



# GEF-6 PROJECT IDENTIFICATION FORM (PIF)

**PROJECT TYPE:** Full-sized Project

**TYPE OF TRUST FUND:** GEF Trust Fund

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## **PART I: PROJECT INFORMATION**

|                             |   |   |                         |
|-----------------------------|---|---|-------------------------|
| Project Title:              | Sustainable management of wooded production landscapes for biodiversity conservation                                    |   |                         |
| Country(ies):               | Haiti   | GEF Project ID:                                 | 9777                    |
| GEF Agency(ies):            | UNDP, FAO   | GEF Agency Project ID:                          | UNDP 5765<br>FAO 640724 |
| Other Executing Partner(s): | Ministry of Environment   | Submission Date:                                | September 19, 2017      |
| GEF Focal Area(s):          | Multi-focal - Biodiversity, Land Degradation  | Project Duration(Months)                        | 84                      |
| Integrated Approach Pilot   | IAP-Cities <input type="checkbox"/> IAP-Commodities <input type="checkbox"/> IAP-Food Security <input type="checkbox"/> | Corporate Program: SGP <input type="checkbox"/> |                         |
| Name of parent program:     | N/A   | Agency Fee (\$)                                 | 587,761                 |

### **A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES**

| Objectives/Programs(Focal Areas, Integrated Approach Pilot, Corporate Programs)       | Trust Fund | (in \$)               |              |
|---|------------|-----------------------|--------------|
|   |            | GEF Project Financing | Co-financing |
| BD-4: Program 9: Managing the human-biodiversity interface                            | GEFTF      | 5,299,540             | 30,964,654   |
| LD-1: Program 1: Agroecological intensification                                       | GEFTF      | 443,712               | 2,517,673    |
| LD-3:Program 4: Scaling-up sustainable land management through the Landscape Approach | GEFTF      | 443,712               | 2,517,673    |
| Total Project Cost  |            | 6,186,964             | 36,000,000   |

### **B. INDICATIVE PROJECT DESCRIPTION SUMMARY**

**Project Objective:** The generation of multiple environmental and social benefits through the integrated and sustainable management of wooded production landscapes in the Massif la Selle and Massif du Nord and Grande Riviere du Nord with globally significant biodiversity

| Project Component   | Financing Type | Expected Outcomes   | Expected Outputs   | Trust Fund | (in \$)       |              |
|---|----------------|---|--|------------|---------------|--------------|
|   |                |   |  |            | GEF Financing | Co-financing |
| <b>Component 1:</b><br>Creation of enabling conditions for application and scaling-up of landscape management model | TA             | <b>Harmonized planning at landscape level</b> favours connectivity and BD-friendly production systems (e.g. diversified shade coffee and cocoa, diverse tree-rich annual production systems and home-gardens, enriched fallows based on assisted natural regeneration), indicated by: <ul style="list-style-type: none"> <li>Improved ecosystem health as per an ecosystem health index to be developed during PPG</li> <li>6,000ha identified and managed as biological corridors prioritized for connectivity-friendly production systems</li> <li>3,000ha of buffer zones with planning and management provisions for the stabilization of landscape-level threats to PAs</li> <li>500ha identified for establishment of new PA(s), with initial consultations and feasibility studies, considering community-based low investment models</li> </ul> | <b>1.1 Decision making tools developed and operationalised to optimize the configuration of landscape elements</b> in relation to spatial aspects of connectivity, biological importance, production potential, vulnerability and flows of ecosystem services including a robust biodiversity monitoring protocol and implementation structure: <ul style="list-style-type: none"> <li>Spatial plans developed and implemented by regional governments covering the target localities, incorporating factors related to biological connectivity and the spatial dynamics of the factors affecting areas of high conservation value.</li> <li>Social and economic development plans formulated and implemented by regional governments that include provisions for the promotion of BD-friendly production systems</li> <li>Systems for environmental monitoring and information management at landscape level established and operationalised in regional governments, permitting adaptive planning of landscape management</li> <li>Systems and capacities for overseeing compliance of production systems established with environmental/conservation criteria agreed in market-based incentive systems</li> </ul> | GEFTF      | 2,062,321     | 13,714,286   |

|   |    |  |  |                         |   |
|---|----|--|--|-------------------------|---|
|   |    | <p><b>Effective cross-sectoral governance of target landscapes</b> addresses inter-sector drivers of threats and facilitates the application of BD-friendly production systems, indicated by:</p> <ul style="list-style-type: none"> <li>• Actions of national, regional and local institutions covering different sectors across the landscape respond to risks of inter-sector impacts and opportunities for synergies</li> <li>• 20 communities across the target landscapes involved in dialogue, coordination and conflict resolution mechanisms</li> <li>• 2,000ha of land covered by community-based systems ensuring security of occupancy and resource use</li> </ul> | <p><b>1.2. Socially- and institutionally sustainable mechanisms for governance established and operationalised</b>, in support of tree-rich production systems:</p> <ul style="list-style-type: none"> <li>• Information and awareness raising programmes implemented for local communities regarding the relations between biodiversity and the sustainable management of the target landscapes, and the structural factors that determine threats.</li> <li>• Mechanisms for dialogue, coordination and conflict resolution established between different actors across the target landscapes, permitting the conciliation and harmonisation of their respective interests in relation to landscape management with implications for BD and LD</li> <li>• Community-based organisations strengthened to facilitate joint action in support of BD-friendly landscape and ecosystem management such as the protection of remnants of vegetation and the restoration of degraded areas around water catchment areas, and the effective social control of threats</li> <li>• Community-based systems strengthened to provide adequate security of occupancy and use rights for the establishment of perennial-based production systems despite poorly defined situation regarding formal land tenure.</li> </ul> |                         |   |
|   |    | <p><b>Value chains incentivizing production systems in the target localities that generate multiple environmental benefits, indicated by:</b></p> <ul style="list-style-type: none"> <li>• 500ha of coffee and 500ha of cacao from the target landscapes is managed in accordance with industry standards and/or BD-related certification criteria</li> </ul> <p><i>Indicators will be confirmed and baseline and targets will be determined during the PPG.</i></p>   | <p><b>1.3 Market-based instruments established for safeguarding biodiversity in production landscapes:</b></p> <ul style="list-style-type: none"> <li>• Groupings/agreements formed among private sector actors (including national companies involved in the production and marketing of coffee and cacao and overseas purchasers) to harmonise criteria for environmental sustainability of production systems of their suppliers</li> <li>• Eligibility criteria, in the form of harmonized industry-wide environmental standards, with clear definitions of the corresponding management requirements to be adhered to by producers, refined for access to green value chains and certification systems, based on the ecological requirements of priority BD specific to the target localities (criteria to be defined but may include e.g. avoidance of clearance of natural vegetation, appropriate management of wastes and maintenance of species diversity in shade cover)</li> <li>• Branding of agroforestry products (e.g. coffee, cacao) in order to exploit market niches among environmentally-concerned consumers, proposed and supported based on site-specific contributions to species and ecosystems</li> </ul>  |                         |   |
| <b>Component 2:</b><br>Conservation compatible tree-based production systems as part of sustainable landscape mosaics | TA | <p><b>Improved access to technical and financial assistance</b> for the management of shade coffee and cacao in accordance with the generation of multiple environmental benefits, indicated by:</p> <ul style="list-style-type: none"> <li>• Coffee and cacao farmers covering 10,000ha have access to permanent sources of technical and financial support</li> <li>• Increased area of shade coffee</li> </ul>  | <p><b>2.1 Service delivery systems for technical assistance improved:</b></p> <ul style="list-style-type: none"> <li>• Systems for technical assistance provision (including extension agents, phytosanitary support facilities, and training events on marketing and post-harvest care) strengthened by the private sector to their suppliers (coffee and cacao farmers), providing economies of scale and harmonization of approaches</li> <li>• Technical guidelines and extension materials developed on management practices for BD-friendly tree-based production systems, which provide for the ecological requirements of priority BD specific to the</li> </ul>   | GEFTF<br><br>BD:<br>LD: | 3,390,791<br><br>2,925,950<br>464,841<br><br>20,571,428 |

|  |  |   |  |                           |
|--|--|---|--|---------------------------|
|  | (1,000ha) and cacao (1,000ha) in the target localities managed in accordance with the generation of multiple environmental benefits  | target localities and uptake of the materials supported.<br><b>2.2 Financing mechanisms improved for tree-based production systems:</b> <ul style="list-style-type: none"><li>Adaptation or opening of financing mechanisms for tree-based production systems proposed and implemented, which correspond to the investment needs and timeframes of the target production systems and the financial profiles of the farmers applying them</li></ul>  |  |                           |
|  | <b>Increased knowledge and capacities for the sustainable management of other tree-based systems on farm</b> (e.g. dispersed trees in fields, live fences, home gardens, assisted natural regeneration), indicated by: <ul style="list-style-type: none"><li>20% increase in density of standing trees (&gt;1m) on farm over 20,000ha</li><li>Maintained/improved diversity of tree species on farm, including species of specific ecological importance (e.g. as food source, habitat, connectivity) for the threatened BD in the target areas</li><li>500ha under management through assisted natural regeneration</li></ul> <i>Indicators will be confirmed and baseline and targets will be determined during the PPG.</i> | <b>2.3 Participatory systems established for knowledge generation and development:</b> <ul style="list-style-type: none"><li>Knowledge on traditional tree species and tree management systems systematized and exchanged through participatory farmer-based processes</li><li>Farmer field schools established and farmer-managed experimentation supported regarding traditional tree species and tree management systems, targeting an estimated 6,000 farmers.</li><li>Sustainable farmer-based mechanisms for production and exchange of planting material of tree species established and operationalised</li></ul> <b>2.4 Capacities of farmers strengthened for generating revenue from other tree-based systems on farm</b> (e.g. dispersed trees managed in association with crops, live fences bordering cropping areas, diversified home gardens, assisted natural regeneration in cropping and fallow areas): <ul style="list-style-type: none"><li>Small-scale processing facilities established and operationalized, managed by farmers and community organizations, especially women, adding value to tree products</li><li>Marketing strategies and mechanisms established for tree-based products, providing equitable and sustainable revenues that motivate ongoing tree management</li></ul> |  |                           |
| <b>Component 3:</b><br>Gender mainstreaming, knowledge management and learning | <b>Lessons learned by the project through participatory M&amp;E are used to guide adaptive management, collate and share lessons, in support of upscaling and gender mainstreaming, indicated by:</b><br><br>At least 5 project lessons are used by other conservation projects and programmes.  | <b>3.1 Knowledge management and dissemination strategy</b> to ensure that lessons learned are incorporated in project management and scaled up elsewhere<br><b>3.2 Monitoring and evaluation strategy</b> , to ensure that the project is managed in an informed, adaptive and effective manner   | GEFTF<br><br>BD:<br>354,718<br>LD:<br>84,517 | 439,235<br><br>34,285,714 |
| <b>Sub-Total</b>   |  |   | 5,892,347                                    | 34,285,714                |
| Project Management Cost (PMC)* <sup>1</sup> BD: 252,359; LD: 42,258            |  |   | GEFTF  | 294,617 1,714,286         |
| <b>Total Project Costs</b>   |  |   |  | 6,186,964 36,000,000      |

\* This would include any Direct Project Costs if the GoH requests direct project services from UNDP in support to NIM execution t.b.d in the PPG

#### C. INDICATIVE SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE, IF AVAILABLE

| Sources of Co-financing   | Name of Co-financier            | Type of Co-financing | Amount (\$)       |
|---------------------------|---------------------------------|----------------------|-------------------|
| Multilateral agency       | Inter-American Development Bank | Grants               | 34,000,000        |
| Private sector            | FECCANO/AVSF                    | Grants               | 800,000           |
| GEF agency                | UNDP                            | Grants               | 700,000           |
| GEF agency                | FAO                             | Grants               | 500,000           |
| <b>Total Co-financing</b> |                                 |                      | <b>36,000,000</b> |

<sup>1</sup> For GEF Project Financing up to \$2 million, PMC could be up to 10% of the subtotal; above \$2 million, PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

**D. INDICATIVE TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES) AND THE PROGRAMMING OF FUNDS<sup>a)</sup>**

| GEF Agency                 | Trust Fund | Country/Regional/Global | Focal Area       | Programming of Funds | (in \$)               |                              |                  |
|----------------------------|------------|-------------------------|------------------|----------------------|-----------------------|------------------------------|------------------|
|                            |            |                         |                  |                      | GEF Project Financing | Agency Fee (b) <sup>b)</sup> | Total (c)=a+b    |
| UNDP                       | GEFTF      | Haiti                   | Biodiversity     | n/a                  | 3,500,000             | 332,500                      | 3,832,500        |
| FAO                        | GEFTF      | Haiti                   | Biodiversity     | n/a                  | 1,799,540             | 170,956                      | 1,970,496        |
| FAO                        | GEFTF      | Haiti                   | Land Degradation | n/a                  | 887,424               | 84,305                       | 971,729          |
| <b>Total GEF Resources</b> |            |                         |                  |                      | <b>6,186,964</b>      | <b>587,761</b>               | <b>6,774,725</b> |

**E. PROJECT PREPARATION GRANT (PPG)**

Is Project Preparation Grant requested? Yes  No  If no, skip item E.

