup>39</sup> AFD already finances a €9M project on cacao production/value chain (since 2016), committed €6M for 2018, and expects an additional US\$24M from the Green Climate Fund; IDB will finance US\$55M; and USAID started a project of US\$45M.

<sup>40</sup> Projet de Développement de la Petite Irrigation – Phase 2



will be replicated in all Project areas (under Component 1), using J/P HRO parallel financing. In general, the cost-sharing of other activities under RPLP with J/P HRO were decided on the basis of (i) their capacity to accelerate implementation readiness (e.g. studies and analysis carried out during Project preparation, provision of support staff before the establishment of PIU); (ii) specific experience (e.g. support to the development of participatory plans, communication activities) ; and (iii) addition of design flexibility (e.g. capacity to reallocate funds towards other relevant activities prioritized by the participatory plans, should the amount necessary for infrastructures be less than estimated at preparation stage).





### ANNEX 3: IMPLEMENTATION SUPPORT PLAN

COUNTRY : Haiti  
Resilient Productive Landscapes in Haiti

**Note to Task Teams:**

*(Recommended length 2-4 pages.)*

*[All sub-sections must have a continuous paragraph numbering for the entire main text or for each annex per institutional standard.]*

(b) This is the sub-para numbering for this level.

(iii) This is the sub-para numbering for this level. This is the sub-para numbering for this level.

#### 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 in the implementation phase. It will include a comprehensive assessment of the progress in achieving RPL 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 a timely basis 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 final 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 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 semi-annual basis at minimum.

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

**Table: Global focus of implementation**

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

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

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



Time	Focus	Resources Estimate	Partner Role
	• Task leadership	• TTL 10 SW	
	• M&E support	• 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	

**Note to Task Teams:** What would be the main focus in terms of support to implementation during:

Time	Focus	Skills Needed	Resource Estimate	Partner Role
First twelve months				
12-48 months				
Other				
Skills Mix Required				
Skills Needed	Number of Staff Weeks	Number of Trips	Comments	
Partners				
Name	Institution/Country	Role		



## **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 for each of the agro-ecological zones (AEZs) specific models. This choice has been made due to the different crops that will be grown and the different activities supported by the Project accordingly with 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 in 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 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. 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.

6. The Project will also support a wide range of supporting activities of agriculture production both for services (e.g. mechanisation) and processing (fruit transformation).

7. 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 impact and take into account lessons learned

8. 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 watershed level. In the selected hydrological zones of the department of Nippes the total number of farmers is estimated to be approximately 300,000.

9. The direct Project beneficiaries are currently estimated at 6,000 organized farmers and processing entrepreneurs in selected watersheds within the target hydrological zones. A more detailed assessment will be done during the incoming stages of the Project preparation. The total agriculture area that will directly benefit from the intervention will be around 4,850 ha.

10. Total cost of the intervention would be around US\$ 26.2 million. Additional production and its value has been estimated using representative crop budgets and processing units.

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

12. Benefits expected from the Project include: increased production; improved productivity increased marketed production; reduced import of selected crops; increased processed capacity of primary agriculture products; reduced post-harvest loss; and improvement in food security.

13. 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, and d) strengthening the overall preservation and protection of forests through alleviation of poverty and development of alternative livelihoods for communities; (e) 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.

14. 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.

15. Given the unmet growing 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.

16. 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) a strengthened public institution responsible for overseeing watershed development.

17. 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 (these benefits needs to be verified once the targeting documents will be available).

18. The proposed Project intends to include US\$6.2M of LDCF Least Developed Country Resources (LDCF) and US\$5 million from J/P HRO. 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**

19. *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.



20. 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.

21. 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.

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

*Table: 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; sorgho-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.





23. 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 take a good share from the whole cropping system through the typical local organisation of the farm: 'jardin creole'. Irrigation is not very common in the area except for the valleys near the sea where extensive areas are under rice. 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 over the dry forest area.

