

## PROJECT PROFILE

### HAITI

#### I. BASIC DATA

<b>Project name:</b>	Productive Infrastructure Program II		
<b>Project number:</b>	HA-L1081		
<b>Project team:</b>	Arcindo Santos, Team Leader; Ana María Saíz (FMM/CHA); Francesco Lanzafame and Dianela Avila (IFD/FMM); Ednoux Dormeus and Marc Alain Boucicault (CDH/CHA); Carlos Faleiro Pajares and Alfredo Rihm Silva (INE/WSA); Stefanie Brackmann and Jonathan Renshaw (VPS/ESG); Taos C. Aliouat (LEG/SGO); Agustín Ignacio Filippo (CDH/CDH); Nelly Wheelock and Marise Etienne Salvane (FMP/CHA).		
<b>Beneficiary:</b>	Republic of Haiti		
<b>Executing agency:</b>	Ministry of Economy and Finance through its Technical Execution Unit (MEF/UTE)		
<b>Financing plan:</b>		<b>US\$ (millions)</b>	
	IDB: (Grant Facility)		40.5
	<b>Total:</b>		<b>40.5</b>
<b>Safeguards:</b>	Policies triggered:	OP-761; OP 703; OP 704; OP-270; OP-102	
	Classification:	A	

#### II. JUSTIFICATION AND OBJECTIVES

- 2.1 **Project Justification:** Haiti has 10.2 million inhabitants, 3 million of which live in the metropolitan region of Port-au-Prince, and 1.8 million in the North and Northeast Departments. Unemployment is estimated at 40%, while 55% of the population lives on less than US\$1 per day and 71% on less than US\$2 per day. Therefore, rapid economic growth is extremely important to create jobs and alleviate poverty, particularly in the less populated Northern region. This will require sustained levels of investment to increase its manufacturing and exporting capacity. Despite high levels of investment (currently over 25% of Gross Domestic Product and expected to increase by 5% next year), private investment is very low, dropping to single digits since the earthquake (5.9% in 2012). Haiti's current export revenues are insufficient to cover imports: the country exported US\$943 million in 2012, and imported about US\$3.4 billion.
- 2.2 Given the need to attract private investment and increase exports, which is hampered by the lack of adequate infrastructure and facilities for manufacturing activities, the Government of Haiti (GoH), along with the United States Government Department of State (USG-DOS) and the Bank, agreed to support the establishment of the Caracol Industrial Park (Parc Industriel de Caracol – PIC) in the Northern part of the country. The Bank's role in this initiative consists of providing four grants, totaling US\$180 million, in the course of six years. This is the estimated amount necessary to supply the infrastructure, production facilities, and management support for the 250 ha. industrial park. The PIC aims to address the key obstacles faced manufacturers in doing business in Haiti by providing: (i) modern production infrastructure and facilities; (ii) reliable utilities (water,

sanitation, electricity); (iii) logistic support and secure road access in and out of the park; (iv) readily available workforce; (v) transparent and enforceable tenancy agreements; (vi) professionally operated and well maintained industrial park; and (vii) advantageous international competitive conditions<sup>1</sup>. The program includes also environmental, social and urban interventions intended to support its overall sustainability and help the surrounding cities to cope with the population influx that is expected as a result of the industrial park. Previous Bank operations in support of the PIC were:

- 2.3 **First PIC operation: The Infrastructure Program (2552/GR-HA).** Consisted of a Bank grant of US\$55 million, approved by the Board on July 25, 2011. The operation became eligible for disbursement on Aug. 23rd 2011, and the civil works started on Sept. 30th 2011. From that date to Nov. 2012, a period of 14 months, US\$50 million dollars were invested, resulting in the following products: (i) for the anchor garment tenant, an administration building, a 11,776 m<sup>2</sup> sewing factory, a 10,500 m<sup>2</sup> warehouse, a 45-room dormitory and a canteen; (ii) one 5,000 m<sup>2</sup> building for an Haitian painting company and one 5,000 m<sup>2</sup> building for a Dominican garment company; (iii) a perimeter wall, water treatment plant, temporary domestic wastewater treatment plant, temporary solid waste facility, 1,450 meters of internal roads and other utility networks; and (iv) social and environmental mitigation and compensation plans, studies and works. Within the same timespan, the USG built a 10 MW powerplant in the PIC that is providing electricity for the Park and surrounding communities. The main outcomes are: (i) three manufacturing firms have been installed at the PIC; and (ii) 1,200 Haitians hired from the surrounding areas, earning total salaries of US\$140,000 per month.
- 2.4 **Second PIC operation: The Productive Infrastructure Program (2779/GR-HA).** This second grant of US\$50 million was approved by the Bank on September 12, 2012. It finances: (i) anchor tenant's manufacturing and employment expansion consisting of two sewing factories, one washing factory, one workshop, two boilers, one canteen, and one dormitory; (ii) one administrative building for the PIC, one generic 5,000 m<sup>2</sup> building, one 5,000 m<sup>2</sup> divided into five, for smaller tenants; (iii) a wastewater treatment plant; (iv) a 30-month PIC operation and maintenance management firm and an Environmental, Social, Health and Safety Manager; (v) the capacity strengthening of the National Society of Industrial Parks (SONAPI) to manage the sector and industrial parks; (vi) complementary urban investments, a worker transportation system, and a permanent solid waste management facility; (vii) social and environmental studies, protection and mitigating measures, including the preservation of the mangrove Caracol bay, downstream of the PIC; and (viii) technical assistance and complementary public works to assist adjacent municipalities manage future growth due to the influx of workers and their families. Since project eligibility on January 31<sup>st</sup>, 2013, 77% of the funds have been already committed, and most civil

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<sup>1</sup>The due to the Hemispheric Opportunity Through Partnership Encouragement Act II law (HOPE), the Haitian Economic Lift Program Act of 2010 (HELP), and duty-free access to other markets.

works will be concluded during 2013. Likewise, it is expected that all social, solid waste, waste water, and environmental action plans will be in place during 2013.

- 2.5 **Country strategy.** The program is consistent with the Economic Rebuilding strategy of the present government and, in particular, its priorities of generating employment and protecting the environment. They include construction of key basic infrastructure and the creation of a business-enabling climate, and environmental rehabilitation and preservation. The proposed program is consistent with the Bank's Country Strategy with Haiti (2011-2015) (GN-2646), as it contributes to the promotion of private sector investment and the development of the Northern part of the country, where the Caracol Industrial Park will help support the decentralization of development, services, and population. The proposed program is also in line with the Ninth General Increase in the Resources of the Inter-American Development Bank GCI-9 (AB-2764), regarding the objectives of reducing poverty and inequality, addressing special needs of less developed and small countries, and fostering development through the private sector.
- 2.6 **Program strategy.** This program is consistent with the Bank's commitment to support the establishment of the Caracol Industrial Park, expanding its infrastructure and implementing measures to insure its sustainable operation. The overall strategy, devised in conjunction with other donors including the United State Agency for International Development (USAID), is to promote the development of Northern are of Haiti by creating conditions to attract private enterprises and thus generate employment opportunities in the area. Other activities complement this effort, such as the Bank (2318/GR-HA) and USAID's housing projects, which jointly will generate up to 2,000 houses in the area by September 2014. Other Bank and other donor activities include the construction of a new bridge into Cap-Haitien, tourism development (World Bank), a hospital 1 km south of the PIC, agriculture and private sector support, solid waste management with the French Development Agency, and several technical cooperations supporting sustainability of the region. (see Par. ¶3.2).
- 2.7 **Program objective.** The Program will contribute to the socioeconomic development of Northern Haiti, by creating the conditions for the establishment of manufacturing activities in the area and thus generating employment opportunities for the haitian population. This will be accomplished by providing the basic infrastructure, industrial facilities, and management support required for the expansion and sustainable operation of the PIC. The program's main beneficiaries will be the the firms that will be established in the industrial park and the workers that they will employ. The program has two main components:
- 2.8 **Component I. Provision of infrastructure in the PIC (US\$33 million).** It finances: (i) warehouses, factory buildings and other structures (e.g., canteines, dormitories) to meet the demands of the PIC's tenants; (ii) ancillary site infrastructure and equipment within the PIC, notably: expansion of the roads and

utilities' networks, and one industrial wastewater treatment plant; and (iii) civil works's supervision.

- 2.9 **Component II. Complementary projects and studies (US\$3.5 million).** Following the recommendations of the environmental and social safeguard assesment of the program, this component will finance small works projects and studies outside the PIC required to mitigate the social, environmental, urban and institutional risks associated with the implementaion of the PIC. The activities and projects included in this component will be specified in the POD.
- 2.10 The program's administration, monitoring, auditing and contingency cost are estimated at US\$4 million. The expected implementation period of the operation is two years. The expected results of this third operation include: (i) generation of up to 5,000 additional jobs at the PIC; and (ii) increase in fiscal revenues derived from payments to social and health security, and from the use of utilities. This operation supports the Bank's poverty reduction goal by generating direct and indirect employment opportunities in Haiti's Northern region.

### III. TECHNICAL ISSUES AND SECTOR KNOWLEDGE

- 3.1 Most sector work has already been done in the course of preparation and execution of both 2552/GR-HA and 2779/GR-HA (see Annex IV). One critical study that has been completed in December 2012 is the Regional Master Plan and Urban Master Plans for nine cities surrounding the PIC. It includes multi-sectorial, community-participative diagnostics, and a Cumulative Impact Assessment, to pave the way for controlled urban growth and key local sustainability projects. The existing financial and economic analysis of the PIC done during the previous operation will be improved with new data and a sensitivity analysis.
- 3.2 The potential to cause significant impacts on local environmental and social development, is also being addressed by five TCs: (i) Urban Growth Management in the Vicinity of the PIC (ATN/SF-11979-HA), which is funding the preparation of land use and development plans and to strengthen the Caracol municipality's territorial management and enforcement capacity; (ii) Water Availability and Integrated Water Resources Management in Northern Haiti (HA-T1179); (iii) Mitigating the Environmental Impacts of the PIC in the Caracol Bay (HA-T1180); (iv) Mitigating the Social Impacts of the PIC (HA-T1181); and (v) Institutional Strengthening of the Government of Haiti to address direct and indirect impacts of the PIC (HA-T1182). The Bank's Emergent Sustainable Cities Initiative will also carry out a detailed diagnostic and plan for the region comprising the four towns around the PIC. Funding within the 2779/GR-HA, Component II of this operation, and other donors will finance some of the small projects prioritized by these initiatives (see also par. 2.6).
- 3.3 **Institutional Framework.** The program will be implemented by the Ministry of Economy and Finance through its Technical Execution Unit (MEF/UTE) of the

two previous operations and under the specific works modality. Improved coordination among among SONAPI, donors, private investors, and local municipalities will be sought so the development of the region will be a more concerted effort that includes tourism, agriculture, water and sanitation, and logistics infrastructure.

- 3.4 **Program risks.** The main risks are: (i) insufficient capacity of government to regulate the sector and attract more investments; (ii) long term sustainability; and (iii) irregular occupation of land and slum-formation around the PIC. The Bank is addressing some of these issues as discussed in 2.6 and 3.2, and will keep working with its partners to secure additional resources to fund complementary infrastructure outside the PIC.

#### IV. SAFEGUARDS AND FIDUCIARY SCREENING

- 4.1 Financial management will be carried out by the UTE/MEF following the policy for IDB-financed projects (OP-273-2) and the general procedures already in place for the management of the previous operations. The UTE already employs financial, procurement, technical, social and environmental specialists. It has also been substantially strengthened recently with additional staff in: (i) planning and monitoring; (ii) communication and public relations; (iii) finance; (iv) on-site representation; and (v) sanitation, solid waste and environmental protection.
- 4.2 **Environmental and social impacts and risks.** Given the complex social, economic and environmental aspects, this operation is classified as Category A. The previous two operations, in particular the 2779/GR-HA, have set in motion a series of measures to address the program's risks. With additional tenants and an increase in workers, the PIC is likely to exacerbate environmental and social impacts leading to increased pressures on already fragile ecosystems and natural resources, potentially increasing the vulnerability of local communities to impoverishment. The two overarching concerns related to the PIC operation are: (i) potential for uncontrolled housing expansion; and (ii) continuation of the construction without a simultaneous compliance with environmental and social safeguards and implementation of mitigation measures necessary to comply with IDB's policies. The Action Plans to achieve compliance with these policies are in the process of implementation as described in the Environmental and Social Strategy (ESS), Annex III. Full compliance with each Action Plan is expected before submission of this project to the Board.