**PPG AMOUNT REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES) AND THE PROGRAMMING OF FUNDS**

| Project Preparation Grant amount requested: \$180,000 |            |                         |                  |                      | PPG Agency Fee: 17,100 |                |                 |
|---|------------|-------------------------|------------------|----------------------|------------------------|----------------|-----------------|
| GEF Agency  | Trust Fund | Country/Regional/Global | Focal Area       | Programming of Funds | (in \$)                |                |                 |
|   |            |                         |                  |                      | PPG (a)                | Agency Fee (b) | Total c = a + b |
| UNDP  | GEFTF      | Haiti                   | Biodiversity     | n/a                  | 101,827                | 9,674          | 111,501         |
| FAO   | GEFTF      | Haiti                   | Biodiversity     | n/a                  | 52,355                 | 4,973          | 57,328          |
| FAO   | GEFTF      | Haiti                   | Land Degradation | n/a                  | 25,818                 | 2,453          | 28,271          |
| <b>Total PPG Amount</b>                               |            |                         |                  |                      | <b>180,000</b>         | <b>17,100</b>  | <b>197,100</b>  |

**F. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS**

Provide the expected project targets as appropriate.

| Corporate Results  | Replenishment Targets   | Project Targets |
|--|---|-----------------|
| 1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society | Improved management of landscapes and seascapes covering 300 million hectares | 20,000 Hectares |
| 2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)          | 120 million hectares under sustainable land management                        | 20,000 Hectares |

**PART II: PROJECT JUSTIFICATION**

*1. Project Description.*

1. Haiti consists of the 2,775,000-ha portion of Hispaniola, which is shared with Dominican Republic, and six satellites islands totalling 95,400 ha. Haïti's population is estimated to be 8 million with a 2.08% annual growth rate. Haiti had a Human Development Index of 0.471 in 2013, the lowest in the western hemisphere and number 168 out of 187 worldwide. Between 2005 and 2010, three-quarters of the population lived below the poverty line of US\$2 per person per day, and more than half (56%) lived below the absolute poverty line of US\$1/person/day.
2. There are 17 Key Biodiversity Areas (KBAs) in Haiti with five "Wholly Irreplaceable Sites" containing the only known populations of globally threatened species, namely Massif de la Hotte, Massif de la Selle, Dame-Marie (Grande-Anse Department), Plaisance (Northern region), and Presqu'île du Nord-Ouest I and II<sup>2</sup>.
3. Haiti's topography produces significant regional and altitudinal differences in temperature and rainfall. The resultant vegetation varies from subtropical very dry forest formations where cacti and scrub predominate (Northwest and Northeast regions), to tropical (Montane wet forest) at the higher altitudes where pines (*Pinus occidentalis*, which is endemic to Hispaniola) and temperate vegetation thrive. Wetlands, lakes, lagoons, estuaries and a varied coastline provide additional diversity.
4. There are 25 native mammal species in Haiti of which two are of special significance: the critically endangered Haitian Hutia (*Plagiodontia aedium*) and the endangered Giant Island Shrew (*Solenodon paradoxus*), which has been

<sup>2</sup> CEPF in its 2010 Ecosystem Profile: *The Caribbean Islands Biodiversity Hotspot*

reported in La Visite National Park. Both are likely extirpated over much of their native range. The highest diversity among the native mammals in Haiti are bats: there are fifteen species of which seven taxa, including species and subspecies, are considered endemic.

5. The country supports over 245 species of birds, of which more than 73 are resident landbirds. The Hispaniolan avifauna exhibits exceptional levels of endemism: the island is an Endemic Bird Area (EBA), and 36 range restricted species are known from Haiti, one of which, the grey-crowned palm tanager (*Phaenicophilus poliocephalus*) is endemic to the country. The majority of the range restricted species are confined to, or occur in habitats above 1,000 m, emphasizing the importance of mixed montane broadleaf-pine forest.

6. Hispaniola hosts 217 species of reptiles and amphibians (Thomas 2000). Approximately 70% of this diversity has been recorded in Haiti. Ninety-eight percent are endemic to Hispaniola with about a third of the species occurring only in Haiti. Haiti harbours an exceptional fauna of terrestrial frogs. From 49 Eleutherodactylus species described for Hispaniola, 20 species come from Castillon, a small village located North to the Massif de la Hotte. The Massif de la Hotte is known to host the most diverse frog species in the Caribbean, with at least 26 Eleutherodactylus species. Two species new to science that were recently discovered in Haiti are: Mozart's Frog, *Eleutherodactyles amadeus* (Plaine Formond/Macaya Park) and Macaya Breast-spot frog, *Eleutherodactyles thorectes* (the smallest species known from Hispaniola and the genus). 46 of the 56 species of amphibians in Haiti are at risk, some at the verge of extinction.

7. Officially, the Government has identified 35 protected areas covering about 6% of the country. However, the percentage of effective PAs, some of which are actually historical sites, is evaluated at no more than 0.5% of the surface of the country. The main PAs include national parks, a forest reserve, historic parks, hot springs and inland waters<sup>3</sup>. Of the 35 legally recognized PAs, only Macaya, La Visite, Forêt des Pins and Sans Souci have some form of management.

#### Trees in farming systems

8. It is estimated<sup>4</sup> that 75% of the currently wooded area in the country consists not of relics of natural forests, but of trees established and managed by farmers. Diverse tree species are typically associated with food crops, with species and densities varying in function of variations in physical and economic conditions. They include fruit, fodder and timber trees: in addition to providing products such as fruit, fuelwood and timber for use by the farmer and their families, trees are used as a source of cash income and as a savings bank. Although a wide number of trees are used, tree cover is dominated by a relatively few species such as mango, avocado, breadfruit, coconut and citrus. The species composition and spatial configuration of tree is strongly determined by altitude, typically with scattered patches at higher altitudes, more homogenous masses at middle altitude (350-600m) and linear forests following watercourses at lower levels, where rainfall and therefore soil humidity tend to be more limited<sup>5</sup>. At higher altitudes (>600m) trees are normally limited to home gardens ("jaden pre kay"), where the required for the establishment of the gardens is derived from crop and kitchen wastes<sup>6</sup>.

#### Agriculture:

9. Haiti is predominantly a rural country, with 53% of its population living in rural areas (The World Bank, 2010). The agriculture sector employs around 50% of the total labour force of the country. The main cash crops in the country are cocoa and coffee.

10. Cocoa: The principal production areas for cocoa are the north and the south-west with an estimated total area of around 9,000ha<sup>7</sup>. There are an estimated 25,000 cocoa farmers in the country, with around 10,000 intermediaries and processors and 4 exporters. Cocoa is produced in either "simple cocoa gardens" or "complex forest gardens"<sup>8</sup>, which differ in terms of the diversity of their composition and the products and services they generate, the importance of cocoa relative to other products, and the level of management.

11. There is great potential for growth of cocoa exports, given the predicted 25% supply deficit worldwide by 2020:

<sup>3</sup>USAID 2006 Haiti Analysis of Tropical Forestry and Biodiversity

<sup>4</sup>Haiti Déforestée, Paysages Remodelés. Alex Bellande 2015, Éditions CIDIHCA

<sup>5</sup>Lilin C and Koohafgan M (2012): Ravines et versants. Atelier de formation de Gros Morne. CIAT.

<sup>6</sup>Garrigue N (1990): La place de l'arbre dans le paysage agricole : Étude des jardins boisés dans le bassin versant de Petite-Rivière de Nippes. Mémoire de fin d'études, CNEARC, Montpellier.

<sup>7</sup>Haiti Déforestée, Paysages Remodelés. Alex Bellande 2015, Éditions CIDIHCA

<sup>8</sup>Murgue (2009): Diagnostique agraire: le cacao, entre plaine et mornes dans le département du Nord en Haïti, Mémoire de fin d'études IRC-Supagro, Montpellier.

demand has grown by 1% annually, while supply has only grown by 3%, and prices have almost doubled over the last 10 years. However, there are significant technical obstacles to the growth of the sector: for example, while 95% of production in Latin American countries is from grafted disease-resistant material, in Haiti there is limited or no knowledge of the varietal heritage available, which consists of multiple varieties, or consequently of their management. In consequence, typical yields are around 250kg/ha as compared to 3,000kg in some countries of Latin America with similar agroecological conditions. There are significant opportunities for improving productivity, for example through the use of grafted plants and improved fertility and disease management<sup>9</sup>.

12. Although the predominant varieties of cocoa grown in Haiti are in strong demand worldwide, the potential of Haiti's cocoa has never been optimized, as it has long been sold on the international market in the form of ordinary unfermented cocoa. Only recently have producers become aware of the benefits of producing fermented cocoa. In 2009, thanks to technical assistance from the Peruvian cooperative CEPICAFE for the Haitian cooperative network FECCANO, and support from the French NGO Agronomes et Vétérinaires Sans Frontières (AVSF), their fermented cocoa output was immediately taken up and marketed by European firms, including the French fair-trade company Ethiquable<sup>10</sup>.

13. Coffee: About 150,000 to 200,000 farm families obtain an important part of their revenues from coffee in the country. Most farmers have less than 3ha of coffee; there are less than 200 'large estate' coffee farmers with around 5-20ha each. In general, few or no agricultural inputs such as fertilizers and pesticides are used<sup>11</sup>.

14. Coffee farms are typically highly diverse<sup>12</sup>, containing bananas, yams, taro, citrus, mango, avocado trees, pineapples, coconuts and breadfruit, and shade is most commonly provided by *sucrin* (*Inga vera*) as well as mahogany (*Swietenia mahogany*), laurel (*Ocotea spp.*), oak (*Catalpa longissimi*) and rain tree (*Albizia saman*). In some parts of the country, cacao is also planted in association with coffee. Production levels typically range between 70 and 210kg/ha). Income from coffee farms has been found to range between 18,000-65,000 Gourdes/ha in 2003; however, the coffee itself only represents between 12% and 28% of this income, with most of the income coming from the sale of yam, taro and bananas grown in association.

15. More than 90% of coffee produced corresponds to natural (or dry-processed) coffee, where the beans are left to dry in the sun for a period of three to four months, then milled by rudimentary means (typically by women) at the farm, producing *café pilé*, or milled in facilities that are equipped to produce "natural coffee".

16. Local roasters commonly buy coffee from speculators and occasionally from farmers' associations; small and medium enterprises are involved in roasting and grinding, and in 2010 the coffee chain had only four private exporters. Coffee exports have declined sharply in recent years, and current exports are reported to be minimal or nil, while internal demand has increased at a steady rate of 2-3% annually. Domestic demand significantly exceeds supply (processing capacity in organizations/regional networks is frequently underutilized due to low volumes of available coffee), and domestic prices are significantly higher than those available on international markets, both of which factors constitute disincentives for entering into export markets, apart from any quality constraints. A further factor that makes domestic markets more attractive than international markets is the fact that when exporting, the sector is required to offer advance payments to producers while revenues are generated only when green coffee reaches the final market, whereas the domestic market offers immediate payments upon the sale of coffee cherries.

17. There has been some investment in improving coffee quality in order to access export markets, including the promotion of "wet processing" (involving de-pulping, washing and fermentation), but the option also exists of considering the "natural" coffee (dried without de-pulping) as a marketing advantage for niche sectors, given the richness of the resulting product.

## Threats to Biodiversity and Ecosystem Services:

### Agriculture and grazing

18. Habitat Loss and Degradation: Today, cutting of trees for charcoal, the country's chief source of fuel, is a major contributor to deforestation. In recent years, among the secondary causes of deforestation and land clearing in Haiti is

<sup>9</sup> Économie Verte : étude sur les filières agricoles et le verdissement de l'économie dans le Département du Sud. PNUD/MdE/MARNDR (2016).

