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HAITI

SUSTAINABLE MANAGEMENT OF UPPER WATERSHEDS OF SOUTH WESTERN HAITI – MACAYA NATIONAL PARK

(HA-G1023)

GRANT PROPOSAL

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2. Monitoring & Evaluation Arrangements
   http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37690333
3. Procurement Plan
   http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37690277
4. ESMR for HA-L1041 (Updated for purposes of this project)
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1. Economic Analysis - Word
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2. Operation Manual of HA-X1002
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3. Map of Vegetation Cover Strata in the Macaya Park Area
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6. HA-X1002 Background studies: Land tenure issue and governance in Macaya Area
   http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37690468
7. USAID. 2007. Environmental vulnerability in Haiti.
   http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37690480
8. Budget by product
   http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37690277
9. Economic Analysis - excel
   http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37690829
10. HA-X1002 Sustainable Land Management of the Upper Watersheds of South Western Haiti (POD)
    http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=37736853
11. Environmental monitoring system of HA-L1041 operation
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ABBREVIATIONS

ANAP	National Agency for Protected Areas
ATPPF	Forest and Park Protection Project
DSF	Debt Sustainability Framework
ESMR	Environmental and Social Management Report
ESS	Environmental and Social Strategy
FAO	Food and Agriculture Organization of the United Nations
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHG	Green House Gas
GOH	Government of Haiti
HRF	Haiti Reconstruction Fund
IDB	Inter-American Development Bank
IGR	Investment Grant
IRR	Internal Rate of Return
MOE	Ministry of Environment
MARNDR	Ministry of Agriculture Natural Resources and Rural Development
NDMP	Natural Disaster Mitigation Program in Priority Watersheds
NEAP	National Environment Action Plan
NPV	Net Present Value
PEU	Project Execution Unit
NEAP	National Environment Action Plan
POD	Proposal for Operation Development
PNIA	National Agriculture Investment Plan
SNAP	National System of Protected Areas
SLFM	Sustainable Land and Forest Management
SSF	Safeguard and Screening Form for Screening and Classification of Projects
UNDP	United Nations Development Program
UNEP	United Nations Environment Program

EXECUTIVE SUMMARY

HAITI

SUSTAINABLE MANAGEMENT OF UPPER WATERSHEDS OF SOUTH WESTERN HAITI – MACAYA NATIONAL PARK (HA-G1023)

<table>
<tr><th colspan="5">Financial Terms and Conditions</th></tr>
<tr><td colspan="3" rowspan="2">Beneficiary: Republic of Haiti
Executing Agency: Ministry of Environment (MOE)</td><td colspan="2">Financial conditions of the grant</td></tr>
<tr><td>Amortization period</td><td>N/A</td></tr>
<tr><td>Source</td><td>Amount</td><td>%</td><td>Grace Period</td><td>N/A</td></tr>
<tr><td rowspan="2">Haiti Reconstruction Fund</td><td rowspan="2">US$9,000,000</td><td rowspan="2">100%</td><td>Disbursement period</td><td>4 years</td></tr>
<tr><td>Supervision and Inspection Fee:</td><td>N/A</td></tr>
<tr><td rowspan="2">Total:</td><td rowspan="2">US$9,000,000</td><td rowspan="2">100%</td><td>Interest Rate:</td><td>N/A</td></tr>
<tr><td>Credit fee</td><td>N/A</td></tr>
<tr><td colspan="3"></td><td>Currency</td><td>US$</td></tr>
<tr><th colspan="5">Project at a Glance</th></tr>
<tr><td colspan="5">Project Objective/Description:
The Project objective is to contain the rapid environmental degradation in the upper watershed of the southwestern part of Haiti. The project aims to promote sustainable natural resources management and watershed protection in order to prevent deforestation, soil erosion and related natural disasters.
The project is comprised of the following two components. Component 1: Institutional and Local Governance Strengthening; and Component 2: Enhancement and restoration of ecosystem services.</td></tr>
<tr><td colspan="5">Special conditions prior to the first disbursement: The Executing Agency must show evidence, to the satisfaction of the Bank: (i) of the installation of an accounting software in the Project Execution Unit (PEU) (¶2.6); (ii) the update of the operations manual of project HA-X1002 in order to account for the activities presented in this project HA-G1023, and also include the environmental and social recommendations outlined in the ESMR updated for purposes of this project (¶2.6); (iii) of the recruitment of an additional procurement specialist assigned to the PEU (¶2.6)</td></tr>
<tr><td colspan="5">Exceptions to Bank policies: N/A</td></tr>
<tr><td colspan="5">Special Aspects: N/A</td></tr>
<tr><td colspan="5">Procurement: In accordance with IDB policies GN-2349-9, GN-2350-9, GN-2654.</td></tr>
<tr><td colspan="5">Project qualifies for: SEQ[X] PTI [X] SECTOR [X] GEOGRAPHIC [ ] HEADCOUNT [ ]</td></tr>
</table>

I. DESCRIPTION AND RESULTS MONITORING

A. Background, problem addressed, justification

1.1 **Environmental conditions of watersheds in Haiti.** According to studies carried out for the Convention on Biological Biodiversity, Haiti and the Dominican Republic are the richest countries in the Caribbean in terms of biological diversity and have the second most diverse flora in the Caribbean, after Cuba. However, slow economic growth[1] and rapid population growth constantly increase pressure on forests, soils and water resources (existing studies suggest that the pressure on farm lands is very high)[2] which, in consequence, exacerbates the impact of natural disasters. According to FAO (2010), some 95 percent of Haiti's original forests have been destroyed and nearly 10 percent of the country's forest cover (11,000 ha) was lost between 1990 and 2005. Land erosion in this mountainous country is extreme, and intensifies during the hurricane season. The continuing degradation of soils and loss of forest cover are a key factor in undermining efforts to combat poverty.[3] Fuel wood demand exceeds new forest growth by 60% creating both a forest and fuel availability problem and threatening ecosystem services upon which many Haitians depend directly for their subsistence.

1.2 The ability of Haiti's environment to continue to provide fundamental local and global environmental services is therefore being seriously compromised, including carbon sequestration, agricultural land, sufficient and clean water, flood protection, and adequate supplies of wood and food for the benefit of current and future generations.

1.3 Located in the hurricane belt of the Caribbean basin, Haiti is also at high risk to natural disasters caused by hydro-meteorological events. The 2004 Report of the United Nations Program for Development on Disaster Risk Reduction ranked Haiti within countries with higher risk rates in the world, indicating that in the last 50 years the country has been affected by approximately 40 hydro-meteorological events, a disaster every two years and a major catastrophe every four to six years. In 2008 two storms and two major hurricanes in less than three weeks left at least 1,100 dead and an estimated damage of more than US$900 million (15% of GDP), particularly in agriculture (US$200 million), housing (US$180 million) and transportation (US$130 million). In August 2012, Hurricane Isaac severely affected the South and South-East departments leaving 19 dead and a loss of 80,000 ha of permanent and annual crops (Ministry of Agriculture, 2012). In October 2012, the South department was hit again by Hurricane Sandy that left US$104 million of agricultural losses and more than 27,000 damaged houses.

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1 Average rates of 1% over the 1960-2005 period (IDB 2011-2015 Country strategy for Haiti)

2 Government of France. Cadastre and land tenure security in Haiti: Findings and recommendations. Mission report (in French). 2010.

3 Socio-economic impacts of land degradation in Haiti and interventions for crop systems rehabilitation. UNDP, ECLAC, Ministry of Environment, 2008 (in French).

Most of those losses were due to flooding which were themselves stressed by the decreasing capacity of water retention in the upper watersheds.