#### V. RESOURCES AND TIMETABLE

- 5.1 Annex V describes the project preparation, timeline and resources. The following timeline is expected: distribution of the Proposal for Operation Development (POD) to the Quality and Risk Review (QRR) and approval by the Operation Policy Committee (OPC) in June 2013, and presentation to the Board on August 7, 2013. The administrative budget will be used for mission travel and consultancies amounting to US\$90,000.

# **Annex I**

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## SAFEGUARD POLICY FILTER REPORT

<b>PROJECT DETAILS</b>	<b>IDB Sector</b>	URBAN DEVELOPMENT AND HOUSING- NEIGHBORHOOD UPGRADING
	<b>Type of Operation</b>	Other Non-Lending or Non-Financing Instrument
	<b>Additional Operation Details</b>	
	<b>Investment Checklist</b>	Generic Checklist
	<b>Team Leader</b>	Santos, Arcindo B. (ARCINDOS@iadb.org)
	<b>Project Title</b>	Productive Infrastructure Program II
	<b>Project Number</b>	HA-L1081
	<b>Safeguard Screening Assessor(s)</b>	Barandiaran Salcedo, Doris Melissa (DORISS@Contractual.iadb.org)
	<b>Assessment Date</b>	2013-02-01
	<b>Additional Comments</b>	Grant agreement

<b>SAFEGUARD POLICY FILTER RESULTS</b>	<b>Type of Operation</b>	Loan Operation	
	<b>Safeguard Policy Items Identified (Yes)</b>	Activities to be financed in the project area are located within a geographical area or sector exposed to natural hazards* (Type 1 Disaster Risk Scenario).	(B.01) Disaster Risk Management Policy– OP-704
		The operation itself has a potential to exacerbate hazard risk* to human life, property, the environment or the operation itself (Type 2 Disaster Risk Scenario).	(B.01) Disaster Risk Management Policy– OP-704
		The Bank will make available to the public the relevant Project documents.	(B.01) Access to Information Policy– OP-102
		Is this project specifically designed to address gender equality or women's empowerment issues?	(B.01) Gender Equality Policy– OP-270
	Does this project offer opportunities to promote gender equality or women's empowerment through its project components?	(B.01) Gender Equality Policy– OP-270	

		The operation is in compliance with environmental, specific women's rights, gender, and indigenous laws and regulations of the country where the operation is being implemented (including national obligations established under ratified Multilateral Environmental Agreements).	(B.02)
		The operation (including associated facilities) is screened and classified according to their potential environmental impacts.	(B.03)
		There are Associated Facilities (see Policy definition) relating to the investments being financed by the Bank.	(B.04)
		The Borrower/Executing Agency exhibits weak institutional capacity for managing environmental and social issues.	(B.04)
		The operation may be of higher risk due to controversial environmental and associated social issues or liabilities.	(B.04)
		Other environmental and social sustainability issues that the Project Team considers to be a risk for this operation. (e.g. wood sourced from Amazon rainforest).	(B.04)
		The operation could increase exposure to risk for ecosystems, communities, etc. from slow onset changes in climatic variables, weather patterns and the consequences incl. sea level rise, glacier run off. (Type 2 Gradual Climate Change Risk Scenario).	(B.04)
		An Environmental Assessment is required.	(B.05)



	The Bank will monitor the executing agency/borrower's compliance with all safeguard requirements stipulated in the loan agreement and project operating or credit regulations.	(B.07)
	Affects natural resources of a country not involved in the project, including areas such as waterways, coastal marine resources, protected areas, regional air shed and/or aquifers.	(B.08)
	The operation is already under construction by the Executing Agency or the Borrower.	(B.12)
	The operation is a repeat or second phase loan.	(B.14)
	Any part of the investment or component(s) is being co-financed.	(B.15)
	Suitable safeguard provisions for procurement of goods and services in Bank financed projects may be incorporated into project-specific loan agreements, operating regulations and bidding documents, as appropriate, to ensure environmentally responsible procurement.	(B.17)
<b>Potential Safeguard Policy Items(?)</b>	No potential issues identified	
<b>Recommended Action:</b>	<p>Operation has triggered 1 or more Policy Directives; please refer to appropriate Directive(s). Complete Project Classification Tool. Submit Safeguard Policy Filter Report, PP (or equivalent) and Safeguard Screening Form to ESR. The project triggered the Disaster Risk Management policy (OP-704).</p> <p>A Disaster Risk Assessment (DRA), is required, as established under Directive A-2 of the DRM Policy OP-704). Please contact a Natural Disaster Specialist in VPS/ESG or INE/RND for guidance.</p> <p>Also: if the project needs to be modified to increase</p>	

		<p>resilience to climate change, consider the (i) possibility of classification as adaptation project and (ii) additional financing options. Please contact a INE/CCS adaptation specialist for guidance.</p> <p>The project triggered the Other Risks policy (B.04): climate risk. Please include sections on how climate risk will be dealt with in the ESS as well as client documents (EIA, EA, etc); Recommend addressing risks from gradual changes in climate for the project in cost/benefit and credit risk analyses as well as TORs for engineering studies.</p>
	<p><b>Additional Comments:</b></p>	

<p><b>ASSESSOR DETAILS</b></p>	<p><b>Name of person who completed screening:</b></p>	<p>Barandiaran Salcedo, Doris Melissa (DORISS@Contractual.iadb.org)</p>
	<p><b>Title:</b></p>	
	<p><b>Date:</b></p>	<p>2013-02-01</p>

## SAFEGUARD SCREENING FORM

<b>PROJECT DETAILS</b>	<b>IDB Sector</b>	URBAN DEVELOPMENT AND HOUSING-NEIGHBORHOOD UPGRADING
	<b>Type of Operation</b>	Other Non-Lending or Non-Financing Instrument
	<b>Additional Operation Details</b>	
	<b>Country</b>	HAITI
	<b>Project Status</b>	
	<b>Investment Checklist</b>	Generic Checklist
	<b>Team Leader</b>	Santos, Arcindo B. (ARCINDOS@iadb.org)
	<b>Project Title</b>	Productive Infrastructure Program II
	<b>Project Number</b>	HA-L1081
	<b>Safeguard Screening Assessor(s)</b>	Barandiaran Salcedo, Doris Melissa (DORISS@Contractual.iadb.org)
	<b>Assessment Date</b>	2013-02-01
	<b>Additional Comments</b>	

<b>PROJECT CLASSIFICATION SUMMARY</b>	<b>Project Category:</b> A	<b>Override Rating:</b>	<b>Override Justification:</b>
	<b>Conditions/ Recommendations</b>		<b>Comments:</b>
		<ul style="list-style-type: none"> <li>• Category "A" operations require an Environmental Impact Assessment or a Strategic Environmental Assessment (see Environment Policy Guideline: Directive B.5 for EIA and SEA requirements) and at least two consultations with affected parties.</li> <li>• These operations will require an environmental assessment (EA), normally an Environmental Impact Assessment (EIA) for investment operations, or other environmental assessments such as a Strategic Environmental Assessment (SEA) for programs and other financial operations that involve plans and policies. Category "A" operations are considered high safeguard risk. For some high safeguard risk operations that, in the Bank's opinion raise complex and sensitive environmental, social, or health and safety concerns, the borrower should normally establish an advisory panel of experts to provide guidance for the design and/or execution of the operation on issues relevant to the EA process, including health and safety. However, these operations will also establish safeguard, or monitoring requirements to address environmental and other risks (social, disaster, cultural, health and safety etc.).</li> <li>• The Project Team must send to the ESR the PP (or equivalent) containing the Environmental and Social Strategy (the requirements for an ESS are described in the Environment Policy Guideline: Directive B.3) as well as the Safeguard Policy Filter and Safeguard Screening Form Reports.</li> </ul>	

SUMMARY OF IMPACTS/RISKS AND POTENTIAL SOLUTIONS	Identified Impacts/Risks	Potential Solutions
	Significant negative impact on endangered species of plants or animals.	<p><b>Potential Biodiversity Impacts Indicate Significant Risk of Non-Compliance with IDB policy OP-703:</b> Develop and evaluate alternative projects options and discuss with Environmental specialist, relevant team members and others before proceeding.</p>
	Conversion or degradation of critical natural habitat is minor to moderate in nature, as confirmed by a specific ecological assessment.	<p><b>Ensure Adequacy of Biodiversity Management Plan (BMP):</b> The borrower should be required to develop a BMP that demonstrates how impacts have been mitigated and what consultation activities are planned. The borrower should confirm that: (a) there are no feasible alternatives acceptable to the Bank; (b) benefits substantially outweigh environmental costs; and (c) mitigation and compensation measures are acceptable by the Bank. In addition this plan should be part of the ESMP. In all situations, impacts to biodiversity should be avoided in first instance (i.e. relocate or reconfigure proposed activities). If avoidance is not possible impacts should be mitigated by restoration, offsetting impacts or other means. Professional support from suitably qualified experts should be sought and confirmation should be obtained that they are confident that the BMP can mitigate impacts and also that relevant authorities have approved the BMP. Require regular (bi-annual or annual) reporting. Require independent audits of BMP implementation and depending on the financial product, the BMP should be referenced in appropriate legal documentation (covenants, conditions of disbursement, project completion tests, etc.).</p>
	Negative impacts on ecosystem services (e.g. biodiversity corridors, flood protection) to other users or habitats are minor to moderate in nature.	<p><b>Ensure Adequate Management Plans:</b> The plans should define how impacts will be mitigated (roles and responsibilities, monitoring, budget, etc.) and how ongoing consultation (including the development of a grievance mechanism) will be implemented which could be part of the ESMP. The ESMP should also include measures to manage these impacts. There should be evidence of effective and timely consultation with local communities, relevant authorities and conservation NGOs and confirmation should be obtained from competent experts that they are confident that the plans can mitigate impacts. Depending on the financial product, the plans should be referenced in appropriate legal documentation (covenants, conditions of disbursement, project completion tests, etc.).</p>
	<p>The project includes dangerous and hazardous working conditions where there could be significant negative impacts to workers or communities.</p> <p>Persistent Organic Pollutants (POPs) unacceptable under the Stockholm Convention, toxic pesticides (as defined by the WHO) without adequate borrower management capacity or hazardous materials not</p>	<p><b>Ensure that the borrower Addresses Occupational Health and Safety:</b> The borrower should provide details of how occupational health and safety issues will be addressed (including those found in the supply chain as appropriate) in a timely and efficient manner as a condition of disbursement and annual audits by third party experts should be considered. This should be addressed using an occupational health and safety management plan.</p> <p><b>Use of Hazardous Materials Subject to International Bans or Phase outs Indicates Significant Risk of Non-Compliance with IDB policy OP-703:</b> Develop and evaluate alternative project options (i.e. other materials) and discuss with ESG specialist(s), relevant team members and others before proceeding.</p>