<sup>10</sup> La filière Cacao d'Haïti : Un exemple de succès d'échanges Sud-Sud et de partenariat Nord-Sud. The Journal of Field Actions. Field Actions Science Reports. Special Issue 9 | 2014 : Haïti : Innovations locales, clés pour un développement durable et inclusif.

<sup>11</sup> Assessment of Haitian Coffee Value Chain. Fernando Rodríguez, Nora Patricia Castañeda, Mark Lundy (2010). A participatory assessment of coffee chain actors in southern Haiti

<sup>12</sup> Haïti Déforestée, Paysages Remodelés. Alex Bellande 2015, Éditions CIDIHCA

the increasing demand for wood for construction (Geo Haiti 2010), which can be expected to increase with the need for reconstruction following the January 2010 earthquake. Deforestation has led to severe erosion in the mountainous areas and also periodic (but often catastrophic) flooding.

19. Ecosystem Degradation: Continued farming and grazing and expansion, which prevent the tree component from re-establishing itself. The resulting slumping and landslides generate impacts on farm in the form of the loss of scarce agricultural land; given the small average farm size in the country the implications of this for the livelihoods of individual farmers can be severe. Such impacts on farm and livelihood sustainability pose significant threats to landscape stability and result in increased pressures being placed on remnant ecosystems as farmers seek new cultivation areas and alternative income generation opportunities.

20. Fire: Associated with agriculture and grazing is the risk posed by fire, which is typically used as a tool for land clearance and for the control of weeds and pests, and commonly spreads into the wider landscape, killing trees and impeding natural regeneration.

21. Abandonment of shade coffee farms: Although when first introduced into the country in the 18<sup>th</sup> century, the expansion of coffee farms had significant negative impacts on the natural vegetation in mountain areas, today both coffee and cacao plantations, with their associated shade canopy, generally represent a net benefit relative to the deforested areas in which they are typically established. Coffee farms in fact represent about 50% of the remaining forest cover in the country (which in turn corresponds to less than 2% of the total land area). In fact, a greater threat would therefore be posed by any reduction in the area of these crops, and their replacement by pasture or annual cropping.

22. Although the harvested area of coffee in the country has remained on average largely stable over the last 50 years, with a notable increase towards the end of the first decade of the 21<sup>st</sup> century, since 2010 the crop has suffered significant pest problems including the coffee borer (*Hypothenemus hampei*), in addition to coffee rust (*Hemileia vastatrix*) and root rotting. Other major threats to coffee production are reported as the age of plantations (almost 70% of all planted coffee corresponds to old stands); and the low levels of technical inputs to improve productivity<sup>13</sup>. Coupled with the problem of producers' limited access to investment funds, these factors have led to the abandonment of coffee in a number of areas. This situation raises the risk of the conversion of plantations to pasture and agriculture, with corresponding loss of biodiversity values and watershed protection functions. This risk is particularly pronounced at higher altitudes (>600m), where on the one hand the expansion of coffee/tree associations (typically in home gardens) is hindered by fertility constraints and, on the other, farmers' motivations to grow such perennials may be limited by the relatively narrow range of useful tree species that will grow here and by fluctuations in the price or yield of coffee<sup>14</sup>.

23. The **long-term solution** is to create conditions and capacities in national, regional and local institutions, local communities and the private sector that will allow farmers to manage their lands in ways that generate multiple environmental benefits and respond to landscape-wide social, productive and environmental dynamics, especially through the increased incorporation and improved management of woody perennials in diverse components of their farming systems.

## 2) Baseline:

24. There is a solid and diverse baseline of investments in relation to natural resource management, conservation and CC resilience in Haiti, however this lacks the integrated vision proposed in the present project, which is necessary to take into account the landscape-wide spatial interrelations between these considerations. These include national and local scale programmes and projects supported by resources of the Government of Haiti as well as international agencies, as well as initiatives being executed by UN agencies, multilateral financial institutions and bilateral development assistance agencies.

25. Efforts promoted by governmental agencies that are exclusively funded from the Public Investment Budget tend to focus on (i) ensuring primary needs and provide a social safety net for the most vulnerable: women, elderly, children and disabled people, and combatting social exclusion; (ii) improving food security; (iii) addressing the implications of exposure and vulnerability to extreme weather events.

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<sup>13</sup>Rodríguez et al (2010)

<sup>14</sup>Haiti Déforestée, Paysages Remodelés. Alex Bellande 2015, Éditions CIDIHCA

26. The **Ede Pèp (Help the Haitian People) Programme**<sup>15</sup>, is a social assistance programme aimed at fighting poverty and facilitating access to social protection and social safety nets, in order to achieve social inclusion. No firm projections are available of spending under this programme during the project period, but in one six-month period (2013-2014) 311,440,246 Haitian gourdes (around US\$6.92 million) were spent<sup>16</sup>.

27. The **Ministry of Environment (MdE) national reforestation campaigns** employ aerial seeding methods and classic tree reproduction techniques in nurseries. The priorities published by the MdE call for actions<sup>17</sup> include the humid uplands in the departments of the North-East, North and the region of Saint-Louis du Nord, and the National Park La Visite/Massif de la Selle focussing on the National Park La Visite and the districts of Jacmel and Léogane.

28. Norwegian cooperation, in support to UNDP, UNEP and WFP, funds the “**Frontière Verte Programme Framework**”, including the “**Revegetation and Transboundary Natural Resources Management –Phase I and II Massacre and Pédernales Rivers Watersheds Project**”, which includes the North-East and South-East of the country. Impacts expected include reduction of soil erosion and sedimentation of water bodies and dams; improved quality of life of communities and poverty reduction; recovery of forest natural regeneration capacity; reversal of desertification and drought processes; and reduction of vulnerability to extreme flooding.

29. The European Union is funding the **Establishment of the Caribbean Biological Corridor (CBC) as a framework for biodiversity conservation, environmental rehabilitation and development of livelihoods options for Haiti, the Dominican Republic and Cuba**, which aims to establish the CBC in the three countries, through environmental rehabilitation and poverty alleviation, with the overarching goal of developing a cooperation platform to boost integration of conservation actions among states. The EU is also proposing to finance the **Binational Observatory on Haitian-Dominican Relations**”, one of the target themes of which will be environment.

30. In the south-east of the country, the **Directorate of Development Cooperation (DDC) of the Swiss Federal Ministry of Foreign Affairs** supports the NGO Helvetas in Unit II of Forêt des Pins, where the High Altitude Biodiversity Valuation Programme is being implemented. Swiss cooperation has contributed to PAs through support to the development and implementation of managerial and control mechanisms and tools, for example by assisting ANAP to design and experiment a platform for co-management of Forêt des Pins NP with a local stakeholder platform.

31. **Fondation Seguin** is working with support from GIZ in the protection of La Visite NP, in the project’s south-east target locality, including the provision of planting materials to farmers located in the *altiplano* vegetable growing area, and financial incentives to rehabilitate forest remnants.

32. The Spanish Government (**AECID**) and **Solidaridad Internacional** are both active in the project’s south-east target locality. SI has supported the development of the land use plan for Anse a Pitre; and AECID has supported the delimitation of La Visite NP.

33. The **US Agency for International Development (USAID)** has made significant investments in support of agricultural productivity and environmental sustainability to date, especially in the centre and north of the country, through programmes including AVANSE (Support to the Valuation of Agricultural Rehabilitation in the North, and Food and Environmental Security) and DEED (Economic Development for Environmental Sustainability). USAID is currently in the process of formulating a new project in the north of the country, which will coincide with this project’s northern target locality: this will focus on promoting the economic role of trees under the concept of “functional forests”.

34. The World Bank is financing, with support of Global Agriculture and Food Security Programme (GRASP), the US\$50 million project **Relaunching Agriculture and Strengthening Agriculture Public Services-Phase II (RESEPAG)**, strengthening MARNDR in providing agricultural support services and providing support for local agricultural extension and innovation services. It also promotes market-based access to inputs, under the new MARNDR approach of using demand-priming voucher systems to stimulate demand for planting material from nurseries, for fertilizer and other inputs, thereby strengthening incentives for the private provision of inputs.

35. CIAT is in the process of finalizing the country’s first regional territorial land use plan, for the north-east coast region; a limited level of experience has also been generated with the development of watershed-level plans, for example

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<sup>15</sup> FAES/Ministry of Social Affairs and the Bureaux of the Ministers in charge of Haitian Peasantry, Human Rights and The Fight Against Extreme Poverty

<sup>16</sup>2013-2014 mid-term report to the Haitian Congress

<sup>17</sup>MDE 2011, Feuille de route de l'action gouvernementale dans le domaine de l'environnement

through the USAID-supported WINNER project. However, the regional plan is “broad-brush” in nature, and mechanisms, capacities and experience are still lacking for putting it into practice at local level, and for integrating it with more specific local level plans.

36. The “SNAP project” (Establishing a Financially Sustainable National Protected Areas System, GEF ID 3616) is helping to create a favourable overall environment for effective PA management, by developing a strengthened PA governance system, backed by policies, regulations and competent institutions. Still lacking, however, is the incorporation of a more integrated, landscape/seascape-wide approach to delivering environmental benefits of global, national and local significance and addressing the implications of climate change.

37. Despite the strong baseline actions, there still are barriers that prevent the country from attaining the long-term vision.

## **Barriers**

| <b>1: Lack of an integrated landscape-scale vision in relation to the management and conservation of mountain massifs of high biodiversity value</b>  |   |
|---|---|
| Inadequate incorporation of considerations of BD and landscape stabilization in spatial zoning and development plans  | Typically land use planning (including regional and local spatial zoning and development plans) does not take adequately into account the locations, nature and magnitude of environmental values, biological connectivity, threats, the implications of climate change or the livelihood support needs of local communities.   |
| Inadequate dialogue and coordination between stakeholders influencing landscape conditions and dynamics   | Despite the existence of interinstitutional and inter-sector entities such as the National Environment Council (CONAE), the Inter-Ministerial Commission on the Environment (CIME) and the Inter-Ministerial Committee on Territorial Land Use Planning (CIAT), in the practice there is a very limited degree of dialogue and coordination, especially regarding the interactions between the agriculture and environment sectors (presided by MdE and MARNDR respectively).   |
| Deficient conditions of governance  | The Ministry of Agriculture, Natural Resources and Rural Development (MARDNR) which is in charge of the agricultural, forestry and fisheries sectors, has severely limited financial, technical and human resources and as a consequence virtually no field presence for the promotion and enforcement of the regulatory framework.   |
| Insecure tenure   | The existence of inadequate conditions of land tenure security over much of Haiti, including the two target massifs, is given by private sector actors as a disincentive for their investment in significant areas of perennial cash crop production, such as coffee and cacao plantations.   |
| Limited development of social capital   | Poor levels of development of social capital resources (e.g. for example, kinship obligations, traditional rotating labour and credit groups, and peasant organizations) limit the willingness of smallholders to adopt agricultural technologies, including agroforestry and tree planting <sup>18</sup> . When these limiting factors are adequately addressed, peasants may be willing to adopt technologies with long time horizons such as tree planting even on short-term tenures including leasehold and sharecropping, and under conditions of complicated watershed management regimes in degraded watersheds with multiple ownership <sup>19</sup> . |
| Market structures and conditions do not favour environmentally-sustainable forms of production  | Linkages between producers and markets with potential to reward environmentally-sustainable forms of production area weak; in the case of coffee, the market niche for environmentally-sustainable products is poorly developed and there is little motivation to export (thereby potentially gaining access to overseas markets with sustainability criteria) given the high level of national demand and the more favourable payment conditions that are available domestically.  |
| <b>2: Inadequate capacities and conditions in farming communities for the sustainable application of tree-based production systems that contribute to the generation of multiple environmental benefits</b> |   |
| Inadequate technical and financial capacities for investing in tree-based production systems <sup>20</sup>  | 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 and to effective technical assistance: agricultural research and extension services are available to only a small fraction of households. The key constraint to wider adoption and continued extension  |

<sup>18</sup>Land tenure and the adoption of agricultural technology in Haiti. Glenn R. Smucker, T. Anderson White and Michael Bannister. CAPRI Working Paper No. 6, CGIAR System-wide Program on Property Rights and Collective Action. October 2000.

<sup>19</sup>Smucker et al, 2000.

