



Improving the flow of ecosystem services in biologically-rich watersheds of the Southern region of Haiti

Part I: Project Information

GEF ID

10684

Project Type

FSP

Type of Trust Fund

GET

CBIT/NGI

CBIT

NGI

Project Title

Improving the flow of ecosystem services in biologically-rich watersheds of the Southern region of Haiti

Countries

Haiti

Agency(ies)

UNDP

Other Executing Partner(s)

Ministry of Environment

Executing Partner Type

Government

GEF Focal Area

Biodiversity

Taxonomy

Focal Areas, Land Degradation, Sustainable Land Management, Improved Soil and Water Management Techniques, Sustainable Livelihoods, Ecosystem Approach, Sustainable Agriculture, Food Security, Climate Change, Climate Change Adaptation, Small Island Developing States, Biodiversity, Species, Plant Genetic Resources, Mainstreaming, Agriculture and agrobiodiversity, Certification - International Standards, Biomes, Tropical Dry Forests, Rivers, Wetlands, Financial and Accounting, Natural Capital Assessment and Accounting, Influencing models, Strengthen institutional capacity and decision-making, Stakeholders, Local Communities, Beneficiaries, Civil Society, Non-Governmental Organization, Private Sector, SMEs, Individuals/Entrepreneurs, Financial intermediaries and market facilitators, Communications, Awareness Raising, Gender Equality, Gender results areas, Access and control over natural resources, Participation and leadership, Gender Mainstreaming, Gender-sensitive indicators, Capacity, Knowledge and Research, Capacity Development, Knowledge Generation

Rio Markers**Climate Change Mitigation**

Climate Change Mitigation 1

Climate Change Adaptation

Climate Change Adaptation 1

Duration

72 In Months

Agency Fee(\$)

480,271.00

Submission Date

9/28/2020

A. Indicative Focal/Non-Focal Area Elements

Programming Directions	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
BD-1-1	GET	5,055,479.00	26,320,000.00
	Total Project Cost (\$)	5,055,479.00	26,320,000.00

B. Indicative Project description summary

Project Objective

To increase the economic value of ecosystem services provided by restored biological diversity-rich ecosystems in the southern region of Haiti

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
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Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
Component 1: governance strengthening and capacity-building to mainstream biological diversity (BD) protection into watershed management	Technical Assistance	<p>Outcome 1: Planning and governance to mainstream BD protection into watershed management is improved and measured by :</p> <ul style="list-style-type: none"> - One (1) draft proposal of one (1) updated laws and regulations addressing invasive species and genetic resources; - One (1) framework, tools and three (3) training modules developed to improve local coordination and capacities 	<p>1.1 Gaps in the mainstreaming of specific aspects of BD conservation (e.g. management of invasive species, use of genetic resources) into relevant national environmental laws and regulations identified and recommendations to update one (1) text of laws and regulations formulated through a participatory process.</p> <p>1.2. 50% of relevant stakeholders from the CPCE (public sector, CSOs), the private sector, and NGOs involved in BD conservation trained on the interpretation and implication of environmental laws and regulations for their respective activities.</p> <p>1.3 Tools for spatial planning in watersheds, environmental monitoring, and information management systems developed at the watershed level to facilitate planning and monitoring of watershed & landscape management</p> <p>1.4 Watershed-level governance framework (CPCE) established to coordinate watershed restoration and agroforestry promotion actions across southern Haiti</p>	GET	511,200.00	300,000.00

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
Component 2: Biodiversity conservation and ecosystem restoration	Investment	<p>Outcome 2: At least 250 hectares of BD-rich ecosystems (incl. Jardin garde-manger “market gardens” and uphill dry forests) are restored in pilot watersheds</p> <p>- 23,944 tons of CO2 eq sequestered by the restoration activities by project end.</p> <p>- One strategy implemented to protect identified endangered species such as <i>Plagiodontia aedium</i>.</p> <p>Baseline and target will be confirmed</p>	<p>2.1 Land restoration plans co-developed between local authorities, extension services and local communities, and implemented to restore vegetation cover in degraded watersheds (esp. ravine and stream-side vegetation)</p> <p>2.2 Nurseries for threatened trees to support reforestation/restoration efforts and the related work needed to establish this including how to make interventions sustainable, promote research and awareness-raising on the value of BD in the southern region department through the Levy Germplasm Center.</p> <p>2.3 Agreements signed with targeted farmers to receive technical training and necessary inputs to develop under-cover coffee culture in degraded areas, in exchange for their maintenance of the tree cover; and technical agronomical assistance brought to farmers to implement best practices for market garden keeping</p> <p>2.4. Endemic and native species that have disappeared from the sites of Etang lachaux and Etang Laborde reintroduced and vulnerable and endangered species protected.</p>	GET	2,907,300.00	18,834,000.00

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
Component 3: market-based practices for commodity-related Small and Medium Enterprises (SME)	Technical Assistance	<p>Outcome 3: market-based practices for commodity-related SMEs are strengthened to further increase the demonstrated value of BD-rich ecosystems</p> <p>- 2000 hectares of coffee production landscape and 3400 hectares of cocoa production landscape sustainably and productively managed</p> <p>- At least 50 producers georeferenced through tracking's and mapping system.</p>	<p>3.1 Mapping of commodity producers in selected value chains conducted using the Agrotracking software (geo-referencing); this will include a revitalisation of the Tracking platform and establishment of local focal points in the southern region to locate producers, and verify compliance with production standards</p> <p>3.2 Identification and training of selected cooperatives in the region implemented, with a focus on marketing and agribusiness skills</p> <p>3.3 Branding of agroforestry products developed (incl. coffee) to meet a growing domestic and international demand for products with known origin, certified production processes complying with sustainability criteria and fostering the provision of ecosystem services</p> <p>3.4 Capacities of producer associations to monitor the compliance of their member producers with environmental management and traceability standards strengthened</p>	GET	1,175,530.00	5,820,000.00

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
Component 4: Monitoring & Evaluation (M&E), and knowledge generation and dissemination	Technical Assistance	<p>Outcome 4: information on the value of restored BD-rich ecosystems is compiled and disseminated, and constitutes an evidence base for awareness-raising and funding mobilisation</p> <p>- The environmental information system includes project data to make it more accessible to the local stakeholders in Haiti.</p> <p>- - Capacities of government staff on control of Vulnerability index of Cocoa, and value chain quality</p>	<p>4.1 A component for ecosystem services accounting developed and added to the existing Environmental Information System and operationalised</p> <p>4.2 Assessments of the value of ecosystem services including, Support services: e.g. nutrient cycling, soil formation and retention; Regulating: e.g. pollination, carbon sequestration, flood control provided by target ecosystems (including Jardin garde-manger de l'abondance et de la Biodiversité) before and after restoration, and the results shared on the national platform for ecosystem services accounting</p> <p>4.3 Communication supports developed and disseminated</p> <p>4.4 Project management training provided to selected stakeholders within MoE, DDS, BCGE, ANAP and MARNDR</p> <p>4.5 Exit strategy for the project developed with MoE</p>	GET	220,713.00	50,000.00

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
				Sub Total (\$)	4,814,743.00	25,004,000.00
Project Management Cost (PMC)						
				GET	240,736.00	1,316,000.00
				Sub Total(\$)	240,736.00	1,316,000.00
				Total Project Cost(\$)	5,055,479.00	26,320,000.00

C. Indicative sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
GEF Agency	United nations Development Programme	Grant	Investment mobilized	200,000.00
Donor Agency	Global Affairs Canada	Grant	Investment mobilized	3,770,000.00
Donor Agency	Inter-American Development Bank	Grant	Investment mobilized	20,000,000.00
Donor Agency	Agence Francaise de Developpement	Grant	Investment mobilized	1,900,000.00
Recipient Country Government	Ministry of Environment	In-kind	Recurrent expenditures	250,000.00
Private Sector	Jardin Botanique de Cayes	In-kind	Recurrent expenditures	50,000.00
Private Sector	Geonova	In-kind	Recurrent expenditures	50,000.00
Private Sector	AYITIKA	In-kind	Recurrent expenditures	100,000.00
			Total Project Cost(\$)	26,320,000.00

Describe how any "Investment Mobilized" was identified

Several video-conferences were conducted with the AFD, Inter-American Development Bank, AYITIKA and Geonova to discuss their projects and activities in the sites selected for this project proposal. The discussions served to identify synergies with the proposed GEF project. - United nations Development Programme: has confirmed co-financing the proposed project at USD 210,000 to support project management and further development of biodiversity policy and institutional frameworks through enabling activities. - Global Affairs Canada: strong synergies were identified between the proposed project and Projet Jaden Kreyol, implemented by Affaires Canadiennes. Implemented in the Sud department, this project aims to promote sustainable agroforestry production and value chains with a focus on coffee and cocoa. - Inter-American Development Bank : Discussions with IDB also indicates their implication in supporting agriculture projects; internal communication with BID indicated that they have an ongoing project supporting sustainable agriculture, adapted to climate change impacts in several project sites. IDB confirmed this project would be extended at least until 2022. - Agence Francaise de Developpement: confirmed their

interventions to support agriculture in southern Haiti and synergies were identified with a new project AFD has planned to implement from 2020. Finally, calls organised with Geonova and AYITIKA indicated their willingness to provide in-kind support – in the form of training essentially – to support the development of agricultural value chains in the project sites. Additional consultations with these proposed co-financing partners will be organised during PPG, to confirm co-financing amounts.

D. Indicative Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
UNDP	GET	Haiti	Biodiversity	BD STAR Allocation	5,055,479	480,271	5,535,750.00
Total GEF Resources(\$)					5,055,479.00	480,271.00	5,535,750.00

E. Project Preparation Grant (PPG)

PPG Required

PPG Amount (\$)

150,000

PPG Agency Fee (\$)

14,250

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
UNDP	GET	Haiti	Biodiversity	BD STAR Allocation	150,000	14,250	164,250.00
Total Project Costs(\$)					150,000.00	14,250.00	164,250.00

Core Indicators

Indicator 3 Area of land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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250.00	0.00	0.00	0.00
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Indicator 3.1 Area of degraded agricultural land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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250.00			
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Indicator 3.2 Area of Forest and Forest Land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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Indicator 3.3 Area of natural grass and shrublands restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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Indicator 3.4 Area of wetlands (incl. estuaries, mangroves) restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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Indicator 4 Area of landscapes under improved practices (hectares; excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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5400.00	0.00	0.00	0.00
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Indicator 4.1 Area of landscapes under improved management to benefit biodiversity (hectares, qualitative assessment, non-certified)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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5,400.00			
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Indicator 4.2 Area of landscapes that meets national or international third party certification that incorporates biodiversity considerations (hectares)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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Type/Name of Third Party Certification

Indicator 4.3 Area of landscapes under sustainable land management in production systems

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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Indicator 4.4 Area of High Conservation Value Forest (HCVF) loss avoided

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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Documents (Please upload document(s) that justifies the HCVF)

Title	Submitted
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Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
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Expected metric tons of CO₂e (direct)	23944	0	0	0
Expected metric tons of CO₂e (indirect)	0	0	0	0

Indicator 6.1 Carbon Sequestered or Emissions Avoided in the AFOLU (Agriculture, Forestry and Other Land Use) sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
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Expected metric tons of CO₂e (direct)	23,944			
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Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO₂e (indirect)				
Anticipated start year of accounting				
Duration of accounting				

Indicator 6.2 Emissions Avoided Outside AFOLU (Agriculture, Forestry and Other Land Use) Sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO₂e (direct)				
Expected metric tons of CO₂e (indirect)				
Anticipated start year of accounting				
Duration of accounting				

Indicator 6.3 Energy Saved (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Total Target Benefit	Energy (MJ) (At PIF)	Energy (MJ) (At CEO Endorsement)	Energy (MJ) (Achieved at MTR)	Energy (MJ) (Achieved at TE)
Target Energy Saved (MJ)				

Indicator 6.4 Increase in Installed Renewable Energy Capacity per Technology (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Technology	Capacity (MW) (Expected at PIF)	Capacity (MW) (Expected at CEO Endorsement)	Capacity (MW) (Achieved at MTR)	Capacity (MW) (Achieved at TE)
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Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	69,628			
Male	69,629			
Total	139257	0	0	0

Part II. Project Justification

1a. Project Description

This project is part of the government's environmental strategy, through the Ministry of the Environment, and aims to establish and strengthen the environmental governance of ecosystems and watersheds on the national territory. The central pivot of this management and governance framework will be focused and defined at the local level (watershed) and called Participatory Citizen Combine for the Environment (CPCE). The CPCE as a local governance structure that should benefit from technical, operational and structural capacity building to enable it to play a fundamental role in the implementation of the project. This structure will have 3 objectives:

- Exchanges at the level of watersheds
- Concertation
- Action

All this will also be done in collaboration with the relevant Communal Office of Environmental Management (in French, Bureau Communal de Gestion de l'Environnement (BCGE)). Within the framework of the improvement of the conservation and valorisation of biodiversity and also of the restoration of the plant cover, the Germplasm Center of Levy will be reinforced to guarantee the sustainability of the nurseries. The research and laboratory unit of this germplasm center will be reinforced with a trained technical team and appropriate materials for research activities on endemic and endangered species of our biodiversity.

