**Document of the Inter-American Development Bank**



**Haiti**

**Productive Infrastructure Program IV**

(HA-L1101)

**Environmental and Social Management Report**

**(ESMR)**

November 2015

This document was prepared by Serge-Henri Troch, Elizabeth Brito, Andrew Drumm, France Francois, Melissa Barandiarán, Soraya Senosier and Crystal Fenwick (VPS/ESG) as part of an integrated project team comprising: Ana María Sáiz, Team Leader; Michael Donovan, Alternate Team Leader; José Brakarz, Patricio Zambrano-Barragan, and Dianela Avila (IFD/FMM); Guisselle Velasquez (FMM/CHA); Ednoux Dormeus; Cedrick Joseph (CDH/CHA); Alfredo Rihm (INE/WSA); Carlos Faleiro Pajares (WSA/CHA); Taos Aliouat (LEG/SGO); José Luis Irigoyen, Laurence Telson (CDH/CDH); Nelly Wheelock; and Takady Mamadou Konate (FMP/CHA).

**Table of Contents**

1. Introduction
2. Summary Table
3. Executive Summary
4. Project Description
5. Key Project Infrastructure Components and Schedule
6. Environmental and Social Setting
7. Alternative Analysis
8. Compliance Status and Project Standards
9. Environmental and Social Appraisal Process
10. Consistency with IDB Policies and Directives
11. Project Standards and Requirements
12. Key Environmental and Social Impacts, Risks and Mitigation
13. Positive Impacts
14. Key Environmental and Social Impacts and Risks
15. Environmental and Health and Safety Impacts and Risks and Mitigation
16. Social Impacts and Risks and Mitigation
17. Cumulative Impacts
18. Natural Disasters Risks
19. Other Risks
20. IDB Additionality
21. Management and Monitoring of Environmental, Social, Health and Safety and Labor Impacts and Risks
22. Management Systems and Plans
23. Remediation of Environmental Liabilities
24. Monitoring and Supervision
25. Environmental and Social Safeguard Performance Indicators
26. Requirements to be Included in the Legal Documents
27. Conditions Precedent to First Disbursement
28. Conditions Four Months after First Disbursement
29. Condition for the life of the Project
30. Monitoring and Reporting

List of Annexes

Annex A: List of Principal environmental assessments of previous PIC operations

Annex B: EHS Prioritized Documents of the EHS Management System

Annex C: PIC’s EHS-MS structure

Annex D: PIC Environmental, Social, Health and Safety Key Performance Indicators

**List of Acronyms**

AANNE Management Authority for the North/North-East or *Autorité d’Aménagement du Nord/Nord-Est*

ANAP National Agency of Protected Areas or *Agence Nationale des Aires Protégées*

BWH Better Work Haiti

CIA Cumulative Impact Assessment

CIAT Inter-Ministerial Committee for Land Use Management or *Comité Interministériel d'Aménagement du Territoire*

CNH Critical Natural Habitat

CTMO-HOPE *Comité Tripartite de la Mise en Œuvre de La Loi Hope*

DRA Disaster Risk Assessment

DRMP Disaster Risk Management Plan

EA Environmental Assessment

ESCI Emerging and Sustainable Cities Initiative

ESIA Environmental and Social Impact Assessment

ESMR Environmental and Social Management Report

ESMP Environmental and Social Management Plan

ESDM Environmental and Social Sustainable Development Mechanism

GoH Government of Haiti

IFC International Finance Corporation

MTA Massacre Transboundary Aquifer

MoE Ministry of Environment

NH Natural Habitat

OHS Occupational, Health and Safety

PC Peintures Caraibes

PIC Caracol Industrial Park *or Parc Industriel de Caracol*

PN3B Three Bays National Park *or Parc National Trois Baies*

SONAPI National Association of Industrial Parks *or Société Nationale des Parcs Industriels*

TTC Thermotolerant Coliforms

UTE Technical Execution Unit *or Unité Technique* *d'Exécution*

WWTP Wastewater Treatment Plant

1. **Introduction**
2. **Summary Table**

|  |  |
| --- | --- |
| Country | Haiti |
| Sector | Urban Development and Housing |
| Project Name | Productive Infrastructure Program IV |
| Borrower and/or Sponsor | Republic of Haiti |
| Executing Agency | Ministry of Economy and Finance (MEF), through its Technical Execution Unit (UTE) and the *Société Nationale des Parcs Industriels* (SONAPI) |
| Transaction Type | Grant Facility |
| Total Project Cost (US$) | US$41 million |
| Environmental Category | A |