<sup>20</sup>Assessment of Haitian Coffee Value Chain. Fernando Rodríguez, Nora Patricia Castañeda, Mark Lundy. A participatory assessment of coffee chain actors in southern Haiti

|   |   |
|---|---|
|   | services is the absence of a permanent institutional base for extension <sup>21</sup> . With cocoa, the situation is generally more positive, but there is still limited incorporation in crop management systems of provisions for resilience to the impacts of climate change.  |
| Inadequate capacities for processing  | Improvement of quality in the processing stage of the value chain, and therefore product value and crop profitability, is hindered by the scarcity of infrastructure and local skill for processing: this is especially critical if wet milling is to be developed <sup>22</sup> . Also lacking are quality control facilities in the form of cupping laboratories.   |
| Weak business management and marketing skills among producers.  | Regional coffee producer networks and grassroots organizations exist, but there is weak vertical integration and cooperation along the value chain, especially between private sector companies involved in retail, processing and export, and coffee producers and their organizations. This limits opportunities for private sector actors to invest in producers in order to protect their supply base, for example through the provision of technical assistance or financing facilities.             |
| Limited recognition and incorporation of traditional knowledge on native tree species and their management  | Traditional knowledge has been eroded and failed to adapt to changing demographic, productive and climatic conditions, and is rarely taken into account in resource management interventions and extension programmes, which tend to focus predominantly on exogenous approaches that may not be well adapted to local needs, conditions and cultural norms. These traditional systems include farmer-assisted natural regeneration and tree-rich home gardens.   |
| The management of perennial-based crop systems does not reflect BD conservation needs   | Rustic 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 as the existence of types of trees with fruit and flowers preferred for food by birds and bats, structural diversity of shade systems to favour small mammals, microclimate to favour amphibians, or spatial configurations to favour cross-landscape movement between ecosystem remnants. |
| <b>3. Insufficient access to knowledge and information of relevance to sustainable land management and biodiversity conservation in production landscapes</b> |   |
| Knowledge is not adequately managed and disseminated to facilitate scaling up   | Gender issues are not adequately considered in initiatives related to environmental considerations in production sectors, and information on experiences (success and failures) and impacts is not routinely systematized and disseminated in such a way as to facilitate scaling up  |

38. In order to remove these barriers, building on the baseline projects, the project will promote a landscape approach to the management of mountain massifs of high global environmental value, leading to a situation in which:

- **Mountain massifs are composed of stable mosaics of land units** (including tree-based cash crop systems, tree-rich annual cropping and fallow areas, integrated functionally with remnants of natural ecosystems both within and outside PAs), favouring the presence and ecological viability of species of high global conservation value, protecting the productive capacity of natural resources and promoting the generation of ecosystem services;
- **Local people receive benefits in terms of the sustainability and viability of their farming and livelihood support systems** as a result of the protection of natural resources on which these depend, and their participation in value chains that reward production systems that generate environmental benefits.

39. **The project** will focus primarily on two target areas: Massif la Selle in the southeast of the country spanning the West and Southeast Departments (360,434 ha) and part of the Massif du Nord and Grande Riviere du Nord watershed in the north/northwest (approx. 125,000ha). Massif La Selle has been designated as a UNESCO Biosphere Reserve, including a core area of 52,579ha, a buffer zone of 66,116ha, and a terrestrial transition areas covering 241,739ha.

40. These areas were selected on the basis of the following criteria:

- Regional and global importance for biodiversity: both contain KBAs and constitute important links in the Caribbean Biological Corridor, connecting Haiti with the south-western Dominican Republic and eastern Cuba, respectively;
- Presence of large areas of tree-rich cropping systems (coffee and cocoa respectively)
- Strong baseline projects and significant co-financing opportunities.

41. The biological importance of the target areas is indicated by the large numbers of IUCN-listed species known to exist there (see 42.Table 1). The specific elements of this biodiversity whose conservation status may be improved as a

<sup>21</sup> Smucker et al, 2000

<sup>22</sup> This is less critical if the alternative approach is taken of focus on the flavour characteristics of the naturel coffee, that currently dominates the sector in Haiti, as a niche product on international markets

result of the project will be confirmed through studies during the PPG phase.

42. During the PPG phase, the selection of the target areas will be reviewed, with particular attention to the ongoing implications of Hurricane Matthew (which occurred during the process of formulation of the PIF, and in particular affected the south-west of the country); the effects of this on the institutional landscape are likely to continue to evolve in the short and medium term, and the opportunities are likely to become clearer for combining the delivery of global environmental benefits and social benefits in different areas of the country where both the local populations and their tree-based production systems were affected by the hurricane.

**Table 1. IUCN- Critical, Endangered or Vulnerable species in the KBAs of the two proposed project intervention sites**

| Class      | Massif La Selle KBA | Cotes du Nord KBA |
|------------|---------------------|-------------------|
| Mammals    | 2                   | -                 |
| Birds      | 11                  | 2                 |
| Reptiles   | 7                   | 6                 |
| Amphibians | 22                  | 3                 |
| Insects    | 2                   | -                 |
| Trees      | 12                  | 8                 |

43. The project **objective** is to generate multiple environmental and social benefits through the integrated and sustainable management of wooded production landscapes in the Massif la Selle and Massif du Nord and Grande Riviere du Nord with global significant biodiversity. 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:

**Component 1: Creation of enabling conditions for the application and scaling-up of the landscape management model**

***Output 1.1 Decision making tools to optimize the configuration of landscape elements in relation to spatial aspects of connectivity, biological importance, production potential, vulnerability and flows of ecosystem services:***

44. In order to optimize impacts in relation to the spatial dynamics of ecosystems, environmental services and threats, the farm level support proposed under Component 2 will need to be carried out within the framework of landscape-wide tools for decision-making and planning. To this end the project will support regional governments in incorporating these environmental considerations into spatial zoning plans covering their areas of jurisdiction, and in ensuring that the spatial plans of the different regional governments that cover the target massifs are effectively harmonized. This will be accompanied by development and adoption of a robust biodiversity condition monitoring protocol and emplacement of implementation structure. Similar mainstreaming support will be provided for social and economic development plans developed by regional governments, in order to highlight potential risks of development proposals undermining environmental values, and propose mitigation measures accordingly.

45. The project's support to these planning instruments will include the development of proposals for the definition of specific territorial zones potentially subject to special management provisions; these may include:

- Biological corridors (covering an estimated 6,000ha), in which for example the expansion of connectivity-friendly production systems will be prioritized;
- Buffer zones (covering an estimated 3,000ha) with planning and management provisions for the stabilization of landscape-level threats to PAs;
- New PAs (potentially covering an estimated 500ha), depending on the results of stakeholder consultations and feasibility studies, and with a particular emphasis on community-based models requiring low levels of external resources, in order to maximize the potential for social, institutional and financial sustainability.

46. In order to help maximize their effectiveness and ongoing relevance, the project will ensure that these planning and management instruments are supported by flows of reliable and relevant information on conditions in the target landscapes, for example in relation to vegetation status, land uses and biodiversity values. This support will take advantage of and build upon existing information management systems and platforms such as ONEV.

47. The market-based instruments proposed under Output 1.3, which are based on the premise that compliance with

environmental standards will facilitate producers' access to favourable markets, is dependent on the existence of effective mechanisms for ensuring such compliance. The project will support private-sector stakeholders in the development and implementation of compliance verification mechanisms including protocols for inspection and monitoring.

***Output 1.2. Socially- and institutionally sustainable mechanisms for governance in support of tree-rich production systems:***

48. The willingness and ability of stakeholders in both local communities and the private sector to invest in the application of tree-based production systems is dependent on favourable governance conditions, the existence of which will be supported by the project.

49. Building where possible on existing social structures, the project will support the establishment and/or consolidation of mechanisms for dialogue, coordination and conflict resolution between different actors across the target landscapes, permitting the conciliation and harmonization of their respective interests in relation to landscape management with implications for BD and LD.

50. Similarly, the project will support the strengthening of community-based institutions capable of organizing joint action in support of BD-friendly landscape and ecosystem management, such as the establishment and protection by communities of riparian reserves, the restoration of degraded areas, and the effective social control of threats, such as fire, affecting such areas and other environmental values. This will to some extent compensate for the limited capacities and resource of State institutions with responsibility for overseeing environmental governance.

51. In this regard, the project will take into account lessons learned from other projects in the past<sup>23</sup> regarding the importance of building on relevant existing community structures wherever possible<sup>24</sup>, before developing new ones, in order to promote community acceptance and sustainability. Such existing associations can function as the primary channels for diffusion and adoption of technical innovations and awareness-raising messages.

52. Security of occupancy and usufruct rights (although not necessarily formal tenure per se<sup>25</sup>) is a key determinant for the scaling up of perennial-based production systems. While it is beyond the scope of the project to significantly address the shortcoming of the land tenure system in Haiti, it will work with local communities to explore options for developing customary-based mechanisms which provide sufficient social sanction of occupancy and use rights to allow farmers to invest in such production systems. This will be closely coordinated and integrated with the incipient national process on the development of Voluntary Guidelines on Responsible Governance on Tenure.

***Output 1.3 Market-based instruments to facilitate the delivery of environmental benefits:***

53. The project will support the use of market-based instruments to motivate application of production practices that favour the generation of environmental benefits. This will involve close collaboration with private sector actors, including national companies involved in the production and marketing of coffee and cacao (such as REBO and Geo Wiener), and overseas purchasers. Central to this approach will be the application by these private sector actors of minimum environmental standards which the commodities that they purchase must meet.

54. Project actions in relation to this output will be focused initially on commodities produced in the selected target localities, but its influence on markets for these commodities, including the introduction of environmental criteria and the raising of awareness regarding the commercial advantages of incorporating environmental considerations, will have nationwide implications and will create favourable conditions for the scaling up of environmental mainstreaming in these sectors elsewhere in the country.

55. In order to ensure the existence of a level playing field that will encourage all major national purchasers to participate, the project will facilitate the joint development by them of harmonized industry-wide environmental standards, with clear definitions of the corresponding management requirements to be adhered to by producers.

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<sup>23</sup> L. Gingembre (2012). Haiti: Lessons learned and way forward in natural resource management projects. In Assessing and Restoring Natural Resources in Post-Conflict Peacebuilding, ed. D. Jensen and S. Lonergan. London: Earthscan.

<sup>24</sup> Haitian peasants have a long history of labour organization and shared work, especially in agriculture. Several peasant organizations are engaged in soil conservation and restoration work, and cooperate in micro watershed management. Others have created simple cooperatives. The widespread tradition of *konbit* (grouping people for a common goal, in Creole) reflects the long-standing culture of cooperation, particularly among peasants in rural Haiti, and lies at the core of Haitian society.

<sup>25</sup> Smucker et al (2000)

56. In addition to these sector-wide standards, the project will also explore with the private sector actors options for applying more case-specific standards that respond to the actual ecological requirements of the priority biodiversity in different localities. While such standards may introduce additional complexity, they may also open opportunities for site-specific branding and for corresponding access to premium prices.

57. The project will adopt a pragmatic approach and emphasise to both purchasers and producer the tangible benefits that can be expected from compliance with market-based environmental standards, rather than relying solely on arguments related to intangible environmental benefits (please see risk table): in addition to generating environmental benefits such as improved habitat value and connectivity, the maintenance of tree-rich production systems with diverse composition and structure will contribute to the ecological and productive sustainability of crop production by, for example, promoting nutrient capture and cycling, the maintenance of soil humidity, the maintenance of populations of natural pest control agents, and the buffering of crop production against the impacts of climate change such as increases in temperature and drought intensity. These benefits have been clearly shown elsewhere in the case of coffee, where moderate increases in tree shade have been shown to reduce the need for chemical inputs to maintain production, and increase resilience. Such increases in the sustainability and resilience of production will be of benefit to both producers, for whom the crops constitute an important source of support for their often otherwise fragile livelihoods, and purchasers, who require reliable supplies (in the case of both coffee and cocoa, purchasers are currently faced with difficulties in obtaining such supply).

## **Component 2: Conservation compatible tree-based production systems as part of sustainable landscape mosaics**

58. This component will focus on developing capacities and mechanisms among farmers and value chain actors to enable the expansion of the area managed under conservation-friendly tree-rich production systems.