1.4 **The Macaya region.** Some of the watersheds most seriously affected are in the South western peninsula.[4] The upper part of the Massif de la Hotte including the highest point, Macaya Peak (2326 m.a.s.l.), in Grand'Anse, Les Nippes and Sud departments serve as the headwaters for all watersheds in this sub region. The area has been declared the Macaya National Bioreserve (Macaya Park) since it protects these headwaters, it is one of the last forests left in Haiti and it prevents against soil erosion.[5] According to the last presidential decree published in March 2013, the limits of the Park's core zone include 8,166 ha, but its influence zone covers all up and downstream watersheds, down to the sea level.

1.5 Watersheds composing the Macaya Park face similar environmental challenges as those in the rest of the country, especially: (i) unrestrained open-access to natural resources; (ii) inadequate land use management; (iii) inadequate exploitation of natural resources which provoke losses in soil fertility,[6] biodiversity and water retention capacity; and (iv) severe flooding and waterways silting due to reduction of water retention capacity of upper watersheds.

1.6 The area is a biological rich zone and attracts farmers and dwellers from other regions in search of land, resources and new opportunities to support their living. Increasing numbers of encroachments are observed and 5,000 households (25,000 to 30,000 persons) are now depending on the Park's natural resources for their subsistence, among which 4,000 are cultivators and 1,000 of which engage in the wood trade.[7] Inappropriate land use practices such as exponential tree cutting, overgrazing and cultivation without adequate soil conservation practices exacerbated by intensive rainfall has led to rapid environmental deterioration. An average of 7,500 trees is logged per year, an equivalent to 10 ha. There is no accurate data for the area, though the estimated 1998-2005 deforestation rate and degradation rate based on comparison of aerial photos were 0.97% and 1.7% respectively. The forest cover still remaining in 2009 was approximately 3,448 ha (2,536 of dense forest and 912 of open forest). See optional electronic link 4.

1.7 The protection of the Park and of its area of influence is weakened by the lack of clear management and surveillance framework, as well as legally/physically defined limits.[8] According to the institutional framework study carried out for the design of HA-X1002 (GRT/FM-11803-HA), the history of Macaya Park management has suffered from a prolonged absence of central state intervention and a trend of fragmentary and discontinuous projects. It is linked to the presence of periodic projects since 1983, but none developed a real structural scheme for its

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4 USAID. 2007. Environmental vulnerability in Haiti, Findings and Recommendations.

5 Sergile F.E., Woods C.A., Paryski P. E. 1992. Final Report on the Macaya Biosphere Reserve Project, Florida Museum of Natural History, Gainesville, Florida.

6 For example, outside the Park area, beans are the most important crop but production has decreased from 1T per hectare in the 70s to 0.35T today due to loss in soil fertility (Background studies carried out to design HA-X1002).

7 Background studies carried out to design HA-X1002

8 Park boundaries were not included in the decree published in 1983.

management. Since the end of the World Bank-financed project ATPPF (Forest and Park Protection Project) in 2001, the central government has been absent from Macaya Park until the end of 2008, when the Ministry of Environment (MOE) affected 10 environmental surveillance agents on the basis of 2006 environmental decree, in an attempt to establish a top-down surveillance and enforcement of protection measures in the Park area. Some local municipalities and district offices[9] concerned by Macaya area developed some initiatives, but with very weak recognition by the central State structures and a lack of resources, cooperation agreements and monitoring and management plans. In this context, the capacity of environmental surveillance corps still remains low since the formal framework has to be better designed, and equipment and means have to be provided.

1.8 As a consequence and according to the environmental vulnerability assessment conducted by USAID in 2007 on the southern side, these watersheds particularly threaten the lowland of Les Cayes, which is characterized by the 2nd highest population vulnerability index[10] in Haiti and the higher index of combined infrastructure vulnerability (roads, markets and irrigation works). Particularly, the 5,000 ha D'Avezac and Torbeck irrigated perimeters are extremely exposed to flooding and silting from the rivers L'Islet, Ravines du Sud and L'Acul which originate from the upper part of the Massif de la Hotte. In addition, on the northern side, the same study warns that if present trends for reduced ground cover in the Grand'Anse are not reversed, the region's high erosion risk would render it highly vulnerable to disaster. Another recent study published by the World Bank on agricultural risk management in the Caribbean[11] clearly states that available ex-ante strategies for weather risk management are insufficient given the very low level of public and private investment in agricultural infrastructure. For example, lack of watershed protection and deficiencies in irrigation are major causes of floods and droughts in agricultural areas. In this sense it recommends to increase risk mitigation funds in infrastructure.

1.9 **Government current strategy in watershed management and protected areas management.** Approved by the Government in 1999 after a participatory process, Haiti's National Environment Action Plan (NEAP) provides a general policy framework and sets priorities over the medium to long-term. It is articulated around four strategic priorities: (i) strengthening environmental governance; (ii) sustainable management of energy sources; (iii) conservative and sustainable use of scarce natural resources, with the focus on water, soils and biodiversity; and (iv) capacity building, including those needed to deal with the implications of population growth and poverty. Despite its approval, the unstable political situation combined with limits in institutional capacity has curtailed implementation of even the most fundamental provisions. However, even if it dates from 1999, its priorities are still valid and the current Minister integrated

9 CASEC in Haiti: chiefs of municipality section, the administrative unit under the municipality.
10 Defined as the intersection of habitat density with flood prone areas
11 World Bank LAC, 2012. Agricultural Risk Management in the Caribbean Lessons and Experiences 2009-2012.

them in its sectorial policy. The proposed project is fully aligned with those priorities.

1.10 The decree of January 26, 2006 on environmental management set a new framework for protected areas management by establishing the Protected Areas National System (SNAP) as a set of conservation areas, identifying the protected areas and creating the Protected Areas National Agency (ANAP), an autonomous body under the Ministry of Environment. The decree defines ANAP's functions in managing and coordinating the SNAP and protecting biodiversity. There are still some steps to take, such as ANAP's organic law which has to be elaborated and voted, but this decree brought significant progress in terms of environmental management regulatory framework.

1.11 Regarding watershed management, the government has realized a series of actions as part of the 2011-2016 National Agriculture Investment Plan (NAIP), 2013- 2016 Agricultural Recovery Program as well as the National Management Plan of Risks and Disasters. These actions aim to reduce the impacts of recurring natural threats on population and critical infrastructure in the most vulnerable watershed areas and include: (i) works in upper watersheds to prevent flooding and soil erosion as well as works in lower watersheds aimed to mitigate damages caused by flooding; (ii) assistance to producers in upper watersheds aimed at introducing sustainable farming practices meant to minimize soil erosion and control landslides; and (iii) development of approaches regarding land management and planning.

1.12 **Lessons learned.** The accumulated experience from previous programs and several researches in Haiti provide the following two lessons learned: (i) the design of mitigation and protection measures need to be developed with the active participation of local population and in the framework of watershed or land-use management plan;[12] and (ii) better results in the prevention of soil erosion and land degradation have been observed where investments combine watershed protection infrastructures together with promotion of changes in natural resources exploitation practices.[13] The Project proposes to incorporate these lessons learned in its design.

1.13 In this sense, the GOH and IDB designed an integrated approach through complementary operations "Natural Disaster Mitigation Program," HA-L1041 (2187/GR-HA) and IDB-GEF Project "Sustainable Land Management of the Upper Watersheds of South Western Haiti," HA-X1002 (GRT/FM-11803-HA). These projects were designed to address the key bottlenecks mentioned above by financing investments from down to top watershed, building local capacity in land

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12 Environmental Vulnerability in Haiti: Findings and Recommendations. USAID, 2007
Study of lessons learned in managing environmental projects in Haiti. UNEP, 2010.