24. *Financial analysis assumptions and results.*

25. *Crop Models.* The analysis has been developed following the crop model approach: average cropping pattern of farmer on 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, foresees no changes in the cropping pattern and conservative increase in production (yield and value) due to new services, training, improved seeds and crops varieties, and new markets not to overestimate the potential benefit.

26. The models presents a realistic mix of culture over the year main seasons during which the crops rotate over the same area. Above this rotation a significant share of the land is under fruit tree crops and agro-forestry activities. Several crops will benefit from RPL intervention, however for analysis purposes only a sample of them (which represents the major share of farmers' area under production) has been taken into in deep analysis (See Annex 2 for the complete set of analysis and indicators).

27. Detailed benefits for major crops have been extrapolated from the crop models on ha basis. The strong impact of Project promoted activities on crop yields are evident for all crops and led 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

28. The exact mix of crop and rotation at farm/household level is still under preparation on will be used to refine the analysis. At this stage the increase in revenue is significant and range from 455 USD/ha to 2350 USD/ha depending on crops grown.



29. *Processing units.* Furthermore the Project will support the creation/upgrade of around fifty processing unit ranging from fruit processing to compost. For analysis purposes 4 models have been prepared using real data provided by an on-going World Bank financed Project: RESEPAG2. Table 3 below summarizes the results of this support (See Annex 2 for the complete set of analysis and indicators).

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

30. The financial analysis for the processing and marketing activities foresee positive returns and cash flows underlining that using matching grant to encourage producers to adopt new technologies provides them with an additional financial space, particularly during the first years when they are working their way further along the technology adoption learning curve.

31. These 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 and these models do not limit the type of activity to be funded and clear criteria in the project document elaborates the requirements to qualify for project assistance. Thus, the 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**

32. *Assumptions and results.*

33. The analysis uses a cash flow model over a 20-years period that includes all investment and operational costs of the RPLP sub-projects, as well as the incremental net revenues derived from the crops financial models. The base case scenario makes assumption on cropping patters 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-ecologic conditions.

34. The economic cost of RPLP has been calculated using preliminary estimation of investment and maintenance cost. Total Project investments have been estimated at 26.2 USD million over five years of implementation. The investment costs per ha related to component 2 only (14 USD million) is around 2,250 USD. The yearly costs to maintain the Project infrastructure fully productive after last year of Project



implementation (recurrent costs to ensure RPLP's sustainability) is assumed to be 10 percent of total costs of the last year of implementation.

35. For the economic analysis purposes only the costs related to component 2 and 3 have been taken into account has 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.

36. 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.

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

38. The overall area under production with Project is 6,350 ha (among which 1,500 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 loss, change in cropping patterns and related economic activities. Further research will be undertaken to simulation changes in cropping patters.

39. 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 soil 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, increase in farm income to be invested in barn improvements). However not to overestimate the economic quantifiable benefits and due to lack of specific data, livestock has been excluded from the computation.

40. 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.

41. Given the above assumption the EIRR for the base case scenario is 20.8 percent and NPV is 7.5 USD million using 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. However these results are preliminary and will be validate during pre-appraisal mission.

42. A number of 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 led the EIRR to 19.1 and 17.6 percent with positive NPV.



43. The Project is more sensitive to changes in benefits and adoption rates. If the adoption rate fell to 45 percent or below (e.g. lower/no yields increases or hectares without production) the EIRR falls below the 12 percent threshold level and NPV is negative. Decrease in expected benefits by more than 30 percent as well 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%
<b>20.8%</b>	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%			

44. On the basis of 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.

45. 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 PPSP

### under finalization

**General:** Procurement will be carried out in accordance with the “World Bank Procurement Regulations for Borrowers under Investment Project Financing” dated July 1, 2016. As per the requirements of the World Bank’s New Procurement Framework (NPF), the first draft of a comprehensive Project Procurement Strategy for Development (PPSD) was carried out and identified the appropriate selection methods, market approach and type of review by the World Bank. The objective is to improve procurement efficiency. Most activities under the proposed Project will be carried out through National or International Competition. An acceptable Procurement Plan was also prepared. Procurement arrangements for the Contingent Emergency Response Component will be described in the IRM Operational Manual. For International Competition, in addition to World Bank Standard and Sample Bidding Documents, the MARNDR will use standard bidding documents agreed with the CNMP (*Commission Nationale des Marchés Publics*).