59. As a result of this support, there will be an increase of 500 ha in the area of shade coffee and 500 ha of cacao plantations in the target localities managed in accordance with the generation of multiple environmental benefits. For these targets to be met, producers will require **improved access to technical and financial assistance**. This will be achieved through the delivery of the following outputs:

### ***Output 2.1 Improved service delivery systems for technical assistance:***

60. The principal incremental focus of technical assistance support to coffee and cacao producers will be on the application of management measures capable of delivering environmental benefits, such as the diversification of shade trees to favour bird species, the management of ground cover to favour amphibians, reptiles and microfauna, and the protection of riparian zones in plantations to favour aquatic fauna. These messages will benefit farmers by helping to ensure their compliance with the requirements of green value chains and certification systems. However, as mentioned above, this may often not be an adequate motivation for producers to adopt environmentally-beneficial practices. The incremental messages will therefore be delivered as part of broader extension packages focused principally on considerations of productivity and resilience, which are likely to be of more immediate concern to farmers.

61. Wherever possible, the promotion of these more productivity-related and agronomic aspects will be supported through co-financing, to which GEF funds will be added incrementally in support of the mainstreaming of global environmental considerations. In cases where such cofinancing support is not available, GEF funds will be used for the direct provision of technical assistance covering both productivity and environmental issues, either by project staff or by contractors.

62. The project will also promote and support the role of the private sector in the development and consolidation of systems for the provision of technical assistance to their supplying farmers, including environmental considerations. This approach will serve to address concerns raised by private sector actors regarding the lack of continuity of the technical assistance typically provided by short-term development projects. The project will work with multiple private sector actors in this regard, in order to promote economies of scale and harmonization of technical assistance packages.

63. The project will emphasise the application of participatory approaches to technology development and transfer, such as Farmer Field Schools, in order to maximize ownership of the extension messages by farmers. It will in addition invest in the production of technical guidelines and extension materials for use by farmers and by extension agents in Government, development agency project technicians, NGOs and private sector, focusing particularly on BD-friendly management practices.

### ***Output 2.2 Improved financing mechanisms for tree-based production systems:***

64. The project will in addition seek to improve farmers' access to the finance needed to enable them to invest in establishing or improving the productivity of tree-based production systems. In the case of cash crops such as coffee and cocoa that are purchased by national or international companies, the project will work with the companies on the development of finance mechanisms for their producers, emphasizing (as with the provision of technical assistance as explained above) the benefits of this for the companies in terms of increased continuity and quality of supply. The project will also explore, with financial institutions (such as savings banks and cooperatives) and Government incentive programmes, opportunities for providing finance facilities to farmers for the establishment and maintenance of tree-based production systems, providing these institutions with the results of analyses of the productive and economic viability of these systems, and therefore their creditworthiness.

***Output 2.3 Participatory systems for knowledge generation and development:***

65. The project will also support farmers in managing trees elsewhere on their farms, in addition to coffee and cacao plantations, for example in the form of dispersed trees managed in association with crops, live fences bordering cropping areas, diversified home gardens, assisted natural regeneration in cropping and fallow areas. This will lead to increases in the density of standing trees in throughout farmers' lands, and the maintenance or improvement of the diversity of tree species on farm, including species of specific ecological importance (e.g. as food source, habitat, connectivity) for the threatened BD identified in the target areas. To this end, the project will invest in increasing farmers' knowledge and capacities for traditional forms of tree management, supporting the recovery, adaptation and scaling up of such practices. These management practices and tree species or varieties may in many cases already be familiar to many farmers and may have been eroded or neglected: in recognition of this, and to maximize the likelihood of ownership, uptake and social sustainability, the project will prioritize participatory approaches including farmer-based participatory systematization and knowledge exchange, as well as farmer-based systems for the production and exchange of planting material.

***Output 2.4 Capacities for generating revenue from other tree-based systems on farm:***

66. In addition to promoting farmers' knowledge and interest in traditional trees and management systems, the project will support the target population in generating revenue from them: this will provide them with direct economic benefits, and this in turn will further contribute to their farmers' motivations to adopt and maintain the trees and management practices. Examples of tree and their products with potential for revenue generation in this way include fruit and handicrafts from native species managed in association with crops or in home gardens (Bellande 2015<sup>26</sup> mentions that at least 15 such species are currently used for the production of preserves by small farmers). This strategy will have particular potential to generate benefits for women, through their involvement in small-scale processing and in the commercialization of tree products.

67. Project support aimed at helping farm families to generate income from such trees and management systems will include the initial investment, training and advisory support for the establishment and management of small-scale processing facilities managed by farmers and community organizations, especially women; and support to local people's participation in value chains for tree-based products.

**Component 3: Gender mainstreaming, knowledge management and learning**

***3.1 Knowledge management and dissemination/scaling up strategy***

68. In order to maximise the impact of the project, a strong emphasis will be placed on scaling up. To this end, a knowledge management strategy will be formulated and implemented, providing for the systematization of lessons learned and their effective dissemination, resulting in improvements to policies, approaches and enabling conditions at national level as well as replication at local level elsewhere in the country where suitable and comparable conditions exist. The KM strategy will also help to ensure that lessons learned

***3.2 Monitoring and evaluation strategy***

69. Project indicators will be confirmed and quantified during the PPG phase, together with a plan for their measurement and an M&E plan. These will be validated during project inception, and developed into a comprehensive M&E strategy during the first months of the implementation phase, to ensure that the project is managed in an informed, adaptive and effective manner.

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<sup>26</sup>Haiti Déforestée, Paysages Remodelés. Alex Bellande 2015, Éditions CIDIHCA

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

70. As described above, there is a strong baseline of investment in Haiti in areas such as the development of production sectors, including green value chains, watershed management, climate change resilience and the protection of biodiversity on a site-specific level.

71. Building on, complementing and synergizing with these baseline initiatives, GEF resources will be used in an incremental manner to deliver additional benefits (global environmental benefits or GEBs) in terms of the conservation status of globally important elements of biodiversity, while at the same time generating globally significant benefits in terms of sustainable land management. In qualitative terms, GEF funds will add incremental value to the baseline situation by showing how to deliver GEBs in the focal areas of BD and SLM in an integrated manner, through the promotion of tree-rich production and resource management systems that favour biodiversity, while at the same time stabilizing landscape dynamics and helping to protect the natural productive capital of the landscape units and their potential to yield environmental goods and services in a sustainable manner:

72. The achievement of the project's objective of generating multiple environmental and social benefits through the integrated and sustainable management of wooded production landscapes will be achieved by associating GEF resources with significant co-financing. GEF resources will be used to mainstream environmental considerations (BD/LD) into a number of the baseline initiatives described above, with the result that these initiatives will come to contribute actively to the generation of GEBs. These cofinancing sources are as follows:

- Support by the Inter-American Development Bank (IADB) for technology transfer to small farmers in the north and north-east of the country, through the Project for Technology Transfer to Farmers (PTTA II), and the promotion of climate resilient (including tree-based) production systems through the Natural Disaster Mitigation Programme (PMDN II). This IADB support coincides in part with the project's northern target area, and will contribute to ensuring that producers have the technical capacities required for the sustainable application of tree-based management systems including cocoa production, while GEF incremental support will complement this by helping to ensure that the production systems optimise the delivery of global environmental benefits, especially biodiversity conservation. This IADB support will also help to create favourable conditions for the scaling up of the tree-based management systems beyond the specific areas to be covered by the GEF project.
- IADB support to the Small and Micro Enterprise Programme of the Ministry of Commerce and Industry: this will help to ensure that producers have the business management capacities required to optimise the profitability and attractiveness of the BD-friendly tree-based production systems.
- Support by the Federation of Cocoa Cooperatives in the North (FECCANO) in association with Agronomists and Vets without Borders (AVSF) to sustainable cocoa production and marketing in the project area.

The following table further clarifies baseline and alternative scenarios for relevant practices, and global environmental benefits which the project will generate.

| Baseline scenario   | Alternatives to be put in place by the project  | Global Environmental Benefits   |
|---|---|---|
| Shade coffee farms will be poorly managed, increasingly unviable and replaced by less BD/LD friendly alternatives such annual crop production and grazing, which will prevent the tree component from re-establishing itself. | <ul style="list-style-type: none"> <li>• Market-based instruments to facilitate the delivery of environmental benefits</li> <li>• Improved service delivery systems for technical assistance</li> <li>• Strengthened decision making tools to optimize the configuration of landscape elements</li> </ul> | <ul style="list-style-type: none"> <li>• Maintenance or improvement in the status of ecosystem health indicators based on the monitoring of taxa such as birds or butterflies, which are easily observable, respond rapidly to changes and likely to reflect changes in overall ecosystem health and trophic structure (the definition of appropriate indicators of this type, and corresponding monitoring protocols, will require significant study in order to ensure relevance, reliability and practicability).</li> </ul> |
| Investments in promoting agronomic, productive and commercial aspects of tree-based production systems will not be effective in generating GEBs   | <ul style="list-style-type: none"> <li>• Participatory systems for knowledge generation and development</li> <li>• Improved financing mechanisms for tree-based production systems</li> <li>• Capacities for generating revenue from other tree-based systems on farm</li> </ul>                          |   |
| Promotion of other tree species is likely to be carried out using conventional tree planting practices with questionable sustainability and little generation of GEBs.  |   |   |

| Baseline scenario  | Alternatives to be put in place by the project  | Global Environmental Benefits  |
|--|---|--|
| Promotion of green value chains (for e.g. mango, cashew, ricin, cacao and vetiver) will not necessarily favour the generation of GEBs, as these crops are typically grown in management systems with limited structural or compositional diversity.                              | <ul style="list-style-type: none"> <li>Support to development of industry-wide sustainability standards and environmental certification/branding, with emphasis on combining environmental and productive sustainability</li> </ul> | <ul style="list-style-type: none"> <li>6,000ha identified and managed as biological corridors prioritized for connectivity-friendly production systems</li> <li>500ha of coffee and 500ha of cacao from the target landscapes is managed in accordance with industry standards and/or BD-related certification criteria</li> </ul> |
| Remnants of natural ecosystems will continue to be affected by wood harvesting for charcoal, construction (especially post-disaster reconstruction) and agriculture expansion, and the continued use of fire as a tool for land clearance and for the control of weeds and pests | <ul style="list-style-type: none"> <li>Strengthening of socially- and institutionally sustainable mechanisms for governance in support of tree-rich production systems, as a complement to weak State capacities</li> </ul>         | <ul style="list-style-type: none"> <li>Increased area of shade coffee (1,000ha) and cacao (1,000ha) in the target localities managed in accordance with the generation of multiple environmental benefits.</li> </ul>  |

##### 5) Global environmental benefits (GEFTF)

73. Through the provision of support to tree-based production systems, in the form of orientation, capacity development and incentives, the project will lead to major GEBs in two focal areas:

74. **Biodiversity:** as shown in 42.Table 1 and Annex 2, the target areas are home to a large number of globally important species, of high conservation value. The specific elements of the biodiversity to the conservation status of which the project will contribute will be defined in as much detail as possible during the PPG phase; in general, it is safe to conclude at this stage that the maintenance or increases in the numbers of trees on farm and in associated land units such as ravines and stream sides, and modifications or diversification of the types of species present, will contribute to improving the conservation status of endemic, globally rare and/or threatened species by:

- Promoting connectivity between populations which are becoming increasingly isolated due to fragmentation of their original habitat into ever-smaller and more widely-separated fragments; reversal of this situation, by creating conditions that help them move and interact between landscapes, will contribute to their long term genetic viability;
- Promoting upstream-downstream connectivity, for example by protecting or increasing ravine-side vegetation, will facilitate the movement of elements of (especially aquatic) fauna, on a daily or seasonal basis, between altitude zones.
- Promoting favourable habitat conditions in production landscapes (for example by increasing numbers of food species for birds and bats and ensuring suitable microclimates for amphibians) will increase the effective range size, and therefore numbers and success, of species that are otherwise inhibited from venturing out of every-shrinking ecosystem remnants due to hostile anthropomorphic conditions.
- Promoting agroforestry-based systems will increase ecological and productive sustainability, reducing the need for periodic abandonment of exhausted plots, and thereby contributing to landscape stabilization and reducing the advance of the agricultural frontier into remnant ecosystems.

75. Direct measurement of the impacts of the project on the conservation status of endemic, globally rare and/or threatened species may be impractical and costly, although this will be confirmed through PPG studies. The project will therefore rely principally on proxy measures of biodiversity status, including the following:

- Maintenance or improvement in the status of ecosystem health indicators based on the monitoring of taxa such as birds or butterflies, which are easily observable, respond rapidly to changes and likely to reflect changes in overall ecosystem health and trophic structure (the definition of appropriate indicators of this type, and corresponding monitoring protocols, will require significant study in order to ensure relevance, reliability and practicability).
- 6,000ha identified and managed as biological corridors prioritized for connectivity-friendly production systems
- 500ha of coffee and 500ha of cacao from the target landscapes is managed in accordance with industry standards and/or BD-related certification criteria
- Increased area of shade coffee (1,000ha) and cacao (1,000ha) in the target localities managed in accordance with

the generation of multiple environmental benefits.