In the same vein and to guarantee a triple food, economic and environmental security, the concept of a Garden as a pantry of abundance and biodiversity will be applied in the project area and techniques already experimented in other parts of the country will be put into practice. During the PPG phase, more detailed information will be collected and detailed in the project document.

This project will be executed by the Ministry of Environment with the support of UNDP and an exit strategy will be developed during the project document development phase. This exit strategy will be implemented by the Ministry of Environment with the support of the project.

1.Global environmental problems, root causes and barriers that need to be addressed

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Baseline situation

The Republic of Haiti is located on the island of Hispaniola, in the Greater Antilles archipelago of the Caribbean Sea. The country is a Small Island Developing State (SIDS) of 27,750 km², with a population of ~10.98 million people and a population growth rate of ~1,2% per year. Haiti is a well-known biodiversity hotspot, characterised by its multiple climatic features, dominated by a tropical climate with variation depending on the altitude: Haiti is the most mountainous nation in the Caribbean. The island is partly volcanic and partly comprised of uplifted old coral reefs. About 70% of the land is mountainous. Because of its diverse climate and relief, Haiti's biodiversity features a large number of endemic species – not to mention species endemic to Hispaniola. The country includes 33 watersheds, which provide various goods and services to all these species and the population. In order to protect its significant natural resources, the government of Haiti has created a national protected area system or “Système National d'Aires Protégées” (SNAP) in 2014; today, there are 14 terrestrial and 11 marine protected areas within this system, managed by Agence Nationale des Aires Protégées (ANAP). Most of them are located in the southern region of Haiti, where the last remaining primary forests can also be found.

The southern region of Haiti is composed of 4 departments: the South department with a population estimated at 775,000; Grande'Anse, with 468,000 people; Nippes with 343,000 people; and Southeast with 633,000 people – which is approx. 20% of the total population. The southern region of Haiti is an important biodiversity hotspot, which includes two of the country's largest national parks, namely Morne la Visite and Pic Macaya. These parks are located respectively in Massif de la Selle and Massif de la Hotte, which also contain the last remaining primary forests of Haiti (see Figure 1). Primary forests exhibit unique ecological features with abundant native tree species and no clearly visible indications of human activities. These forests are essentially located in Macaya-Grande Colline in Massif de la Hotte. Massif de la Hotte (1,451 ha) and Massif de la Selle (1,582 ha)^[1] have the highest number of endemic species of the country – in particular amphibians and reptiles – which are mostly confined to the primary forests. Massif de la Selle, which also includes Pine Forest National Park, constitutes an important link to the Caribbean Biological Corridor, connecting Haiti with south-western Dominican Republic. These two massifs are classified as Key Biodiversity Areas (KBA) of Haiti (see Figure 2) and were designated as UNESCO Biosphere Reserves.

[1] Hedges S.B., Cohen W.B., Timyan J. and Yang z. (2018). Haiti's biodiversity threatened by nearly complete loss of primary forest. PNAS 115 (46): 11850-11855

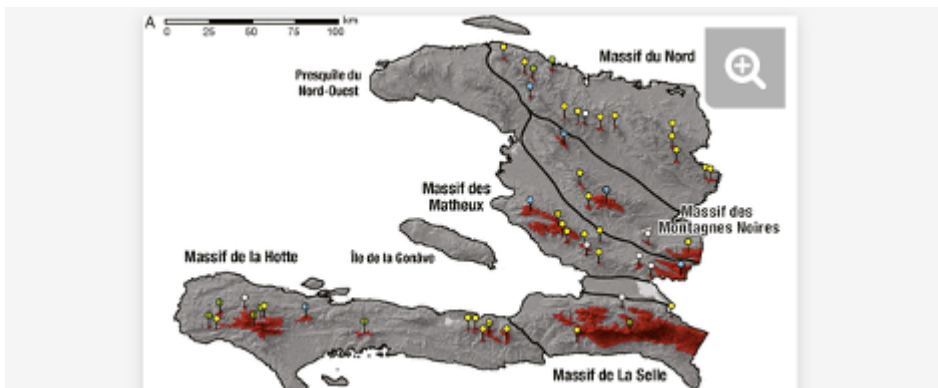


Figure 1: location of the primary forest areas of Haiti^[2]. Terrain map showing elevation (dark gray), geographic features (labeled), and distribution (red) of the 50 largest mountains in Haiti, >1 km² above 1,000-m elevation. Green pins are mountains with primary forest in 2016 (>0.5% of total area for the mountain), blue pins are mountains where primary forest was negligible (0.5–0.1%) in 2016, and yellow pins are those that had completely lost primary forest by 2016 and are bald. Mountains with white pins became bald before the earliest measurement (1988), probably during 1986–1988.



Figure 2: the 31 Key Biodiversity Areas of Haiti^[3].

In addition to these two key massifs, the southern region of Haiti includes 9 marine protected areas, established in 2013, and coastal zone ecosystems with mangrove forests, estuaries and coral reefs.

The exceptional biodiversity of the southern region of Haiti and its ecosystems provide key goods and services to the population; for example, watersheds supply drinking water, water for agriculture and manufacturing. Watersheds also provide habitat to numerous plants and animals. Being essentially agricultural communities, the vast majority of Haiti's population is heavily reliant on the free goods and services derived from their ecosystems. The goods and services they rely on include nutrient cycling, soil stabilisation, water infiltration and protection from floods. These services are all the more important in Haiti as the country is prone to recurrent natural hazards including earthquakes and extreme weather events (e.g. droughts and heavy rainfalls); the country lies in the middle of a hurricane belt with most severe storms taking place from June to October. In the context of natural hazards, ecosystems serve as a buffer to protect the population. For example, well-managed forests and watersheds play a critical role to protect the population by reducing risks of floods, landslides and other hazards.

Despite their significant role to support livelihoods, existing regulations and the establishment of protected areas, Haiti's key ecosystems, namely watersheds and forests, face increasing pressures. For example, primary forest cover shrank from 4.4% in 1988 to 0.32% in 2016, leaving the country with less than 1% of its original primary forest; the total forest cover was estimated at 2% in 2006; Haiti is therefore amongst the most deforested countries of the world: 42 of Haiti's 50 largest mountains have lost their primary forests. At the current rate, it is expected that Haiti will lose all of its primary forest during the next two decades^[4]. Large-scale deforestation has contributed to the degradation of watersheds: 25 out of the country's 30 watershed are now completely deforested. Compounding this baseline scenario, the impacts of COVID-19, affecting all economic activities in the country for several months, will contribute to accelerate the pressure on the country's natural resources.

The main causes of this widespread environmental degradation, deforestation and soil erosion are population growth – Haiti having the highest population density in the Caribbean Community – and unsustainable economic activities and practices. In the southern region, where deforestation and advanced soil degradation are observed, livelihoods are essentially based on the use of natural resources for agriculture, forestry and fisheries. Charcoal production, a key source of income for many households (between 30 and 50 million trees are cut down each year to produce wood-fire and charcoal) and clearing for new agricultural areas (currently 44% of the country is under cultivation, while less

than 30% of the land is suitable due to uneven relief with many mountains^[5]– are key drivers of land degradation in the region. These unsustainable practices are driven by poverty and food insecurity, which are salient in Haiti. Over 6 million Haitians live below the poverty line with less than USD 2.41 per day, and more than 2.5 million are below the extreme poverty line of USD 1.23 per day. The country ranks 68th on the UNDP Human Poverty Index scale, and is the poorest country in the Western Hemisphere^[6]. Forecasts already show an increase in the level of poverty in the country due to the COVID-19 pandemic impacts. This situation will also affect the food security of the country. Poverty is exacerbated by political instability, which has contributed to hinder the country's economic and social development, resulting in tenuous economic situation for the vast majority of the population. In addition, Haiti is highly exposed to natural hazards, which often lead to heavy damages to all sectors – water, health, infrastructure, food security among others – and cause losses and damages to the country's economy: for example, Hurricane Matthew, which hit the country on 2016, caused an estimated loss of 32% of the country's GDP; recovery efforts are still ongoing^[7]. To reduce its fiscal deficit, the government implemented drastic cuts in capital investments and social programs in 2019, leading to additional negative impacts on the population. Climate change is expected to intensify the impacts of natural hazards in Haiti, with negative effects on the natural environment and the livelihoods of the most vulnerable communities.

Poverty – a key driver of environmental degradation – is accentuated by unsustainable agricultural practices and weak agricultural productivity. While 70% of the population of Haiti relies on agriculture, this economic sector only contributed to 22% of the GDP in 2017; the main economic sector is services (contributing 57.6%), and the third one is industry (20.3%)^[8]. Agriculture in Haiti is essentially composed of small-scale farms. Despite a potential to be an important driver of economic growth, through both domestic and export markets, the sector is undermined by the pressure of a growing rural population on natural resources, their use of rudimentary agricultural tools, the lack of access to technologies and knowledge of sustainable agricultural practices, and natural hazards like droughts. These elements also contribute to the limited agricultural productivity in Haiti. With limited means and knowledge to practice sustainable agriculture and agroforestry, conversion of forests to agricultural fields and slash-and-burn practices are frequent; they not only contribute to deforestation but also to the depletion of critical soil nutrient and soil capability to retain water. The degradation of ecosystems leads to soil erosion, losses of key ecosystem services (like provision of clean water and protection against natural hazards like floods), reduced productivity of arable land, increased droughts, and desertification. These impacts further put agriculture, ecosystems and rural livelihoods at risk. Land degradation and overexploitation of the natural resources also occur in protected areas. As a result, loss of soil fertility, erosion and serious flooding are observed in particular in degraded watersheds, leading to a vicious circle of increased vulnerability of the population, destruction of crops and infrastructure^[9], and enhanced exposure to natural hazards. This, in turn, leads to additional pressure on the ecosystems, for the production and sale of charcoal or search of arable land.

Forests, coastal and marine areas, along with the services provided by these ecosystems, are threatened by unsustainable economic activities in southern Haiti. While it is possible to combine economic activities with the preservation of the natural resources, the high level of poverty and food insecurity in Haiti, a lack of promotion of agroforestry, basic capacities to implement agriculture and limited access to competitive markets for producers have pushed many farmers in the southern region to cut down trees – including cocoa trees which were historically one of the main agricultural products in the south department and contribute to maintaining forest cover – to produce charcoal and short-cycle food-crops like beans and corn. Watershed degradation and deforestation in the southern departments as well as the lack of protective vegetative cover has led to increased evapotranspiration, impacting agricultural yields. Bare soil also contributes to increase the impacts of tropical storms and hurricanes. The result is continuous, significant biodiversity losses in Haiti, which are accentuated by natural hazards and climate change impacts.

The proposed project will intervene in five watersheds of Southern Haiti, namely Aquin-Saint Louis du Sud, Cavaillon, Les Cayes and Tiburon-Port Salut – all four mostly in the South Department –, as well as the Corail-Anse à Veau watershed, split between the Grand’Anse and Nippes Departments. Six communes within these watersheds have been pre-selected for interventions, following a participatory process involving community consultations (see Section 2 & Annex E). A multi-criteria approach was used to select the target watersheds. Criteria included:

- 1) significance of BD;
- 2) level of threats to BD and associated habitats;
- 3) presence of baseline initiatives; and
- 4) community demand.

The table below summarised key characteristics of the target watersheds identified during the selection process.