**Project Procurement Development Objectives (PPDO):** To increase procurement efficiency and ensure value for money that contributes towards (i) enhancing the resilience of agriculture and ecosystems in selected watersheds; and (ii) enabling the Government to respond promptly and effectively to an eligible emergency.

**Project Procurement Result Indicators:** The following indicators will measure the achievement of the PPDO; i) Bidding processes initiated as per Procurement Plan with no substantial delays and no rebidding, ii) No substantial cost and time overrun of the contracts, and iii) Successful implementation of Key Procurement Indicators in the key contracts as set forth in the PPSP.

**Procurement Institutional Arrangements:** Procurement and contract management implementation will be the responsibility of the MARNDR, in coordination with the RPL Project implementation team to ensure proper quality of the design, and construction management and supervision. The UPMP/MARNDR has been established and will be the sole responsible of the procurement under the proposed Project.

**MARNDR and MdE Capability and PIU (Project Implementing Unit) Assessment:** Project implementation will be the responsibility MARNDR and MdE, and RESEPAG II fiduciary team being responsible for fiduciary coordination, procurement, contract management, financial management, and disbursement. MdE project management staff have no experience in implementing projects financed by the World Bank and managing contracts. One full time senior procurement staff will be appointed to help UPMP managing the workload created by the proposed Project. In addition, short term Consultant experts will be used to reinforce UPMP for better efficiency and improve its capability in the management of large and complex contracts, when required. Moreover, to support and strengthen procurement capacity of MdE in getting full exposure to the World Bank procurement systems and implementation, a dedicated MdE civil servant would be assigned at UPMP during the execution of the Project. With the changes in the Bank procurement, Project staff passing and managing the contracts need comprehensive training in the new regulations (NPF), STEP and contract management. Consequently, they will be trained on these different features. The World Bank will provide also hands-on implementation support for ensuring that procurement packages have been efficiently delivered in the attainment of the PPDO.



**Procurement risks analysis** : Procurement main risks are in particular inherent to the following: (i) weak capacity of the implementing agency in procurement and management of large contracts; (ii) high risk and weak control environment, Haiti's ability to manage public resources is undermined by volatile and sensitive environment, instability and outdated practices; (iii) Limited local market with a few regional/international bidders with the required experience may result in lesser competition and higher bid and consulting services prices; (iv) delays in implementation due to the overall context conditions in Haiti; v) delay in implementation from Bidder's side and time/cost over-runs. Based on the overall assessment of the implementing agency and the information available on the procurement environment in Haiti, the overall procurement risk is judged to be high (to be completed with specific risks if any).

**Market Analysis:** Owing to the economic conditions and instability of the country, the possibility of attracting big reputable international companies could be limited. However, communicating/consulting with the potential bidders would be important to have national competition, domestic preference will be preferred approach for some specific programs.

The supply positioning aimed at determining the high and value contracts is as shown below: (to be completed as set forth in the PPSD).

**Graph (will be included after the completion of the PPSD)**

**Key procurement under the Project:** The total value of the Project is (21.2 US\$ million dollars, out of which High risk contracts approximately the value totalizing (Y million) Dollar representing A % the total value of the Project comprising of procurement of work (W million), goods and non-consulting services (Z million) and consulting Services (\$T million)

The Key procurement contract table is shown in the table below (Will be completed).