1. **Executive Summary**

This Environmental and Social Management Report (ESMR) presents the findings of the Inter-American Development Bank’s (IDB) Environmental and Social Due Diligence (ESDD) for the operation - the Productive Infrastructure Program IV (HA-L1101). Through this operation and four previous operations (HA-L1055: 2011; HA-L1076: 2012; HA-L1081: 2013 and, HA-L1091: 2014), the IDB has supported the construction and operation of the 250 hectares Caracol Industrial Park (Parc Industriel de Caracol, “PIC”) in Northern Haiti.

As was the case with previous three operations, this operation is classified as Category A because of the potential to cause significant environmental and associated social impacts during construction and operation, specifically: (i) direct and indirect impacts leading to ecological degradation of the mangrove, sea grass, and the coral reef ecosystems in Caracol Bay; (ii) degradation of surface and groundwater; (iii) negative impacts on local livelihoods resulting from poorly managed population influx and urban development and cumulative impacts; and (iv) the persistent non-compliance of national labor standards. The potential impacts of this current operation are incremental in nature.

A noteworthy challenge will be to ensure that, as the operation of the industrial park continues and expands, the mitigation measures in place and those to be still put in place to adequately manage the environmental and social impacts and risks actually function and are effective. The experience over the past five years indicate that even basic environmental and social management requirements consistent with not only IDB policies but also industry standards are a struggle to implement due to limited capacity, competing priorities, and resource constraints. In particular, close proximity of the industrial park to the proposed Three Bays National Park initially raised international concern about negative impacts of the industrial park. The assurances made by the IDB that the necessary mitigation measures would be taken to protect the marine protected area will be significantly tested during the operation of the park in the next 5-10 years. The IDB’s central role in financing the industrial park has resulted in an exceptionally strong identity of the industrial park with the IDB, and as such reputational risks related to any environmental or social liabilities are significant. Thus, as the IDB’s role in the industrial park shifts away from construction of new infrastructure, it will need to maintain focus and efforts on ensuring that the operation of the industrial park is environmentally and socially sound at least in the short to medium term. Therefore, IDB will continue to need to be engaged in the operation of the park over the medium-term.

From 2011, the number of tenant businesses in the PIC has increased from one to six. The range of activities in the PIC has broadened from sewing and embroidery to include textile washing, paint and perfume mixing. The number of workers has increased from 1,800 in 2013 to 6,600 in 2015 with 18,000 workers projected for 2018. Consequently, this ESMR places greater emphasis on managing the impacts from operating the industrial park.

The Technical Execution Unit (UTE) of the Ministry of Finance, the National Society of Industrial Parks (SONAPI), the *Comité Interministériel d’Aménagement du Territoire* (CIAT), and the IDB have worked to develop and implement mitigation measures aimed at addressing the concerns from previous operations and to ensure the long-term environmental and social sustainability of the PIC: (i) involuntary resettlement of farmers from the lands now occupied by the industrial park; (ii) environmental, social and health and safety (EHS) impacts during construction; (iii) the need to follow adequate EHS procedures and practices during operations; (iv) discouraging the development of slums surrounding the PIC; and, (v) identifying and developing plans to address potential cumulative indirect and long-term negative impacts.

Funding to support the development and implementation of these mitigation measures came from commitments within components of the previous operations (HA-L1076:US$6,425,000; HA-L1081: US$1,000,000; and, HA-L1091: US$1,000,000) and technical cooperation grants (HA-T1179; HA-T1083; HA-T1185; HA-T1186; HA-T1180; HA-T1181; HA-T1182; and HA-T1209: US$3,639,000).