	Aquin-Saint Louis du Sud	Cavaillon	Les Cayes	Tiburon-Port Salut	Corail-Anse à Veau
Area	700 km ²	380 km ²	720 km ²	540 km ²	880 km ²
Pre-selected target communes	Saint Louis du Sud	Maniche, Camperin	Cayes	Coteaux	Baradères
Population of pre-selected target communes ^[10]	64,924 (women: 31,895; men: 33,029)	Maniche: 23,924 (women: 11,147; men: 12,787) Camperin: 45,043 (women: 21,348; men: 23,695)	Cayes: 151,696 (women: 77,220; men: 74,476)	21,302 (women: 10,180; men: 11,122)	41,245 (women: 18,843; men: 22,402)

<p>Environmental characteristics</p>	<ul style="list-style-type: none"> · Coastal & marine ecosystems, incl. mangroves · Mountain ecosystem with extensive tree cover (dry forests) · Arable plains <p>Typical vegetation species: <i>Cassia siamea</i>, <i>Azadirachta indica</i>, <i>Coffea arabica</i>, <i>Theobroma cacao</i>, <i>Haematoxylon campechianum</i>, <i>Mangifera indica</i>, <i>Simaruba glauca</i>^[11]</p>	<p>Communes located within the Massif de la Hotte (BD hotspot)</p> <ul style="list-style-type: none"> · Laborde Lake, Lachaux Lake^[12]: largest freshwater body in the country (endemic Salizia fish). · Mountain ecosystem (dry forests) · Arable plains <p>Typical vegetation species: <i>Cassia siamea</i>, <i>Artocarpus incisa</i>, <i>Persea Americana</i>, <i>Cedrela odorata</i>, <i>Psidium guayava</i>, <i>Haematoxylon campechianum</i>, <i>Citrus limon</i>, <i>Mangifera indica</i>, <i>Citrus sinensis</i>, <i>Schaefferia frutescens</i>, <i>Simaruba glauca</i>, <i>Swietenia mahagoni</i></p>	<ul style="list-style-type: none"> · Coastal & marine ecosystems (incl. mangroves) · Arable plains <p>Typical vegetation species: <i>Cassia siamea</i>, <i>Artocarpus altilis</i>, <i>Persea Americana</i>, <i>Cedrela odorata</i>, <i>Psidium guayava</i>, <i>Haematoxylon campechianum</i>, <i>Mangifera indica</i>, <i>Citrus sinensis</i>, <i>Schaefferia frutescens</i>, <i>Citrus limon</i>, <i>Simaruba glauca</i>, <i>Swietenia mahagoni</i></p>	<ul style="list-style-type: none"> · Coastal & marine ecosystems, incl. mangroves · Mountain ecosystem with extensive tree cover (dry forests) · Arable plains <p>Typical vegetation species: <i>Artocarpus incisa</i>, <i>Bocconia frutescens</i>, <i>Cedrela odorata</i>, <i>Theobroma cacao</i>, <i>Mangifera indica</i>, <i>Swietenia mahagoni</i></p>	<ul style="list-style-type: none"> · Coastal & marine ecosystems, incl. mangroves · Mountain ecosystem with extensive tree cover (dry forests) · Arable plains <p>Typical vegetation species: <i>Cassia siamea</i>, <i>Artocarpus incisa</i>, <i>Persea Americana</i>, <i>Ceiba pentandra</i>, <i>Haematoxylon campechianum</i>, <i>Mangifera indica</i>, <i>Spondias mombin</i></p>
<p>Examples of threatened species</p>	<p>Birds: <i>Todus angustirostris</i>, <i>Melanerpes striatus</i>, <i>Falco columbarius</i>, <i>Amazona ventralis</i>, <i>Patagioenas squamosa</i> etc.</p> <p>Plants: <i>Tamrindus indica</i>, <i>Coffea arabica</i>, <i>Guaiacum officinale</i></p>	<p>Birds: <i>Pelecanus occidentalis</i>, <i>Ardea herodias</i></p> <p>Others: tortoises, <i>cama</i> fish, leech species</p> <p>Plants: <i>Eugenia jambos</i>, <i>Inga vera</i></p>	<p>N/A</p>	<p>Birds: <i>Todus angustirostris</i>, <i>Melanerpes striatus</i>, <i>Psittacus erithacus</i>, <i>Amazona ventralis</i>, <i>Columbina passerina</i>, <i>Falco columbaris</i>, <i>Corvus palmarus</i> etc.</p>	<p>Marine & freshwater species: turtles, <i>Epinephelus morio</i>, magrit fish, crayfish, <i>Strombus gigas</i></p>

	<ul style="list-style-type: none"> · Deforestation (incl. mangrove), lack of tree cover threatens some agroforestry cultures such as coffee and cocoa · Impact of cyclones (landslides, damaging of mangroves) · Overfishing 	<ul style="list-style-type: none"> · Erosion of hillslopes, causing siltation in water bodies · Deforestation 	<ul style="list-style-type: none"> · Deforestation · Impact of cyclones (landslides, damaging of mangroves) · Overgrazing 	<ul style="list-style-type: none"> · Deforestation from charcoal production, threatening bird species · Climate change: erratic rainfall, more frequent droughts · Increased frequency of animal pests · Impact of cyclones (landslides, tree falling incl. fruit trees) · Reduced water availability · Overfishing 	<ul style="list-style-type: none"> · Deforestation (incl. mangrove) from charcoal production and canoe construction, threatening bird species · Climate change: erratic rainfall, more frequent droughts · Reduced water availability · Overfishing · Increased frequency of animal pests · Impact of cyclones (landslides, tree falling)
	<ul style="list-style-type: none"> · Agriculture: maize, beans, yam, banana, potato, cassava, market gardening, pineapple, melon, sugar cane, vetiver, rice, giraumon · Livestock: cattle, goats, poultry, sheep, hog · Coal production, fisheries 	<ul style="list-style-type: none"> · Agriculture: cassava, market gardening, beans · Livestock: cattle, goats 	<ul style="list-style-type: none"> · Agriculture: market gardening, manioc, beans, melon, sugar cane, vetiver, rice, giraumon · Livestock: cattle, goats · Coal production, fisheries 	<ul style="list-style-type: none"> · Agriculture: maize, beans, yam, banana, pistachio, coconut, potato, cassava, market gardening, papaya · Livestock: cattle, goats, poultry, sheep, hog · Coal production, fisheries, fruit processing 	<ul style="list-style-type: none"> · Agriculture: maize, beans, yam, banana, rice, sugar cane, coconut, potato, cassava, pearl millet, taro, market gardening, coffee, pineapple · Livestock: cattle, goats, poultry, sheep, hog · Coal production, fisheries, canoe construction, beekeeping, handicraft, commodity processing (chocolate, castor oil, distillation)
	<ul style="list-style-type: none"> · Fisheries · Agroforestry in association with coffee and cocoa · Commodity processing · Pineapple cultivation 	<p>Development of a sustainable agroforestry system based on cocoa in the area of Camperin and Maniche following the AYITIKA model (cf. Annex F).</p>	<ul style="list-style-type: none"> · Agroforestry (fruit trees) · Aquaculture 	<ul style="list-style-type: none"> · Agroforestry (fruit trees) · Aquaculture 	<ul style="list-style-type: none"> · Agroforestry in association with cocoa · Livestock keeping · Beekeeping

Barriers to the improvement of the flow of ecosystem services in biologically-rich watersheds of the Southern region of Haiti

The following major barriers have been identified that prevent the achievement of the project overarching objective.

- Barriers related to governance and capacity to mainstream biological diversity (BD) protection into watershed management

In February 2019, a draft law was formulated to reform and secure land tenure[1]. This law has not been voted by Parliament yet, but, once it is adopted and promulgated, it should form a solid basis for any land-use planning initiative. Similarly, a draft law on territorial planning at the national level was prepared[2] but was never adopted. In the meantime, land-use planning is largely conducted on a project by project basis, and attempts to mainstream land-use planning into regular institutional practices in the southern region have so far mostly focused on urban areas, particularly prone to seismic hazards (e.g. the UNDP- and GoH-funded “Land-use planning project”, that targeted the districts of Cayes, Axe des Palmes and Jacmel in southern Haiti). In southern Haiti, a limited level of experience has been generated with the development of watershed-level plans through dedicated projects, such as GEF projects #5380, # 9750 and #5531.

Another governance barrier to the achievement of the project objective is the inadequate coordination between stakeholders influencing ecosystem conditions and dynamics. These stakeholders will be identified during the PPG phase based on the organizational law of the Ministry of the Environment published in 2020. Despite being inter-institutional and inter-sectoral in nature, in practice these entities do not create the conditions for effective dialogue and coordination, especially regarding the interactions between the agriculture and environment sectors – under the mandates of MoE and MARNDR, respectively. This situation is compounded by the lack of capacity of the MoE and MARNDR to fulfil their mandates. The MARNDR has constrained financial, technical and human resources, and, as a consequence, very limited field presence for the promotion and enforcement of regulatory frameworks – including spatial development plans. The MoE has reasonable staff based in the Departments, but many of them are actually located in Port-au-Prince. Similar constraints apply to the National Agency for Protected Areas (ANAP), which is highly dependent on donor-funded projects.

In addition to the barriers above, there are gaps in the availability of tools and capacity of using such tools to inform decision-making related to development planning – especially integrating BD conservation – at the watershed level. While the capacity of the MoE to develop terms of reference and review Environment Impact Statements is currently being strengthened under GEF project #5380[3], specific tools to support spatial planning in watersheds, environmental monitoring, and information management systems are yet to be made available to relevant local stakeholders[4] – this could be facilitated by the significant capacities for information management developed in the National Centre for Geospatial Information (CNIGS) with support from the European Union.

- Barriers to the full provision of ecosystem services in BD-rich watersheds

As described in the sections above, BD-rich watersheds in the southern region of Haiti are increasingly being degraded. This is causing ecosystems to not provide the full suite of services that could be expected of well-functioning ecosystems, including provisioning services (e.g. forest products, aquifer recharge), regulating services (improvement of water quality, erosion control, protection of infrastructure against extreme weather events) and supporting services (e.g. nutrient cycling).

In productive landscapes, the management of perennial-based crop systems often does not reflect biological diversity conservation needs. Basic, low-input management systems tend to be more favourable for BD than alternative land uses, but the specific ecological requirements of high conservation priority species are not necessarily met. Such requirements include: i) trees with fruit and flowers preferred for food by birds and bats; ii) the structural diversity of shade systems that favour small mammals; iii) microclimate to favour amphibians; and iv) spatial configurations to favour cross-landscape movement between ecosystem remnants. The concept of Jardin garde-manger de l'abondance et de la biodiversité is advocated by the MDE and combines several of these conditions, and therefore constitutes a favorable environment for the conservation of BD. However, the value of Jardins garde-manger de l'abondance et de la biodiversité is not widely recognized, and this model is not sufficiently popularized. Therefore, the project should contribute to the promotion of this innovative concept and its replication on a large scale.

- Barriers to market-based practices for commodity-related Small and Medium Enterprises (SME)

A number of barriers impede the development of market-based practices for commodity-related SMEs.

- o Inadequate capacities for processing: SMEs generally lack transformation and packaging tools required to extract additional value-added from raw commodities and access markets. The lack of capacity to use such tools is another constraint.

- o Lack of business skills: this is the main behavioural barrier preventing the development of commodity-based businesses. Related entrepreneurial skills include the capacity to identify bankable market opportunities, design a sustainable business plan, access funding and manage finances.

- o Lack of labels to certify commodity-based products: such labels either do not exist or are not promoted for producers to adopt them. This is limiting the dissemination of quality standards, impeding verification of such standards and ultimately hampering access to national and international markets.

- o An innovative geo-referencing online platform (<http://agrotracking.ht/login.aspx>) to register commodity-based SMEs was created. Its objective is to help producers meet traceability requirements to boost consumer confidence in the safety and quality of products, and to help producers increase their competitive edge in the marketplace. The platform is backed by agronomic and traceability advice delivered directly to registered producers and cooperatives. However, the development of the platform was dependent on project funding, and is now halted with only one value chain (vetiver) benefiting from this promising tool. Other value chains should be accompanied to register on the platform, and the development of the platform itself would need to be continued to serve a greater number of beneficiaries.

- Barriers to knowledge generation and dissemination

In terms of environmental knowledge, the Haitian context is characterised by a wealth of dispersed information. A number of studies and reports have been produced over the years through government-led programmes, donor-funded projects and research initiatives, but these documents are often not disseminated adequately or readily available to the GoH, CSOs, NGOs, donor partners and other practitioners. While this widely-acknowledged gap is being bridged through the GEF-funded project “Developing core capacity for MEA implementation in Haiti” thanks to the development of an Environmental Information System (EIS), this EIS will not be planned to integrate any module on the valuation of ecosystem services in Haiti. Studies on this topic have been produced^[5], but are difficult to find. In addition, it is anticipated that the National Observatory of Environment and Vulnerability (ONEV^[6]) and the MoE – which will be in charge of maintaining the EIS after the termination of the above-mentioned project – will still be in need of technical support to fulfil this role.

2) Baseline projects

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Under the baseline scenario, biodiversity-rich ecosystems like watersheds and forests in Haiti will continue to be degraded, leading to a complete loss of primary forests by 2035, and a drastic reduction of biodiversity in one of the world's richest countries in terms of natural resources. Land degradation will have a negative effect on crop yields through decreasing water availability and soil quality, as well as more frequent and severe floods and landslides, particularly in fragile watersheds. Alternative economic activities such as wood extraction will also increase the pressure on these ecosystems and further reduce agricultural productivity. Unsustainable land management practices in watersheds of the southern region will contribute to the ongoing degradation of ecosystems that provide important services such as flood mitigation, water infiltration and soil stabilisation. In addition, population growth and settlement in protected areas will continue to place unsustainable pressure on watersheds. Overall, these dynamics will result in increased poverty and food insecurity, as well as increased vulnerability to natural hazards and climate change.