13 Smucker, G.R., White T.A., Bannister, M. 2002. Land tenure and the adoption of agricultural technology in Haiti. Paper presented at the 9th Biennal Conference of the International Association for the Study of Common Property. Victoria Falls., Zimbawe, 17-21 June 2002;
Dolisca, F. et al., Land tenure, population pressure, and deforestation in Haiti: The case of Foret des Pins Reserve. Journal of Forest Economics 13 (277-289). 2007.

use planning, providing technical assistance and inputs to farmers for the adoption of sustainable technologies in agriculture and livestock, and financing watershed protection infrastructure aimed at both reducing natural disaster impacts and improving agricultural production by retaining soil and water resources (such as rainwater harvesting water-tanks, check-dams, river-bank retaining walls, among others). HA-L1041 particularly focuses in down watershed and piedmont whereas HA-X1002 targets the Macaya Park area. These projects are articulated with other major initiatives[14] implemented in the region related to agriculture and environment sectors, particularly those financed by the World Bank, the French Development Agency, the Kingdom of Norway, the Global Environment Facility, as well as those implemented by the United Nations Development Program (UNDP) and the United Nations Environment Program (UNEP). National and local coordination mechanisms have been developed and are currently active in order to foster synergies and avoid duplication.

1.14 HA-X1002, in which execution started in November 2012, is articulated around four components that will support: (i) the physical demarcation of Park boundaries and execution of a participatory physical cadaster based on GPS and local consensus, which implicate land tenure clarification and conflict solving; (ii) the elaboration of participatory communal land planning schemes which will allow for consensus on communal land planning and utilization, including Park limits, zoning and use regulations; (iii) the implementation of a local co-governance scheme and management structure of Macaya Park in coordination with the National Protected Area System; (iv) the adoption of sustainable land and forest management practices in support of activities to improve revenues from agriculture and livestock production among the poor local population exploiting Macaya area resources (basically through technical assistance, inputs and watershed protection infrastructure); and (v) the design and implementation of a land use, greenhouse gas emission and carbon stock monitoring system.

1.15 **Project strategy**. HA-G1023 was designed to complement HA-X1002 in response to the challenges mentioned in paragraph 1.5, considering both operations as a sole program. It has been observed and agreed among the different stakeholders implicated in the area (Government, civil society, international agencies, among others) that additional resources are needed to provide a response commensurate with the environmental challenges affecting the Macaya area, since it provides key ecosystem services on which depends an important number of families living up and downstream. It is particularly needed to further address socio-institutional issues among a wider population, as well as develop and protect alternatives sources of living for local population through investments in watershed protection. In this sense the opportunity to channel additional and complementary resources has been seized thanks to the willingness of the Haiti

[14] The operations financed by World Bank and the French Development Agency are implemented by the Ministry of Agriculture and focus on agricultural productivity improvement in Les Cayes lowland. UNEP and UNDP implement two operations, financed by the Kingdom of Norway, aiming at improving environmental conditions in the South department. In addition, with financing from the Global Environment Facility, UNDP is currently executing a program aimed at strengthening protected area management in Haiti (¶3.3).

Reconstruction Fund to mobilize part of its resources to this end. In this regard, HA-G1023 will contribute to: (i) build local capacity and promote behavior changes regarding natural resources management by implementing environmental education activities and strengthening park surveillance corps and management infrastructure; and (ii) contribute to restoring critical ecosystem services provided by the Macaya area and foster alternative sources of living by financing reforestation of the park's core area as well as critical watershed protection infrastructure. The proposed approach comes from lessons learned through several studies, evaluations and academic researches[15] and demonstrate that: (i) training local population and technicians in watershed and natural resources management is essential in understanding the environmental cycles (i.e. the link among up and down stream dynamics) and to foster adequate appropriation of land management dynamics;[16] (ii) strengthening the State's control mechanisms of natural resources exploitation has to be combined with participative land management planning;[17] (iii) erosion control structures developed in gullies give better results than those set on the hillsides,[18] since they "harvest" erosion and quickly create more fertile and moist micro-environments that can easily be cropped; and (iv) the river flows peaks are lower in rivers with forested catchments than in those rivers that lack of proper vegetative cover.[19]

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15 Initiative Régénération Haïti. 2010. *Étude des leçons apprises dans la gestion des projets environnementaux en Haïti, PNUE ;* Murray, G.F. et Bannister, M.E. ; 2004. Peasants, agroforesters, and anthropologists: A 20 year venture in income generating trees and hedgerows in Haïti. Agroforestry Systems 61, pp. 383-397.
White, T.A., 1994. Policy lessons from history and natural resource projects in Haiti. Department of Forest Resources, U. of Minnesota, Working Paper no. 17

16 Coopération Suisse, Bureau de Port-au-Prince. 2012. Rapport d'évaluation externe de la 3ème phase du Programme de Préservation et Valorisation de la Biodiversité en haute altitude en Haïti (PVB)
WCPA, IUCN, CEC. Communication, Education and Public Awareness in Protected Areas, West Asia and North Africa, Workshop Report September 13-14, 2002.
Gardner, Lloyd. 2009. Protected Areas Management in the Caribbean: Core Themes for Education, Awareness, and Communication Programmes. The Trust For Sustainable Livelihoods and WCPA Caribbean. 28pp.
Filho W. L., Carvalho C., Hale W. H. G. 1998. Environmental education in protected areas: international perspectives and experiences. Parthenon Pub. Group, - 185 pages

17 Toussaint, J.R., 2009. Révision et synthèse des leçons apprises des interventions dans la zone d'intervention du Parc National de Macaya. MDE, BID, GEF.

18 Brochet M., Lilin C., Clossy S. 2010. Aménagements hydro-agricoles et conservation des eaux et des sols: comment tirer profit de l'expérience acquise dans un projet
Bellande. 2010. Historique des interventions en matière d'aménagement des bassins versants en Haïti et leçons apprises. CIAT-BID
Lilin, C. et Koohafkan, A.P. 1987.Techniques biologiques de conservation des sols en Haïti. FAO Smolikowski, B.1993. La gestion conservatoire de l'eau, de la biomasse et de la fertilité des sols (GCES) : une nouvelle stratégie de lutte anti-érosive en Haïti. Cahiers de l'ORSTOM, série Pédologie, vol. XXVIII, no.2, pp. 229-252.
Agoramoorthy G., Chaudhary S., Hsu M. J., 2008. The Check-Dam Route to Mitigate India's Water Shortages. Natural Ressources Journal, vol.48.
Piyapit Khonkaen, Cheng, Jie-Dar. 2011. The Application of Check Dams Construction to Watershed Management: A case study in the North of Thailand. Journal of Soil and Water Conservation. National Chung-Hsing University, Taiwan, R.O.C.
Xu Xiang-zhou, Zhang Hong-wu, Zhang Ouyang. 2004. Development of check-dam systems in gullies on the Loess Plateau, China. Environmental Science and Policy. Tsinghua University, China.

19 Burger, H. (1954). Einfluss des Waldes auf den Stand der Gewässer - der Wasserhaushalt im Sperbel- und Rappengraben von 1944/45 bis 1953/54. *Mitt. EAFV* [Birmensdorf], 31, 2: 493-555
Bosch, J.M. & Hewlett, J.D (1982). A review of catchment experiments to determine the effect of vegetation changes on water yield and evapotranspiration. *J. Hydrology*, 55: 3-23 (1998)
H. Liniger and R. Weingartner (1998). Mountains and freshwater supply. An international journal of forestry and forest industries (UNASYLVA), Vol, 49., FAO - Food and Agriculture Organization of the United Nations

1.16 **Consistency with the Bank's Country Strategy.** The project is aligned with the Bank's Country Strategy with Haiti for 2011-2015 (GN-2646) since it will contribute to the reduction of expected losses for flooding and landslides, one of the expected results of the country strategy for the Agriculture Sector. The operation is included in the Haiti Country Program Document 2013 (See GN-2696, Annex II).