Nevertheless, the implementation of some mitigation measures is delayed. The critical outstanding environmental and social liabilities include: (i) the need to satisfactorily complete implementation of the compensation and livelihoods restoration plan as agreed with beneficiaries – ten (10) people are still awaiting their new houses and one (1) person is not yet incorporated into the *Office National d'Assurance Vieillesse* (ONA); (ii) the need to complete hiring of a team within SONAPI to implement EHS procedures and practices and to ensure effective management of transportation, food provision, solid and hazardous waste management, grievances, and water resources, and to ensure that they are not left unpaid as it has happened earlier this year; and (iii) the need to successfully complete the baseline (HA-L1055) and livelihood (HA-L1076) studies as inputs for the effective management of the Three Bays National Park (PN3B).

Wastewater management has consistently been a critical concern. With respect to the exception to OP-703 related to Directive B.11 granted by the IDB Board at the time of approval of operation HA-L1081, since July 24th, 2014, 100% of wastewater produced at the PIC has been sent to the Permanent Wastewater Treatment Plant (WWTP) for treatment. As wastewater was not discharged to the environment until September 23rd, 2015, Directive B.11 did not apply. Final treated effluent began to be discharged to the Trou-du-Nord River on September 23rd, 2015. Independent verification of wastewater quality prior to discharge indicated that all parameters meet the required standards, with the exception of total coliforms and color. Therefore, the exception to OP-703 related to Directive B.11 will continue to apply until the effluent discharge standards are met, in accordance with Document PR-4110.[[1]](#footnote-1) To assist the GOH in ensuring future compliance with Directive B.11, the IDB contracted an expert firm to evaluate potential impacts to aquatic life and human health. Based on the outcomes of their evaluation, the IDB and the GOH has prepared an action plan with specific mitigation measures which the GOH will be required to implement (sections 4.14 to 4.16 for more details).

This operation is the last of five operations directly financing the PIC. Increasingly, the sustainability focus has shifted from managing construction impacts to ensuring that operations of the PIC are sustainable. Food provision, water, solid waste, wastewater, transport, labor, health and safety, and grievance management systems are still not in place. Not only do they need to be established but also managed so that they are effective over time for a growing number of workers. The institutional capacity of SONAPI is therefore crucial to the long-term sustainability of these systems; the experience of the last five years would indicate that medium-term (ten-year) engagement of the IDB is critical to ensuring this sustainability.

Similarly, to date, the IDB has played a critical role in supporting regional and urban planning in the northeast of Haiti so as to set the context for the future success for the PIC as a catalyst for sustainable development. Ongoing institutional capacity building is critical to ensuring long-term sustainability to maximize the positive cumulative benefits of the investments in the northeast of Haiti and to manage any negative cumulative impacts. The key institutions targeted include: (i) the recently proposed regional coordinating body *Autorité d'Aménagement du Nord et du Nord-Est* (AANNE); (ii) local governments and civil society; (iii) national and regional agencies responsible for services including transport, energy, water, sanitation, solid waste, natural resources, security, education, and social services; (iv) the *Comité Interministériel d'Aménagement du Territoire* (CIAT), responsible for defining the government’s policy in regards to urban planning, watershed management and protection and water and wastewater management; and (v) *Agence Nationale des Aires Protégées* (ANAP). The long term sustainability of the PIC will require investments beyond the context of this operation to ensure the institutional strength in the north-east of Haiti.

Although the IDB has taken steps to ensure these elements are in place, there are significant gaps including the financial resources to implement plans to respond to the growing demand for public services and to sustainably manage natural resources.

The key priority for this operation, HA-L1101, is to ensure that: (i) all conditions set forth in this and previous operations have been met and there are no impacts and risks that cannot be adequately managed; (ii) the PIC has a sound management structure and system in place through SONAPI, including adequate budget and operational means at its disposition; and (iii) government agencies and municipalities responsible for regional and local land and resource use have the institutional and technical capacities and resources to ensure sustainable development in the Northern Corridor.

Of the conditions referenced above and in Table 3.1 (Compliance of project with IDB safeguard requirements): there are several where the lack of progress in the previous operations raises doubts as to whether the project will indeed meet compliance requirements.[[2]](#footnote-2) Normally we would expect specific compliance requirements still outstanding by Board approval to be met during the course of execution. However, the delays experienced in previous operations indicate that this may not be the case and will only be met through concerted efforts by the Bank, executing agencies and other relevant parties. Significant efforts will need to be made in this operation to ensure these measures are completed.