Various projects totalling US\$ 95,129,305 are currently being implemented to address socio-economic and environmental problems in the southern region of Haiti. The following baseline projects, identified as mobilised investment complementing the GEF investment, are considered.

Projet JADEN KREYOL (implementation from 2019 to 2024)

Projet Jaden Kreyol is funded by Affaires Mondiales Canadiennes for USD 3,770,000.

This project aims to develop agroforestry for the production of cocoa and coffee in southern Haiti, in the buffer zone of Macaya park; this will contribute to reduce pressures on the park's natural resources. To achieve this objective, 250 ha of new plantation are being established and 800 households are receiving training on the sustainable management of these plantations. Moreover, producers in the targeted area are linked to major coffee and coca cooperatives to facilitate the marketing and sale of their products. With regards to sales, the project provides a specific support to women and young girls, who receive marketing training for the management of cooperatives. In addition to supporting value chains for cocoa and coffee production in the South Department of Haiti, the project provides training on climate change adaptation using agroforestry, and capacity building on this theme for local and departmental governments.

Programme innovation technologique en agriculture et agroforesterie (Agriculture and Agroforestry Technological Innovation Programme, PITAG; implementation from 2017 to 2022 with possible extension 2023)

This programme, implemented in Nord, Nord-Est, Artibonite, Sud and Grande-Anse departments, is funded by the Inter-American Development Bank (IDB), the World Bank, IFAD and Global Agriculture and Food Security Program (GAFSP). The general objective of this programme is to increase smallholders' income and food security in selected areas of Haiti. To achieve this, the programme will increase agricultural productivity, and improve the use of natural resources through the adoption of sustainable technologies. The programme started in 2017 and has a total budget of USD 76,859,305.

There are 2 major components to this programme:

- Component 1: applied research and training for the development and adaptation of sustainable agricultural technologies. This component will finance the following activities: i) applied and adaptive agricultural research projects developed and implemented by national and/or international institutions, in order to create, improve and/or adapt innovative, profitable, and sustainable agricultural technologies that will enhance the supply of technological options available to farmers; and ii) strengthening of the higher education curriculum to improve applied and adaptive research and technology transfer capabilities. The results of Component 1 will progressively provide input for the technology menu promoted by Component 2 of the proposed project.

- Component 2: promotion of sustainable agricultural technologies. This component will finance the adoption of innovative, profitable and sustainable agricultural technologies that will improve long-term farm profitability and generate positive environmental externalities. This component will be implemented through the agricultural incentives program conducted by the Ministry of Agriculture, Natural Resources and Rural Development (MARNDR) and the technologies will be adapted to the different agro-ecological environments, local context and climate change perspectives. The technology menu may include: small irrigation equipment, harvest and post-harvest equipment as well as the application of sustainable agricultural practices (agroforestry systems, sustainable soil and water management techniques).

Project PITAG is implemented in 5 Departments of Haiti, out of which only two – Grand Anse and South – are targeted by the proposed project. This will be considered while estimating the mobilised investment for this project (see section 5).

AYITIKA: promotes the genetic heritage of Haiti's cocoa beans and develops synergies with various specialized institutions. It maintains partnership agreements with the Ministry of Agriculture, Faculties of Agronomy; and strategic alliances with producer organizations. It also develops specific relations with training and research centers specialized in cocoa at the international level and in Europe.

Fermented cocoa is dedicated to the international market, particularly niche markets (Fair Trade, organic) where there is a system of premiums and remunerative prices for producers. Precisely the FARMFORCE used by AYITIKA is a traceability tool that allows to set up a good internal control system that guarantees the obtaining of these advantages by the small producers. And this tool is also used by large international companies. The use of this traceability tool <https://farmforce.com/> is expected to be reinforced with the project. A positive experience that has been shared by the CEO of AYITIKA : “Farmforce gives AYITIKA and the customers security and certainty in the sustainable origin of Haitian cocoa by providing bag level traceability back to individual certified farmers. With the Farmforce platform it is possible to digitally capture cocoa purchases from specific farmers including real time management of certified quotas to ensure that AYITIKA certified cocoa is grown to their high standards. This digital transparency allows AYITIKA to differentiate our cocoa and ensure its credibility.”

Irrigated agriculture project for the South Department of Haiti (implementation from 2020 to 2025)

AFD has approved this project, funded at USD 14,500,000. This project, which targets in particular Aquin and Cayes in the South Department of Haiti, seeks to rehabilitate water infrastructures, in particular secondary canals, and improve social water management through the establishment and structuring of irrigators committees. Moreover, support will be provided to farmers to improve the productivity and sale of selected crop species (to be determined at project onset). The project is built around 3 main components:

- Component 1: Rehabilitation of critical water point, with support from the local populations. This will include a rehabilitation of irrigated agricultural plots, water pipes and water retention infrastructure, as well as building of small infrastructure like cisterns and drinking trough for livestock farmers;
- Component 2: Capacity building for sustainable management of water infrastructure. This will include the establishment of irrigator committees and their training to maintain the rehabilitated water infrastructure and ensure sustainable use of water for agriculture;
- Component 3: Strengthening of the value chains for selected agricultural products. Technical support to improve yields through irrigated agriculture will be provided to farmers. Moreover, access to market will be improved, processing equipment provided and access to credit will be facilitated to support agricultural development.

Component 3 of this project, which is estimated at USD 1,900,000, will be considered as cofinance to the proposed project.

Sustainable management of wooded production landscapes for biodiversity conservation (Planned implementation 2021-2028)

This project aims to generate major biodiversity benefits, as well as sustainable land management benefits and collateral gender-sensitive socioeconomic/livelihood benefits by enhancing conditions and capacities among farmers in the north of Haiti to manage BD-friendly, sustainable and economically viable tree-based production systems (diversified cacao, coffee and home gardens). It will be funded by GEF and implemented by FAO in collaboration with MoE of Haiti and UNDP. This project is developed around 3 components:

- Component 1: Creation of enabling conditions for application and scaling-up of landscape management model;
- Component 2: Conservation compatible tree-based production systems as part of sustainable landscape mosaics;
- Component 3: Knowledge management and learning.

Experiences from this project will be used to guide the implementation of some of the project's activities. In addition, certain studies and expertise on some topics will be shared between the projects in order to create synergy. Studies on Cocoa value chain that will be developed in GEF-6 project will be used in the project.

Geonova and Solutions S.A.: Agrotracking Platform modules and mobile app

Geonova has developed Agrotracking over the past six years, an on-line platform that allows actors in a value chain to geo-locate, identify and retrace a product's history from source to consumer or from consumer to source by means of recorded reliable cloud-based data collection. The platform relies on four key pillars of information in order to be effective: i) identification of producers/area of production; ii) identification of products; iii) identification of transport infrastructure; and iv) recording of the movement of products (transport, transactions, packaging, storage, etc.) every step along the way to the final consumer.

The data collected allows the user to meet traceability requirements and help producers increase their competitive edge in the marketplace. The app allows the consumer to know who produced what they bought and the route it took to get to them. Data gathered from the field also enable improved decision making in terms of when product will be available, where, how much is harvested, when is it ready for pick up, etc. Through this platform, farmer sales directly in the field and, through local electronic banking apps, can pay for produce picked up by transporters for delivery to the processing plant.

Thanks to improved logistics in terms of knowing in advance when a product is ready to be picked up and where, losses are reduced and delivery sped up. Through this platform, the long-term goal of Geonova is to enable farmers and exporters to meet the increasing demands of higher-value export markets, and to modernise and consolidate the different value chains.

The geo-tracking app has received various support since its launch in 2008, especially from the private sector. Today the platform only provides services for the producers and buyers of vetiver with ongoing financial support from UniKode (USD 4,000) and Organisation Internationale du Travail (OIT) (USD 40,000). However, Agrotracking can be upscaled to provide similar services for the producers of other key commodities such as cocoa and coffee, to geolocate and identify the producers in the southern region of Haiti, link them with key buyers, and Geonova can provide training on the platform use.

3a) Proposed alternative scenario

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Given the current socio-economic and political context in Haiti, a set of guiding principles have been adopted to steer the project's intervention strategy. These principles – outlined below – were widely discussed during extensive consultations^[7] for the preparation of the PIF.

- BD conservation for itself is difficult to accept by local populations, who cannot understand why access to certain resources – land, water, forests – on which their livelihoods rely should be restricted.
- As a result, the favoured avenue for BD protection should be the emphasis on how healthy, BD-rich ecosystem can improve livelihoods of local populations. The key concept to link this socially-conscious approach with the GEF TF's BD focal area is the notion of ecosystem services, which is thus be the backbone of the project strategy.
- The project should focus on working at a decentralised level, as: i) this is in line with Haiti's Constitution^[8]; and ii) centralised approaches – in particular in terms of capacity-building – have shown limited effectiveness in past BD-related initiatives in Haiti.
- Partnering with organisations that are well-established within target communities is a necessary condition to build on an existing confidence base and catalyse existing experience – as opposed to operating through a top-bottom approach.

The project objective is to increase the economic value of ecosystem services provided by restored biological diversity-rich ecosystems in the southern region of Haiti. In order to remove the barriers and achieve global environmental benefits, the financial resources of GEF will be invested in an incremental way to the aforementioned baseline initiatives, as detailed below.

Note: a Theory of Change diagram for the proposed project is presented in Annex D.

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3b) Brief description of expected outcomes and components

Component 1: governance strengthening and capacity-building to mainstream BD protection into watershed management

Outcome 1: planning and governance to mainstream BD protection into watershed management is improved

The GEF-funded project 5380 “Increasing Resilience of Ecosystems and Vulnerable Communities to Climate Change and Anthropic Threats Through a Ridge to Reef Approach to BD Conservation and Watershed Management” (known as the “EbA project”) underwent a mid-term evaluation in October 2018. One of the key lessons learned in terms of governance strengthening and capacity-building is that the EbA project's propositions to improve governance and inter-institutional coordination were excessively ambitious. In particular, Department-level sectoral platforms were largely ineffective, and there was little coordination between Environment and Agriculture Directorates at Department level. Taking stock of this lesson learned, the proposed project will adopt a two-tier approach. Under Output 1.1 the proposed project will identify gaps in the current environmental legislation at the national level in terms of specific angles that prevent the full mainstreaming of BD conservation into watershed planning. Such angles include the management of invasive alien species and the use of genetic resources, that are not adequately reflected in key legislations such as the Decree^[9] from 12 October 2005 on environmental management and the law from 24 May 1962 on the protection of trees. Recommendations will then be formulated through a participatory process to Draft proposals of updated laws and regulations addressing invasive species and genetic resources Training will also be provided to stakeholders from the public sector, the private sector, Civil Society Organisations (CSO) and Non-Governmental Organisations (NGO) involved in BD conservation to better understand how environmental rules and legislations should guide their activities. The second tier of interventions under Component 1 will focus on the local and watershed levels to establish a relevant governance framework for the

conservation of BD-rich ecosystems. To set up this governance framework, adequate tools will be made available to local authorities and relevant stakeholders (Outputs 1.1 & 1.3), building on existing capacities readily available at the national level, for example through the National Centre for Geospatial Information (CNIGS). During the Project Preparation Grant (PPG) phase, a review of such capacities will be conducted, along with a critical assessment of adequate tools available internationally (e.g. the Watershed Plan Builder developed by the American Environmental Protection Agency) that could be applied to target watersheds under the proposed project. Tools to be reviewed will also include any tools applied under similar projects in Haiti, such as the environmental monitoring tool under development by the French International Office for Forests (ONFI) for the Inter-American Development Bank-funded project “Managing the Human-Biodiversity Interface in the Southern Marine Protected Areas of Haiti”. The implementation of the governance framework at the local level (watershed) will be done through the establishment of a local governance structure called "Participatory Citizen Environmental Combite (in French: Combite Participative Citoyenne pour l'Environnement (CPCE))" (Outcome 1.4). The project will also help to strengthen the capacity of this local structure so that it can fulfil its role.

To further create an enabling environment for watershed-level planning that incorporates BD conservation priorities, awareness-raising programmes will be implemented (Output 1.6). These programmes will target specific publics – e.g. schooled and unschooled youths – and avenues – e.g. primary and secondary schools, youth village associations, women’s associations, cooperatives – that have proven efficient in conveying messages on the importance of the links between BD and sustainable ecosystem management. Such campaigns will be carried out through the Directorate of Education, Inspection and Environmental Monitoring in collaboration with the Civil Society Organisations (CSO) that are already well-established within local communities, with demonstrated experience and track record of implementing such activities.