1.17 **Consistency with IDB-9 objective.** The proposed project is aligned with the following lending targets and regional development goals established in the Report on the Ninth General Increase of Resources of the Bank (IDB-9): (i) small and vulnerable countries, since it concerns Haïti; (ii) poverty reduction and social equity, since in Haiti's rural areas 88% of individuals live below the poverty level and 59% earn less than US$1 a day;[20] and (iii) protecting the environment, responding to climate change, promoting renewable energy, and enhancing food security, since it will contribute to restore environmental and ecosystem services of Macaya area. The operation includes components contributing to improved management of terrestrial and marine protected areas (output 3.5.5 in the results framework 2012 - 2015).

B. Objective, Components and Cost

1.18 **Objective:** The objective of the project is to contain the rapid environmental degradation in the upper watershed of the southwestern part of Haiti. It will promote sustainable natural resources management and watershed protection in order to prevent deforestation, soil erosion and related natural disasters. To achieve this objective, HA-G1023 will be implemented through two components, in complementarity with the HA-X1002 operation. The estimated 5,000 households living from park resources will benefit directly from educational activities, as well as from watershed protection infrastructure (water-tanks, check-dams). Around 3,000 producers will benefit directly from the protection of downstream irrigated perimeter and the population living downstream Park watersheds will globally benefit from better natural resources management and restoration of ecosystem services.

1.19 **Component 1: Institutional and Local Governance Strengthening.** This component aims to strengthen the environmental governance of the Macaya National Park area (Massif de la Hotte), by financing the following activities: (i) complementary training on natural resources management and environmental education intended for the local population, particularly municipalities, producers' organizations and schools, in order to raise further awareness regarding sustainable natural resources management in the area; (ii) strengthening the environmental surveillance corps that monitors Macaya Park area; and (iii) provide the Park with the adequate management infrastructure (Park unit building, control stations, which were not included in HA-X1002 operation). These activities are aimed to complement interventions to be financed in the same

[20] (MARNDR-PNIA, 2010).

component of HA-X1002 operation, including: (i) the creation of the inter-municipal "Massif de Macaya" Committee; (ii) the participatory elaboration of communal land planning schemes; and (iii) design and implementation of a local co-management scheme for the Park.

1.20 **Component 2: Enhancement and restoration of ecosystem services.** This component will contribute to enhance and restore the critical ecosystem services provided by Macaya National Park area, particularly the provisioning and regulating functions the area fulfills by storing water, retaining soils, preventing flooding and mitigating the impact of climate events. To achieve this objective, the project will finance investments in: (i) forest restoration (through reforestation and natural re-vegetation of around 1,500 ha)[21] in degraded state lands within the Macaya National park area; (ii) design, supervision and execution of works of watershed protection infrastructure[22] which would prevent economic damages due to soil erosion and flooding, enhance water storage and retention capacity and therefore enhance agricultural production (rainwater harvesting water-tanks in households and along rural roads, check-dams in critical gullies, river-bank retaining walls, among others); and (iii) an hydro-meteorological and flooding monitoring system in the main watersheds coming from Macaya National Park area. These investments will be defined and prioritized in accordance with communal land use planning schemes and will complement HA-X1002 Component 2 "Adoption of sustainable land and forest management practices" since such infrastructures foster changes of crop system and improve agricultural productivity[23]. They will therefore decrease pressure on Park's resources by contributing to provide alternative source of living for local residents.

1.21 **Project management and monitoring.** This investment category will finance the necessary means to manage, administrate and monitor project execution, such as PEU consultants' salaries, travel costs, office equipment and other operational costs. This component will include consulting services to support project technical execution, monitoring and evaluation, as well as assistance in fiduciary issue to support project financial management, procurement and internal control processes.

II. FINANCING STRUCTURE AND MAIN RISKS

A. Financing Instruments

2.1 **Cost and Financing:** This operation was designed under the modality of an Investment Grant Operation (IGR) for US$9,000,000 financed by non-reimbursable resources from the Haiti Reconstruction Fund (HRF).[24] The

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21 With species such as *Pinus occidentalis, Cedrala Odorata* and fast growing one such as *Racosperma auriculiforme, Racosperma mangium, Cassia siamea, and Leuceana leucocephala*, among others.

22 Rainwater harvesting water-tanks and check-dams will generally be maintained by the local beneficiary communities, while river-bank retaining walls would rather be maintained by the Ministry of Agriculture. The Ministry of Environment will establish and sign maintenance protocols among the parties before launching the works.

23 Refer to economic evaluation

24 Donated by the Kingdom of Norway

funds have already been approved by the HRF committee and transferred to the Bank. Table I-1 provides the cost summary by investment categories and components. For more information, please see budget by output link.

Table I-1: Estimated Cost by investments categories in US$

Investment categories	HRF	%
I – Direct costs	**7,830,000**	**87.0%**
Component I: Institutional and Local Governance Strengthening	*2,250,000*	*25.0%*
Component II: Enhancement and restoration of ecosystem services	*5,580,000*	*62.0%*
II - Project Management and monitoring	**860,000**	**9.6%**
III – Audits	**60,000**	**0.7%**
IV - Evaluations	**250,000**	**2.8%**
Total	**9,000,000**	**100%**

2.2 The project will be executed during a four year period and disbursements will be made on the basis of cash flow needs according to quarterly activity planning.

B. Economic Analysis

2.3 The overall economic viability of the project was assessed considering the direct effects of the investments foreseen to enhance and restore the ecosystem services (Component 2), which will contribute to develop sustainable land and forest management practices as well as prevent losses due to flooding. The incremental benefits have been estimated comparing the situation without project, characterized by unsustainable annual crop system (bean and sweet potatoes), timber exploitation in the Park and losses due to flooding, to the situation with project, which includes a change towards more sustainable agricultural and forestry production patterns and benefits from the prevention of losses due to flooding. The benefits have been calculated according to the following assumptions. First, thanks to enhanced Park management and reforestation, corn and peas crop system will switch to sustainable timber and charcoal production practices based on several tree species (already existing in Haiti and some of them fast growing). Second, as observed in Haiti and other countries, introducing such type of watershed infrastructure will contribute to foster spontaneous changes of crop system, specifically: (i) rainwater harvesting water-tanks (in households and along rural roads) contribute to improve vegetable production by improving the availability of water; and (ii) check-dams restore the fertility of critical gullies as they generate very fertile soils by stopping and retaining silts, sediments and water which, consequently, foster the introduction of more profitable crops, such as some plantain varieties, vegetables and other. Finally, the river-bank retaining walls will protect part of downstream irrigated perimeter[25] (water intake structure and channels) from flooding and silting. This will avoid periodic losses due to flooding and enhance agricultural productivity since the producers will benefit from more regular water flows and could apply better agricultural practices with

[25] Tibi d'Avezac irrigated perimeter, 2800 ha.

the support of other on-going programs.[26] The incremental costs include investments under the Project, and some recurrent costs linked to infrastructure maintenance and Park management have been estimated. Considering a 20-year horizon, the economic evaluation showed an internal rate of return (IRR) of 24% and, according to the same hypothesis at a 12% discount rate, the net present value (NPV) is US$3.8 million. A sensibility analysis have been carried out by applying several scenarios using the following assumptions: reduction of the adoption rate of new crop system by the farmers, longer delays in the adoption of new crop system and increase of the investment and recurrent costs. The investments remain profitable in all cases, except if all those assumptions are combined together, which is unlikely to happen. However it is worth highlighting that this project will generate other important environmental positive externalities which have not been estimated due to their complexity and lack of reliable data (such as carbon sequestration, water and soil retention, protection of critical natural habitats and species, etc.).