1. **Project Description**

The project objective is to contribute to the sustainable economic development of Northern Haiti. The specific objective is to create formal employment in the North and Northeast Departments of Haiti by providing the necessary conditions for the establishment of firms in the PIC and ensuring its adequate management and long-term financial sustainability. The program’s direct beneficiaries will be the workers employed at the PIC and the firms established there, with benefits spilling-over to the surrounding communities of the North and Northeast departments. This operation is the final phase of a program, consisting in five operations in total.

1. **Key Project Infrastructure Components and Schedule**

The operation has two main components:

* **Component I. Provision of infrastructure in the PIC (US$38.4 million)**. This finances further expansion of the PIC (buildings and related infrastructure) essentially to respond to the expansion plan of the anchor tenant, including: (i) four large factory buildings (11,776 m2 each) to accommodate industrial activities, one canteen, and two boiler rooms; (ii) expansion of the park´s infrastructure and equipment (expansion of internal roads and the water and drainage networks); (iii) works for the protection of the *Trou-du-Nord* River Bank at its crossing of the PIC; and (iv) civil works’ supervision. The PIC Master Plan (Figure 1 below) shows: (i) in red, the four large factory buildings to be completed as part of the present operation (47,104 m2); (ii) in purple completed works (113,449 m2); and (iii) in pink, those that will be built with funds from the grant 3384/GR HA (75,750 m2).
* **Component II. Institutional Strengthening of SONAPI (US$1.3 million).** This component will provide funds to SONAPI to cover part of the PIC’s current operational expenses. Funds will be used for the PIC’s operation and maintenance, and will fiancé among others: (i) personnel and equipment necessary for the implementation of the EHS system and mitigation measures; and (ii) a business plan.
* **Administrative Costs (US$1.3 million)**. The program will fund administration, monitoring, and auditing activities to be implemented by the Ministry of Economy and Finance (MEF), through its Technical Execution Unit (UTE).

The Caracol Industrial Park (PIC) is located in the Community of Caracol, Department du Nord EST, off of Highway 121 between Cap Haitien and Ouanaminthe. The park comprises 250 hectares, bisected by the *Trou-du-Nord* River and the site is greenfield. All required infrastructure, facilities and services do not exist in the area and had to be built (or will be built) specifically for the PIC.

The PIC is a response to the GoH’s 2010 National Action Plan, which proposes to create centers of economic development outside of Port-au-Prince to spur economic growth and bring jobs to Haiti’s underserved regions. The Industrial Park is an important part of this initiative, that was envisaged and planned to provide a safe, secure, and sustainable environment in which employers can access the talents and desire to achieve of the local workforce, and local residents can realize the economic and social benefits of increased employment opportunities.