	<p>complying with relevant national legislation and IDB requirements will be manufactured, procured, used or disposed.</p>	
	<p>The negative impacts from production, procurement, use and disposal of hazardous materials (excluding POPs unacceptable under the Stockholm Convention or toxic pesticides) are moderate to significant and will comply with relevant national legislation, IDB requirements on hazardous material and all applicable International Standards.</p>	<p><b>Hazardous Materials Management Plan:</b> The borrower should document risks relating to the use of hazardous materials and prepare a hazardous material management plan (as part of the ESMP) that indicates how hazardous materials will be managed (and community risks mitigated). The borrower will be responsible for preparing the ESMP, which should include: a management plan that will address identification, labeling, handling, storage, use and disposal of the relevant hazardous materials. The plan might include confirmation from third-party specialists that risks have been adequately assessed and managed. An action plan should be defined and requires regular monitoring, reporting and independent review of implementation; this plan should be included in legal documentation (covenants, conditions of disbursement, etc.).</p>
	<p>Generation of solid waste is moderate in volume, does not include hazardous materials and follows standards recognized by multilateral development banks.</p>	<p><b>Solid Waste Management:</b> The borrower should monitor and report on waste reduction, management and disposal and may also need to develop a Waste Management Plan (which could be included in the ESMP). Effort should be placed on reducing and re-cycling solid wastes. Specifically (if applicable) in the case that national legislations have no provisions for the disposal and destruction of hazardous materials, the applicable procedures established within the Rotterdam Convention, the Stockholm Convention, the Basel Convention, the WHO List on Banned Pesticides, and the Pollution Prevention and Abatement Handbook (PPAH), should be taken into consideration.</p>
	<p>Likely to have significant emissions or discharges that would negatively affect ambient environmental conditions.</p>	<p><b>Management of Ambient Environmental Conditions:</b> The borrower should be required to prepare an action plan (and include it in the ESMP) that indicates how risks and impacts to ambient environmental conditions can be managed and mitigated consistent with relevant national and/or international standards. The borrower should (a) consider a number of factors, including the finite assimilative capacity of the environment, existing and future land use, existing ambient conditions, the project's proximity to ecologically sensitive or protected areas, and the potential for cumulative impacts with uncertain and irreversible consequences; and (b) promote strategies that avoid or, where avoidance is not feasible, minimize or reduce the release of pollutants, including strategies that contribute to the improvement of ambient conditions when the project has the potential to constitute a significant source of emissions in an already degraded area. The plan should be subject to review by qualified independent experts. Depending on the financial product, this information should be referenced in appropriate legal documentation (covenants, conditions of disbursement, etc.).</p>
	<p>Moderate Greenhouse Gas Emissions are predicted.</p>	<p><b>Greenhouse Gas (GHG) Assessment:</b> The borrower should promote the reduction of project-related greenhouse gas emissions in a manner appropriate to the nature and scale of</p>

	<p>project operations and impacts. The borrower should quantify direct emissions from the facilities owned or controlled within the physical project boundary and indirect emissions associated with the off-site production of power used by the project. Quantification and monitoring of GHG emissions should be conducted annually in accordance with internationally recognized methodologies (i.e. IPCC - <a href="http://www.ipcc.ch/">http://www.ipcc.ch/</a>). In addition, the borrower should evaluate technically and financially feasible and cost-effective options for the reduction/offset of emissions that may be achieved during the design and operation of the project. The Sustainable Energy and Climate Change Initiative (SECCI) can help with this task (<a href="http://www.iadb.org/secci/">http://www.iadb.org/secci/</a>).</p>
<p>Transport of hazardous materials (e.g. fuel) with minor to moderate potential to cause impacts on community health and safety.</p>	<p><b>Hazardous Materials Management:</b> The borrower should be required develop a hazardous materials management plan; details of grievances and any independent health and safety audits undertaken during the year should also be provided. Compliance with the plan should be monitored and reported. Depending on the financial product, this information should be referenced in appropriate legal documentation (covenants, conditions of disbursement etc). Consider requirements for independent audits if there are concerns about commitment of borrower or potential outstanding community concerns.</p>
<p>The project will result in a minor to moderate increase in community risks from disease or natural resources risks.</p>	<p><b>Manage Increased Risk of Disease:</b>Where a project will generate environmental health risks (such as increased risk from disease and environmental hazards), the borrower should be required to develop a environmental health risk plan (this will require input from professionally competent advisers/ consultants). There should be engagement with affected communities and compliance with the plan should be monitored and reported. Where specific diseases are endemic in communities in the investment area of influence, the borrower is encouraged to explore opportunities to reduce their incidence.</p>
<p>Project activities will significantly in a negative way affect availability and/or quality of water supplies to local communities or ecosystems (e.g. as a result of increased volumes of flow as a result of clearance of large areas of vegetation, increased water demand in locations with potable and surface water deficit, or as a result of reduced water quality from industrial activities, infrastructure or land development).</p>	<p><b>Water Resources:</b>The borrower should demonstrate via a plan (part of the ESMP) how project activities (and any associated facilities) will be developed and operated so as to avoid impacts to water supply and quality. Depending on the scale, type and significance of risk, this might involve relocation/reduction of project activities, erosion and sediment control measures during construction, water conservation initiatives or more comprehensive waste water treatment. Evidence of appropriate consultation with local communities should be apparent. Regular reporting and independent review of implementation as well as reporting on the plan should be part of the legal documentation (covenants, conditions of disbursement, etc.).</p>
<p>The operation has potentially minor transboundary environmental and</p>	<p><b>Environmental/Social Transboundary Impacts:</b>The borrower should do an environmental and social analysis addressing the following issues: (i) notification to the affected country or countries of the critical transboundary impacts; (ii) implementation of an</p>

	associated social impacts, such as operations affecting another country's use of waterways, watersheds, coastal marine resources, biological corridors, regional air sheds and aquifers, or transboundary indigenous groups	appropriate framework for consultation of affected parties; and (iii) appropriate environmental mitigation and/or monitoring measures, to the Bank's satisfaction. This analysis should be part of a plan (part of the ESMP). Review of implementation as well as reporting on the plan should be part of the legal documentation (covenants, conditions of disbursement, etc.).
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<b>DISASTER SUMMARY</b>	<p><b>Details</b></p> <p>The Project should include the necessary measures to reduce disaster risk to acceptable levels as determined by the Bank on the basis of generally accepted standards and practices. Alternative prevention and mitigation measures that decrease vulnerability must be analyzed and included in project design and implementation as applicable. These measures should include safety and contingency planning to protect human health and economic assets. Expert opinion and adherence to international standards should be sought, where reasonably necessary.</p>	<p><b>Actions</b></p> <p>A Disaster Risk Assessment (DRA), is required, as established under Directive A-2 of the DRM Policy OP-704). Please contact a Natural Disaster Specialist in VPS/ESG or INE/RND for guidance.</p> <p>Also: if the project needs to be modified to increase resilience to climate change, consider the (i) possibility of classification as adaptation project and (ii) additional financing options. Please contact a INE/CCS adaptation specialist for guidance.</p> <p>The project triggered the Other Risks policy (B.04): climate risk. Please include sections on how climate risk will be dealt with in the ESS as well as client documents (EIA, EA, etc); Recommend addressing risks from gradual changes in climate for the project in cost/benefit and credit risk analyses as well as TORs for engineering studies.</p>
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<b>ASSESSOR DETAILS</b>	<b>Name of person who completed screening:</b>	Barandiaran Salcedo, Doris Melissa (DORISS@Contractual.iadb.org)
	<b>Title:</b>	
	<b>Date:</b>	2013-02-01

## ENVIRONMENTAL AND SOCIAL STRATEGY (ESS)

### I. SUMMARY

- 1.1 The proposed financing is for an IDB Grant for a total of US\$40.5 million to the Government of Haiti (GoH) to continue the activities of the previous programs (HA-L1055 - 2552/GR-HA and HA-L1076 - 2779/GR-HA) financing the expansion of the existing infrastructure and manufacturing facilities that are required for the full implementation of the Caracol Industrial Park (PIC - *Parc Industriel du Caracol*).
- 1.2 Because this operation has the potential to cause significant negative environmental and associated social impact and may have profound implications for the natural resources in the area, the project has been classified as Category “A.”
- 1.3 The two overarching concerns related to the PIC operation are: (i) irregular growth and unregulated development in its vicinity and along the main access roads; and (ii) construction and operational progress that continues to outpace the compliance with environmental and social requirements and implementation of the environmental and social mitigation measures necessary to achieve compliance with OP-703, OP-710, and OP-704, under IDB environmental and safeguards policies.
- 1.4 Over the last year, the PIC has made significant advances: the first anchor tenant, Sae-A Trading Co. Ltd. (Sae-A), a private Korean textile-garment manufacturer, is on site and operational; two additional tenant agreements have been signed; and over 1,200 Haitians are currently employed in the Park. It is crucial that the environmental and social programs, investments, and technical Action Plans, as defined in the Environmental and Social Management Report (ESMR) of HA-L1076 - 2779/GR-HA, are implemented effectively and in a timely fashion.<sup>1</sup> If the current situation continues, particularly with additional tenants and an increase in the number of workers, the PIC construction and operation are likely to lead to increased pressures on already fragile ecosystems and depleted natural resources, and exacerbate the vulnerability of local communities to impoverishment, thus potentially compromising any development gains.

### II. PROJECT DESCRIPTION

#### A. PROJECT OVERVIEW

- 2.1 Construction started in September 2011 and has included: (i) an administration building, a 11,776 m<sup>2</sup> sewing factory, a 10,500 m<sup>2</sup> warehouse, a 45-room

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<sup>1</sup> IDBDOCS-#36903146-(ESR-Sys) HA-L1076\_ESMR.doc; presented to OPC in August 2012.



- dormitory, and a canteen for the first anchor tenant, Sae-A; (ii) one 5,000 m<sup>2</sup> building for a Haitian paint manufacturer, Peintures Caraibes, and one 5,000 m<sup>2</sup> building for a Dominican Republic garment company, D’Clase; (iii) 7 km of perimeter wall, one water treatment plant, a temporary domestic Wastewater Treatment Plant (WWTP), a temporary solid waste facility, 1,450 m of internal roads, and other utility networks; and (iv) preparation and implementation of several social and environmental mitigation and compensation plans and studies. Additional facilities currently in the planning stage include a permanent WWTP and a solid waste facility. The project is being implemented by the Ministry of Economy and Finance through its Technical Execution Unit (MEF/UTE) Technical Executing Unit (UTE). A 10 MW power plant, constructed by the U.S. Government in the PIC, is providing electricity for the Park and surrounding communities.
- 2.2 Sae-A is operating, and two other tenant agreements have been signed with Peintures Caraibes and D’Clase. Installation of these two companies has started.
- 2.3 Project objective. The project will contribute to the socioeconomic development of northern Haiti by creating additional jobs through the establishment of new manufacturing firms in the PIC. This will be accomplished by providing the basic infrastructure, industrial facilities, and management support required for the expansion and sustainable operation of the PIC. The project’s beneficiaries will be the firms that are established there and the workers that are employed by them, with benefits spilling over into the surrounding population (additional job creation).
- 2.4 **Component I. Provision of infrastructure in the PIC (US\$33 million).** It finances: (i) warehouses, factory buildings and other structures (e.g., canteens, dormitories) to meet the demands of the anchor tenant’s 50 ha manufacturing footprint and of 2-3 new tenants; (ii) ancillary site infrastructure and equipment within the PIC, notably: expansion of the roads and utilities’ networks, and one industrial WWTP (to be operational in 2015); and (iii) civil works’s supervision.
- 2.5 **Component II. Complementary studies and projects (US\$3.5 million).** This amount is allocated to complementary activities and needs to address issues of a social, environmental, urban, institutional, and technical nature. The activities and projects included in this component will be specified in the Proposal for Operation Development (POD).
- 2.6 The administration, monitoring, auditing, and contingency of the project are estimated at US\$4 million. The expected implementation period of the operation is 2 years. The outcomes of this third operation are: (i) approximately 5,000 additional workers employed at the PIC; (ii) increased microeconomic development related to the additional salaries; and (iii) increased payments to social and health security, with revenues from utilities also being increased (these will be updated for the POD). By providing direct and indirect employment

opportunities in one of the poorest regions of Haiti, the operation will support the Bank’s goal of reducing poverty.

## B. LOCATION

- 2.7 The PIC is being built on a 250 ha greenfield site in the rural community of Caracol. The communes—or municipalities—of Caracol and Fort Liberté, in particular, are coastal towns located close to ecologically sensitive areas (mangroves, coral reefs, and fisheries) and cultural assets (see also Section IV). Caracol lies about 4 km to the north of the PIC (and approximately 25 km southeast of Cap-Haitien). The municipality of Fort Liberté, to the northeast, has an estimated 31,315 inhabitants. In spite of its important role in administration and education as the capital of the Northeast Department, Fort Liberté’s infrastructure and public buildings are in very poor condition due to their age and poor maintenance. The municipality of Limonade, located to the southwest of the PIC, is expected to expand in the next few years as a result of the nearby King Henry Christophe University Campus, which opened in 2012 with an estimated enrollment of 10,000 students. Trou-du-Nord is located at the midpoint between Cap-Haitien and Ouanaminthe, and is surrounded by cultivated agricultural lands.