Type of procurement	Prior review High Risk Contracts (US\$ million)	Percent of Total Value High Risk Contracts (%)
Works ()	W	A
Goods and Non-Consulting Services ()	Z	B
Consulting Services ()	T	C
Total	Y	100

- (1) **Civil Works:** These works will be executed after the completion of the feasibility studies. As per PPSD, appropriate procurement method will be selected and mentioned in the procurement plan.
- (2) **Goods and Non-Consulting Services:** The Project will finance XXXX. It is also envisaged that the coordination of RESEPAG will procure vehicles, office equipment and furniture for its staff. Contracts will be of small value and use request for quotation procedures.
- (3) **Selection of Consultants:** There are a few number of important consultancy services under component. As per PPSD, appropriate procurement method will be selected and mentioned as per the PPSD



**Procurement Plan Summary Table:** As per the PPSD, key procurement activities are summarized in the procurement plan below (Will be completed).

#	Activity Description	Budget Estimate (Million US\$)	Method	Bank's Review Prior/Post	Background
<b>Total</b>		<b>Y</b>			
<b>1</b>	<b>Works</b>	<b>W</b>			
1.1				Prior	
<b>2</b>	<b>Good and Non-Consulting Services</b>	<b>Z</b>			
2.1				Prior	
<b>3</b>	<b>Services</b>	<b>T</b>			
3.1				Prior	

**Procurement Thresholds and Prior Review Thresholds:** The Procurement Plan shall set forth those contracts, which shall be subject to the World Bank's Prior Review for high risk environment. All other contracts shall be subject to Post Review by the World Bank

Spending category	Contract value (threshold) Thousand US\$	Procurement method	Contracts subject to prior checking by World Bank
<b>1. Work</b>	>3,000	ICB	All
	between 1,000 and 3,000	NCB	None
	≤1,000	RFQ	None
<b>2 Goods</b>	>500	ICB	All
	≤500	RFQ/NCB	None
	≤150	RFQ	None
<b>3. Consultants</b>	> 300		>200
3. A National Firms	≤300		>100
	No limit	DC	
3. B Consultants	No limit	Comparison of 3 CV	>100 and specific missions

**Acronyms:**

ICB = International Competitive BID  
 NCB = National competitive BID  
 DC= Direct Contracting  
 RFB= Request for BID

QCBS = Quality and Cost-Based Selection  
 QBS = Quality Based Selection  
 RFQ=request for Quotations



## ANNEX 6 : CLIMATE CO-BENEFITS AND NET CARBON BALANCE

### Haiti Resilient Landscapes

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 CO<sub>2</sub> 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 CO<sub>2</sub> 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 ptta 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 (which is the entire national territory) has a tropical wet climate. The dominant soil type is High Activity Clay. The project implementation phase is 4 years of actual implementation 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 tCO<sub>2</sub>-eq, equivalent to 28,620 tCO<sub>2</sub>-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 <sub>2</sub> eq)			Annual average (tCO <sub>2</sub> 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	0	-641,835	-641,835		-31,029	-32,029
Afforestation 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
<b>Total</b>	<b>-82,127</b>	<b>-654,524</b>	<b>-572,397</b>	<b>-4,106</b>	<b>-32,726</b>	<b>-28,620</b>



## **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 is already pre-existing, and 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 interest is accrued quicker; (d) interests accrued on the US\$3 million will be used for climate adaptation activities, and this will be clearly specified in the legal agreements; (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 to address that crisis 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 is governed by a Board of Directors-, and financed under the World Bank/LDCF project Sustainable Financing and Management of Eastern Caribbean Ecosystem Project (closed 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. Yet, as mentioned earlier, 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 Initiative<sup>41</sup>, 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 description below) to channel funds to climate change adaptation funds using the same processes and framework that have already been established. The processes used to establish a Haiti national trust and to receive

<sup>41</sup> <http://www.caribbeanchallengeinitiative.org/>



funds from the CBF are already established. In addition, the process will be supported by the Nature Conservancy (TNC), the same NGO that supported the other Caribbean countries in establishing their national trust. In the case of Haiti, financial assistance related to establishing this national trust is also



\* 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.

supported by KfW and the Swiss Corporation.