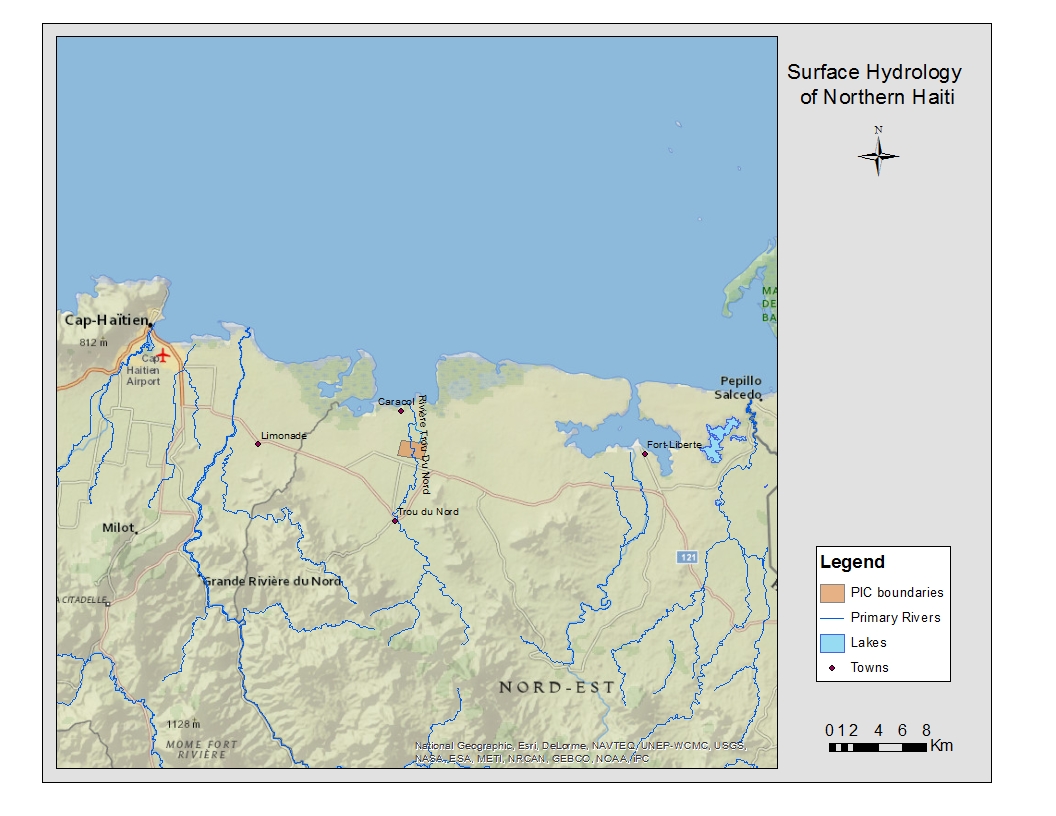
Construction of the PIC began in November 2011 (under HA-L1055) and has advanced overall at a rapid pace (See Figure 1 – PIC Master Plan). The anchor tenant (S&H Global) began operations on March 31, 2012, initially limited to sewing and embroidery. Operations have since grown to include washing and drying, and to employ close to 6,000 workers. At present, five other tenants are also operating in the Park, giving rise to a total of 7,700 people (including tenants and contractors). Construction workers for this phase could reach 650 at peak times, with 300 workers on average during the overall construction period, expected to start around mid-2016 and to last for six months. Nevertheless, some of the envisaged services and infrastructures are significantly delayed and still not available.



Figure 1 – PIC Master Plan

1. **Environmental and Social Setting**

The PIC is built on a 250 ha green field site, situated on the plains between the northern massif and the Atlantic Ocean. The site is essentially flat with slight variations in topography ranging from 8 to 13 meters above sea level with a slope of less than 0.5 percent towards the *Trou-du-Nord* River. Caracol and Fort Liberté, in particular, are coastal towns located close to ecologically sensitive areas (mangroves, coral reefs, and fisheries) and cultural assets (see Figure 2). Caracol lies about 4 km to the north of the PIC and approximately 25 km southeast of Cap-Haïtien.



Watershed

Figure 2 – Surface hydrology of Northern Haiti and PIC boundaries

The GoH’s overall intention of placing the Industrial Park in this region was aimed at deconcentrating the Port-au-Prince region and bringing population and economic development to the Northern Region. Therefore, the long term and indirect impacts of the PIC are much broader than the actual project site and extend throughout the Northeastern Corridor. The Northeastern Corridor is located along National Route 6 (RN6), extending 60 km between Cap Haitian in the west and Ouanaminthe in the east, on the border with the Dominican Republic (DR).

**Biodiversity.** Similar to many rivers in Haiti, the *Trou-du-Nord* River is home to several species of fish endemic to Hispaniola including *Limia pauciradiata*. Caracol Bay includes an estimated 5,250 ha of healthy mangroves (mainly red mangroves, or Rhizophora mangle), which represent more than 18% of the remaining mangroves in Haiti. The sheltered bay also includes sea grass beds and is bounded by a fringing coral reef area of around 900 hectares that extends over 20 km. Caracol Bay provides an important habitat for endangered species, including turtles, manatees, and humpback whales, whereas its mangroves provide valuable shoreline protection services. Local communities depend on resources from this system, particularly through fisheries, including demersal finfish, conch, shrimp and lobster, and through exploitation of mangroves for firewood, charcoal and building materials. The establishment of evaporation ponds for the production of sea salt also contributes to the loss of mangroves and a consequent increase in vulnerability to coastal flooding.