## C. WORKFORCE

- 2.8 During construction, the number of workers on site varies between 200 and 600 each day depending on the construction needs. Concurrently, for the ongoing operation of the PIC, it is expected that about 13,000 workers will be employed by Sae-A by 2016. It is expected that about 25,000 workers will be employed by all tenants by 2021 (see Table 1).

**Table 1: Estimated PIC Tenant Projections<sup>2</sup>**

Year	TOTAL: Sae-A, D’Clase, Peintures Caraïbes
2012	1,650
2013	5,000
2014	7,600
2015	10,500
2016	13,200
2021	24,600

- 2.9 As of December 2012, Sae-A had employed 1,300 workers, 90% female and 10% male, with almost 68% coming from the four principal communes surrounding the PIC (Cap-Haitien, Limonade, Caracol, and Trou-du-Nord).

## D. SCHEDULE

- 2.10 The PIC construction work began in November 2011 (under 2552/GR-HA) and has been advancing very rapidly. The anchor tenant, Sae-A, started operations on March 31, 2012. Sae-A’s initial operations in the PIC are limited to sewing, embroidery, and textile washing and printing. Dyeing operations are scheduled to start in 2015, and, for the handling of the resultant effluents, a fully

<sup>2</sup> Current estimates show reduced numbers from previous 2012 estimates (2012 estimate for 2016 was 20,000 workers).

environmentally compliant industrial WWTP will be designed and constructed, and will start operations with a respective management plan in place. The budget for this plant is included in Component I of this project, and further details will be provided in the POD.

### III. INSTITUTIONAL AND REGULATORY CONTEXT

#### A. NATIONAL REGULATIONS

- 3.1 Haiti's Ministry of Environment (MOE) is the primary institution responsible for environmental management and protection. The Ministry of Public Works, Transport, and Communications as well as the Ministry of Agriculture and Natural Resources Management also have responsibilities associated with environmental protection. The MOE is responsible for the development of national policy regarding environmental management, particularly for the establishment of environmental standards and the management and regulation of protected areas.
- 3.2 The Haitian Legislative Decree of January 2006<sup>3</sup> addresses issues related to ecosystem conservation, protected areas and protection of habitats, and pollution control. Specific articles describe the requirements for the treatment of industrial wastewater (Art. 122, 123, and 124) and solid waste (Art. 139). National parks are defined in the 1968 Decree<sup>4</sup> as any area (forest or not) on which there are historic or natural monuments.
- 3.3 The National Water and Sanitation Directorate (DINEPA) was created under Haitian Law No.CL01-2009-001 (March 2009), which establishes the legal framework for the regulation of the drinking water and sanitation sector. DINEPA's roles and responsibilities are described in Art.6 of this Act and include, but are not limited to: the norms and regulations pertaining to drinking water quality and sanitation; criteria to be respected by drinking water and sanitation operators; and the establishment of measurable indicators and procedures for the sector, all of which are applicable to private and/or public entities responsible for the provision of drinking water and sanitation.
- 3.4 Authorities at the departmental, commune, and communal section levels support the central government in protecting the environment and managing natural resources. Principal functions include participation in departmental and communal Action Plans, implementing land-use management plans, maintaining public health services, and preserving natural, historic, and cultural resources.

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<sup>3</sup> Décret sur la Gestion de l'Environnement, approuvé en Conseil des Ministres le mercredi 12 octobre. 2005; publié au Numéro 11 de la 161e Année du Journal Officiel.

<sup>4</sup> Décret du 18 Mars 1968 dénommant Parcs Nationaux, Sites Nationaux, Sites Naturels toutes étendues de terres boisées ou parcs sur lesquelles sont établis des monuments historiques ou naturels.

- 3.5 The Haitian Labor Code (*Code du travail*) addresses, among other things: (i) transportation for industrial sector employees; (ii) housing for workers; (iii) food for workers; (iv) nursing mothers; and (v) health insurance for workers. Under the Haitian Labor Code, workers have the right to seek resolution of disputes relating to the payment of wages through a process mediated by the Labor Department. In order to benefit from the Haitian Hemispheric Opportunity through Partnership Encouragement Act of 2008 (HOPE II),<sup>5</sup> Haiti was required to develop a program to assess and promote compliance with core labor standards and national labor law. Better Work Haiti (BWH) is implementing the Technical Assistance Improvement and Compliance Needs Assessment and Remediation (TAICNAR) Program.<sup>6</sup>
- 3.6 **SONAPI-Sae-A Framework Agreement.** The National Society of Industrial Parks (Société Nationale des Parcs Industriels - SONAPI) leased premises located in the PIC to Sae-A for a term of 30 years by means of an agreement dated May 19, 2011. During the construction phase of the project, SONAPI has delegated management authority of the PIC to the UTE (Updated Protocol of November 28, 2012). Under the tenancy agreement, Sae-A is required to comply with all applicable laws, including all environmental laws, and with “SONAPI Internal Regulations,” including the PIC Rules and Regulations (which will be developed under Component 2 of HA-L1076). While SONAPI is undergoing institutional strengthening supported by HA-L1076, a Park Manager has been hired to operate and maintain the PIC, observe good environmental, social, and health and safety industry practices, and ensure that tenants comply with local regulations and HOPE II requirements. Finalizing and implementing the PIC Rules and Regulations, and the wider application of them by SONAPI, will, however, not occur before December 2013.

## **B. INTERNATIONAL AGREEMENTS RATIFIED**

- 3.7 Haiti has ratified the following international agreements: the Convention on Biological Diversity; the UN Framework Convention on Climate Change; the UN Convention to Fight against Desertification; the UN Convention on the Law of the Sea; the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter; and the Convention on Fishing and Conservation of the Living Resources of the High Seas. Haiti has signed but not ratified the International Labor Organization (ILO) Declaration on Fundamental Principles and Rights at Work and the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal.

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<sup>5</sup> HOPE II approved by the U.S. Congress in 2008, initiated support efforts to expand industry in Haiti by extending duty-free treatment to textiles, apparel, and other goods until 2018.

<sup>6</sup> These efforts will result in regular monitoring of textile industries with respect to compliance with the Haitian Labor Code and the International Labor Organization (ILO) Core Labor Standards.

**C. ENVIRONMENTAL ASSESSMENT**

- 3.8 An Environmental and Social Impact Assessment (ESIA) was prepared for the PIC in May 2011 and disclosed under HA-L1055. This ESIA was deemed to be incomplete given the lack of sufficient PIC program details. To address the limitations of the ESIA, and as information regarding the design of the infrastructure program has become available, additional environmental and social studies and management plans have been prepared, including a preliminary hydro-geological assessment, solid and hazardous waste management study, Cumulative Impact Assessment, and PIC Social Impact Assessment. In addition, a Compensation and Livelihoods' Restoration Plan has been prepared (and is currently under implementation).<sup>7</sup> For the current operation, an additional ESIA would not be required.
- 3.9 The requirement to prepare an Environmental Assessment (EA) for the permanent WWTP, to be financed under HA-L1076 - 2779/GR-HA, has been included in the bidding documents.
- 3.10 A separate TC financed the preparation of a Northern Regional Master Plan under the coordination of the "Comité Interministériel d'Aménagement du Territoire (CIAT)." Currently, the IDB Initiative on Sustainable Cities is assessing how this initiative can assist with the definition of priority actions.
- 3.11 The PIC's power plant (financed by the U.S. Agency for International Development [USAID]) is considered an associated facility, and an EA for the plant has been prepared and disclosed.<sup>8</sup>

**D. CAPACITY FOR ENVIRONMENTAL AND SOCIAL OVERSIGHT**

- 3.12 The capacity of regulatory environmental and social agencies in Haiti is extremely limited, in particular for on-the-ground technical support, enforcement, and monitoring.
- 3.13 The UTE is considered a very capable and experienced executing agency in Haiti. The UTE's capacity for environmental and social oversight includes two environmental specialists and two social specialists (in Port-au-Prince and on site). However, due to the scale of the operation, as well as the complexity and tight timeline of the PIC development, the capacity of the UTE has been recently strengthened with additional technical expertise. Furthermore, by mid-May, the UTE will have an international senior consultant on water, sanitation, and

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<sup>7</sup> The documents have been disclosed on the IDB webpage: HA-L1055 (<http://www.iadb.org/en/projects/project-description-title,1303.html?id=HA-L1055>); HA-L1076: (<http://www.iadb.org/en/projects/project-description-title,1303.html?id=HA-L1076>); and Government of Haiti (<http://www.ute.gouv.ht/caracol/fr/component/content/article/76-the-government-of-haiti>).

<sup>8</sup> <http://ute.gouv.ht/caracol/images/stories/docs/environmental%20assessment%20of%20the%20usaidhaiti%20north%20park%20power%20project.pdf>.

environmental protection to strengthen its environment and social unit. However, the institutional and operational procedures still have to be developed.

- 3.14 A supervision firm, LGL S.A. LAVALIN, has been hired by the UTE to supervise the design and construction of the civil works for the PIC. Another company will be hired for environmental, social, and health and safety (ESHS) monitoring and enforcement of the PIC's ESHS plans. This is a contractual clause of HA-L1076 - 2779/GR-HA (Clause 4.07-(1)) and must be in place 2 months after the hiring of the Park Manager.

#### **E. IDB SAFEGUARD REQUIREMENTS**

- 3.15 Given the natural habitats, social and economic issues, and complexity of this project, this follow-up operation is classified as a Category "A" operation. The project is likely to cause significant environmental and associated social impacts and may have profound implications affecting natural resources in the surrounding area, which, at the moment, is largely unprepared for these impacts, is already under pressure, and has limited capacity to manage the increased pressures generated by the influx of population that is estimated to be attracted to the area.
- 3.16 The Operational Directives (ODs) of the IDB's Environment and Safeguards Compliance Policy (OP-703) that are triggered include: B.2 (Compliance with Country Laws and Regulations); B.3 (Screening and Classification); B.4 (Other Risk Factors); B.5 (Environmental Assessment Requirements); B.6 (Consultation); B.7 (Supervision and Compliance); B.8 (Transboundary Impacts); B.9 (Natural Habitats and Cultural Sites); B.10 (Hazardous Materials); B.11 (Pollution Prevention and Abatement); B.12 (Project Under Construction); B.14 (Multiple Phase and Repeat Loans); and B.17 (Procurement). The program also triggers the IDB's Disaster Risk Management Policy (OP-704); the IDB's Policy on Gender Equality in Development (OP-761); and the IDB's Access to Information Policy (OP-102).
- 3.17 In relation to OD B.14, it should be noted that an Environmental Audit of the previous program (HA-L1076 - 2779/GR-HA), as required under the OD, was deemed not necessary, given that the program is still being executed and is under close monitoring and supervision by the Bank. Therefore, there is sufficient knowledge of the program's current liabilities and risks. Thus, an Environmental Audit of HA-L1076 - 2779/GR-HA would neither be cost-effective nor provide additional information regarding potential liabilities and other risks.
- 3.18 **OP-710 (Involuntary Resettlement).** The additional infrastructure that will be constructed inside the PIC will not involve any additional involuntary or economic displacement of affected people since the 250 ha site was acquired and a Compensation and Livelihoods Restoration Plan was prepared as part of the original program (2552/GR-HA). In addition, three rounds of compensation for lost harvests and food security have been paid to farmers; training has been given

to over 170 farmers and their families in the areas of sewing, masonry, and food processing; and five households have been resettled in the area immediately surrounding the PIC. The Land-for-Land component of the Plan is currently under implementation, but it has experienced delays due to the conflicting interests of stakeholders; however, an agreement was reached by the parties in March 2013, and a formal signed agreement is expected in April 2013. In this final agreement, an additional 230 farmers, not originating from the PIC land, will be included in the Plan and gain access to land, along with specialized technical assistance.