Finally, the resolution of conflicts over the access and use of land and natural resources will be facilitated through the strengthening and/or establishment of conflict-resolution mechanisms at the community level, through the CPCE. Indeed, with less than 5% of total land formally registered in public records, land acquisition in Haiti, particularly in rural areas, is often dominated by undocumented or partially documented informal practices. According to a 2012 study^[10], only 10 to 15% of land-based conflicts are brought to court, the rest of them being mediated at the local level through mayors, churches, voodoo priests and other communal institutions – Communal Section Assembly (ASEC^[11]), Communal Section Board (CASEC^[12]) and Communal Section Development Council (CDSC^[13]). There is a need to strengthen such informal conflict-resolution mechanisms, and possibly to establish *ad hoc* mechanisms. Thus, the Participatory Citizen Environmental Combine (CPCE), in its function as a local governance structure, will play a fundamental role in conflict resolution. It will have 3 main objectives:

- Facilitate exchanges between stakeholders at the watershed level,
- Promote consultation;
- Contribute to the implementation of actions at the watershed level.

Outcome 1 will be delivered through seven indicative outputs:

1.1 Gaps in the mainstreaming of specific aspects of BD conservation (e.g. management of invasive species, use of genetic resources) into relevant national environmental laws and regulations identified and recommendations to update these laws and regulations formulated through a participatory process.

1.2 Relevant stakeholders from the public sector, the private sector, CSOs and NGOs involved in BD conservation trained on the interpretation and implication of environmental laws and regulations for their respective activities.

1.3 Tools for spatial planning in watersheds, environmental monitoring, and information management systems developed at the watershed level to facilitate planning and monitoring of watershed & landscape management

This output will build on lessons learned from some projects and initiatives undertaken by the government and other partners such as the South Watershed Management Program / Phase 2 and the Natural Disaster Mitigation Program (PMDN).

1.4 Watershed-level framework produced to coordinate watershed restoration and agroforestry promotion actions across southern Haiti

1.5 Capacity of local authorities enhanced to use the tools developed under 1.1 and to formulate plans for the socio-economic development of watersheds incorporating the conservation of ecosystem services

1.6 Information and awareness-raising programmes implemented for local communities regarding the relations between BD and the sustainable management of target watersheds

1.7 Conflict resolution mechanisms strengthened at the community level to limit tenure- and resource-use conflicts

Component 2: Biodiversity conservation and ecosystem restoration to strengthen the provision of ecosystem services

Outcome 2: BD-rich ecosystems (incl. Jardin garde-manger “market gardens” and uphill dry forests) are restored in pilot watersheds

Under Component 2 of the proposed project, target degraded ecosystems will be restored to improve the flow of ecosystem services, improve the conditions for BD conservation and serve as a basis for the documentation of the value of ecosystem services (Output 2.1). Three types of areas will be specifically targeted, the exact location of which be further determined during the PPG phase: i) *Jardin garde-manger de l'abondance et de la Biodiversité*; ii) ravine and stream-side environments; and iii) uphill dry forests.

Traditional creole market gardens – known in Haiti as *Jardin garde-manger de l'abondance* – are multi-level agroforestry systems that serve diverse purposes. This ancient culture system still holds an important role in agrarian landscapes of mountainous areas, and in the economic model of small agricultural farms. *Jardin garde-manger de l'abondance* are characterised by a large diversity of useful species (up to 69, according to a reference study^[14]), and fulfil agro-economic, environmental and socio-cultural functions, including: i) factor of food safety; ii) source of fodder and cattle-keeping ground; iii) income source; iv) habitat protection against weather events; and v) leisure area. These gardens range between 100 and 1000 m², and are typically structured into three layers, a lower layer with herbaceous plants, a shrub layer and a tree layer. In addition to their socio-economic importance and thanks to their biodiversity and layered structures, *Jardin garde-manger de l'abondance* have a capacity to value existing biological, organic and mineral resources and to protect soils despite difficult climatic and topographic conditions: heavy rainfalls, cyclones, dry spells and steep slopes.

Ravine and stream-side environments are key stewards of ecosystem services in terms of water quality regulation, nutrient cycling and soil stabilisation. They are particularly prone to run-off and erosion when their vegetation cover is degraded, leading to decreased aquifer recharge, increased siltation and water turbidity, nutrient wash-off and potential landslides^[15]. This can in turn compound damages in case of flood, affect agricultural productivity and be detrimental to riverine biodiversity – with documented impacts on marine BD as well^[16].

Finally, uphill dry forests have a key role in erosion control and soil stabilisation. These forests have been severely degraded mostly because of unsustainable fuelwood harvesting. Dry forests are present above 800 m of altitude, and are characterised by the presence of species such as *Pilosocereus polygonus*, *Senna atomaria*, *Guaiacum sanctum*,

Phyllostylon brasiliense Capanema and *Acacia macracantha* Willd. Although Haitian dry forests are severely degraded, encouraging results^[17] on the capacity of these ecosystems to recover when adequate actions are implemented have been published. They show the effectiveness of conservation approaches in Dominican dry forests, which are very similar to Haitian dry forests just across the border, and that have proven efficient in restoring the biological diversity of these ecosystems. Such approaches implemented in the Dominican Republic will be further reviewed during the PPG phase, and lessons learned incorporated into the design of activities for the proposed project.

In addition, as part of outcome 2.1, the project will also contribute to the increase of vegetation cover in the project area. The Ministry of Environment has a Plant Propagation Center with a production capacity of about 1.4 million seedlings per production cycle with an installed capacity of 4.5 million seedlings per year, located in Lévy (Camp-Perrin), in the Southern Department. The project will sign a Memorandum of Understanding with this Center for the production of seedlings for the project activities. Also, as part of the capacity building of this Center, the project will contribute to the creation of a mini-laboratory with the material and human resources necessary for its operation. However, the MoE, for certain activities related to the restoration of ecosystems, will be able to develop collaborations for the promotion of the cocoa sector. This is the case of AYITIKA which has expertise in the cocoa sector and has been working for about ten years with producers on the selection of local varieties of high quality in terms of flavor.

To facilitate the dissemination of best ecosystem restoration practices and provide indigenous species seedlings for restoration work, **nurseries** will be established by the proposed project (Output 2.2) in addition to the Levy Propagation Center and AYITIKA nurseries. **The nurseries for threatened trees will support reforestation/restoration efforts that are being undertaken by other groups such as AYITIKA (as well as this project) and the related work needed to establish this including how to make interventions sustainable. A synergy will be developed between these nurseries and the Plant nursery of Dosmond for the multiplication and reproduction of these species that will be used for restoration of 5,400 ha of forest and contribute to global environmental benefits.**

Finally, to bridge capacity gaps in terms of agro-forestry and agricultural best practices, agreements will be signed with voluntary farmers to receive technical training and necessary inputs, with a focus on the coffee sector. Management problems, such as the high incidence of coffee pests and diseases (especially shoot borers and rusts) and soil erosion, are largely a function of low access by farmers to financial capital (to be addressed under Component 3) and to effective technical assistance: agricultural research and extension services are available to only a small fraction of households. Output 2.3 will build on lessons learned from past and ongoing experiments in southern Haiti (e.g. from CROSE and AVSF in the Jacmel area) to contract farmers for the maintenance of tree cover.

Outcome 2 will be delivered through three indicative outputs:

2.1 Land restoration plans codeveloped in conjunction with the CPCE, local authorities, extension services and local communities, and implemented to restore vegetation cover in degraded watersheds:

- *Jardins garde-manger de l'abondance*
- ravine and stream-side areas
- uphill dry forests

2.2 **Nurseries for threatened trees to support reforestation/restoration efforts and the related work needed to establish this including how to make interventions sustainable, promote research and awareness-raising on the value of BD in the southern region department through the Levy Germplasm Center.**

2.3 Agreements signed with targeted farmers to receive technical training and necessary inputs to develop under-cover coffee culture in degraded areas, in exchange for their maintenance of the tree cover; and technical agronomical assistance brought to farmers to implement best practices for market garden keeping

2.4. Endemic and native species that have disappeared from the sites of Etang lachaux and Etang Laborde reintroduced and vulnerable and endangered species protected.

Component 3: market-based practices for commodity-related Small and Medium Enterprises (SME)

Outcome 3: market-based practices for commodity-related SMEs are strengthened to further increase the demonstrated value of BD-rich ecosystems

During the PPG phase, key commodity-based value chains (VC) to focus on will be selected, based on criteria including: i) links with BD conservation; ii) current development; iii) market potential; iv) accessibility of production sites. These VCs may include, but will not be limited to, coffee and cocoa.

Under Output 3.1, the innovative Tracking tool will be further developed to map out at least three of the target VCs selected during the PPG phase. The Tracking Platform modules and mobile app have been developed over the past six years, and constitute a multi-product, on-line, real time platform that allows actors in a VC to geo-locate, identify and retrace a product's history forward (from source to consumer) or backward (from consumer to source) by means of recorded reliable cloud-based data collection. The Platform relies on four key pillars of information in order to be effective:

- identification of producers/area of production;
- identification of products;
- identification of the infrastructure; and
- recording of the movement of products (transport, transactions, packaging, storage, etc.) every step along the way to the final consumer.

This will allow to identify producers and cooperatives for the dissemination of quality standards and certification (Outputs 3.3 & 3.4) and verification of such standards (Output 3.1). In addition, the mapping exercise will provide a basis for the identification of cooperatives in need of agribusiness and entrepreneurship training that will be conducted under Output 3.2 – as major gaps in such skills have been identified as a key barrier for the development of BD-friendly VCs.

Facilitating the development of strategic VCs – including through the provision of small transformation and packaging equipment (Output 3.6) – will ultimately increase the value-added extracted from commodities by local farmers. This is expected to relieve the pressure on tree resources from fuelwood felling, which is often the last livelihood options for destitute community members without other economic options, who thus turn to unsustainable coal production. Taking into account the impact of COVID -19 and given the interrelation between the socio-economic conditions of the populations and the conservation of biodiversity, other sustainable economic alternatives will be developed through this project. These activities will include cage aquaculture, which will contribute to reducing fishing pressure; beekeeping, which will help to strengthen plant cover; support for the processing of agricultural products to empower women's groups, and support for the conservation of fishery products through the acquisition and installation of solar refrigerators for the benefit of fisheries associations.

Finally, access to finance will be facilitated for farmers (Output 3.5). This will enable them to procure production equipment beyond the small processing facilities to be provided under Output 3.6, and generally invest to capitalise

on the business skills acquired through Output 3.2. Indicative activities – to be further assessed during the PPG phase – may include linking producers with existing micro-financing institutions and providing financial training at the cooperative (finance sourcing) and farmers levels (financial literacy).

Outcome 3 will be delivered through seven indicative outputs:

3.1 Mapping out of at least three target commodity-based value chains located nearby protected areas in southern Haiti conducted, using the Tracking software (geo-referencing); this will include a revitalisation of the Tracking platform and establishment of local focal points to locate producers, and verify compliance with production standards. **This will be based on past experiences in other value chains. GEONOVA has used and continues to use this technology for the vetiver and mango value chains with funding received in the past from UniKode and OIT.**

3.2 Identification and training of selected cooperatives in the region implemented, with a focus on marketing and agribusiness skills

3.3 Branding of agroforestry products developed (incl. coffee) to meet a growing domestic and international demand for products with known origin, certified production processes complying with sustainability criteria and fostering the provision of ecosystem services

3.4 Capacities of producer cooperatives/federations to monitor the compliance of their member producers with environmental management and traceability standards strengthened

3.5 Access to loans improved for agroforestry-based cooperatives to increase the quality and economic value of products derived from these sustainably-managed systems

3.6 Producers equipped with small-scale processing facilities and trained to use them to extract additional value from agroforestry products and other sustainable economic alternatives related to the protection of the environment for a post COVID-19 recovery developed

3.7 A long-term institutional, operational and financial strategy for **value chains** Tracking developed

3.8. Financial products (credit lines, green bonds, guarantee funds, impact investment funds, payments by results, etc.) established with necessary institutional capacity in place for the financing of biodiversity-friendly production practices, including agroforestry systems, community-based forestry, and sustainable cocoa livestock production including the following: a) business agreements with international and national buyers through public-private mechanisms.

Component 4: Monitoring & Evaluation (M&E), and knowledge generation and dissemination

- Outcome 4: information on the value of restored BD-rich ecosystems is compiled and disseminated, and constitutes an evidence base for awareness-raising and funding mobilisation

- Component 4 will be focused on knowledge management and capacity building. In terms of knowledge management, the proposed project will build on the Environmental Information System currently being developed by ONEV under the GEF-funded project “Developing core capacity for MEA implementation in Haiti”, and that will be handed over to MoE towards the end of this project. The purpose of the EIS is to ensure that environmental information is generated, accessible, shared and applied for improved implementation of the Rio Conventions. The proposed project will complement the EIS with a specific module to centralise information on ecosystem service valuations conducted

in Haiti (Output 4.1). Some such studies already exist, but information is dispersed and not readily available to the GoH, NGOs, CSOs and other practitioners.