76. **Land degradation:** the project will result in increases in the area of integrated natural resource management (INRM) practices in the target landscapes, in the form of diverse agroforestry systems, which will contribute to combating land degradation processes by facilitating nutrient capture and recycling, facilitating soil water protection and recharge, and reducing rainfall impact and erosive runoff flow.

77. This proposed project will also contribute to the following Aichi Targets:

- By promoting the application of market-based incentives for tree-based production systems, the project will contribute to **Strategic Goal A:** Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society/**Target 3:** By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio economic conditions/**Target 4:** By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.
- By supporting the stabilization of landscapes and the consequent erosion of ecosystem remnants, and promoting connectivity between remnants, the project will contribute to **Strategic Goal B:** Reduce the direct pressures on biodiversity and promote sustainable use/**Target 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/**Target 7:** By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.
- By supporting the protection of ecosystem remnants and increasing the value of production landscapes or habitat and connectivity, the project will contribute to **Strategic Goal C:** To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity/**Target 12:** By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.

#### **6) Innovation, sustainability and potential for scaling up.**

78. Two key innovative elements of the project are:

- Its application of a landscape-wide approach to the delivery of GEBs, that takes into account the landscape-level nature and spatial dynamics of the social and biological processes that determine environmental values, such as the need for connectivity of different kinds, and the indirect implications of land use and social changes in terms of landscape instability and pressures on natural resources.
- Its application of an integrated farming system and livelihood approach to the promotion of tree cover in productive landscapes, in order to maximize the likelihood of uptake and sustainability, and generate favourable outcomes in terms of gender equity and food security.

79. The sustainability of the project will be ensured by:

- Linking the conservation of forest cover to the application of production systems with proven social and economic viability and sustainability
- Strengthening socially-sustainable governance mechanisms to underpin the application of the proposed resource models
- Developing institutional capacities to ensure the continued provision of technical assistance to producers in the long term.

80. A challenge for sustainability will be the aging of the population due to rural-urban migration by young people, a phenomenon which affects the target areas in common with much of the rest of rural Haiti: this threatens to erode traditional knowledge and its transmission between generations, and to reduce the availability of labour for the management of the target production systems. Subject to the recommendations of PPG studies, this will be at least partly addressed by placing particular emphasis on targeting project messages and technical assistance at younger farmers, and by promoting forms of economic activity (such as processing and marketing), related to the target production systems, that provide opportunities and motivations for young people to remain in the target communities.

81. This proposed project envisages the scaling up of the landscape approach at a broader scale based on the valuable information and lessons learned from the proposed pilot experiences. There is scope for project experiences to be scaled up to all other coffee and cocoa production areas in Haiti, including the south-west peninsula, the Artibonite area in the centre of the country and the Belladere/Savanette area in the centre/east, on the border with the Dominican Republic. The proposed project will thus develop the capacity of institutions and producers to expand the coverage and programmatic scope to include additional producers in the target areas as well as the potential to replicate practices in other provinces. Scaling-up will be promoted by ensuring that project messages and lessons learned regarding the viability of the proposed management approaches are effectively communicated to entities working with producers in those areas, including Government institutions, development NGOs, producer groups and private sector value chain actors: this communication (to be confirmed during the PPG phase) will be achieved through a combination of audiovisual and printed dissemination materials, workshops/seminars, and visits by representatives of these entities to project pilots.

**2. Stakeholders.** Will project design include the participation of relevant stakeholders from civil society and indigenous people? (yes  /no  ).

82. There are no indigenous people in Haiti.

83. The project will require the participation of community-based organizations (CBOs), particularly in relation to the strengthening of natural resource governance, under Output 1.2. There is a wide range of CBOs active in rural communities in Haiti, which vary in terms of their objectives, level of consolidation and origins, with some emerging as endogenous responses to specific community concerns (such as agriculture, local development, environmental protection and environmental vulnerability), some having been especially created with the arrival of NGO projects, and others being “opportunists”, lacking functionality at present but waiting to become legitimate community interlocutors if opportunities arise.

84. A specialist in social and gender issues will be contracted during the PPG phase to identify and map key CBOs of potential relevance to the project. PPG inception meetings will be held in the two target areas, in which the key proposed elements of the project will be presented and discussed with CBOs and other stakeholders. A stakeholder participation plan will be developed in consultation with them: in accordance with this plan, project design consultants and Government counterparts will undertake specific consultations with these actors throughout the PPG phase, to address technical issues (for example, participatory identification of the resource management strategies to be promoted by the project) and also to define the proposed nature and mechanisms for their participation during the implementation phase of the project. This will conclude with community-level feedback and validation workshops prior to the finalization of project design, in order to allow their inputs to be incorporated.

### **Key stakeholders:**

|  |   |
|--|---|
| Ministry of the Environment (MdE)  | Project executing agency  |
| Ministry of Agriculture and Natural Resources (MARNDR)   | Sector head with responsibility for promoting the development of agricultural crops including coffee and cocoa  |
| Inter-ministerial Commission on the Environment (CIME)   | Presided by the Prime Minister and involves the Ministers of Environment, of Public Works, Transport and Communication, and of Public Health and Population; responsible for inter-ministerial coordination on issues related to the environment. |
| Inter-Ministerial Committee on Territorial Land Use Planning (CIAT)  | Inter-institutional coordination of territorial land use planning   |
| Ministry of Planning and External Cooperation  | Lead entity with responsibility for overseeing and regulating territorial land use planning   |
| Regional and local governments   | Responsible for overseeing land use planning and social/productive development programmes at local level  |
| Private companies (e.g. REBO and WEINER)<br>regional networks e.g. FACN, RECOCARNO, COOPCAB, UCO CAB and FECOCAS, and grassroots organizations (e.g. COOPACVOD and UPAB) | Purchasers from producers; roasters and exporters.<br>Coffee exporters, linking coffee producers/roasters and international commodity markets   |
| Development NGOs (e.g. Fondation Seguin)   | Promotion of tree planting, sustainable agriculture and conservation.   |
| Coffee and cocoa farmers   | Principal project beneficiaries   |

**3. Gender Considerations.** Are gender considerations taken into account? (yes  /no  ).

85. Men and women have differential roles and interests in relation to the management of the natural resources in the target areas, and specifically in relation to the management of the target 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, in relation for example to the balance of control of economic resources in the family and community, balances in work load, and levels of representation in decisions on natural resource governance.

86. The social and gender specialist to be contracted during the PPG phase 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.

87. The gender specialist will advise the PPG team in order to ensure that all PPG studies and consultations are gender sensitive and allow women's concerns to be expressed effectively, and that 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. A gender mainstreaming and knowledge management component has been included in the project framework and specific resources and targets will be assigned to gender mainstreaming accordingly.

#### **4.Risks.**

| Risk  | Probability | Mitigation   |
|---|-------------|--|
| Climate change, affecting the productive viability of production systems and increasing risks of wildfires affecting vegetation   | High        | <ul style="list-style-type: none"> <li>- Promotion of technical capacities and favourable market conditions for the application of CC-resilient tree-based production systems that will reduce the vulnerability of livelihoods, production systems and ecosystems to CC. The risks and impacts of wildfires will be reduced through the strengthening of community governance structures and through the promotion of tree-based production systems with reduced susceptibility to fire damage.</li> </ul>  |
| Weak capacities in Government institutions  | High        | <ul style="list-style-type: none"> <li>- Strengthening of socially- and institutionally sustainable mechanisms for governance in support of tree-rich production systems (Output 1.2), to complement weak State capacities for governance</li> <li>- Support to farmer-based technology generation and transfer under Output 2.1, to complement to weak State-managed extension services</li> <li>- Support (under Output 2.1) to the private sector in the development and consolidation of systems for the provision of TA to their supplying farmers, including environmental considerations, to address their concerns regarding the lack of continuity of the TA typically provided by short-term development projects.</li> </ul>  |
| 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. | Moderate    | <ul style="list-style-type: none"> <li>- Awareness-raising in private sector on the benefits of sound environmental management for ensuring reliability of product supply (under output 1.3, the project will emphasise to both purchasers and producers the tangible benefits that can be expected from compliance with market-based environmental standards, such as ecological and productive sustainability and the buffering of crop production against the impacts of climate change).</li> <li>- 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</li> <li>- Support to farmer-based technology generation and transfer in order to reduce reliance on private sector support</li> </ul> |
| Variations or weakness in markets and value chains for target products  | Moderate    | <ul style="list-style-type: none"> <li>- Promotion of productive diversification in order to buffer variations in individual components, through participatory farm planning, the systematization and dissemination of traditional knowledge on diverse farming systems, and the inclusion of diversified systems in the TA packages to be supported through the project.</li> <li>- Complementary emphasis on non-market benefits such as provision</li> </ul>  |

| <b>Risk</b>   | <b>Probability</b> | <b>Mitigation</b>   |
|---|--------------------|---|
| Natural disasters could damage the target production systems and affect market access routes, but the target production systems would not be more susceptible than existing systems.  | Moderate           | <p>of subsistence products, food security and CC resilience</p> <ul style="list-style-type: none"> <li>- The project will support the maintenance of diverse livelihood support and farming systems in order to minimize the livelihood implications of the failure of individual productive components due to natural disasters</li> </ul>   |
| If inadequately formulated and managed, possible restrictions on environmentally damaging activities might limit women's opportunities to use natural resources as a source of livelihood support                                     | Moderate           | <ul style="list-style-type: none"> <li>- Analyses of women's dependences on natural resources will be carried out during the PPG phase, and any proposed restrictions on resource use will take these into account, and where appropriate alternative livelihood support opportunities will be identified and promoted.</li> </ul>  |
| The existence of inadequate conditions of land tenure security is given by private sector actors as a disincentive for their investment in significant areas of perennial cash crop production, such as coffee and cacao plantations. | Moderate           | <ul style="list-style-type: none"> <li>- While it is beyond the scope of the project to resolve land tenure issues, it will work with local communities to explore options for developing customary-based mechanisms which provide sufficient social sanction of occupancy and use rights to allow farmers to invest in such production systems.</li> <li>- Research suggests that poor levels of development of social capital resources are more significant than tenure as a determinant of smallholders' willingness to adopt agricultural technologies, including agroforestry and tree planting<sup>27</sup>, and to this end the project will invest in strengthening social and capital.</li> </ul> |
| There is the potential for wet coffee milling to result in the release of organic pollutants to water courses if inadequately managed   | Low                | <ul style="list-style-type: none"> <li>- It is expected that "natural" production will continue to predominate: where wet milling is introduced, the project will support the use of "ecological" washing and milling facilities in order to minimize environmental impacts</li> </ul>  |

**5. Coordination.** Outline the coordination with other relevant GEF-financed and other initiatives.

88. One of the three target areas of CCA/BD project 5380 "**Increasing Resilience of Ecosystems and Vulnerable Communities to CC and Anthropic Threats Through a Ridge to Reef Approach to BD Conservation and Watershed Management**" will be included within the Massif La Selle target area of this project. There will however be clear differentiation between the two projects: project 5380 is focused specifically on addressing upstream-downstream (ridge to reef) issues related to CC resilience, and on reducing impacts of watershed management on coastal and marine biodiversity, and will only cover three watersheds. The project proposed here will complement this by adopting a broader landscape focus that will cover the Massif as a whole, in order to address considerations of biological connectivity and flows of impacts that cross watershed divisions, such as the connections between ecosystem remnants located along ridge tops, connectivity within altitude zones (such as the coffee production belt) and the impacts on ridge-top ecosystem remnants arising from activities on the northern slopes of the Massif, not covered by project 5380. The two projects will also differ in term of their target production sectors, project 5380 focusing principally on fish value chains and this project focusing on coffee and tree products: project 5380 will only address coffee to a limited extent (around the community of Thiotte), while this project will include the more important coffee production areas around Marigot, at the western end of the Massif.