#### **IV. ENVIRONMENTAL AND SOCIAL SETTING/ENVIRONMENTAL CONTEXT AND GEOGRAPHICAL SETTING**

- 4.1 The PIC is situated on the plains between the northern massif and the Atlantic Ocean. The PIC site is essentially flat. The site is bisected by the Trou-du-Nord River, which is bordered by riparian vegetation. The river seasonally floods, inundating riparian habitats, and it empties into Caracol Bay approximately 4 km downstream.
- 4.2 The footprint of the PIC is broader than the actual project site and extends the length of the Northeastern Corridor because of the overall development of the area for which the PIC will act as catalyzer. The Northeastern Corridor is located along National Route 6 (RN6), extending from Ouanaminthe in the east on the border with the Dominican Republic (DR), to Cap-Haitien in the west.
- 4.3 The region is deficient in basic infrastructure, including roads, energy, and public services, such as water supply, sanitation, solid waste management, education, healthcare, and policing. As a result, the region has suffered environmental degradation, including deforestation, contaminated waterways, and depleted fish stocks, and has experienced periodic outbreaks of cholera and other water-borne diseases. The influx of people anticipated from the development of the PIC will increase pressure on already scarce or depleted resources, and could exacerbate the potential risks to health.

##### **A. COASTAL ENVIRONMENT**

- 4.4 Haiti's northern coast is characterized by low-lying alluvial coastal plains. According to satellite imagery from 1998, mangroves occupy 0.6% of Haiti's land area. Many of them are located in northern Haiti, primarily in pockets in the bays of Caracol, Fort Liberté, and Baie de l'Acul. The PIC site is situated within 4 km of Caracol Bay - an extensive mangrove, eel grass, and coral ecosystem. This area is considered critical natural habitat because it has been identified by the GoH as a priority for protection. Caracol Bay includes an estimated 5,250 ha of healthy mangroves (mainly red mangroves, *Rhizophora mangle*), which represent more than 18% of the remaining mangroves in Haiti. The sheltered bay also includes eel grass beds and is bounded by a fringing coral reef that extends over 20 km and has an estimated area of 900 ha. This matrix of protected bay, mangroves, eel

grass beds, and corals is important for spawning and nurseries for fish, mollusks, and crustaceans that are important for local artisanal and subsistence fisheries. In addition, Caracol Bay provides important habitat for endangered species, including turtles and manatees, and, because organic productivity is high, the bay also provides important inputs for offshore marine ecosystems. The local communities depend on the resources from this system, particularly through fisheries, including those containing demersal finfish, conch, shrimp, and lobster, and through exploitation of mangroves for firewood, charcoal, and building materials. The fisheries resources are critical for local food security, with most fishing focused on the near-shore demersal fisheries because of the use of smaller sailboats and the limited number of motorized vessels that can access pelagic fisheries. Most fishing depends on seines deployed in the bay, gill nets deployed along the mangrove edge, and free diving. The establishment of evaporation ponds for the production of sea salt presents an additional use of the mangrove area.

- 4.5 The MOE has proposed a marine protected area that includes the bays, mangroves, and coral reefs of Limonade, Caracol, and Fort Liberté. The boundaries of this proposed protected area have not been defined, but it would include the Important Bird Area (IBA) of Lagon-aux-Boeufs and would be a component of the Caribbean Biological Corridor running from Cuba to the Dominican Republic under the protocol concerning Specially Protected Areas and Wildlife (SPAW). The establishment of the proposed protected area will be supported by the National Protected Areas System financed by the Global Environment Facility (GEF) through the United Nations Development Programme (UNDP). HA-L1055; 2552/GR-HA and HA-L1076 - 2779/GR-HA include a total of US\$900,000 to protect Caracol Bay, and the non-objection for the respective Terms of Reference for establishing a baseline, socioeconomic conditions, and resource utilization was given by the Bank on March 22, 2013.

## **B. HYDROLOGY AND WATER QUALITY**

- 4.6 Water availability is one of the main potential limiting factors for development of the area. The primary source of surface water in the vicinity of the PIC is the Trou-du-Nord River, born in the mountainous region to the south, which bisects the PIC before reaching its mouth located in Caracol Bay to the north. Its watershed extends approximately 110 km<sup>2</sup>. Since it is an intermittent river, seasonal variations in precipitation greatly impact its flow.
- 4.7 The PIC is underlain by the Massacre Transboundary Aquifer (MTA), which spans approximately 2,280 km<sup>2</sup> and extends from Haiti's Northeast Department in the west, to the Dominican Republic's Dajabón Province in the east. Groundwater, obtained from dug wells and shallow boreholes, is readily accessible and is the primary source of domestic and irrigation water for local residents. Local residents report a shallow water table ranging from 3 to 10 m below ground level in many places. Simple pit latrines reportedly often fill up with water, which poses contamination risks to the MTA and local wells.



- 4.8 High levels of deforestation and climate change can significantly alter groundwater reserves over the long term, thereby influencing water security across the region. Although borehole pump tests indicate that there is sufficient water available for Phase 1 of the anchor tenant’s activities, the impact of additional tenants, future phases of the PIC, and surrounding infrastructure developments on water availability is unknown in part due to the limited information available on the MTA. To this end, a TC on Water Availability, Quality, and Integrated Water Resources Management in Northern Haiti (HA-T1179; ATN/OC-13756-HA) is currently under preparation. Its primary objective is quantitatively assessing current and future water availability and analyzing water quality and stakeholder demand to inform an Integrated Water Resources Management (IWRM) Plan for the Trou-du-Nord Bassin.

### **C. SOCIAL AND CULTURAL CONTEXT**

- 4.9 Today, the almost 387,000 residents of the towns and cities in the northeast lack wastewater treatment and affordable energy sources other than charcoal, and have no solid waste management services. The PIC is only one of a series of investments planned for by the GoH in the northern region, including investments in roads, a university, and tourism. Without the PIC and these other investments, the population in the north of Haiti would be expected to grow 60% by 2030. With the PIC and these other investments, the population is projected to grow 114% by 2030. Both scenarios will transform this largely rural, agricultural area, which is dependent on subsistence farming. These development projects will place increased pressure on the environment, natural resource management, and public services (including water supply, sanitation, solid waste, and transportation). The eight communes in the area of the PIC (including Caracol, Jacquesyl, Trou-du-Nord, Fort Liberté, Sainte-Suzanne, Terrier-Rouge, Limonade, and Quartier Morin) and the broader Northern Corridor will require investments in infrastructure, human resources, management, and governance capacity to transform this area away from the current cycle of poverty and environmental degradation into a cycle where human well-being and ecological sustainability are mutually reinforcing.

### **V. KEY ENVIRONMENTAL AND SOCIAL IMPACTS AND RISKS**

- 5.1 Given the delay in the implementation of the mitigation measures developed for HA-L1055; 2552/GR-HA and HA-L1076 - 2779/GR-HA, the key environmental and social concerns for HA-L1081 remain largely as stated in the Environmental and Social Strategy (ESS) for HA-L1076 - 2779/GR-HA: (i) the existing infrastructure (e.g., housing, water supply, solid waste management, wastewater management, transport of workers, and food provision) and public services (health clinics, schools, and police) are not sufficiently prepared to deal with the expected population influx into the area; (ii) the implementation of the Livelihood Restoration Plan is behind schedule; (iii) the environmental and social risks to the mangrove ecosystems, coral reefs, and fisheries of Caracol Bay and the

- surrounding marine environment have only started to be addressed in March 2013; (iv) the field capacity of the GoH and the IDB to implement such a complex project is pushed to its limits; and (v) the institutional mechanisms and procedures needed to ensure the sustainable and planned development of the region are not yet in place, thereby complicating the planning and implementation of a comprehensive approach to the northern area development program.
- 5.2 Although the potential impacts of the current project will be additional and incremental, given that the PIC development is already underway, the above-mentioned issues, if not adequately addressed, may exacerbate the environmental and social risks to the project and present a significant reputational risk for the IDB and the other agencies involved in the project.
- a) Key Impacts from Construction**
- 5.3 Inadequate sanitation facilities, as well as the improper handling, management, and disposal of domestic wastewater from construction workers, could compromise surface and/or groundwater quality.
- 5.4 Minor to moderate contamination may occur from the improper management, storage, or disposal of used oils, hydraulic fluids, and toxic and empty containers. Improper handling, transport, and disposal of solid waste and, in particular, hazardous waste may contaminate surface and groundwater, as well as soils.
- 5.5 Hazardous waste, such as spent oil, solvents, and batteries produced as a result of construction activities, is currently transported back to the Dominican Republic, where the products originated, without proper documentation or declaration at the border. According to a recently issued Legal Opinion,<sup>9</sup> these activities constitute a prohibited practice under Dominican Republic Law, in addition to contravening IDB Policy and the Grant Agreement. The project team and the UTE are looking into alternatives to immediately correct this non-compliance, which incurs significant reputation risks for the Bank.
- b) Key Impacts from the Operation on Water Quality, Availability, Solid Wastes, and Natural Habitats**
- 5.6 As there are no wastewater treatment facilities in the area, HA-L1055 financed a temporary WWTP—designed and constructed to meet the initial demands of the anchor tenant, Sae-A—for the treatment and disposal of domestic wastewater and other effluents compatible with domestic wastewater. The plant was designed to meet the requirements of the International Finance Corporation (IFC) Environmental, Health, and Safety (EHS) General Guidelines<sup>10</sup> and is capable of treating up to 150 m<sup>3</sup>/d of domestic wastewater. Tertiary treatment will be

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<sup>9</sup> IDBDOCS-#37680296-Legal Opinion on Hazardous Waste.

<sup>10</sup> See Table 1.3.1 Indicative Values for Treated Sanitary Sewage Discharges, Section 1.3 Wastewater and Ambient Water Quality: <http://www1.ifc.org/wps/wcm/connect/026dcb004886583db4e6f66a6515bb18/1-3%2BWastewater%2Band%2BAmbient%2BWater%2BQuality.pdf?MOD=AJPERES>

- achieved through chlorination, and the final effluent will be discharged into infiltration beds. Sludge will be recovered and stored on site for later disposal, pending the results of an analysis of sludge disposal alternatives being undertaken as part of an environmental analysis of discharge alternatives prior to construction of a permanent WWTP.
- 5.7 The temporary WWTP has experienced several setbacks and is not yet operational. All domestic wastewater produced on site is currently collected and disposed of in the septic system located at the temporary solid waste facility. Although the septic system was designed to process domestic wastewater produced exclusively by construction workers, Estrella SA has indicated that there is sufficient capacity in the system to receive the additional wastewater currently produced by Sae-A. However, leachate produced by organic waste (also managed and stored at the temporary solid waste facility) is currently disposed of in the septic system, possibly impacting the overall effectiveness of the system and leading to potential contamination of soil and groundwater. Moreover, it is not known whether the current system can handle the additional volume of wastewater anticipated from the two new tenants, or any other increase in the PIC's population.
- 5.8 HA-L1076 - 2779/GR-HA financed the permanent WWTP required to meet such additional demands. The contract for its design, construction, and operation has been signed, and operation is scheduled to commence between December 2013 and February 2014. The contract includes the requirement to undertake an environmental impact assessment prior to construction in addition to an analysis of effluent discharge, and sludge management, alternatives. Moreover, the plant has been designed to meet the IFC EHS General Guidelines. Tertiary treatment will be considered through the use of artificial wetlands, a cost-effective and sustainable solution.
- 5.9 Additional Sae-A activities, specifically involving the dyeing of fabric and resulting in the production of industrial wastewater, are scheduled to begin on site in 2015. Such wastewater cannot be assimilated with domestic wastewater, therefore requiring a viable treatment alternative, which must comply with the IFC EHS Guidelines for Textile Manufacturing. Starting in June 2013, with HA-L1076 - 2779/GR-HA funding, the UTE will hire consultants with wastewater engineering expertise in the textile industry to evaluate alternatives and prefeasibility studies.
- 5.10 The area, like all of Haiti, does not possess a solid waste facility. Therefore, to overcome this difficulty, the PIC is operating a small temporary landfill and separation site situated 3 km from the PIC (financed under both HA-L1055; 2552/GR-HA and HA-L1076; 2779/GR-HA). This site, for which an EA and operational procedures were prepared, could be extended until a permanent, long-term facility is designed and constructed with funds (US\$2 million) allocated under HA-L1076 - 2779/GR-HA. Currently, the UTE is in the process of partnering with the French Development Agency (AFD) for the co-financing (an

additional US\$2-3 million) of a regional waste disposal facility and recycling center, located in Limonade, and a corresponding management plan. The PIC project team, with assistance from the IDB Water and Sanitation Department, will perform the due diligence on the proposed site during the first week of April 2013 to confirm the following: (i) there are no environmental or social impediments; (ii) the site will be designed to receive and treat hazardous waste; (iii) the area will be able to be expanded to accommodate a 20-year operation period; and (iv) the institutional and financial management scheme will be designed to sustain proper operation and maintenance. Beyond serving the PIC, it is important to note that this facility would solve one of the significant issues in the region, which is the lack of environmentally sound solid waste management for the population of Terrier-Rouge, Caracol, Trou-du-Nord, Limonade, and Cap-Haitien.