C. Environmental and Social Safeguard Risks

2.4 Since the project involves development of watershed protection infrastructure, which may cause local and short-term negative environmental and associated social impacts, it has been classified as a "B" through the Safeguard Classification Tool (see Optional Link #13). As the project includes the same areas, environmental issues and works as those of HA-L1041 (2187/GR-HA), it will refer to the same environmental assessment and apply the same Environmental and Social Management Report.[27] As required in the Safeguard Screening, the ESMR includes a Biodiversity Management Plan. The Project is oriented towards promoting positive environmental and social impacts including mitigation of natural disaster risks and protection of critical natural habitats[28]. The project does not include involuntary resettlements. A condition precedent to first disbursement will be the update of operations manual of project HA-X1002 in order to include the environmental and social recommendations outlined in the ESMR updated for the purpose of this project.

D. Fiduciary Risk

2.5 The Ministry of Environment (MOE) has experience as executing agency for IDB funded operation HA-L1006 (Grant 2391/GR-HA).[29] The project will be implemented by the same Project Executing Unit (PEU) as HA-X1002 operation, which is new and whose staff was recently recruited.

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[26] Particularly the RESEPAG project financed by World Bank and the SECAL project financed by the French Development Agency. Both include smart subsidies to producers for the adoption of better corn production technologies.

[27] The ESMR includes the required safeguards for OP-703, OP-704 and OP-710

[28] The Les Cayes-Jeremie road located in Macaya Park's buffer zone is currently under construction with financing from HA-L1028, HA-L1027 and HA-L1054, which include the necessary social and environmental impacts mitigation measures. Since HA-X1002 and HA-G1023 consider the same areas, they will contribute to address indirect and cumulative impacts associated with road construction.

[29] Institutional Strengthening for Environmental Management (Grant 2391/GR-HA)

2.6 Regarding financial management, the overall risk rating is considered to be high due to lack of appropriate computerized accounting software and lack of experience of the newly recruited team in IDB procedures. Risks are to be mitigated by the following **special conditions precedent to first disbursement**: **(i) installation of an accounting software in the Project Execution Unit (PEU); (ii) the update of operations manual of project HA-X1002 in order to account for the activities presented in this project HA-G1023, and also include the environmental and social recommendations outlined in the ESMR updated for purposes of this project; and (iii) the recruitment of an additional procurement specialist assigned to the PEU**. Training on IDB financial management procedures will be provided to PEU staff prior the execution of this new operation, as part of the strengthening planed under HA-X1002 operation. In addition for the first year of execution, most disbursement will be made via direct payment to suppliers against achievement of agreed milestones or outputs.

2.7 Regarding procurement, the overall risk for procurement activities is evaluated as being high. Although the procurement specialist of operation HA-L1006 (Grant 2391/GR-HA) is temporarily acting as procurement specialist for HA-X1002 operation, the PEU does not have record for procurement related activities under Bank's rules and procedures. Training on procurement will be provided to the newly constituted PEU. The Bank will request that all activities be undertaken under ex-ante supervision and risk assessment will be performed according to the established supervision plan for the present operation. The recruitment of an additional procurement specialist assigned to the PEU will be a special condition prior to first disbursement (¶2.6).

2.8 All disbursements by the Bank for the project will be done based on ex-post review. The fiduciary specialists of the IDB representation will realize at least three fiduciary (procurement and financial) inspections per year.

2.9 The Bank recommends that the audit firm which was recruited to perform audit of HA-X1002 also be used for the audit of HA-G1023. Due to the significant increase in funding and due to the lack of experience of PEU the terms of reference of the auditors will be amended to include semi-annual audits of financial statements for both operations including the review of internal control and procurement processes. Audit reports will have to be submitted within 60 days after the closure of each semester.

E. Other Key Issues and Risks

2.10 By focusing on reversing the degradation processes of natural resources in Haiti, the project is attempting to address some root causes of conflicts and social instability. In a context where land tenure insecurity increases social tensions, the competition for scarce resources is high to provide a living for a growing number of people. The Macaya forest resources are of interest to stakeholders living in and outside the area. The project will represent an ideal opportunity to work with

stakeholders in an integrated and participatory manner to address these risks and achieve desired economic and environmental impacts. By proposing a participatory and institutional-based approach, the project recognizes the need to understand individuals and the incentives that influence their decisions. In general, the risks associated with these factors are considered to be low, given the existing resilience of agro-forestry activities in Haiti.

2.11 **Natural disaster risks** are caused by the increased frequency of hurricanes and heavy rainfalls. The deforestation pattern arising in the upper watersheds of the southwestern peninsula has made the watershed and in particular the populations living in the lower parts highly vulnerable to degradation and flooding. By trying to positively impact the local land use system and promote reforestation activities, the project will lay the foundation for good possibilities to reduce the natural disaster risks. In order to cope with the impacts of climatic risks on civil works, the watershed protection infrastructure will be dimensioned according to hydrological models (including flood recurrence interval). These models will be in as much detail as possible, depending on the availability of climatic and river flow data. If no data is available, information on similar and comparable watershed will be used. In addition, all works will be planned according to the hurricane seasons, in order to avoid potential losses and the increase in cost.

2.12 **Sustainability.** The operations HA-X1002 and HA-G1023 aim at creating the socio-institutional framework and enhancing living conditions of local population, in order to progressively foster sustainable management of the Park and its natural resources. The involvement of local authorities, civil society organizations and population in the decision-making processes related to land management is key and will foster sustainability. The Ministry of Environment is committed to hand over the recurrent costs of Park management unit at the end of both operations, according to a sustainable business model to be elaborated in the framework of HA-X1002. On one hand, the costs of maintenance of the watershed protection infrastructure will be covered by the beneficiaries for minor elements, following the experience of other projects such as HA-L1041 and HA-L1009[30] where the value added by the structures to the beneficiaries motivate them to take over part of the maintenance, mainly by providing labor (cleaning water tanks, small reparations). On the other hand, in the framework of the External Aid Cooperation Framework (*Cadre de Coopération de l'Aide Externe au Développement*, in French) recently launched by the Government of Haiti and the external cooperation agencies, the Government of Haiti resolutely committed to take into consideration the sustainability of investments and particularly the maintenance of infrastructure. Larger maintenance needs will therefore be covered by the national and local authorities according to maintenance plans to be elaborated for each infrastructure and agreed before launching the respective works.

[30] HA-L1009: Ennery-Quinte Agricultural Intensification Program, which financed the building of similar structures.

III. IMPLEMENTATION AND MANAGEMENT PLAN

A. Summary Implementation Arrangements

3.1 The beneficiary of the project is the Republic of Haiti and the executing agency is the Ministry of Environment (MOE), through the already existing Project Executing Unit (PEU) which is currently implementing HA-X1002 operation. It is physically located in the project zone, under the direct authority of the Direction of Soil Erosion and Biodiversity of the MOE, which provides overall guidance as well as technical orientation to the PEU. For project implementation the PEU will mobilize a technical team including: (i) project coordinator; (ii) assistant coordinator; (iii) specialist in social communication; (iv) environmental specialist; and (v) civil engineer; as well as a fiduciary team composed of: (i) financial specialist; (ii) accountant; (iii) two procurement specialists; and (iv) administrative assistant. The Beneficiary undertakes to maintain at least such personnel for the implementation of HA-X1002 and HA-G1023 operations, unless the Bank and the Beneficiary, through the Executing Agency, decide otherwise.

3.2 At the level of Macaya National Park, the project's institutional arrangements are based on principle of decentralized governance and co-management, through: (i) an inter-jurisdictional agreement linking the ten (10) municipalities directly concerned by the Macaya National Park and supported by an Inter-communal Committee; (ii) inter-communal agreements among the those ten municipalities; and (iii) a Steering Committee established for HA-X1002 in order to define the strategic guidelines for Macaya National Park management.