Under Output 4.2, assessments of the value of ecosystem services provided by ecosystems restored under Component 2 of the proposed project will be conducted, and deposited onto the module to be created under Output 4.1. Conducting such assessments both before and after restoration will enable to draw comparisons and generate a body of evidence for future advocacy on the need to mainstream ecosystem protection – including for BD conservation – into development planning.

To facilitate the implementation of BD and ecosystem-related projects in Haiti, project management trainings will be provided to a range of stakeholders, including MoE, ANAP and MARNDR in particular staff from the Planning unit of each institution. (Output 4.4). These trainings would cover matters like project management tools, resources monitoring, and project indicators/results monitoring.

Under Outputs 4.3, communication supports will be developed and disseminated, through the Directorate of Communication of MoE, for the project's results to reach a wide audience. These supports will include annual newsletters intended for donor partners and development agencies, to facilitate the identification of potential synergies with other ongoing or upcoming initiatives. Finally, an exit strategy for the project will be prepared by the MoE with the support of the project, and discussed with all the partners involved. Throughout the implementation of the project, measures will be taken to ensure the sustainability of the actions. The support will be made with well installed capacities (technical, financial and material).

Outcome 4 will be delivered through five indicative outputs:

-
4.1 A national platform for ecosystem services accounting developed in conjunction with the Environmental Information System and operationalised

4.2 Assessments of the value of ecosystem services provided by target ecosystems (including Jardins garde-manger de l'abondance) conducted before and after restoration, and the results shared on the national platform for ecosystem services accounting

4.3 Communication supports developed and disseminated

4.4 Project management training provided to selected stakeholders within MoE, ANAP and MARNDR

4.5 Exit strategy for the project developed

4) Alignment with GEF focal area and/or Impact Program strategies

-
The proposed project adopts a watershed approach to foster biodiversity conservation, land management and the improvement of ecosystem services with a focus on improved agricultural practices and the strengthening of selected value chains. It is fully aligned with the following GEF-7 Biodiversity Focal Area objectives:

· BD-1-1: Mainstream biodiversity across sectors as well as landscapes and seascapes through biodiversity mainstreaming in priority sectors.

The proposed project will mainstream biodiversity conservation measures into the development of watersheds. In addition, conservation measures will be implemented under Component 2, benefiting the conservation of about 5,400 ha of biodiversity-rich areas.

5) Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF and co-financing

The proposed project will build on baseline projects and programmes that share a common focus on protecting the biodiversity of the southern region of Haiti, through improved, sustainable agricultural practices that lead to enhanced income generation for rural communities. In addition, the project will benefit from direct support from international and national institutions to implement its components. It will particularly address the barriers facing the baseline situation of lack of governance and capacity to mainstream biological diversity (BD) protection into watershed management and limited market-based practices for commodity-related Small and Medium Enterprises (SME).

Indicative total co-financing for the proposed project amounts to USD 26,270,000. It stems from the baseline projects further described in Section 2, as well as direct support – in cash or in-kind – detailed below. The following section outlines the additional cost reasoning for each of the four components.

Component 1: GEF support (for a total of USD 511,200) will be sought to strengthen the capacity of the Haitian government to mainstream biodiversity protection in watershed management; adequate tools to facilitate this mainstreaming will be identified during the project preparation phase. In addition, awareness-raising on the role played by watersheds and the services they provide to the communities will be organised with support from local NGOs well-implanted in the target region. Finally, conflict resolution mechanisms will be strengthened through GEF support to solve salient issues around access and use of land and natural resources in the project sites.

In addition to GEF resources, Component 1 will benefit from USD 200,000 cofinancing from UNDP; and USD 100,000 in-kind from the MoE.

Component 2: GEF support (for a total of USD 2,907,300) will be sought to restore critical ecosystems in the southern region of Haiti to enhance the provision of goods and services. Restoration interventions will take place in selected watersheds. This will contribute to enhance critical services for the nearby communities, namely soil nutrients, water retention and protection against floods and landslides. As a result, productivity and income from agroforestry activities will increase and the condition for biodiversity protection in the target areas will be strengthened. The approach adopted under Component 2 and supported by the GEF will be the co-development of land restoration plans with local communities and authorities and their implementation to restore critical ecosystems in the target region. In addition, nurseries for threatened trees will be established to support reforestation/restoration efforts and the related work needed to establish this including how to make interventions sustainable in the southern region.

In addition to GEF resources, Component 2 will benefit from cofinancing from PITAG at USD 20,000,000. This is the cost of Component 2 of PITAG project, which has a total budget of USD 76,859,305. This Component will disseminate sustainable agricultural technologies which will generate positive environmental externalities, like restoration and protection of ecosystems to enhance their provision of goods and services. USD 100,000 in-kind from the MoE; and USD 50,000 in-kind cofinancing from the Botanical Garden of Cayes, to provide training on ecosystem restoration to MoE and extension authorities, and facilitate exchange visits to the Botanical Garden of Cayes.

Component 3: Under this Component, GEF support (for a total of USD 1,175,530) will be sought to support the development of market-based practices for key value chains in the southern region of Haiti, including cocoa and coffee. GEF fund will serve to train SMEs producing selected commodities with a focus on marketing and agribusiness skills. Producers will also be trained to monitor the compliance to environmental and traceability

standards. Access to financing and markets will be facilitated and producers will receive small processing equipment to enhance the economic value of their agroforestry-based products, including coffee and cocoa. These products will be selected for their link with biodiversity conservation to raise awareness on the benefits brought by rich watersheds and ecosystems on agricultural productivity. This will contribute to further enhance awareness of the necessity for biodiversity conservation in Haiti.

In addition to GEF funds, Component 3 will receive a cofinancing of USD 3,770,000 from Projet Jaden Kreyol. Implemented in the Sud department, this project aims to promote sustainable agroforestry production and value chains with a focus on coffee and cocoa. Component 3 will also receive a cofinancing of USD 1,900,000 through Component 3 of AFD project providing support to strengthen selected agricultural value chains in the South Department of Haiti. Finally, USD 50,000 of in-kind support will be contributed by Geonova S.A; and 100,000 USD will be contributed by AYITIKA S.A. This company has developed the Agrotracking tool, which will be used to map out selected value chains, identifying producers and area of production and tracking the movement of the products every step to the final consumer.

Component 4: GEF support (for a total of USD 220,713) will be sought to compile and disseminate information on the value of restored ecosystems; this will serve as a basis for awareness-raising interventions and to raise funding for future interventions in the field of biodiversity in Haiti. The EIS set up by ONEV with support from GEF will be used to compile and make available environmental information. This information will include the one generated through the proposed project, which will be assessed through studies on ecosystem values conducted under this component. In addition to GEF fund, Component 4 will receive USD 50,000 in-kind support from the MoE, which will take responsibility of management the EIS during and after the project.

6) Global environmental benefits (GEFTF)

-
The project is expected to generate global environmental benefits (GEB) by restoring tree cover, limiting land degradation and protecting biological diversity. The proposed project will prioritise interventions in communes situated in the buffer zones of protected or significant BD-rich areas, such as Parc Macaya and Lake Lachaux. In particular, mainstreaming biodiversity conservation into the watershed development plans to be developed under Component 2 will strengthen the role of target areas as buffer zones. Globally-significant biodiversity to be protected will thus include *Plagiodontia aedium* F. Cuvier, *Coccyzus rufigularis* Hartlaub, *Loxia megalaga* Riley, *Pterodroma hasitata* Kuhl, *Turdus swalesi* Wetmore, *Caretta caretta*, *Chelonia mydas*, *Eleutherodactylus* amphibians, *Cedrela odorata*, *Cleyera bolleana* Kobuski, *Guaiacum officinale*, *Juniperus gracilior* etc. (all endangered or vulnerable).

In addition, the proposed project will protect environmental services – such as clean water and soil nutrients – as a basis for continued resilience. The proposed project will strengthen commodity-based livelihoods and ecosystem services for 139,257 smallholder farmers (50% of women; GEF-7 Core Indicator 11). GEBs will be generated through the implementation of sustainable landscape management practices on 5,400 ha of land, including forests and cropland (GEF-7 Core Indicator 4). As a result, specific GEBs expected from the project interventions include:

- the mainstreaming of biodiversity concerns into watershed development plans, contributing to limit the fragmentation of natural habitats;
- the promotion of genetically-diverse cultivars, including local and traditional species;
- the restoration of the tree cover;
- the preservation of naturally-occurring trees and shrubs through the promotion of fodder culture;
- a limitation of human pressure on forests for fuelwood harvesting; and
- reduced degradation of aquatic habitat through limited siltation from soil erosion.

The following table illustrates to which Aichi targets the proposed project contributes primarily.

Aichi target	How the proposed project will contribute
1: By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.	The proposed project will work with the population in the target watersheds, so that local people are able and committed to conserving forest biodiversity.
2: By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.	The proposed project includes consultation and planning at the watershed level, to mainstream biodiversity concerns into rural development in southern Haiti. Interventions to promote integration of biodiversity and land management issues will also be undertaken across the target watersheds.
5: By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.	All project interventions will contribute in the short- to medium-term towards halting and reversing the loss and degradation of forest ecosystems in southern Haiti.
7: By 2020, areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.	This is a major focus of the project. As a result of Components 2 and 3, 5,400 ha of agricultural and forest land will benefit from improved management practices that will promote biodiversity.
13: By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.	The proposed project will promote the use of genetically-diverse cultivars under Component 2.

7) Innovation, sustainability and potential for scaling up

The project will mostly innovate through:

- the continued development of the Tracking platform. This original geo-referencing tool for farmers and cooperatives was successfully experimented on commodity-based VCs such as vetiver and mango, and will be further expanded to include other strategic VCs – to be determined during the PPG phase. As described in Section 3.b, the Agrotracking platform will: i) facilitate the provision of both pre-harvest (registration of farmers and their productions) and post-harvest (support to farmer's associations and product tracking within the value chains) services, including transformation of agricultural products ; and ii) ensure the traceability of commodity-based products. Increased traceability and facilitated coordination will also enhance logistics. For example, knowing in advance when and where products are ready to be picked up have been shown to significantly reduce losses and delivery time. ^[1]_[SEP]
- the development of contracts with private farmers, who will commit to maintain forested areas in exchange for agricultural advice and inputs.
- The establishment of Jardins de l'abondance et de la biodiversité

Sustainability concerns have informed the whole project design, and materialise through:

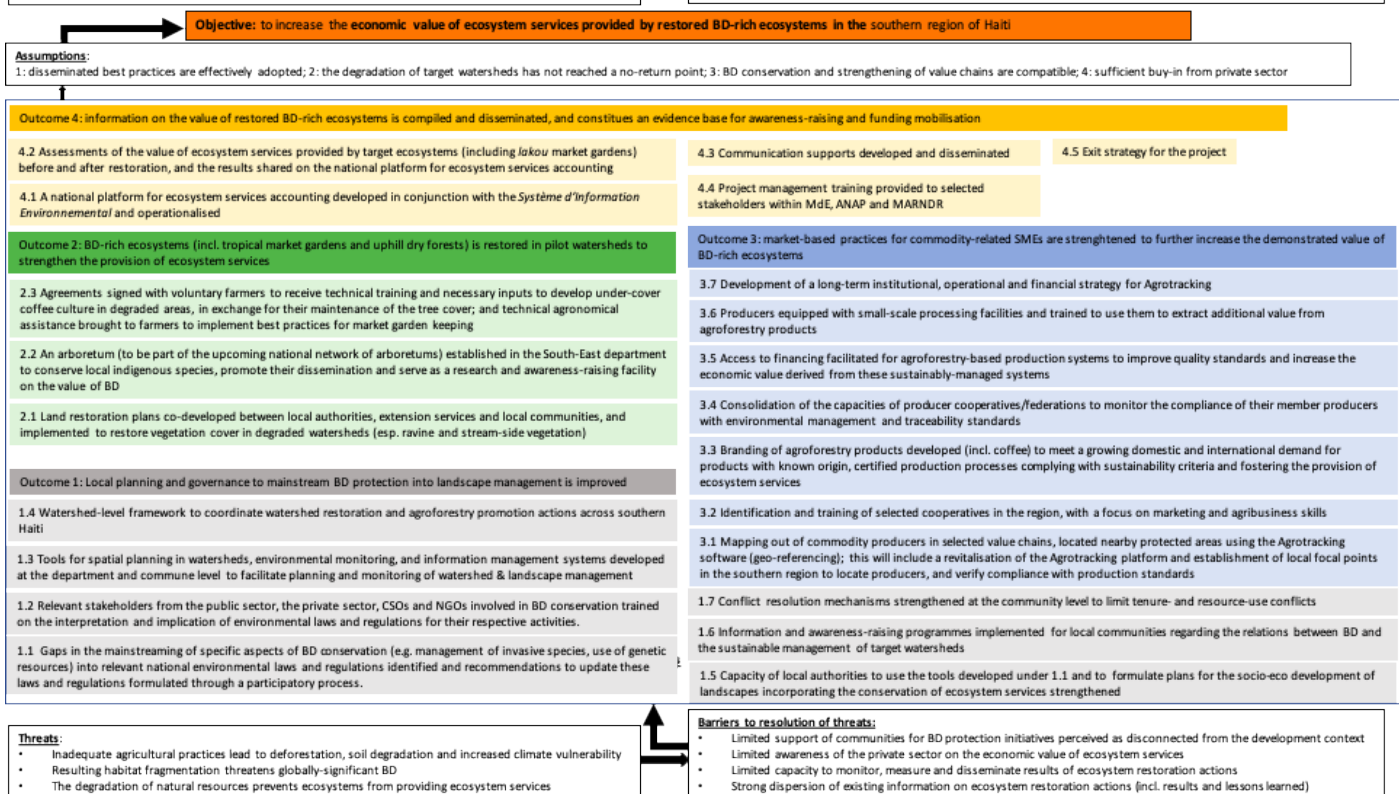
- the adoption of an ecosystem services approach to foster BD conservation through the support to rural livelihoods, as only such an approach to BD protection can succeed in the current Haitian socio-economic context;
- capacity-building and training outputs (1.2, 1.3, 1.5, 1.6, 2.3, 2.4) , which will focus on equipping Haitian nationals with required tools to carry out watershed planning, implement best agricultural practices and maintain restored ecosystems;