- 5.11 **Water Quality and Availability.** Brackish water is believed to be limited to coastal areas of Fort Liberté and Caracol, downstream from the project site. However, in the long term, continued abstraction of groundwater on site may induce saline intrusion. Additional pressure on groundwater reserves due to the anticipated increase in population and the abstraction of groundwater for domestic use and irrigation may exacerbate the situation. Additional studies are needed to ensure adequate provision of water for subsequent phases of the PIC and other related developments, including a safe drinking water supply for the local population, and for assessing any long-term impacts on regional hydrology induced by the continued abstraction of groundwater on site.
- 5.12 According to a recent expert analysis undertaken by TITAN Engineering, “the radius of influence of [GW-1<sup>11</sup>] is anticipated to extend significantly beyond the 150 meters from the well to the river, potentially capturing water infiltrating from the river. If the river is recharging the aquifer, the water quality of the river may adversely affect groundwater quality. However, if the aquifer is sustaining base flow to the river during the dry season, then production from the well will lower the water table in the aquifer and decrease the base flow in the river upstream of the wastewater treatment plant, potentially affecting the ecology of the river. The [aquifer] will also be subject to contamination through [infiltration of precipitation], if contaminants are released on the surface.” Such potential impacts will be evaluated in the TC on Water Availability, Quality, and Integrated Water Resources Management in Northern Haiti (HA-T1179; ATN/OC-13756-HA), being led by WSA.
- 5.13 **Natural Resources.** In relation to natural habitats, the population influx driven by new developments associated with the PIC may exert significant additional pressures on land and natural resources in northern Haiti. There is a risk that the PIC will drive the significant conversion and degradation of critical natural habitats through the population influx, which is likely to exacerbate existing impacts generated by mangrove wood overharvest, new salt ponds, overfishing, salinization of the mangroves, increased solid waste, wastewater effluent

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<sup>11</sup> Principal water supply well for Phase 1.

discharge, and urban and industrial runoff and contamination degrading mangroves, coral reefs, and eel grass beds. There is also the future threat of increased deforestation on the slopes of the upper watershed, which would lead to increased sedimentation for the Caracol Bay area and more dangerous rapid flooding.

**c) Key Social Impacts**

- 5.14 Impacts on the social environment include mostly risks and impacts that are incremental to those already generated by the PIC, in particular: (i) the population influx from outside of the area causing social changes and overloading of public services (e.g., transport and solid waste management); (ii) informal squatting around the PIC, in case housing and accommodations are not sufficient to supply the demand of new workers; (iii) delays in the implementation of the Compensation and Livelihood Restoration Plan, potentially fueling social unrest; (iv) land price speculation and food insecurity, if the demands of population increases are greater than the local supply capacity, which may lead to an increased cost of living; (v) health impacts on local communities, including increased health-related issues (e.g., alcohol and drug abuse, and sexually transmitted diseases, including HIV); (vi) increased safety risks due to increased road traffic and accidents, especially resulting from the transport of equipment and personnel; and (vii) gender issues and impacts on women, including heightened security risks due to a larger population (e.g., crime, prostitution, and drug use).
- 5.15 **Informal Development Surrounding the PIC – Poor Land Use and Housing Deficiencies.** Prior experience in Haiti has seen the development of large squatter settlements surrounding industrial parks (CODEVI, at the border with Ouanaminthe, and at Cité Soleil’s now-closed free trade zone). A lack of planning, land-use zoning and enforcement, and public infrastructure, and inadequate housing pose high associated risks for the program’s social and environmental sustainability and represent a significant reputation risk for the Bank. From 2015 on, it is expected that the local labor pool will be insufficient to meet the demands of the PIC’s manufacturing operations; thus, workers will likely come from outside of the region. According to the American Institute of Architects (AIA) input to the Regional Master Plan, the PIC and other investments in the region are likely to increase the local population 114% by 2030. In the absence of adequate zoning and enforcement, urban upgrading, and housing solutions (public and market), there is a high risk that informal settlements could develop in the vicinity of the PIC during the coming years.
- 5.16 **Food Security.** Agricultural production in the region where the PIC is located is currently not sufficient to satisfy the needs of the existing population, and the basic food staples, particularly rice, are imported (four-fifths of the rice consumed in Haiti is imported into the country). The prices of locally produced foodstuffs (corn, beans, etc.) fluctuate considerably, according to the time of year. With the increase in population, as people are attracted to the PIC in search of employment,

- there is a risk that the cost of basic foodstuffs could increase dramatically, making it difficult for the poorest, most vulnerable households to feed themselves. However, there is a possibility that increased demand could trigger increased supply.
- 5.17 **Health Risks.** The Northern Corridor is subject to risks of cholera and other water-borne diseases (typhoid, hepatitis, etc.) as well as vector-borne diseases (malaria, dengue, and filariasis) and sexually transmitted infections (STIs), including HIV/AIDS. The population influx could increase indirect impacts such as STIs and traffic accidents. While the northeast is more underserved in terms of health facilities, its proximity to the north provides access to two high-quality, department-level hospitals in Cap-Haitien and Milot, as well as a newly renovated Community Reference Hospital in Quartier Morin. In addition, the north has a Community Reference Hospital providing high-quality care in Trou-du-Nord and a departmental hospital in Fort Liberté.
- 5.18 **Gender.** The potential population influx is likely to increase gender-based violence, STIs, including HIV/AIDS, and/or sex work. Given that 90% of the workforce is female, the current lack of adequate transport and access to credit for payment presents an additional potential security risk for PIC employees. However, the transport of workers is already being addressed under HA-L1076 - 2779/GR-HA: a request for proposals was launched in early March 2013, including a specific requirement that all workers get picked up by buses from the four nearby towns and be transported to the PIC.
- 5.19 **Park Management.** Currently, a contract with a park management firm has been signed. Similarly, an ESHS Manager (under a separate contract) will be hired before the end of June 2013. Delays in hiring the ESHS Manager would increase the risk that the PIC does not comply with ESHS provisions as established in the PIC Environment, Social, and Health and Safety Management Plan (ESMP) and other conditions in HA-L1076 - 2779/GR-HA.
- 5.20 **Occupational Health and Safety (H&S) Risks.** The occupational H&S impacts and risks that may occur during construction are similar to those of large industrial facilities and are primarily associated with the operation of large equipment and machinery, such as falls and accidents, as well as those associated with the use and manipulation of fuels and lubricants. During operations, such risks could include an inadequate work environment, exposure to high levels of noise and dust, and physical and chemical hazards (e.g., fire, explosion, and dangerous chemicals). Although an IDB review of current H&S management showed inadequacies in meeting basic standards, two ambulances are always on site to provide emergency services and corrective actions are being implemented. Nevertheless, improvements are still needed in both the construction and operational H&S practices.
- 5.21 **Biodiversity Impacts – Caracol Bay.** Mangroves are currently at risk of depletion due to widespread deforestation for agriculture, household construction,

charcoal supplies, and salt production (salt basins). Although these impacts are unrelated to the PIC, a potential increase in population could contribute to the exacerbation of such impacts, including: (i) a loss of ecological services provided by mangroves such as spawning and protection against storm surges and the consequent loss of livelihood; (ii) significant depletion of fisheries by overfishing in Caracol Bay and beyond; (iii) negative impacts on mangroves, beaches, and Caracol Bay from the discharge of pollutants/solid wastes carried by the Trou-du-Nord River. In addition, the estimated demographic pressures would be significant.

**d) Positive Impacts**

- 5.22 The project will contribute to the socioeconomic development of northern Haiti, provided that there is adequate implementation of environmental and social safeguards. It will likely generate increased economic activity and create paid jobs by providing the basic infrastructure, industrial facilities, management support, and complementary investments required for the expansion and operation of the PIC, with benefits spilling over to the surrounding population of the north and northeast departments. To date, this includes the financing of a micro-park of female entrepreneurs to provide meal services on site at the PIC, creating additional employment and support for private sector growth.
- 5.23 In addition, if adequate mitigation measures are implemented, the current threats to Caracol Bay will be reduced, environmental protection and awareness campaigns will be implemented, and a protected area will be created for the conservation and protection of the bay's mangroves and other sensitive habitats.
- 5.24 If the potential cumulative impacts and implementation of environmental and social safeguards are adequately addressed in a timely manner, the PIC program offers the opportunity to promote the sustainable development of the Northern Corridor under a structured framework of the Regional Development Master Plan.

**e) Cumulative and Indirect Impacts and Risks**

- 5.25 While the construction activities and operation of the PIC, combined with other initiatives financed by various donors, will contribute to the development of Haiti's Northern Region (Cap-Haitien and Ouanaminthe Corridor), they will also likely lead to negative cumulative environmental and social impacts. The GoH has initiated some development projects, such as the University of Haiti, and some housing projects, and is planning for an airport, the development of a new port, and the expansion of an existing port. A Cumulative Impact Assessment (CIA) was finalized in 2012.<sup>12</sup> However, the institutional arrangements within the GoH to implement the CIA's recommendations for addressing the negative cumulative impacts have so far not been defined.

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<sup>12</sup> <http://www.iadb.org/projectDocument.cfm?id=37092181>

5.26 The population influx driven by the new developments—with the associated population growth and demand for jobs and services within existing settlements—will likely exert further pressure on undeveloped land and on existing settlements in the entire corridor area. In the CIA, it was estimated that 18,000 direct jobs would be created by 2014, and there would be 120,000 direct and indirect jobs at full build-out of the PIC. However, these estimates are now believed to be too high, and current estimates place the number of direct jobs at 25,000 by 2021. The population influx is considered the most serious pressure on services and resources for the entire area. If uncontrolled and unmanaged, the expected population influx will substantially accentuate existing impacts on natural resources, including those resulting from increased mangrove extraction, increased use of salt ponds, and increased fishing, as well as increased solid waste and wastewater contamination of waterways. There is a real risk that the PIC will indirectly drive the significant conversion and degradation of critical natural habitats through overfishing; overharvesting of mangrove timber and mangrove resources; salinization of mangroves; and the degradation of coral reefs and eel grass beds through solid waste, sewage discharge, and urban and industrial runoff and contamination.

#### A. Other Risks

5.27 **Natural Disaster Risks.** The program falls under the Type 1 Disaster Risk Scenario: “Developments located in coastal zones of the Caribbean are likely to be affected by hurricanes, tropical storms and coastal flooding due to storm surges.” Some disaster risk mitigation measures have been included in the construction of the PIC; however, infrastructure financed under Component 2 will also be affected. The location of and the building standards applied to the infrastructure financed under Component 2 need to take this risk into account. Moreover, flood risks as a result of severe weather events and climate change must be analyzed in detail to assess requirements for short- and long-term flood risk protection. The protection of the mangroves and reforestation, along with prevention of deforestation efforts, would be an essential element of a storm protection strategy.

5.28 **Reputation Risks.** The project poses a general reputation risk to the Bank if the environmental safeguards are not adequately implemented in a timely manner, for example, specifically regarding this operation, failure to establish a water-quality baseline prior to the operation of the PIC. Given the PIC’s operational status, a true water-quality baseline study can no longer be undertaken. The risk remains that the Bank will not be able to defend itself against any future claims of potential contamination, although, given the nature and magnitude of activities on site, the PIC is not expected to have significantly altered the existing water quality. As the PIC continues its operations, incremental monitoring has to be undertaken to evaluate the performance of the program and the adequate implementation of the ESMP measures.