89. While specifically differentiated, there will also be significant opportunities for coordination and complementarity between the two projects. Lessons on resource management practices will be exchanged: this project will benefit from the lessons that will have been learned, by the time it starts, through Project 5380 in relation to CC resilient production systems, and this project will then feed lessons on tree-based production systems into project 5380. The projects will also learn from each other in relation to interactions with community-based organizations and local and regional governments. The two projects will not overlap spatially in the north of the country, but there will again be valuable opportunities for exchanges of lessons learned given that Project 5380 will operate in similar landscapes in the watershed of Grande Riviere du Nord and the watersheds draining into the Three Bays, which also include cocoa production areas.

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<sup>27</sup>Land tenure and the adoption of agricultural technology in Haiti. Glenn R. Smucker, T. Anderson White and Michael Bannister. CAPRI Working Paper No. 6, CGIAR System-wide Program on Property Rights and Collective Action. October 2000.

90. The project will coordinate, for example in the sharing of experiences and knowledge, the dissemination of information and lessons learnt, and the scaling-up of results, with the newly-approved **World Bank GEF project “Resilient Productive Landscapes in Haiti”**, which will target watersheds in other areas of the country. Details of collaboration will be defined during the PPG phases of this project and the World Bank one, which will largely coincide.

91. The project will be closely coordinated with the proposed new **USAID** project, which will coincide with this project’s northern target locality and will focus on promoting the economic role of trees under the concept of “functional forests”. There will be significant opportunities for the GEF project to associate itself in an incremental manner with the USAID project, supporting the mainstreaming of global environmental benefits into the tree-based production systems to be promoted by the USAID project.

92. Similar coordination and complementarity is envisaged with the proposed **AFD/GCF** project in support of the coffee sector, which will coincide with this project in the Massif La Selle target area. The AFD/GCF project will focus largely on productivity aspects of coffee, and there is opportunity for this project to contribute incrementally in relation to the mainstreaming of environmental considerations into the sector.

93. The GEF **Small Grants Programme (SGP)** in Haiti provides grants to NGOs and CBOs (Community-Based Organisations) in support of community-based initiatives that could contribute to the GEF focal areas on biological diversity, climate change, land degradation and international waters. The SGP is currently implementing 18 community projects in 5 departments: North-East, North, Artibonite, Plateau Central and South. It operates, with the support of AusAid, the “Community-Based Adaptation to Climate Change Programme” with a view to improve adaptation capacity to climate change and climate variability through community measures capable of increasing resilience of livelihoods systems and ecosystems. Opportunities will be explored during the PPG phase for specific collaboration with the SGP in support of community-based resource management initiatives.

**6. Consistency with National Priorities.** Is the project consistent with the National strategies and plans or reports and assessments under relevant conventions? (yes  /no  ).

94. The project is in accordance with the principal strategic guidelines presented in the country’s draft NBSAP, including the reduction of poverty in communities who rely on biodiversity for their survival and prosperity, the correlation of biodiversity actions with measures that provide employment opportunities and diversify income generation activities, the promotion of the ecosystem approach, promoting gender equity in biodiversity programmes and management, the promotion of a decentralizing approach to manage biodiversity by strengthening civil society and local organizations to facilitate sustainable use of biodiversity, the development of increasing partnerships with the private sector, and the valorisation of traditional and local knowledge. The Triannual Plan of Operations of MDE for 2013-2016 also prioritizes reforestation, integrated watershed management, strengthening of environmental governance and the sustainable management of PAs and natural spaces.

95. The project is in line with the 2010-2020 Action Plan of MARNDR, which prioritizes the protection of natural resources (soil, water and forests) through the practice of integrated and conservationist agriculture, together with the expansion of traditional and non-traditional export crops.

96. The project will contribute to the priorities and targets set out in Haiti’s Climate Action Plan (2015) 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.

97. The project will also contribute to the targets of Haiti’s 2015 National Action Plan for the Combat of 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.

98. In January 2017 Haiti launched its process for the definition of a strategy for Land Degradation Neutrality, with corresponding targets, through a national information and coordination workshop. Targets have already been set for 3 mandatory and transversal issues, namely vegetation cover, land productivity and carbon sinks, and it is expected that other national targets will have been established in accordance with Nationally Determined Contributions (NDC) and based on the 3 conventions (biodiversity, LD, and CC) by the time of CEO Endorsement of this project, and the level of contribution of this project to those targets will accordingly be defined.

99. It will also contribute in particular to Aichi target B5 in relation to the reduction of the rate of loss, degradation and fragmentation of natural habitats, B7 in relation to the sustainable management of areas under agriculture and forestry, ensuring conservation of biodiversity, C11 in relation to the integration of PAs into wider landscapes, and D14 and D15 in relation to the conservation and restoration of ecosystems.

### **7. Knowledge Management.**

100. During the PPG phase, a detailed review will be carried out of relevant experiences in Haiti and elsewhere with the restoration and management of tree-based production systems, and with the application of the green value chain approach to support the generation of incentives and the development of producer capacities, in order to inform project design. This will include a critical review (based on literature and consultations) of the numerous experiences with reforestation and tree management applied to date in Haiti, as well as initiatives focused on green value chains both within and outside the country (including those supported by the UNDP Green Commodities Programme).

101. 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 3. This system will provide for two-way exchanges of lessons learned, between the project and other relevant (including partner) initiatives. These will include, for example, the CCA/BD project 5380 "Increasing Resilience of Ecosystems and Vulnerable Communities to CC and Anthropic Threats Through a Ridge to Reef Approach to BD Conservation and Watershed Management", as well as the proposed initiatives of AFD/GCF and USAID with which it is expected that the project will partner directly.

## **PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)**

**A. RECORD OF ENDORSEMENT<sup>28</sup> OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S):**  
 (Please attach the [Operational Focal Point endorsement letter](#)(s)with this template. For SGP, use this [SGP OFP endorsement letter](#)).

| NAME              | POSITION                    | MINISTRY                | DATE(MM/dd/yyyy) |
|-------------------|-----------------------------|-------------------------|------------------|
| Moise Jean-Pierre | GEF Operational Focal Point | Ministry of Environment | 2/23/ 2017       |

### **B. GEF AGENCY(IES) CERTIFICATION**

This request has been prepared in accordance with GEF policies<sup>29</sup> and procedures and meets the GEF criteria for project identification and preparation under GEF-6.

| Agency Coordinator, Agency name                | Signature   | Date (MM/dd/yyyy) | Project Contact Person                     | Telephone     | Email                   |
|--|---|-------------------|--|---------------|-------------------------|
| Adriana Dinu, UNDP- GEF Executive Coordinator. |  | 09/19/2017        | Lyes Ferroukhi, Regional Technical Advisor | +507 302-4576 | lyes.ferroukhi@undp.org |

### **C. ADDITIONAL GEF PROJECT AGENCY CERTIFICATION (APPLICABLE ONLY TO NEWLY ACCREDITED GEF PROJECT AGENCIES)**

For newly accredited GEF Project Agencies, please download and fill up the required [GEF Project Agency Certification of](#)

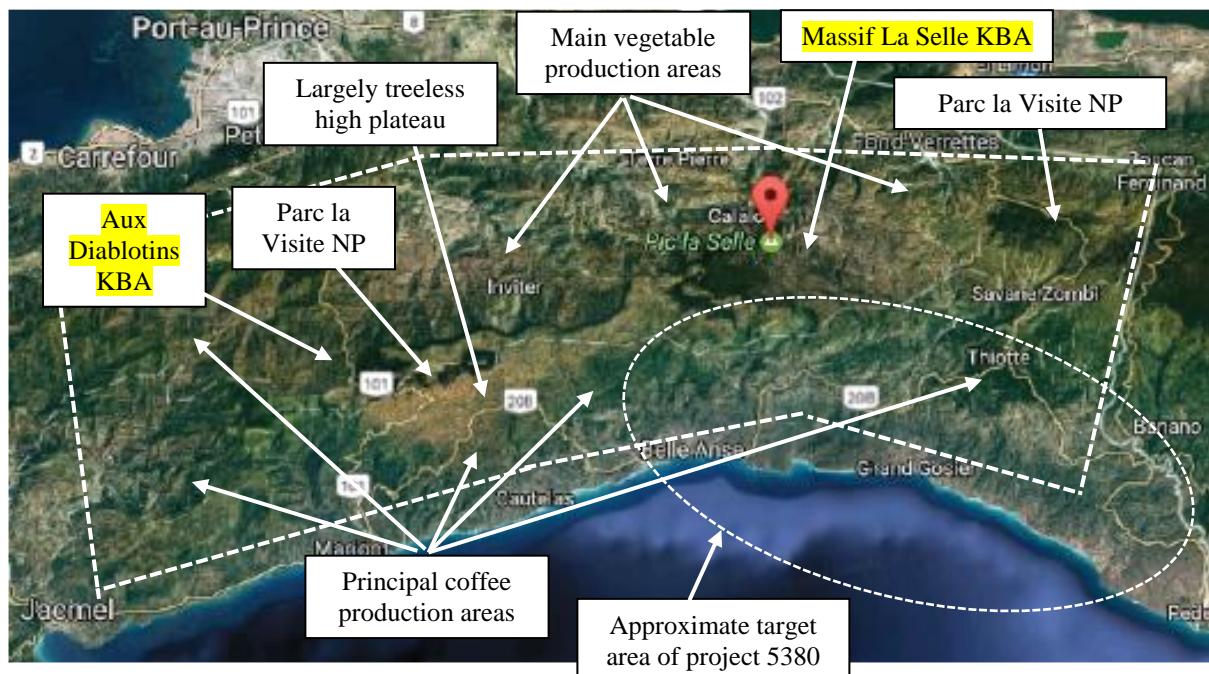
<sup>28</sup> For regional and/or global projects in which participating countries are identified, OFP endorsement letters from these countries are required even though there may not be a STAR allocation associated with the project.

<sup>29</sup> GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, and SCCF

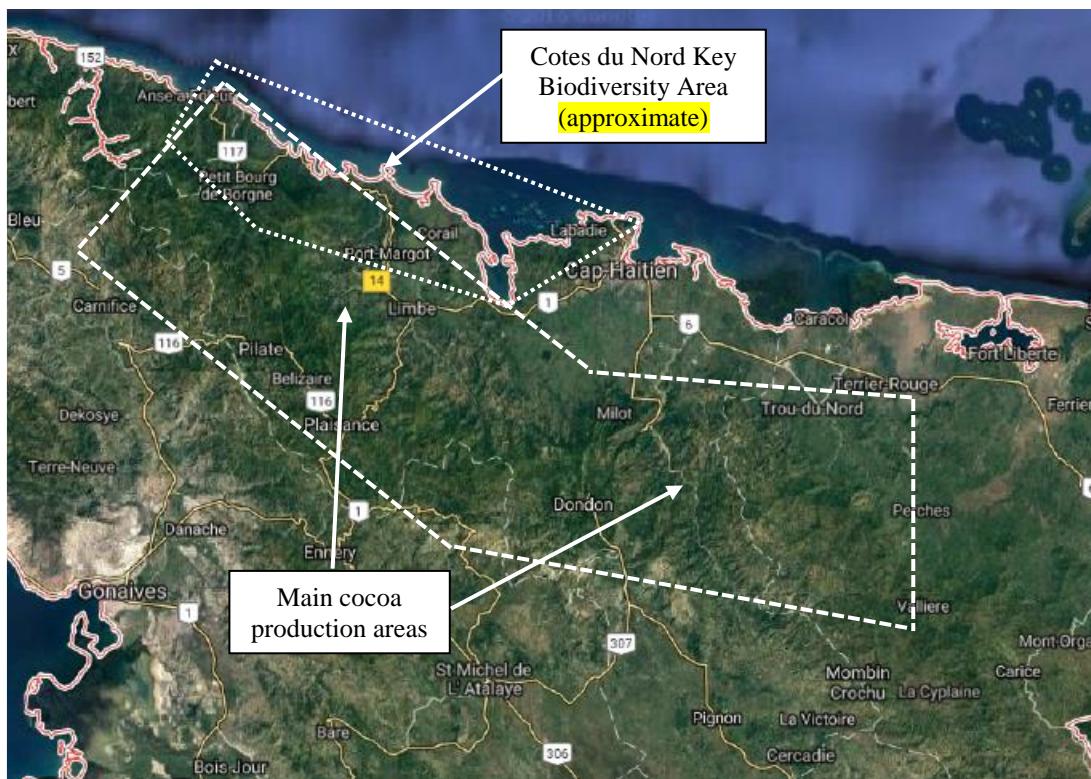
**Ceiling Information Template** to be attached as an annex to the PIF.