In 2012, the IDB, in collaboration with the UNDP-GEF SNAP project, supported the ANAP – a directorate within the Ministry of Environment (MoE), the “Comité Interministériel d'Aménagement du Territoire” (CIAT) and the UTE to establish the Steering Committee for the Three Bays National Park (PN3B). This led, in October 9, 2013[[3]](#footnote-3) to the Government of Haiti declaring the creation of the PN3B, which includes the bays, mangroves and coral reefs of Limonade, Caracol and Fort Liberté (see Figure 3 for the National Park boundaries). Subsequently, the IDB and UTE, with resources from HA-L1055 and additional funds made available through CDH, has contracted respectively socio-economic and ecological baseline studies for the national park and is in the process of recruiting firms to develop an alternative livelihoods and environmental education program with communities in the PN3B. This funding in turn has leveraged an additional new investment of approximately $2.5m from USAID to finance the development of the park’s management plan and a fisheries action plan for the protected area and to strengthen local organizations. In early 2015 USAID contracted The Nature Conservancy (TNC) to undertake this work, which in turn developed a sub award agreement with FOPROBIM (Fondation pour la Protection de la Biodiversité Marine). Both organizations have since established a base of operations in Caracol with a staff of six people. Royal Caribbean Cruise Lines (RCCL) has also provided TNC with $100k to carry out benthic mapping in Caracol Bay.

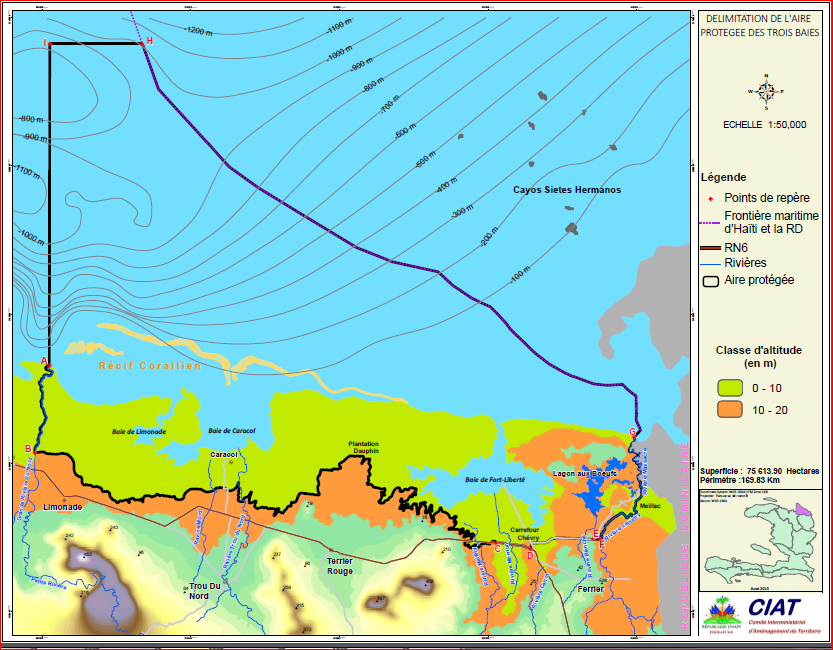


Figure 3 – Map indicating PN3B boundaries

**Geology, Hydrology and Hydrogeology.** The PIC is situated in the Trou-du-Nord watershed, located in Northeast Haiti, which measures approximately 110 km2. The portion of the watershed that is hydrologically connected to the PIC (the lower watershed) is estimated to be 100 km2 (or 90% of the full watershed) and is characterized by moderately to highly permeable alluvial deposits. The upper watershed is located in the mountainous region to the south known as the Massif and comprises highly permeable, intrusive, volcanic rocks.

The primary source of surface water in the vicinity of the PIC is the *Trou-du-Nord* River, which has two sources located in the mountainous region to the south. The two sources located southwest of the village of Cabaret and southeast of the village of Cabon, respectively, converge approximately 6 km southeast of the town of Trou-du-Nord. The river continues a further 6 km downstream, where it bisects the PIC before finally reaching its mouth on Caracol Bay approximately 4 km due north of the PIC. Seasonal variations in precipitation greatly impact its flow and the river floods seasonally, particularly along its lower reaches.