4. CBF Funding: The CBF is currently capitalized by US\$32 million in initial financial, with plans to grow CBF capital to US\$42 million. Each OECS country has joined the CBF with a contribution to the endowment of US\$3 million, which, in the case of the OECD countries, was contributed by GEF. Likewise, for Haiti, the funds from LDCF will likewise 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 an accruing 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 LDCF (through the World Bank), 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 in previous years included 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](http://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 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 who 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.

The characteristics of a National Trust 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 funding<sup>42</sup>. In Haiti's case, donor funding will be permitted to constitute this match, as well as any other measures.

7. 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.

8. National Trust (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 their 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 Haiti Trust Board would make all decisions regarding the NT policies and

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<sup>42</sup> Although some flexibility exists on this aspect



annual work program, and reports to the CBF. HNT disburses the CBF investment proceeds and resources generated by national mechanisms at the national level.

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

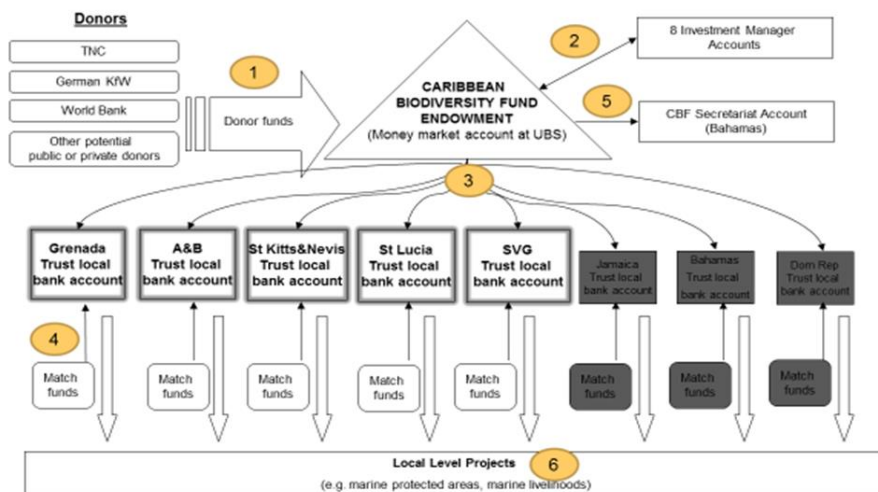
- **Staffing.** Recruit an Executive Director. The single most important step toward operationalizing a national trust fund is to hire a highly capable Executive Director who can spearhead the activities described below and others. Additional support staff may also be needed.
- **Office.** Set up initial 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 bank account, select accountant and accounting system, identify auditor, purchase insurance, etc. Ideally, a Board member with relevant financial experience can assist 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.

10. Funds Flow from the CBF to the NT. The figure below shows how the CBF currently allocates funds to the other countries who are eligible. Haiti would be just another country on that existing flow chart that receive funds and unlike the other countries, 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)



11. Case of Haiti. The aim of the Project, under subcomponent 1.3, is to facilitate the establishment of the NT (which in Haiti has been given the name of *Le Fond Haitien pour la Biodiversité* -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, who are providing the legal and administrative support for the legal establishment of HNT. Currently, Haiti has completed their by-laws and constitution and is now in the phase of legally creating the fund and establishing their 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.

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 aim is 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 *Projet Small Irrigation and Market Access Development Project in the Nippes and Goavienne Region (PPI-3)* (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 of 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 Program *Ecosystem approach on the South Coast of Haiti* (2015-2020, US\$ 6.2 million), 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 co-financed *Project for Food Security (SECAL)* (2013-2017, 15 million euros), which 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