## Annex 1: Project Landscapes

**Massif La Selle Target Area (approximate)- 360,434 ha**



**Massif du Nord Target Area (indicative) – approx. 125,000ha**



## Annex 2: Threatened animals and plants of Massif de la Selle Key Biodiversity Area (KBA)

| CLASS       | SPECIES   | STATUS |
|-------------|---|--------|
| MAMMALS     | <i>Lasiurus minor</i> Miller, 1931  | VU     |
|             | <i>Plagiodontia aedium</i> F. Cuvier, 1836                                  | EN     |
| BIRDS       | <i>Amazona ventralis</i> Müller, 1776                                       | VU     |
|             | <i>Aratinga chloroptera</i> Souancé, 1856                                   | VU     |
|             | <i>Calyptophilus frugivorus</i> Cory, 1883                                  | VU     |
|             | <i>Cathartes bicknelli</i> Ridgway, 1882                                    | VU     |
|             | <i>Coccyzus rufigularis</i> Hartlaub, 1852                                  | EN     |
|             | <i>Corvus leucognaphalus</i> Daudin, 1800                                   | VU     |
|             | <i>Loxia megaplaga</i> Riley, 1916  | EN     |
|             | <i>Pterodroma hasitata</i> Kuhl, 1820                                       | EN     |
|             | <i>Tachycineta euchrysea</i> Gosse, 1847                                    | VU     |
|             | <i>Turdus swalesi</i> Wetmore, 1927   | EN     |
|             | <i>Xenoligea montana</i> Chapman, 1917                                      | VU     |
|             | <i>Caretta caretta</i> L., 1758   | EN     |
| REPTILES    | <i>Chelonia mydas</i> L., 1758  | EN     |
|             | <i>Cyclura cornuta</i> Bonnaterre, 1789                                     | VU     |
|             | <i>Cyclura ricordi</i> Duméril & Bibron, 1837                               | CR     |
|             | <i>Dermochelys coriacea</i> Vandelli, 1761                                  | CR     |
|             | <i>Eretmochelys imbricata</i> L. 1766                                       | CR     |
|             | <i>Typhlops capitatus</i> Richmond, 1964                                    | EN     |
| AMPHIBIANS  | <i>Eleutherodactylus alcoae</i> Schwartz, 1965                              | EN     |
|             | <i>Eleutherodactylus aporostegus</i> Schwartz, 1965                         | EN     |
|             | <i>Eleutherodactylus armstrongi</i> Noble & Hassler, 1933                   | EN     |
|             | <i>Eleutherodactylus audanti</i> Cochran, 1934                              | EN     |
|             | <i>Eleutherodactylus darlingtoni</i> Cochran, 1935                          | CR     |
|             | <i>Eleutherodactylus fowleri</i> Schwartz, 1973                             | CR     |
|             | <i>Eleutherodactylus furcyensis</i> Shreve & Williams, 1963                 | CR     |
|             | <i>Eleutherodactylus glanduliferoides</i> Shreve, 1936                      | CR     |
|             | <i>Eleutherodactylus heminota</i> Shreve & Williams, 1963                   | EN     |
|             | <i>Eleutherodactylus hypostenor</i> Schwartz, 1965                          | EN     |
|             | <i>Eleutherodactylus jugans</i> Cochran, 1937                               | CR     |
|             | <i>Eleutherodactylus leoncei</i> Shreve & Williams, 1963                    | CR     |
|             | <i>Eleutherodactylus nortoni</i> Schwartz, 1976                             | CR     |
|             | <i>Eleutherodactylus oxyrhyncus</i> Duméril & Bibron, 1841                  | CR     |
|             | <i>Eleutherodactylus paulsoni</i> Schwartz, 1964                            | CR     |
| CRUSTACEANS | <i>Eleutherodactylus semipalmatus</i> Shreve, 1936                          | CR     |
|             | <i>Eleutherodactylus wetmorei</i> Cochran, 1932                             | VU     |
|             | <i>Hypsiboas helprini</i> Noble, 1923                                       | VU     |
|             | <i>Osteopilus pulchrilineatus</i> Cope, 1869                                | EN     |
|             | <i>Osteopilus vastus</i> Cope, 1871   | EN     |
|             | <i>Epilobocera haytensis</i> Rathbun, 1893                                  | VU     |
| INSECTS     | <i>Battus zetides</i> Munroe, 1971  | VU     |
|             | <i>Phyolestes ethelae</i> Christiansen, 1948                                | EN     |
| TREES       | <i>Cedrela odorata</i> L.   | VU     |
|             | <i>Cleyera bolleana</i> (O.C. Schmidt) Kobuski                              | VU     |
|             | <i>Cleyera vaccinioides</i> (O.C. Schmidt) Kobuski                          | VU     |
|             | <i>Ekmanianthe longiflora</i> (Grisebach) Urban                             | EN     |
|             | <i>Guaiacum officinale</i> L.   | EN     |
|             | <i>Guaiacum sanctum</i> L.  | EN     |
|             | <i>Juglans jamaicensis</i> C. DC.   | VU     |
|             | <i>Juniperus gracilior</i> var. <i>ekmanii</i> (Florin) R. P. Adams         | CR     |
|             | <i>Juniperus gracilior</i> var. <i>urbaniana</i> (Pilg. & Ekm.) R. P. Adams | EN     |
|             | <i>Mappia racemosa</i> Jacq.  | VU     |
|             | <i>Picrasma excelsa</i> (Sw.) Planch.                                       | VU     |
|             | <i>Podocarpus aristulatus</i> Parl.   | VU     |

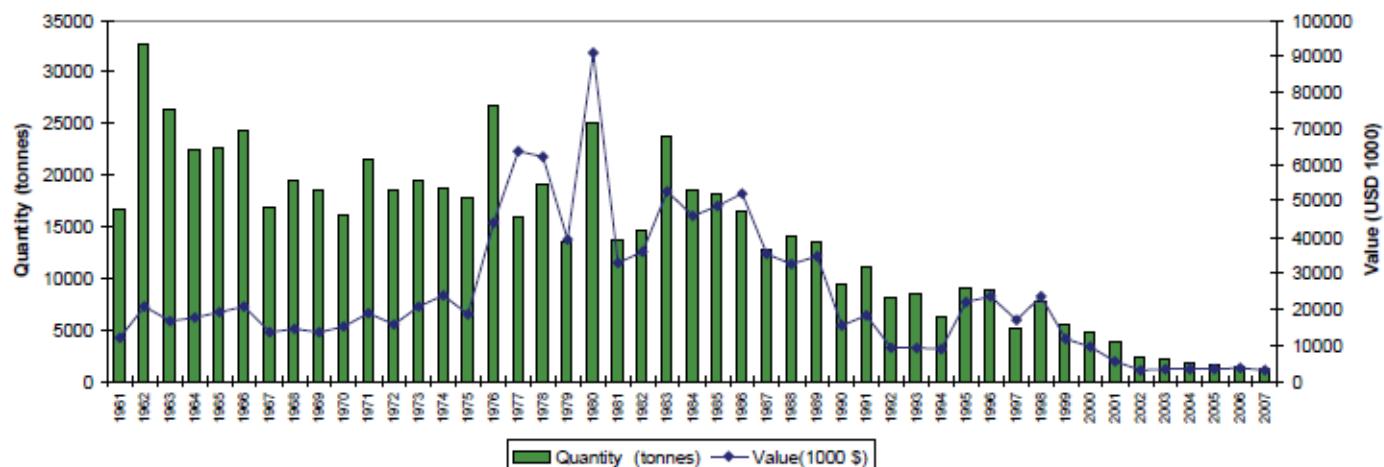
### Annex 3: Threatened animals and plants of Cotes du Nord Key Biodiversity Area (KBA)

| CLASS       | SPECIES  | STATUS |
|-------------|--|--------|
| BIRDS       | <i>Aratinga chloroptera</i> Souancé, 1856                | VU     |
|             | <i>Corvus leucognaphalus</i> Daudin, 1800                | VU     |
| REPTILES    | <i>Caretta caretta</i> L., 1758                          | EN     |
|             | <i>Celestus warreni</i> Schwartz, 1970                   | CR     |
|             | <i>Chelonia mydas</i> L., 1758                           | EN     |
|             | <i>Cyclura cornuta</i> Bonnaterre, 1789                  | VU     |
|             | <i>Dermochelys coriacea</i> Vandelli, 1761               | CR     |
|             | <i>Eretmochelys imbricata</i> L., 1766                   | CR     |
| AMPHIBIANS  | <i>Hypsiboas heilprini</i> Noble, 1923                   | VU     |
|             | <i>Osteopilus pulchrilineatus</i> Cope, 1869             | EN     |
|             | <i>Osteopilus vastus</i> Cope, 1871                      | EN     |
| FISH        | <i>Balistes vetula</i> L., 1758                          | VU     |
|             | <i>Epinephelus striatus</i> Block, 1792                  | EN     |
|             | <i>Hippocampus erectus</i> Perry, 1810                   | VU     |
|             | <i>Hyporthodus flavolimbatus</i> Poey, 1865              | VU     |
|             | <i>Hyporthodus nigritus</i> Holbrook, 1855               | CR     |
|             | <i>Lachnolaimus maximus</i> Walbaum, 1792                | VU     |
|             | <i>Lutjanus analis</i> Cuvier, 1828                      | VU     |
|             | <i>Lutjanus cyanopterus</i> Cuvier, 1828                 | VU     |
|             | <i>Mycteroperca interstitialis</i> Poey, 1865            | VU     |
|             | <i>Thunnus obesus</i> Lowe, 1839                         | VU     |
| SHARK       | <i>Isurus oxyrinchus</i> Rafinesque, 1810                | VU     |
| CRUSTACEANS | <i>Epilobocera haytensis</i> Rathbun, 1893               | VU     |
| CORAL       | <i>Acropora cervicornis</i> Lamarck, 1816                | CR     |
|             | <i>Acropora palmata</i> Lamarck, 1816                    | CR     |
|             | <i>Agaricia lamarcki</i> Edwards & Haime, 1851           | VU     |
|             | <i>Dendrogyra cylindrus</i> Ehrenberg, 1834              | VU     |
|             | <i>Dichocoenia stokesii</i> Edwards & Haime, 1848        | VU     |
|             | <i>Montastraea annularis</i> complex <sup>1</sup>        | VU     |
|             | <i>Mycetophyllia ferox</i> Well, 1973                    | VU     |
|             | <i>Oculina varicosa</i> Leseuer, 1821                    | VU     |
|             | <i>Cedrela odorata</i> L.                                | VU     |
| TREES       | <i>Cinnamomum triplinerve</i> (Ruiz & Pav.) Kosterm.     | VU     |
|             | <i>Guaiacum officinale</i> L.                            | EN     |
|             | <i>Guaiacum sanctum</i> L.                               | EN     |
|             | <i>Huertea cubensis</i> Griseb.                          | VU     |
|             | <i>Magnolia domingensis</i> Urb.                         | EN     |
|             | <i>Magnolia emarginata</i> Urb. & Ekm.                   | EN     |
|             | <i>Senna domingensis</i> (Spreng.) H. S. Irwin & Barneby | VU     |

### Annex 4: Principal coffee growing areas and their potential to produce quality coffee

| DEPARTMENT  | MUNICIPALITIES   |
|---|--|
| High-quality coffee zones <ul style="list-style-type: none"> <li>• Grande Anse</li> <li>• South</li> <li>• Southeast</li> <li>• Centre</li> <li>• Artibonite</li> </ul> | <ul style="list-style-type: none"> <li>• Beaumont, Roseaux, Jérémie</li> <li>• Tiburon, les Anglais, Rendel</li> <li>• Thiotte, Belle Anse, Marigot</li> <li>• Baptiste, Savanette</li> <li>• Les Cahos</li> </ul>   |
| Average-quality coffee zones <ul style="list-style-type: none"> <li>• North</li> <li>• Northwest</li> <li>• Northeast</li> <li>• Nippes</li> </ul>                      | <ul style="list-style-type: none"> <li>• Dondon, Plaisance, Pilate, Borgne, Grande rivière du nord, Bahon, Mermelade</li> <li>• Saint-Louis de Nord, Port de paix, Anse à Foleur</li> <li>• Sainte Suzanne, Valliére, Carice, Mont Organisé</li> <li>• L'Asile, Baradères</li> </ul> |

## Annex 5: Quantity and value of Haitian coffee exports 1961-2007



Source: FAO (2010).