- 5.29 Other reputation risks are related to: (i) the inadequate disposal of hazardous wastes, which contravenes Dominican Republic legislation and the IDB's Environment and Safeguards Compliance Policy; and (ii) potentially inadequate drinking water.

## VI. ENVIRONMENTAL AND SOCIAL MANAGEMENT AND MONITORING

- 6.1 Several environmental and social management plans have been developed during implementation of the first phase of the PIC, including: (i) an ESMP for the construction phase; compliance is supervised by a Construction Supervisor hired by the UTE; (ii) an ESMP for the operations; to date, the UTE has been supervising the tenants' compliance with the applicable ESMP, albeit imperfectly; (iii) a Compensation and Livelihood Restoration Plan; and (iv) a water-quality baseline and monitoring program.<sup>13</sup>
- 6.2 However, the ESMP for the operations will need to be revised and adjusted to incorporate ESHS management plans and procedures for the additional tenants carrying out activities that were not initially considered in the ESMP (such as Peintures Caraibes).
- 6.3 Detailed Environmental and Social Action Plans (ESAPs) have been prepared for solid waste management, wastewater treatment, and water supply. However, the implementation of these Action Plans by the UTE has experienced serious delays. In particular, the UTE has encountered difficulties in finding and retaining qualified consultants to develop the water-quality baseline. This should have been completed prior to construction and was a condition prior to First Disbursement for HA-L1076 - 2779/GR-HA; therefore, it required a waiver of a 2 month delay for its completion.<sup>14</sup> Subsequently, IDB's Environmental Safeguards (ESG) intervened on the UTE's behalf to ensure that their outstanding responsibilities were met.

## VII. ENVIRONMENTAL AND SOCIAL DUE DILIGENCE STRATEGY

- 7.1 The Bank will perform an environmental and social due diligence (ESDD) in order to confirm that the project's environmental and social impacts and risks have been properly identified and will be adequately mitigated throughout the life of the project. Further, the ESDD will focus on ensuring a comprehensive understanding of the nature and extent of the environmental and social impacts, risks, and liabilities from the previous project phases, ensuring that appropriate mitigation and management measures are designed for the project, and comprehensively and consistently implemented throughout the life of the project.

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<sup>13</sup> HA-L1076: <http://www.iadb.org/en/projects/project-description-title,1303.html?id=HA-L1076> and HA-L1055: <http://www.iadb.org/en/projects/advanced-project-search,1301.html?query=HA-L1055>

<sup>14</sup> See Section 5.27 for related risks.

- 7.2 A number of critical ESHS non-compliances must be immediately addressed to avoid ESHS risks for the PIC employees, local communities, and surrounding coastal environment. The critical non-compliances to be addressed include the lack of: (i) adequate wastewater treatment; (ii) adequate management and disposal of solid waste, in particular hazardous waste; (iii) a functioning certified potable water supply and distribution network; (iv) monitoring and enforcement of ESHS standards, including monitoring of water quality; (v) adequate transportation for workers; and (vi) acceptable food service provisioning inside the PIC. In addition, the establishment of a protected area and the development of alternative livelihoods for community members must be addressed to reduce the pressure on natural resources.
- 7.3 To perform the ESDD adequately, information will be needed regarding the status of implementation of the conditions established for HA-L1076 - 2779/GR-HA and whether liabilities and pending issues have been addressed. Such issues may include: (i) deficient ESHS and labor relations performance; (ii) limited monitoring and enforcement of ESHS standards; (iii) verifying that the PIC Park Manager is already operating and delivering services; (iv) the lack of an ESHS Manager; (v) the lack of formal arrangements with tenants to ensure adequate ESHS and labor management; (vi) deficient management and disposal of solid waste; (vii) the transport and disposal of hazardous waste in a manner that is not compliant with local laws, the Grant Agreement, and the Dominican Republic laws; (viii) outstanding certification for a potable water supply; and (ix) limited water monitoring. For additional details on key requirements, see Annex 1.
- 7.4 Specific areas to be addressed in the ESDD include:
- a) **PIC Management**
- 7.5 **A review of the project’s ESHS compliance and mitigation, management, and monitoring plans** developed to address potential impacts and risks for the PIC. This includes an assessment of whether: (i) an ESHS Manager has been hired and has been working to monitor, supervise, and enforce ESHS compliance; (ii) the Interim ESHS Annex to tenant agreements has been signed with current tenants, until permanent rules and regulations are adopted and ESHS requirements are added to all new tenant leases; and (iii) the ESHS PIC rules and regulations are being developed as part of SONAPI’s institutional strengthening, Subcomponent 2.1 of HA-L1076 - 2779/GR-HA.
- 7.6 **Assessment of the environmental and social management plans** to ensure that the construction and operation of all infrastructure developments within and outside of the PIC that will be financed under this project comply with national requirements and IDB environmental and social safeguards policies. In particular, the ESDD will review whether the ESMP developed for the first stage of the PIC operations is still adequate to address the new activities of additional tenants and Sae-A’s expansion. If the ESMP is not deemed adequate, the ESDD will review the development of the complementary ESMP.

- 7.7 **Confirmation that adequate health and safety and contingency plans and procedures has been established and implemented** for construction, operation, and decommission (including subcontractors) to address potential workers' health and safety risks associated with project-related accidental events (e.g., spills and fires).
- b) **Assessment of the Implementation Status of the Action Plans (ESAPs) Established as Part of the Requirements of HA-L1076 - 2779/GR-HA, Including:**
- 7.8 **Implementation Status of the Water Supply Action Plan.** As a result of significant delays in developing the water-quality monitoring program, there is no definitive environmental baseline, which limits the Bank's ability to rigorously defend itself against allegations concerning the PIC's impact on the surrounding environment. Because the site is already operational and its rapid expansion is seen by the Bank and the GoH as a priority, water-quality monitoring must now fulfill the dual role of completing the baseline while simultaneously monitoring the impact of the PIC on water quality. Therefore, a comprehensive monitoring program that is satisfactory to the IDB for all water-related aspects of the PIC must be fully implemented prior to the temporary WWTP becoming operational and prior to the certification of the water supply as potable. The program should remain in place until the Park Manager or a third party satisfactory to the Bank can adequately assume such responsibilities.
- 7.9 **Implementation Status of the Wastewater Treatment Action Plan.** The construction of the permanent WWTP is behind schedule, and, owing to its limited capacity, the temporary WWTP cannot accommodate the increase in wastewater produced by an increase in on-site tenants or employees. A special focus of the ESDD will be on assessing the current capacity of the temporary WWTP to treat any additional wastewater produced as a result of HA-L1081 and on identifying the appropriate alternatives to ensure that no contamination originates from PIC wastewater.
- 7.10 In addition, a comprehensive site-wide Water Safety Plan (designed typically to address water and wastewater quality, operation and maintenance, health and safety, chlorine management, etc.) must be designed and implemented prior to presenting the Operation to the Board.
- 7.11 **Implementation Status of the Solid Waste Action Plan.** The current solid waste management practices and the existing storage facility were not designed to handle large volumes of solid waste or hazardous wastes. In particular, hazardous wastes must be managed in compliance with the IFC EHS General Guidelines on Solid Waste Management, as well as the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal. A special focus of the ESDD will be on assessing the current liabilities related to inappropriate management of solid wastes, including transport and disposal of hazardous wastes, and on ensuring that adequate measures for mitigating the

corresponding risks are developed and implemented prior to presenting the Operation to the Board.

**c) Assessment of the Status and Adequacy of the On-site Locally Sourced and Staffed Food Service Provision System**

7.12 The availability of affordable meal options, together with a series of incentives to keep employees on site during meal times, is an important component of the influx management strategy and is likely to decrease incentives for informal food-service providers to gather outside of PIC gates. A special focus of the ESDD will be on assessing the EHS performance of the food service and, if necessary, on developing an Action Plan to mitigate any EHS risks and potential non-compliance with adequate sanitary conditions.

**d) Assessment of the Formal Transportation System for all PIC Employees**

The transportation system for all PIC employees is an important component of the influx management strategy. The ESDD will evaluate: (i) the adequacy of the transportation system, which is under public bidding at the moment; (ii) whether the system complies with the EHS performance standards and international good practices; and (iii) whether the system effectively contributes to mitigating the risks of uncontrolled urban development surrounding the PIC.

**e) Assessment of Potential Impacts on Natural Habitats and Critical Natural Habitats**

7.13 The ESDD will review the progress made by the MOE in the establishment of protection for Caracol Bay and will develop an Action Plan to address any risks associated with delays in implementation of this protection. The effective implementation of this protection and the associated natural resource management - especially for mangroves, fisheries, and coral reef uses - are critical to the long-term sustainability of the PIC and to ensuring that the PIC does not lead to significant conversion or degradation of critical natural habitats.

**f) Assessment of the Existing Pool of Available Workers in the Region and the Potential Need for Housing in the Medium and Long Term**

7.14 In order to contribute to avoiding uncontrolled development surrounding the PIC, the ESDD will: (i) assess the existing availability of potential PIC workers in the area surrounding the PIC; (ii) compare this workforce with the estimated workforce needs of the PIC in the medium term (5 years) and long term (10 years); (iii) identify the housing and accommodation programs projected for the region in the same timeframe; (iv) identify any potential gaps; and (v) propose a strategy to overcome such gaps.

**g) Assessment of Whether Cumulative Impacts Have Been Adequately Addressed**

- 7.15 The ESDD will include an analysis of: (i) envisaged labor requirements for the PIC and the projection of the population influx into the area, which is associated with direct and indirect PIC employment opportunities; (ii) infrastructure needs for the additional population drawn into the area by the PIC, including housing, water and sanitation, waste management and transportation, and fuel requirements; and (iii) the adequacy of the schedule for all existing/proposed interventions by all donors in order to address these needs, and the adequacy of a proposed mitigation measure in case the schedule is deemed to be inadequate to address the identified needs in a timely manner.
- 7.16 **Assessment of the status of project compliance with the applicable country's (national, state, and municipal) environmental, social, health and safety, labor regulatory, and permit requirements**, including project-specific legal requirements and any applicable Bank environmental and social policies or guidelines, in particular the Environment and Safeguards Compliance Policy (OP-703), the Access to Information Policy (OP-102), the Involuntary Resettlement Policy (OP-710), and the Disaster Risk Management Policy (OP-704).
- 7.17 **Assessment of any environmental or social liabilities** resulting from the implementation of HA-L1055 and HA-L1076 - 2779/GR-HA, including assessing whether the conditions of HA-L1076 that are due at the time that the operation is submitted to the Board have been met.

**h) Assessment of the Institutional Capacity**

- 7.18 **Assessment of SONAPI's capacity for managing the PIC.** In addition, the ESDD will assess the progress of the HA-L1076 - 2779/GR-HA component on strengthening the capacity of SONAPI to progressively overtake the UTE's role in the operation of the PIC. In particular, the ESDD will focus on reviewing SONAPI's capacity to respond to the ESHS requirements of a growing PIC in the short, medium, and long term (5, 10, 15 years, respectively).
- 7.19 **Assessment of the UTE's and the GoH's capacity to mitigate and monitor** the ESHS and labor aspects of the project and, if necessary, a proposed Action Plan to enhance their capacity for ESHS and labor management.
- 7.20 Following the conclusion of the ESDD, and prior to submitting the Operation to the Board, an Environmental and Social Management Report (ESMR) will be prepared, which summarizes the conclusions of the above-mentioned assessments and reviews, providing a synthesis of the relevant social, environmental, health and safety, and labor aspects of the project, any additional or modified management plan (ESMP), and the proposed Bank recommendations for the loan documents and the project execution.

**Annex 1 - Key Requirements to Implement/to be Resolved before the HA-L1081 Board Presentation**

This Annex presents a summary of key milestones that must be achieved prior to going to the Board. Each milestone includes a set of specific actions, which are detailed in the relevant Environmental and Social Action Plan (ESAP), e.g., Solid Waste Action Plan, Wastewater Treatment Action Plan, and Water Supply Action Plan. As information becomes available, each ESAP is modified, resulting in an evolving document. Achieving a particular milestone necessarily requires the specific actions detailed in the ESAP to have been successfully implemented.