- improved access to funding for local farmers and cooperatives (Output 3.5); and
- a specific output dedicated to the discussion, formulation and validation of an exit strategy (Output 4.5).
- Strengthening the local governance structure CPCE to ensure concerted management at the watershed level.

Scaling up of the project' anticipated results will be facilitated by the knowledge management approach embedded into the project's intervention strategy. Under Component 4, the value of ecosystem services provided by restored ecosystems will be documented, and uploaded along with existing evidence from other case studies onto the expanded EIS hosted by the MoE. This will contribute to establish an Haiti-specific evidence base on the relevance of ecosystem and BD conservation for development, and help leverage funding for future similar initiatives.

Annex D

Theory of Change diagram



[1] “Avant-Projet de loi fixant de nouvelles règles relatives à l’exécution des travaux de cadastre et établissant une nouvelle administration du cadastre”

[2] “Avant-Projet de loi sur l’aménagement du territoire et le développement local”

[3] “Increasing Resilience of Ecosystems and Vulnerable Communities to CC and Anthropic Threats Through a Ridge to Reef Approach to BD Conservation and Watershed Management”

[4] Source: University of Florida. 2017. Water Governance in Haiti: An Assessment of Laws and Institutional Capacities

[5] Examples include:

· FoProBim. 2013. ReefFix – An Integrated Coastal Zone Management Ecosystem Services Valuation and Capacity Building Project for the Caribbean; and

· D. Whittington, J. Briscoe, X. Mu and W. Barron. 1990. “Estimating the Willingness to Pay for Water Services in Developing Countries: A Case Study of the Use of Contingent Valuation Surveys in Southern Haiti” *in* Economic Development and Cultural Change (38-2)

[6] Observatoire National de l’Environnement et de la Vulnérabilité

[7] Cf. Section 2: Stakeholders.

[8] Constitution from 1987, as analysed in V. Dorner. 1998. “La Décentralisation en Haïti” *in* Bulletin de l'APAD (15)

[9] “Décret du 12 octobre 2005 portant sur la gestion de l’environnement et de régulation de la conduite des citoyens et citoyennes pour un développement durable.”

[10] Earth Institute at Columbia University & International and Public Affairs Capstone. 2012. Options for Land Tenure Dispute Management in Rural Haiti. Challenges and Opportunities in the Côte Sud

[11] Assemblée de la Section Communale

[12] Conseil d'Administration de la Section Communale

[13] Conseil de Développement de la Section Communale

[14] J.D. Sardou, D. Jean-Pierre, M. Mutel, H. Duchaufour, C. Langlais, P. Fernandes, M.E. Alphonse and E. Malézieux. 2014. “Évolution de la structure d’un système agroforestier en relation avec le cycle de vie familial des cas du jardin de case en Haïti” *in* Bois et Forêts des Tropiques (321-3)

[15] C. Lilin and M. Koohafgan. 2012. Ravines et versants. Atelier de formation de Gros Morne. CIAT.

[16] P. Saffache. December 2006. “Le milieu marin haïtien : chronique d’une catastrophe écologique” *in* Etudes caribéennes (5)

[17] T. May. 2015. “Effets contrastés des prélèvements de bois sur la végétation de forêt sèche en zone frontalière dominico-haïtienne : comment les interpréter ?” *in* Bois et Forêts des Tropiques (326-4)

1b. Project Map and Coordinates

Please provide geo-referenced information and map where the project interventions will take place.

See Annex A.

2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Indigenous Peoples and Local Communities

Civil Society Organizations Yes

Private Sector Entities Yes

If none of the above, please explain why:

In addition, provide indicative information on how stakeholders, including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles and means of engagement.

Extensive consultations were conducted to prepare the formulation of the PIF. These included governmental bodies, private sector representatives, donor organisations and Civil Society Organisations (CSO): i) Ministry of

Environment; ii) National Agency for Protected Areas (ANAP); iii) Inter-American Development Bank; iv) European Union; v) Agence Française de Développement (AFD); vi) Helvetas Suisse; vii) GIZ; viii) Agronomes & Vétérinaires Sans Frontières (AVSF); ix) UNDP; x) UNEP; xi) Macaya Foundation; xii) Fondation pour la Protection de la Biodiversité Marine (FoProBiM); xiii) Coordination Régionale du Sud'Est (CROSE); xiv) Botanical Garden of Cayes; and xv) private businesses.

A field mission was conducted between 8 and 20 March 2020. The mission report (in French) is embedded in Annex F.

During the PPG phase, further consultations will be conducted, including with local communities, with a view to secure stakeholders' engagement from the onset of the project. A special focus will be placed on the consultation of local farmers, as well as Civil Society Organisations (CSOs) and professional organisations representing the private sector.

These potential Key stakeholders will involve in this project:

Stakeholder	Role in the project
Ministry of Environment (MOE) of Haiti	The MOE will play an executive role in the implementation of the project. It will be part of the project steering committee. In coordination with the other entity managers, the MOE will contribute to compliance with environmental standards and national laws and procedures.
Botanical Garden of Cayes	The Botanical Garden of Cayes is a private institution involving in research and development in Haiti. It will be the implementing partner under the component 2 of the project. The Botanical Garden will provide technical guidance and training in the implementation of the nurseries in the south.
GEONOVA	Geonova is a private business that initiated the Agrotracking platform. It will be the implementing partner under the component 3 of the project. Through this on-line platform, it will work with the Cocoa producer in order to geo-locate, identify and retrace a product's history from source to consumer or from consumer to source by means of recorded reliable cloud-based data collection.
AYITIKA	AYITIKA SA is a "citizen" company committed to the development of the cocoa industry in Haiti. It is a Production and Services company. The company proposes a vertical integration of activities ranging from research at the level of cocoa plantations to the port of embarkation. AYITIKA is a partner in several Agroforestry projects in the country. AYITIKA's model involves actors participating in a Responsible, Fair and Sustainable approach. From a technical point of view, it aims at enhancing the value of various cocoa growing areas in the country. In a participative way, it creates and popularizes technical and technological ecological innovations that guarantee the quality of the cocoa and the profitability of the producer's plot of land. Each cocoa tree on the plot must provide at least one kilogram of high-quality cocoa per harvest. Economically and socially, the company has its own plantations. But to increase its supply of quality cocoa, it maintains partnership relations with individual or organized producers. These are regulated through a set of specifications clearly defining the technical, environmental, social and economic specifications governing the partnerships.

During the implementation phase, a participatory approach will be used across activities. Watershed management plans will be designed in consultation with all relevant stakeholders. Conflict resolution mechanisms will be strengthened at the community level to limit tenure- and resource-use conflicts. Agronomical training will be provided to farmers and cooperatives will benefit from capacity-building activities on marketing and business skills.

The project will also place a special focus on gender aspects, as described in the following section.

3. Gender Equality and Women's Empowerment

Briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis).

Men and women may have different roles and interests in relation to the management of natural resources in the target region, and specifically in relation to the management of the production systems, as well as the overall livelihood support systems of the participating families. The promotion of tree-based production systems may therefore have a number of potential gender-related implications, e.g. in relation to the control of economic resources within the family and community, balances in workload and levels of representation in decisions on natural resource governance (esp. with respect to conflict resolution).

During the PPG phase, a social and gender specialist will carry out detailed analyses of these gender-based differentiations, beginning with a review of literature, and followed by field-visits and semi-structured gender-differentiated interviews with farm families, and meetings with women's groups and other CBOs to identify and discuss gender issues and define corresponding gender strategies. Gender expertise will also be provided by the UNDP country office. The PPG phase for the proposed project will also be informed by relevant gender analyses carried out for the preparation of relevant UNDP-implemented projects in Haiti (including GEF project #9777 "Sustainable Management of Wooded Production Landscapes for Biodiversity Conservation").

The gender specialist will inform the preparation of the CEO Endorsement Request, in order to ensure that: i) all PPG studies and consultations are gender sensitive and allow women's concerns to be expressed effectively; and ii) project indicators are, where appropriate, gender sensitive. A full gender assessment will be conducted and a project-specific gender mainstreaming strategy and plan will be developed during the PPG phase.

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment? TBD

closing gender gaps in access to and control over natural resources;

improving women's participation and decision-making; and/or

generating socio-economic benefits or services for women. Yes

Will the project's results framework or logical framework include gender-sensitive indicators?

TBD

4. Private sector engagement

Will there be private sector engagement in the project?

Yes

Please briefly explain the rationale behind your answer.

The expected outcome of Component 3 is the strengthening of market-based practices for commodity-related SMEs to further increase the demonstrated value of BD-rich ecosystems. The proposed project will thus engage extensively with the private sector by: i) eliciting an “entrepreneurship spirit” with local populations by providing them with training to identify business opportunities and seize them (Output 3.2); ii) working with cooperatives and other private organisations to strengthen transformation units, with a view to increase the value-added that producers can extract from commodity-based products (Output 3.6); iii) facilitating market linkages, e.g. by helping producers and cooperatives to adopt recognised labels through the implementation of best agricultural practices (Outputs 3.2 & 3.4); and iv) facilitating access to funding (Output 3.5). One of the tools to meet these objectives will be the Agrotracking platform, the expansion of which will be continued in partnership with their original private developers.

In addition, co-financing will be sought from Geonova, the private business that initiated the Agrotracking platform and that will continue its development with the support of the proposed project. In-kind co-financing of USD 50,000 from Geonova will contribute towards Component 3, including for training sessions. Other opportunities to leverage private co-financing will be further explored during the PPG phase.

5. Risks to Achieving Project Objectives

Indicate risks, including climate change, potential social and environmental risks that might prevent the Project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the Project design (table format acceptable)

The risks identified in relation to the effective execution and sustainability of project activities, including potential social and environmental threats, are related to complexities of implementing watershed approaches, project management, and exogenous risks. The main risks identified at the identification phase are summarised in the table below.

Risk	Importance	Mitigation
Civil unrest and general safety conditions could impede project implementation.	I = 4 P = 3 High	The risk is not under the project control. One of the key measures to address the risk is postponing and stopping all project activities in the project area if the security situation deteriorates. Safety will be one of the criteria for the selection of target areas during the PPG phase.
The outcomes of the proposed project would be sensitive or vulnerable to potential impacts of climate change	I = 3 P = 3 Moderate	Haiti’s agricultural production systems are extremely vulnerable to the impacts of climate change, so any interventions will carry this risk. However, the project will promote production systems with high levels of structural and compositional diversity, the use of climate-resilient varieties, and the maintenance of overall diversity of livelihood support options and farm systems, in order to maximise climate resilience, and therefore decrease overall vulnerability to climate change compared to the baseline situation.