3.3 This Steering Committee is headed by the MOE and composed by representatives from: (i) local civil society organizations; (ii) departmental and municipal authorities related to the Macaya area; (iii) Ministry of Environment; (iv) Ministry of Agriculture, Natural Resources and Rural Development; (v) Ministry of Planning and External Cooperation; (vi) the Inter-ministerial Land Management Committee; and (vii) Donors. The Committee designates among its members a board of executives in charge of monitoring the application of strategic guidelines by the PEU. The project resources will provide funds for the meetings and activities of the Steering Committee and its board of executives. At the end of the project, the PEU will become the Macaya National Park Office, and the Steering Committee of the project will become Macaya National Park Local Board, ensuring the sustainability of investments carried out through HA-X1002 and HA-G1023 operations. Such structure will then represent this protected area in the national board of the National Agency for Protected Areas, currently supported by a UNDP-GEF project executed in parallel and in coordination with the HA-X1002 project under the responsibility of MOE. In that sense, the institutional setup of the HA-X1002 project anticipates, from its very inception, post project integration into the SNAP of the MOE and its autonomous ANAP.

3.4 For the procurement of goods, works and services the PEU will follow the procurement policies of the Bank: Policies for the Procurement of Goods and

Works financed by the Inter-American Development Bank (GN-2349-9), Policies for the Selection and Contracting of Consultants financed by the Inter-American Development Bank (GN-2350-9) and the Procurement Provisions for Haiti (GN-2654). A detailed procurement plan for the first 18 months of execution has been prepared. All contracts for works, goods or services of an amount of US$1,000 or more will be supervised under the ex-ante modality. . The manual of operation of HA-X1002 has been approved by the Bank and will be used to manage HA-G1023 operations, but will before be updated as part of condition to first disbursement. The recruitment of an additional procurement specialist assigned to the PEU will be a special condition prior to first disbursement (¶2.6). In addition, a technical assistance on fiduciary matters will be contracted to support the PEU in financial management, procurement, internal control processes and project management.

B. Summary of Arrangements for Monitoring Results

3.5 The PEU will coordinate the development of a permanent, integrated and cost-effective monitoring and evaluation system that will gauge progress in achieving the project's objectives. The monitoring and evaluation system will function within the PEU and will be shared with partners in management, whenever the case. Part of the system will use similar methodologies in complementarity with the environmental monitoring system designed in the framework of the Natural Disaster Mitigation Program (2187/GR-HA). It is expected that within the first year, the PEU will ensure the consolidation of the baseline information for all indicators in the results framework, which will enable continued monitoring of the project's results.

3.6 Periodic reports will facilitate the monitoring and evaluation of project results and impacts, as well as support adaptive management and provide guidance to the planning and management decisions of the PEU and local partners. The project will operate based on detailed annual work plans containing a series of short-term process indicators, which will be monitored by the PEU on a day-to-day basis. The IDB Country Office in Haiti will conduct periodic supervision visits to the project site and maintain a Project Monitoring Report (PMR). Along with, semestrial progress reports and annual reviews, the PEU will respond to reporting needs from the Haiti Reconstruction Fund.

3.7 Finally, independent evaluations for HA-X1002 and HA-G1023 will be conducted on a mid-term basis[31] and on a final evaluation (three months before the final disbursement date). These evaluations will be performed by an independent team of experts commissioned by IDB, and special administration missions could be commissioned to discuss the results of the final evaluation in Haiti. This evaluation will include a cost-benefit analysis of the investments carried out during the project life. Further details are provided in the Monitoring and Evaluation Plan linked to this document.

[31] When 35% of HA-X1002 resources have been disbursed or 24 months after the project contract of HA-G1023 operation entered into effect, whichever comes first.

Development Effectiveness Matrix			
Summary			
I. Strategic Alignment			
1. IDB Strategic Development Objectives	**Aligned**		
Lending Program	**(i) Lending to small and vulnerable countries, (ii) lending for poverty reduction and equity enhancement, and (iii) lending to support climate chance initiatives, renewable energy and environmental sustainability.**		
Regional Development Goals	**(i) Annual reported economic damages from natural desasters, and (ii) Proportion of terrestrial and marine areas protected to total territorial area (%).**		
Bank Output Contribution (as defined in Results Framework of IDB-9)	**Number of projects with components contributing to improved management of terrestial and marine protected areas.**		
2. Country Strategy Development Objectives	**Aligned**		
Country Strategy Results Matrix	**GN-2646**	**Reduction in expected losses for flooding and landslides.**	
Country Program Results Matrix	**GN-2696, CP-3438**	**The operation is included in the 2013 Country Program Document.**	
Relevance of this project to country development challenges (If not aligned to country strategy or country program)			
II. Development Outcomes - Evaluability	Highly Evaluable	Weight	Maximum Score
	8.8		**10**
3. Evidence-based Assessment & Solution	**10.0**	**33.33%**	**10**
4. Ex ante Economic Analysis	**10.0**	**33.33%**	**10**
5. Monitoring and Evaluation	**6.5**	**33.33%**	**10**
III. Risks & Mitigation Monitoring Matrix			
Overall risks rate = magnitude of risks*likelihood	**High**		
Identified risks have been rated for magnitude and likelihood	**Yes**		
Mitigation measures have been identified for major risks	**Yes**		
Mitigation measures have indicators for tracking their implementation	**Yes**		
Environmental & social risk classification	**B**		
IV. IDB´s Role - Additionality			
The project relies on the use of country systems (VPC/PDP criteria)			
The project uses another country system different from the ones above for implementing the program			
The IDB's involvement promotes improvements of the intended beneficiaries and/or public sector entity in the following dimensions:			
Gender Equality			
Labor			
Environment	**Yes**	**The project aims to contain environmental degradation.**	
Additional (to project preparation) technical assistance was provided to the public sector entity prior to approval to increase the likelihood of success of the project			
The ex-post impact evaluation of the project will produce evidence to close knowledge gaps in the sector that were identified in the project document and/or in the evaluation plan			

The Project objective is to contain the rapid environmental degradation in the upper watershed of the southwestern part of Haiti. The project aims to promote sustainable natural resources management and watershed protection in order to prevent deforestation, soil erosion and related natural disasters. The project is comprised of the following two components. Component 1: Institutional and Local Governance Strengthening; and Component 2: Enhancement and restoration of ecosystem services.

The Project document and its annexes provide justification for the project. Problems and their causes are identified and discussed. The structure of the results matrix is satisfactory. The project document presents an ex-ante cost-benefit analysis to assess potential benefits of the reforestation and infrastructure works interventions, assumptions are clear and the sensitivity analysis is driven by the role key assumptions play in the viability of the project. The project includes a reflexive evaluation (before and after).

The project documentation includes a risk matrix that identifies potential risks and mitigation measures, including metrics to monitor their implementation.

RESULTS MATRIX

Project Objective:	Reduce the rapid environmental degradation of the upper watershed of the south western part of Haiti		
Impact	**Base Line**	**Target (2016)**	**Sources and Means of Verification**
Increase the area with permanent forest cover in the Macaya National Park **Indicator:** Area with permanent forest cover in Macaya Park area	3,448 ha (year 2008)	4,948 ha	*Baseline:* 2,536ha of dense forest, 912 ha of heterogenous forest. *Sources:* Background studies to design HA-X1002 operation, data from CNIGS (National Center for Geospatial information). *Means of verification:* Before-after analysis of digital orthophoto at the beginning, at the end and 5 years after operation closure. The methodology has been designed in the framework of HA-L1041 (refer to POD annex)
Decrease the probability of flooding **Indicator:** Percentage change in the water levels of critical rivers coming from Macaya Park area, for given precipitation levels.	0 (year 2013)	-5%	*Baseline:* 0 *Means of verification:* Flooding monitoring system consisting of flood gauges and markers, and meteorological stations, located at critical reference points. This system has recently been designed in the framework of the Natural Disaster Mitigation Program (HA-L1041), and will be run by the Ministry of Environment (refer to POD annex). The monitoring and evaluation plan defines the rivers to be monitored.