The PIC is underlain by the Massacre Transboundary Aquifer (MTA), one of four transboundary aquifers in the Caribbean. Spanning approximately 2,280 km2, it extends from Haiti's Northeast Department in the west to the Dominican Republic's Dajabón Province in the east. On the Haitian side, it is composed mainly of volcanic rocks located in the mountains to the south and alluvial deposits in the plains to the north. Of significant regional importance, the MTA is the main source of water for domestic and agricultural use for local populations on both sides of the Haiti-Dominican Republic border. Locally the groundwater table is relatively high, ranging from 3 to 10m below the surface in many places. As a result, pit latrines are often situated below the water table and reportedly fill with water thereby posing contamination risks to the aquifer and wells used by local residents.

There is believed to be a strong degree of hydrological connectivity in the area and groundwater beneath the PIC is believed to coincide with average water levels in the *Trou-du-Nord* River. Consequently, groundwater likely contributes to the river's base flow particularly during periods of low flow. To the contrary, surplus water likely infiltrates into the aquifer during times of peak flow. As a result, a fall in groundwater level could potentially reduce the volume of water delivered to the river. Importantly, in dry periods, when all river flow is potentially derived from groundwater, it is theoretically possible that river flow would cease in any section where groundwater levels were depressed to below the channel bed, e.g. 100% of river water flowing from upstream would infiltrate through the river bed. This is supported by

**Water Quality.** Water quality in Haiti is generally compromised and must be treated prior to consumption. The *Trou-du-Nord* River presents high levels of thermotolerant coliforms (TTC), a proxy for fecal contamination, but is otherwise relatively free from industrial contamination. Groundwater collected from the PIC’s primary productive well typically varies by season. Samples collected and analyzed during the dry season indicate an absence of TTC while samples collected and analyzed in the rainy season indicate the presence of *E. Coli*. This is primarily due to the high interconnectivity between surface and groundwater locally and the pump not being installed at an adequate depth, resulting in shallow groundwater and/or surface water being drawn into the well. Trace metals and radionuclides, which are commonly found in volcanic aquifers and groundwater derived from volcanic rocks, such as the Massif to the South of the PIC, are also present in groundwater yet do not pose a risk to human health at levels encountered.

**Natural Disasters.** The Northern Corridor exposure to hazards has been assessed through the Hazard and Risk Assessment prepared for the Northern Development Corridor, Urban Development and Climate Change Study under the IDB’s Emerging and Sustainable Cities Initiative (ESCI). In the study, five main hazards were prioritized and studied: Seismicity, Hurricanes, Inland Flooding, Coastal Flooding, and Drought. There has been historic evidence that the northern coast has been struck repeatedly by earthquakes and tsunamis. Haiti is among the most hurricane-prone locations in the world. From 2004 to 2012, twelve (12) storms made landfall in Haiti. One of the most serious components of hurricanes is high winds and there are no areas of Haiti that are free from hurricane force winds. Hurricane risk, associated with wind speed, is a relatively homogeneous factor across the study area, and no discernible geographical variation was noted for the study area.

Flood risk is a particular concern given the potential for seasonal flooding of the *Trou-du-Nord* River, particularly in its lower reaches, and the PIC’s location within an alluvial flood plain. Preliminary results of HA-T1179[[4]](#footnote-4) indicate that the PIC is highly susceptible to flooding as a result of intense rainfall, which is likely to rapidly saturate soils owing to a particularly high water table, leading to ponding and pooling across the site. In addition, settlements along the coast and in low lying areas, along with damage to and dwindling mangrove assets and deterioration of littoral environments, result in exposure of populations and communities along the Northern coast to coastal flooding. The north of Haiti also frequently experiences repeated droughts, brought about by a combination of erratic rainfall patterns coupled with limited water management infrastructure

As part of the ESCI studies, the Climate Studies Group (at Mona, Jamaica), part of the University of West Indies, was commissioned to undertake an assessment of climate change parameters and projections applicable to Northern Haiti. The results are presented in Appendix 3 of the ESCI Northern Development Corridor Report.[[5]](#footnote-5) According to the data, climate change is expected to contribute to long-term sea level rise along the coast of Haiti. Sea level rise is expected in a range of 0.17-0.38 m in the 2046-2065 timeframe. In regard to storm intensities and frequencies, it suggests no major change in frequency of hurricanes in the North Atlantic, region comprising Haiti.