Risk	Importance	Mitigation
The potential outcomes of the Project may be sensitive or vulnerable to potential impacts of climate change, especially those associated with increase in rainfall.	I = 2 P = 4 Moderate	Haiti is extremely vulnerable to the impacts of extreme natural hazards. This context poses additional challenges for the preservation of project interventions related to natural reforestation. It is expected that climate change could generate at least one adverse effect for project interventions: Increase in rainfall would imply a risk for the long-term sustainability of the project interventions. These risks are classified as Moderate considering that although the impacts of climate change can occur, they will be manageable. Project interventions are unlikely to fail. To manage these risks, the project activities will support the diverse resilient livelihood and farming systems in order to minimise the socio-economic implications in case of failure of individual productions. Ecosystem restoration – especially in ravine and stream-side areas – will also increase the protection services provided by ecosystems against some of these natural hazards (e.g. flood).
Potential child labour in promoted VCs.	I = 1 P = 2 Low	This risk was investigated through the stakeholder consultations for the PPG phase of the project “Sustainable Management of Wooded Production Landscapes for Biodiversity Conservation”, and was not considered significant. The 2017 report produced by the Bureau of International Labour Affairs of the US Department of Labour “Worst forms of child labour” Report from Haiti identifies the following sectors as the most at risk of involving child labour in Haiti: sugarcane agriculture, fishing and livestock, domestic work and construction. These sectors will not be targeted by the proposed projects. In addition, the risk of child labour will be amongst the criteria that will be used during the PPG phase to select target sectors.
Limited willingness of purchasers, retailers and exporters to reward producers for delivering GEBs through the provision of price premiums and/or preferential access to markets, and of producers to assume the costs of compliance in the expectation of uncertain price and market benefits. There is also a risk of intended industry-wide standards being undermined by non-compliant private sector actors.	I = 3 P = 2 Moderate	<ul style="list-style-type: none"> · Facilitation of label compliance and use through the Tracking platform · Awareness-raising in private sector on the benefits of sound environmental management for ensuring reliability of product · Awareness-raising among producers regarding the benefits of sound environmental management for productive and livelihood sustainability, as alternative motivations in addition to market-based instruments · Support to farmer-based technology generation and transfer in order to reduce reliance on public sector support
The proposed project could potentially cause adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services.	I = 2 P = 2 Low	The overall objective of the project is precisely to improve habitat conditions, ecosystems health and ecosystem services. However, the uncontrolled development of commodity-based VCs could potentially run counter to these conservation objectives. It is unlikely that this risk will materialise given the limited scale at which these VCs operate; nevertheless, this risk will be further assessed during the PPG phase, and factored in the choice of target VCs and intervention areas.

Risk	Importance	Mitigation
The proposed project could potentially limit women's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services.	<p>I = 3 P = 2</p> <p>Moderate</p>	<p>If inadequately formulated and managed, there is the potential for a focus on perennial cash crops to have differentiated, and potentially negative gender implications due to existing gendered differences in economic and productive roles in some commodity-based VCs. Given women's roles in the charcoal value chain, sensitisation among project beneficiaries regarding environmentally damaging activities such as cutting down trees, may also indirectly limit women's opportunities to use natural resources as a source of livelihood support.</p> <p>Analyses of gender a differentiation in economic and productive roles will be carried out during the PPG phase and a comprehensive Gender Assessment and Action Plan (GAPP) will be prepared accordingly. This GAAP – as well as the GAAP prepared during the PPG phase of the project “Sustainable Management of Wooded Production Landscapes for Biodiversity Conservation” will inform the design of the proposed project activities, and, as relevant, definition of indicators and targets.</p>
Invasive alien species that have detrimental effects on ecosystem services and biodiversity may be introduced or promoted.	<p>I = 3 P = 3</p> <p>Moderate</p>	<p>5,400 ha of biodiversity-rich ecosystems will be restored in pilot watersheds to strengthen the provision of ecosystem services. The plant species used to restore degraded ecosystems will be carefully selected by scientific experts to ensure that only locally appropriate species are used. This will avoid the use of species, in particular invasive alien plant species, that have negative consequences for biodiversity and ecosystem services. Indigenous tree species will be used as far as possible, complemented where appropriate by useful exotic species that are known to not be invasive or detrimental to local ecosystems. To facilitate the dissemination of best ecosystem restoration practices and provide indigenous species seedlings for restoration work, nurseries for threatened trees will be established by the proposed project.</p>

6. Coordination

Outline the institutional structure of the project including monitoring and evaluation coordination at the project level. Describe possible coordination with other relevant GEF-financed projects and other initiatives.

Institutional structure of the project

The Ministry of Environment as national partner will be responsible for ensuring compliance with environmental standards and defining national territorial planning law and procedures, in coordination with other responsible entities. The project execution will be led by the Ministry of Environment. Project staff will be recruited by the MoE in close collaboration with UNDP.

The GEF Implementing Agency for the proposed project is the United Nations Development Program (UNDP). UNDP's comparative advantage in Haiti lies not only in its historical support to the MoE, but also in its technical capacity and experience in disaster risk management, ecosystem-based adaptation, land-use practices and land management and biodiversity protection. UNDP represents a unique partner able to effectively deliver policy advice in the field of biodiversity conservation and watersheds management, as well as to nudge private investments across agricultural value chains

Coordination with other GEF and non-GEF-funded initiatives

In addition to the baseline projects described in Section 2, coordination will be sought with the following relevant initiatives.

Managing the Human-Biodiversity Interface in the Southern Marine Protected Areas of Haiti (IDB, GEF)

The objective of this project (USD 1.8 m granted by the GEF Trust Fund) is to contribute to improve the conservation and management effectiveness of the Grosse Caye/Zone humide d'Aquin and Olivier/Zanglais Marine Protected Areas. Expected outcomes are to: i) improved fishery management in Marine Protected Areas; and ii) mitigation of climate change impacts through critical ecosystems restoration. Lessons learned from ecosystem restoration interventions implemented under this project will inform Component 2 of the proposed project.

Sustainable Management of Wooded Production Landscapes for Biodiversity Conservation (UNDP, GEF)

This project is under approval by the GEF Trust Fund (expected contribution of USD 6.1m). It will be implemented by UNDP, with the objective to generate multiple environmental and social benefits through the integrated and sustainable management of wooded production landscapes in the Massif du Nord and Grande Rivière du Nord with globally significant biodiversity. This project will share common components with the proposed project – namely ecosystem restoration and a focus on agroforestry value chains – and multiple synergies are therefore expected. Lessons learned will be shared across projects and common partnerships may be established with CSOs and NGOs. The fact that UNDP will be the implementing entity for both projects will facilitate knowledge exchange and mutualisation of best practices.

Resilient Productive Landscapes in Haiti (World Bank, GEF)

This USD 26.2m project – towards which the GEF Least-Developed Countries Fund contributes USD 6.2m – aims to facilitate the adoption of resilience-enhancing agricultural and landscape management practices in selected sub-watersheds through four components, namely: i) strengthening of institutional and organisational 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. Target areas are: i) Rivière Froide watershed; ii) Petite Rivière de Nippes watershed; iii) Piémont area and Baconnois Plain; and iv) Bondeau sub-watershed. Sub-component 1.1 of this project will include the dissemination of spatial decision support tools for watersheds; these tools may be relevant to target watershed in the proposed projects and potential collaborations will thus be explored during the PPG phase. Other synergies on value chain strengthening aspects will also be explored.

Ecosystem Approach to Haiti Côte Sud (UNEP, GEF)

This GEF Trust Fund-funded project (USD 6.2m) aims to increase the resilience to climate change risks and decrease disaster risk using an ecosystem management approach, targeting protected areas and fragile ecosystems in the Southwestern Peninsula of Haiti. Its implementation started in 2016. Among several potential synergies, the proposed project will continue to support the MoE on the maintenance of the EIS that will be developed under this project, and build an additional module on ecosystem services into it.

Increasing Resilience of Ecosystems and Vulnerable Communities to Climate Change and Anthropic Threats Through a Ridge to Reef Approach to Biodiversity Conservation and Watershed Management (UNDP, GEF)

Several lessons learned and studies produced under this GEF-funded project (USD 9.1m) have informed the design of this PIF and will be built upon during the PPG and implementation phases of the proposed project. Such studies include: i) the identification of best practices for the management of natural resources in the context of climate change; and ii) a consolidated report on best water and soil conservation practices. With an overall objective adjacent to that of the proposed project – namely to enhance the resilience of vulnerable ecosystems to the impacts of climate change in protected areas and surrounding landscapes, and thereby to secure their biodiversity and ecosystem functionality and derivative ecosystem services including greenhouse gas sequestration and emissions reduction –, the experience accumulated by UNDP by implementing this project will directly benefit the proposed project.

Developing core capacity for MEA implementation in Haiti (UNEP, GEF)

This project, funded by the GEF Trust Fund (USD 1.2m) and initiated in 2015, aims at enhancing the capacities of the GoH for environmental decision-making and implementation in line with national priorities. A focus is placed on cross-sectoral issues such as coastal zone management and the protection of water sources and riverbanks. As such, this project is laying the basis for capacity-building activities to be conducted under the proposed project. During the PPG phase, contacts with UNEP and the project team will be further established to identify specific capacity gaps and tailor capacity-building interventions around them.

7. Consistency with National Priorities

Is the Project consistent with the National Strategies and plans or reports and assessments under relevant conventions

Yes

If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc

- National Biodiversity Strategy and Action Plan (NBSAP)

The project is in accordance with the principal strategic guidelines presented in the country's draft NBSAP, including: i) the reduction of poverty in communities that rely on biodiversity for their livelihoods; ii) the association of biodiversity conservation actions with measures in favour of employment income diversification; iii) the promotion of the ecosystem approach; iv) the promotion of a decentralising approach to manage biodiversity by strengthening CSOs and local organisations; v) the development of partnerships with the private sector; and vi) the valorisation of traditional and local knowledge.

- Sixth National Report to the CBD

Haiti submitted its Sixth National Report to the CBD in 2019. The proposed project responds to several of the conclusions and recommendations of this report, namely: i) the need for a decentralised approach to BD conservation; ii) the importance of generating and organising information on BD and ecosystems; and iii) the recognition of the value of traditional knowledge and practices (which will be done under the proposed project through the promotion of *Jardin garde-manger de l'abondance* and indigenous species).

- Climate Action Policy

The project will contribute to the priorities and targets set out in Haiti's Climate Action Policy (2019) in relation to increases in reforestation (with emphasis on local species), the protection and conservation of existing forest reserves and the restoration and extension of agroforestry systems.

- National Adaptation Programme of Action (NAPA)

Haiti submitted its NAPA in 2006 (and is currently preparing its National Adaptation Plan). The proposed project is aligned with several adaptation priority actions identified in the NAPA: i) sustainable management of watersheds; ii) governance strengthening of watershed and forested areas; and iii) reforestation.

- National Action Plan to Combat Desertification

The project will also contribute to the targets of Haiti’s 2015 National Action Plan to Combat Desertification, in particular that populations in areas affected by desertification/degradation will have improved and diversified livelihood support options and will obtain revenue through sustainable land management; sustainable improvements in the productivity of lands and the goods and services provided by ecosystems, contributing to livelihoods.

8. Knowledge Management

Outline the Knowledge management approach for the Project, including, if any, plans for the Project to learn from other relevant Projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

The main tool to foster knowledge dissemination will be the EIS, that will be featured with a specific module on ecosystem services and their valuation (Output 4.1). This module will host existing studies and reports, as well as assessments specially conducted on the ecosystems restored under the proposed project (Output 4.2).

In addition, other lessons learned from the project will be disseminated through a range of communication products (Output 4.3).

Knowledge management and M&E strategies will be developed during project preparation, for application during project implementation. During project implementation, a dedicated monitoring and information specialist will be included on the project team who will be responsible for implementing these strategies, and supporting the design and implementation of the project’s M&E and knowledge management system, under Component 4. This system will provide for two-way exchanges of lessons learned, between the project and other relevant initiatives (e.g. including the establishment of the arboretum with Haiti State University – Henri Christophe de Limonade campus – and the Botanical Garden of Cayes).

9. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification*

PIF	CEO Endorsement/Approval	MTR	TE
Medium/Moderate			

Measures to address identified risks and impacts

Provide preliminary information on the types and levels of risk classifications/ratings of any identified environmental and social risks and potential impacts associated with the project (considering the

GEF ESS Minimum Standards) and describe measures to address these risks during the project design.

Supporting Documents

Upload available ESS supporting documents.

Title	Submitted
6314_Haiti PIF_UNDP_SESP	

Part III: Approval/Endorsement By GEF Operational Focal Point(S) And Gef Agency(ies)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the Operational Focal Point endorsement letter with this template).

Name	Position	Ministry	Date
Moise Jean Pierre	GEF Operational Focal Point	MINISTRY OF ENVIRONMENT	8/10/2020

ANNEX A: Project Map and Geographic Coordinates

Please provide geo-referenced information and map where the project intervention takes place

PROGRAM/PROJECT MAP AND GEOGRAPHIC COORDINATES