Component 1: Institutional and Local Governance Strengthening							
Component I	**Base Line**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Target**	**Sources and Means of Verification**
Outcome: Improve effective environmental control of the Macaya area							
Indicator 1: Percentage of trained people who reach the minimum level of knowledge assimilation regarding natural resources and land use management	0					60%	*Means of verification:* Before-after knowledge assimilation tests to be applied on samples of trained and educated population
Indicator 2: Number of sawyers exploiting Park resources	500					250	*Baseline sources:* Background studies to design HA-X1002. *Means of verification:* Survey with local population and authorities
Output 1: Local population benefiting from training and education on natural resources management and land use management, according to agreed communal land planning schemes							
Indicator: Number of people trained natural resources management and land use management	0	1,000	3,000	3,000	3,000	10,000	*Baseline source:* Ministry of Environment. *Means of verification:* Monitoring report from PEU
Output 2: Park surveillance guards equipped, trained and mobilized							
Indicator 1: Number of guards trained, equipped and mobilized	5	25	-	-	-	25	*Baseline source:* Ministry of Environment. *Means of verification:* Monitoring report from PEU. Twenty new guards will be recruited, in addition to the 5 already operating.

Component 1: Institutional and Local Governance Strengthening							
Component I	**Base Line**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Target**	**Sources and Means of Verification**
Output 3: Park unit and control points built,							
Indicator: Number of park unit and control points built	0	0	1	4	0	5	*Baseline source:* Ministry of Environment. *Means of verification:* Monitoring report from PEU

Component 2: Enhancement and restoration of ecosystem services							
Component 2	**Base Line**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Target**	**Sources and Means of Verification**
Outcome: Increase the protection of areas vulnerable to soil erosion, land degradation and flooding							
Indicator 1: Incremental areas protected from flooding (ha)	0	0	0	1000	1800	2800	*Baseline source:* Background studies to design HA-X1002 operation. *Means of verification:* Annual mapping on the basis of the works executed
Indicator 2: Extension of vulnerable areas protected from soil erosion and land degradation (ha)	0	50	50	150	250	500	
Output 4: Native forest restored							
Indicator 1: Number of trees planted	0	300,000	300,000	400,000	500,000	1,500,000	*Baseline source:* Background studies to design HA-X1002 operation.

Component 2: Enhancement and restoration of ecosystem services							
Component 2	**Base Line**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Target**	**Sources and Means of Verification**
Indicator 2: Incremental restored forest area	0	300	300	400	500	1,500	*Means of verification:* Monitoring report from PEU
Output 5: Watershed protection infrastructure installed							
Indicator 1: Number of new watershed protection structures built (water-tanks, check-dams, river bank retaining walls)	0	20	120	147	230	517	*Baseline source:* Ministry of Environment. *Means of verification:* Monitoring report from PEU
Indicator 2: Flooding monitoring system installed	0	0	1	0	0	1	*Baseline source:* Ministry of Environment. *Means of verification:* Monitoring report from PEU

FIDUCIARY ARRANGEMENTS

COUNTRY:	Republic of Haiti
PROJECT Nº:	HA-G1023
NAME:	Sustainable Management of Upper Watersheds of South Western Haiti – Macaya National Park
EXECUTING AGENCY:	The Ministry of Environment of the Republic of Haiti through the Project Execution Unit managing HA-X1002 – GEF Macaya
FIDUCIARY TEAM:	Marise E. Salnave (FMP/CHA) and Emilie Chapuis (FMP/CHA)

I. Executive Summary

1.1 Project objective is to contain the rapid environmental degradation in the upper watershed of the south western part of Haiti. It will promote sustainable practices at the watershed level in order to prevent deforestation, soil erosion and related natural disasters. To achieve this objective, the proposed operation will complement HA-X1002 operation by implementing two components: i) Institutional and Local Governance Strengthening and ii) Enhancement and restoration of ecosystem services. Project amount is USD $9,000,000 from the Haiti Reconstruction Fund, Operation HA-G1023.

1.2 The latest evaluation of the public financial management systems of the Republic of Haiti is contained in the Public Expenditure and Financial Accountability (PEFA) assessment report conducted in 2011 and published in February 2012. The latest assessment of the procurement system in Haiti was undertaken in the context of the 2007 PEMFAR and conducted in accordance with the methodology for assessment of national procurement systems based on the OECD/DAC-World Bank Working Group indicators. Country financial management systems and external control mechanism, as evidenced by the recent diagnostic, would require further improvements prior to conform to levels consistent with their utilization for the fiduciary management of Bank's funded projects. Therefore to mitigate these weaknesses the Bank will continue in the foreseeable future to: (i) strengthen the executing agency and rely on special project execution units for the execution of all projects; and (ii) to implement special fiduciary arrangements for the implementation of its projects and to conduct close operation supervision of project execution units. External control will be performed for all Bank operations by independent audit firms acceptable to the Bank in accordance with the Bank's financial reporting and audit guide.

II. Executing Agencies Fiduciary Context

Project Execution Unit of the Ministry of Environment of the Republic of Haiti

2.1 The executing agency is the Ministry of Environment (MOE), through its Project Executing Unit (PEU) physically located in the project zone, but under the direct authority of the Direction of Soils and Ecosystems of the Ministry. The PEU was created

for the execution of operation GEF-IDB HA-X1002, which has been declared eligible to disbursement at the end of October 2012. Staff has recently been recruited and is composed of a project coordinator, an assistant coordinator, a sociologist, an environment specialist and a civil engineer. The PEU also has a fiduciary team with a financial specialist, an accountant, a procurement specialist and an administrative assistant.. Also included as part of the eligibility process is the implementation of an accounting software and the preparation of an operation manual. The updating of the PEU operation manual to include the activities of new operation and the implementation of the accounting system will be required as condition to first disbursement for new operation HA-G1023.

III. Fiduciary risk evaluation and mitigation actions

Project Execution Unit of the Ministry of Environment of the Republic of Haiti

Financial Management

3.1 The overall risk rating is considered to be high due to lack of appropriate computerized accounting software and the lack of experience of the newly recruited team in IDB procedures. Risks are to be mitigated by the implementation of an accounting software and the updating of project operating manual as part of conditions precedent to first disbursements. Training on IDB financial management procedures will be provided to PEU staff prior the execution of this new operation, as part of the strengthening planed under GEF-IDB HA-X1002. In addition for the first year of execution, most disbursement will be made via direct payment to suppliers against achievement of agreed milestones or outputs. Disbursement request including supporting documents will be submitted to IDB by the PEU for the processing of payments.

Procurement

3.2 The overall risk for procurement activities is evaluated as being high. Although the procurement specialist of HA-L1006 operation (Grant 2391/GR-HA) is temporarily acting as procurement specialist for the program, the PEU does not have a record for procurement related activities under Bank's rules and procedures. Training on procurement will be provided to the newly constituted PEU. The Bank will request that all activities be undertaken under ex-ante supervision and risk assessment will be performed according to the established supervision plan for the present operation so as to re-evaluate the level of risk in that specific field of practice.

IV. Aspects to be considered in the Special Conditions of Contract

4.1 Condition prior to first disbursement: The PEU will recruit a new procurement specialist who will be trained to ensure that all procurement related activities are performed in accordance with Bank's rules and procedures. The Operation's Manual for HA-X1002 will be updated to reflect all changes linked to the addition of the funds from HA-G1023 resources such as foreseen under the present operation, including the environmental and social recommendations outlined in the ESMR updated for purposes of this project.

4.2 Special Accounts and authorized signatures: PEU will open separate bank accounts at the Banque de la République d'Haïti for the management of grant resources and update its chart of account to reflect current operation.

4.3 Listings of authorized signatures are to be provided to Bank.

4.4 Exchange rate valid at the day of transaction will be used to record all expenses made in local currency. The Central Bank exchange rate will be used at the reference rate.