Requirements	Policy Reference
<p><b>Adequate PIC Management</b></p> <ul style="list-style-type: none"> <li>• PIC environmental, social, and health and safety (ESHS) plans are operational, including monitoring, supervising, and enforcing ESHS compliance,</li> <li>• An ESHS Manager has been hired and has been working to monitor, supervise, and enforce ESHS compliance</li> <li>• (i) Interim ESHS Annex to tenant agreements signed with current tenants, until permanent rules and regulations are adopted; and (ii) ESHS requirements are added to all new tenant leases</li> <li>• ESHS PIC regulations are being developed and enforced</li> <li>• H&amp;S procedures for construction and operation have been implemented, with the H&amp;S Manual and Compliance Report submitted</li> <li>• Put in place a screening system of waste water of all tenants prior to their acceptance into the PIC</li> </ul>	<p>Environment and Safeguards Compliance Policy (OP-703) - B.4. Other Risk Factors, B.5. Environmental Assessment Requirements, B.14. Multiple Phase and Repeat Loans</p>
<p><b>Implementation of Solid Waste Action Plan</b></p> <p><b>Temporary Disposal Site</b></p> <ul style="list-style-type: none"> <li>• Rehabilitation of site</li> </ul> <p><b>General Solid Waste Management</b></p> <ul style="list-style-type: none"> <li>• A comprehensive Solid Waste Management Plan for on-site activities is implemented</li> <li>• Undertake a diagnostic and analysis of management alternatives for long-term solid waste management, e.g. a diagnostic of on-site waste streams (including waste streams from surrounding areas, as applicable); analysis of site selection for the proposed landfill in Limonade; and adequate justification for recommended solution</li> </ul> <p><b>Hazardous Waste Recovery and Disposal</b></p> <ul style="list-style-type: none"> <li>• Based on the Legal Opinion, take measures to ensure compliance with applicable local and international laws pertaining to transboundary movement, disposal, and/or management of hazardous waste and research other solutions</li> <li>• Develop and implement adequate temporary storage and management plan for hazardous waste and explore other solutions</li> </ul> <p><b>Sewage Sludge</b></p> <ul style="list-style-type: none"> <li>• Implement Interim Sludge Management Plan</li> </ul>	<p>Environment and Safeguards Compliance Policy (OP-703) - B.2. Compliance with Country Laws and Regulations, B.4. Other Risk Factors, B.10. Hazardous Materials/B.11. Pollution Prevention and Abatement</p>
<p><b>Implementation of Wastewater Treatment Action Plan</b></p> <ul style="list-style-type: none"> <li>• Contract in place to implement Wastewater Quality Monitoring Plan</li> </ul>	<p>Environment and Safeguards Compliance Policy (OP-703) - B.2. Compliance with Country Laws</p>

<ul style="list-style-type: none"> <li>Implement measures to ensure adequate capacity for wastewater treatment until the permanent WWTP is operational</li> </ul>	and Regulations, B.4. Other Risk Factors, B.10. Hazardous Materials/B.11. Pollution Prevention and Abatement
<p><b>Implementation of Water Supply Action Plan</b></p> <ul style="list-style-type: none"> <li>Implement comprehensive Water Safety Plan, including recommended Drinking Water System, and Well Maintenance and Monitoring Plans</li> </ul>	Environment and Safeguards Compliance Policy (OP-703) - B.2. Compliance with Country Laws and Regulations, B.4. Other Risk Factors, B.10. Hazardous Materials/B.11. Pollution Prevention and Abatement
<p><b>Resettlement Plan</b></p> <ul style="list-style-type: none"> <li>Development of an action plan for the farmers displaced from the PIC site as defined in the Compensation and Livelihoods Restoration program which includes livelihood restoration options, key actions needed, definition of institutional responsibilities for public institutions involved, and a timeline acceptable to the Bank</li> </ul>	Involuntary Resettlement (OP-710), Environment and Safeguards Compliance Policy (OP-703) - B.4. Other Risk Factors
<p><b>Transportation System for all PIC Workers</b></p> <ul style="list-style-type: none"> <li>Transportation system covering the villages of Caracol Limonade, Trou-du Nord, Terrier Rouge is in place for all workers</li> </ul>	Environment and Safeguards Compliance Policy (OP-703) - B.2. Compliance with Country Laws and Regulations, B.4. Other Risk Factors, B.5. Environmental Assessment Requirements
<p><b>Provision of Food for all PIC workers</b></p> <ul style="list-style-type: none"> <li>Low-cost quality food is available to all PIC employees inside the Park</li> </ul>	Environment and Safeguards Compliance Policy (OP-703) - B.2. Compliance with Country Laws and Regulations, B.4. Other Risk Factors, B.5. Environmental Assessment Requirements
<p><b>Cumulative Impacts</b></p> <ul style="list-style-type: none"> <li>(i) Analysis of envisaged labor requirements for the PIC over the next 5 years and projection of the population influx into the area (Caracol, Limonade, and Trou-du-Nord), which is associated with direct and indirect PIC employment opportunities; (ii) assessment of infrastructure needs of the additional population drawn into the area by the PIC, including housing, water and sanitation, waste management and transportation, and fuel requirements; and (iii) progress report on addressing these needs by various interventions</li> </ul>	Environment and Safeguards Compliance Policy (OP-703) - B.4. Other Risk Factors, B.5. Environmental Assessment Requirements, B.10. Hazardous Materials/B.11. Pollution Prevention and Abatement
<p><b>Protection of Caracol Bay</b></p> <ul style="list-style-type: none"> <li>The baseline studies for establishing protection of Caracol Bay (from HA-L1055) are under contract and in implementation by a suitably qualified organization. The UTE is in charge of developing the Terms of References (TORs) and executing the contract.</li> <li>TORs for Component 2.b.iv of HA-L1076 - 2779/GR-HA: Support for the establishment and management of a protected area in the Caracol Bay, preserving the coastal environment and fisheries, developed and agreed upon by all relevant parties, including the MOE, and presented for bids. The UTE is in charge of developing the TORs and executing the contract.</li> </ul>	Environment and Safeguards Compliance Policy (OP-703) - B.9. Natural Habitats and Cultural Sites

INDEX OF BACKGROUND ECONOMIC AND PROPOSED SECTOR STUDIES<sup>1</sup>

	DESCRIPTION	DATE COMPLETED OR EXPECTED	REFERENCE OR LINK
<b>PROJECT DESIGN (PARTIAL LIST OF STUDIES FROM “PIC I” 2552/GR-HA)</b>			
	Infrastructure Program – Loan document	July 26, 2011	<a href="#">IBBDOCS#36254225</a>
	Description of Haiti’s North Industrial Park	2011	<a href="#">IBBDOCS#35813746</a>
	Economic Analysis	2011	<a href="#">IBBDOCS#36075281</a>
	Trade preference programs for Haitian textiles and apparel	2011	<a href="#">IBBDOCS#36157154</a>
	Haiti Northern Pole Development Program	2011	<a href="#">IBBDOCS#36171048</a>
	Identifying demand for industrial space	2011	<a href="#">IBBDOCS#36190080</a>
	Sector note: Private sector development	2011	<a href="#">IBBDOCS#36170355</a>
	Koios and Associates: “Development of the Industrial Park Model to Improve Trade Opportunities for Haiti (HA-T1074-SN2)	2011	<a href="#">IBBDOCS#36174208</a>
<b>PROJECT DESIGN (PARTIAL LIST OF STUDIES FROM “PIC II” 2779/GR-HA)</b>			
	Annual Work Plan (AWP or POA)	May 2012	<a href="#">IBBDOCS#36856690</a>
	Monitoring & Evaluation Arrangements	May 2012	<a href="#">IBBDOCS#36848211</a>
	Report by UTE to SONAPI on the PIC	2012	<a href="#">IBBDOCS#36838506</a>
	Financial and Economic Viability of the PIC	May – July 2012	<a href="#">IBBDOCS#36850836</a>
	Financial and economic evaluation of the PIC - Appendix 1A, 1B and 1C	May – July 2012	<a href="#">IBBDOCS#36850853</a>
	Evaluation management capacity UTE	2012	<a href="#">IBBDOCS#36838432</a>
	Risk Assessment (Excel version)	May 2012	<a href="#">IBBDOCS#36850201</a>
<b>ENVIRONMENTAL AND SOCIAL STUDIES (PARTIAL LIST FROM “PIC I” 2552/GR-HA)</b>			
	Hydrologic Evaluation Haiti’s North Industrial Park area	Septembre 6, 2011	<a href="#">IBBDOCS#36472380</a>
	Updated PGES	December. 2011	<a href="#">IBBDOCS#36389679</a>
	Plan of Action and Relocation (PAR)	December. 2011	<a href="#">IBBDOCS#36639359</a>
	Environmental and Social Impact Assessment (ESIA) for Haiti’s North Industrial Park, Koios	June 2011	<a href="#">IBBDOCS#36168335</a>
	Contract for professional training of 330 displaced farmers	December. 2011	<a href="#">IBBDOCS#36599919</a>
	Water quality monitoring contract (First contract attempt)	February 2012	<a href="#">IBBDOCS#36612293</a>

<sup>1</sup> The studies listed for HA-L1055 and HA-L1076 cover the needs of the present operation.



440 ha site official survey map for Compensation Plan of farmers displaced by the 250 ha of the PIC	Sept. 2011	IDBDOCS#36683484
Temporary PIC Waste Management and Landfill EA	March, 2012	IDBDOCS#37091611
Environmental and Social Studies		IDBDOCS#36721481
<b>ENVIRONMENTAL AND SOCIAL STUDIES (PARTIAL LIST FROM “PIC II”2779/GR-HA)</b>		
Cumulative Impact Assessment American Institute of Architects (16, 17 July, 2012 – Public Consultation)	Aug, 27, 2012	IDBDOCS#36838525
Caracol Bay Protected Area 2012	2012	IDBDOCS#36838445
List of major public consultation and engagement meetings	2012	IDBDOCS#36838437
Environmental Assessment for Temporary PIC Solid Waste Management	2012	IDBDOCS#37091611
Social Impact Assessment	Feb. 2012	IDBDOCS#37091614
Wastewater Action Plan	2012	IDBDOCS#37094949
Solid Waste Action Plan	2012	IDBDOCS#37094878
Environmental and Social Report from UTE to IADB	2012	IDBDOCS#37094857
Environmental and Social Action Plan (ESAP) – Prior to Board	2012	IDBDOCS#37094978
Environmental and Social Action Plan (ESAP) – Prior to First Disbursement and Other Conditions (French)	2012	IDBDOCS#37094979
ToR for Social Monitoring	2012	IDBDOCS#37094962
Rapport Evaluation Capacités Gestion Joseph & Associes	Jan. 2013	IDBDOCS#37384210
Plan d'engagement parties prenantes	Jan. 2013	IDBDOCS#37384222
Résolution conflits - extraits loi Hope 2 - créole	Jan. 2013	IDBDOCS#37384229
Annexe Parc Industriel de Caracol Air and Bacterial Monitoring	Jan. 2013	IDBDOCS#37384237
Rapport No. 1 Qualité de l'eau - Partiel	Jan. 2013	IDBDOCS#37384243
Comprehensive list of Environmental & Social Documents	Jan. 2013	IDBDOCS#35955112
Environmental and Social Conformity Report	Dec. 2012	IDBDOCS#37384215
Addendum – Tenant ESHS Clauses (yet to be negotiated)	Dec. 2012	IDBDOCS#37384238
<b>PROPOSED STUDIES FOR HA-L1081</b>		
<b>Update of Economic and Financial Analysis</b>	<b>May 2013</b>	
<b>RISK ANALYSIS</b>		
Risk Analysis Matrix prepared by Project Team.	February, 2012	IDBDOCS#36680105
Risk Analysis Update	April, 2013	IDBDOCS#37388289
NOTE: A complete list of studies for the PIC, 10 pages long, is available in <a href="#">Haiti Database of Contents</a> , and is updated regularly.		

## **Annex V**

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