4.5 Audit special requirements: Bank recommends that the audit firm which was recruited to perform audit of GEF-IDB HA-X1002 also be used for the audit of HA-G1023. Due to the significant increase in funding and due to the lack of experience of PEU the terms of reference of the auditors will be amended to included semi-annual audits of financial statements for both operations including the review of intern control and procurement process. Audit reports will have to be submitted within 60 days after the closure of each semester.

V. Fiduciary Arrangements for Procurement Execution

5.1 The procurement fiduciary arrangements establish the conditions applicable to all procurement execution activities in the project.

1. Procurement Execution.

5.2 All project related procurement activities will be performed by the PEU of the Ministry of Environment of the Republic of Haiti following Bank's Procurement Policies: Policies for the Procurement of Goods and Works financed by the Inter-American Development Bank (GN-2349-9) and Policies for the Selection and Contracting of Consultants financed by the Inter-American Development Bank (GN-2350-9) and the Procurement Provisions for Haiti (GN-2654).

a. **Procurement of Works, Goods and Non-Consulting Services:** The contracts for Works, Goods, and Non-Consulting Services[1] generated under the project and subject to International Competitive Bidding will be executed through the use of the Standard Bidding Documents (SBDs) issued by the Bank. The processes subject to National Competitive Bidding (NCB) will be executed through the use of National Bidding Documents agreed to by the Bank. The technical specifications review during the preparation of the selection process, is the responsibility of the project sector specialist. There is no direct contracting anticipated at this time.

b. **Selection and Contracting of Consultants**: The consulting services contracts generated under this project will be executed through the use of the Standard Request for Proposals (SRFPs) issued or agreed by the Bank. The terms of reference review for the selection of consulting services is the responsibility of the project sector specialist.

c. **Selection of Individual Consultants**: The selection will be made in accordance with Bank's Procurement rules and procedures and will consist in evaluating the capacity of at least three candidates against set and agreed Terms of References.

d. **Exceptions to Bank's rules and procedures:** The project team is not requesting any exception to Bank rules and Procedures.

[1] Policies for the Procurement of Goods and Works Financed by the Inter-American Development Bank (GN-2349-9) paragraph 1.1: The services different from consulting services have a similar process as procurement of Goods.

2. Thresholds (miles US$)

Works			Goods[2]			Consulting Services	
International Competitive Bidding	National Competitive Bidding	Shopping	International Competitive Bidding	National Competitive Bidding	Shopping	International Advertising	100% National Short List
= / >1,000	100-1,000	<100	= / >100	25 -100	<25	>100	<100

However, the thresholds applied procurement activities under this operation will follow the ones established in the Procurement Provisions for Haiti such as detailed in GN-2654.

HAITI – Thresholds in force since 1 January 2012 (In thousands of US$)				
Works		Goods		Consulting Services
International Competitive Bidding	National Competitive bidding / Price Comparison	International Competitive Bidding	National Competitive bidding / Price Comparison	Short list of national firms only
≥1.000	<1.000	≥100	<100	<100

3. Main Procurement Activities

Activity	Procurement Method	Estimated Date	Estimated Amount 000'US$
Goods			
Vehicles	ICB	June 2013	280
Agricultural and environmental inputs	PC	March 2013	4,00
Works			
Water small infrastructures	PC	May 2013	1,600
Services			
Agro-environmentalist consultant	IC	March 2013	
Firms			
Consultant in Environmental Education and Reforestation	NCB/SBQC	March 2013	1,000
Consultant in Eco-systemic Services Development	NCB/SBQC	March 2013	800

*To access the 18 month procurement plan, click here

4. Procurement Supervision

5.3 All procurement activities under this operation will be subject to ex-ante review. Indeed, since the new procurement specialist will be recruited as a condition prior to first disbursement of the present operation, capacity to discharge procurement duties in conformity with Bank's procurement rules and procedures is not evidenced. Procurement supervision modalities may change during project execution based on capacity evaluation by the Bank.

5. Records and Files

5.4 The Executing Agencies will be required to keep files and track records of all procurement related activities financed by the Bank in their office in accordance with the Bank's Procurement Rules and Procedures and to the Project's Operations manual in such a way that it be available for supervision visit by the fiduciary team. It is also

[2] Including different services other than consulting.

recommended that the Executing Agency developed electronic filing so as to avoid losing all paper files should a natural disaster such as an earthquake occur. It is important however to note that the national legislation in Haiti does not recognize electronic documents as being originals, which means that creating an electronic filing system should not be considered mandatory.

VI. Financial Management

1. Programming and Budget

6.1 Programming and budget planning, execution and monitoring at the project level will rely on IDB's project financial management formats and procedures. The PEU will prepare annually, an annual operation plan (AOP), a procurement plan and a twelve-month detailed financial plan. The financial plan will be prepared based on calendar year and will respect the budget lines defined in the grant agreement (investment categories). The execution of the project's financial plans will be evaluated quarterly.

7. Accounting and Information Systems

7.1 The PEU is in the process of implementing an accounting software, and elaborated an operation manual which will be used for the financial management of the project.

8. Disbursements and Funds Flows

8.1 Project financial management will be executed according to OP-273-2. The PEU will prepare annual planning of project cash flow which will be reviewed on a quarterly basis. Cash flow will be based on activities derived from AOP and Procurement Plan and payment terms agreed with suppliers.

9. Internal Control and Audit

9.1 To ensure the implementation of sound internal control systems, semi-annual audits will be conducted by an external audit firm hired by the Bank to ensure implementation of the operations manual.

10. External Control and Reporting

10.1 Audits will be performed in accordance with Bank's Guidelines for Financial Reports and External Audits. The project financial statements will correspond to the calendar year. As stated in paragraph 4.5 above, the Bank recommends that the audit firm which was recruited to perform audit of IDB-GEF-HA-X1002 also be used for the audit of operation HA-G1023 which will include semi-annual audits of financial statements including the review of intern control and procurement process. Audit reports will have to be submitted within 60 days after the closure of each semester.

11. Financial Supervision Plan

11.1 Bank Fiduciary staff will initially conduct at least three inspection visits to review execution of the financial plan. When satisfactory systems are in place, visits may be reduced to two visits every six months.

12. Execution Mechanism

12.1 Same executing mechanism used for GEF-IDB HA-X1002 will be implemented for HA-G1023. The PEU will maintain proper financial management systems and will prepare an annual operation plan and procurement plan and a twelve-month detailed financial plan indicating cash flow needs for the execution of project activities stemming from AOP and procurement plans. The twelve-month financial plan will serve as the basis for advance of funds disbursements. According to planned activities, the majority of expenditures will be made for the payments of different consultations. For this reason and considering the experience of the PEU, we recommend that disbursements of advance of funds are limited to cover the operational costs of the project (including payment of executing unit salaries and payment for office equipment), workshop and travel expenses on a quarterly basis and all other payments to consultants/suppliers be made by direct payment by the Bank at least during the first year of execution of the project.

12.2 A technical assistance on fiduciary matters will be contracted to support the project executing unit in financial management, procurement, internal control processes and project management.

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-____/13

Haiti. Nonreimbursable Financing GRT/HR-_____-HA to the Republic of Haiti
Sustainable Management of Upper Watersheds of South Western
Haiti-Macaya National Park

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, as Administrator of the Haiti Reconstruction Fund, hereinafter referred to as the "HRF", to enter into such contract or contracts as may be necessary with the Republic of Haiti, as Beneficiary, and to implement the necessary actions for the purpose of granting it a nonreimbursable financing for an amount of up to US$9,000,000 chargeable to the resources of the HRF, to cooperate in the execution of the project "Sustainable Management of Upper Watersheds of South Western Haiti-Macaya National Park", as contemplated in document PR-____.

(Adopted on ___ _____ 2013)

LEG/SGO/IDBDOCS#37756034
HA-G1023