**Social and Cultural Context.** According to the update of the Cumulative Impact Study[[6]](#footnote-6), which was based on the 2012 estimates of the Haitian Institute of Statistics (IHSI), the current population of the Northeastern Corridor is estimated at 416,137 people, compared to the 387,339 people estimated in 2009. Much like most of Haiti, the population lacks equitable access to basic social services such as education, housing, police services, healthcare, and food security. The region is deficient in basic infrastructure, including roads and public services such as electricity, water supply, sanitation, solid waste management, education, healthcare, employment opportunities, and policing. As a result, the region has been economically under developed and suffers from environmental degradation, including deforestation, lowered agricultural production, contaminated waterways, and depleted fish stocks. The difficulty of accessing potable water, affordable energy sources other than charcoal, basic infrastructure, and solid waste management services further exacerbate the social implications of environmental issues. Thus, although the PIC may bring much needed economic development to the region, if not coupled with adequate and integrated urban planning it will most likely exacerbate the social problems and deplete the natural resources.

The PIC is only one of a series of investments that the GoH is planning or has completed in the northern region. These include investments in roads, upgrades to the airport and the port in Cap Haitian, the university in Limonade, and tourism programs, housing projects and agricultural investments. These investments are expected to significantly transform this largely rural, agricultural area.

1. **Alternative Analysis**

The alternative analysis for the site selection was included in the Environmental and Social Impact Assessment (ESIA) for the first operation (HA-L1055). Alternative analyses were also conducted for other PIC components, including the WWTP. For the Power Plant[[7]](#footnote-7), an ESIA was conducted by USAID, the US agency responsible for its financing and construction.

1. **Compliance Status and Project Standards**
2. **Environmental and Social Appraisal Process**

An ESIA for the construction and operation of the PIC was prepared in May 2011 and was disclosed under the first operation of the Program (HA-L1055).[[8]](#footnote-8) In addition, a Targeted Environmental Assessment (TEA) for the temporary sewage treatment system, a Cumulative Impact Assessment (CIA), and an EA for the PIC temporary solid waste facility,[[9]](#footnote-9) and an Updated Cumulative Impact Assessment (2015) were also prepared.

This is the fifth operation in support of the PIC. The IDB has been supervising previous construction and operation phases of the Program through regular site visits. In addition, ERM, an independent environmental and social consulting firm was retained to assist the IDB in monitoring the EHS status and performance of the PIC (in particular, compliance and status with applicable IDB requirements, and specifically any outstanding EHS-related impacts, risks or liabilities).

The EHS Management System (EHS-MS) for the operation of the PIC includes a stakeholder engagement plan, grievance mechanism, solid waste management plan, and emergency response plan. During due diligence, the IDB verified if these plans were being implemented by SONAPI and how they would meet long-term demands for food provisioning and transportation services. The IDB also reviewed the institutional capacity of government agencies relevant to ensuring the long-term environmental and social sustainability of the PIC and the sustainable development of the Northern Region (SONAPI, the Ministry of Environment (MoE), ANAP, and CIAT).

In addition, ERM: (i) evaluated the current status of the water supply, wastewater and storm water drainage systems in the context of the broader hydrological regime at the PIC; (ii) assessed perceived key gaps and opportunities for improvements, and; (iii) provided a roadmap for addressing these issues and short, medium and long-term sustainability of the PIC.

Several liabilities remain outstanding from previous operations, including: (i) deficiencies in water supply, wastewater, and solid waste management (including hazardous wastes); (ii) inadequate EHS management of both construction and operation activities; (iii) delays completing the Compensation and Livelihoods Restoration[[10]](#footnote-10) (as a result of which the PIC is currently in non-compliance with the IDB’s Policy on Involuntary Resettlement OP-710); (iv) delays in implementation of the alternative livelihood study for Caracol Bay, pending since the second operation (HA-L1076); and (v) delays in the hiring of a Water Manager/ Lead Engineer to address the multiple interrelated outstanding water and wastewater activities.

To comply with OP-703, the executing agencies have prepared and agreed to address the existing issues through specific contractual conditions (see section VI for more details).

1. **Consistency with IDB Policies and Directives**

This operation is classified as Category A because of the potential to cause significant environmental and associated social impacts during construction and now especially during operation, specifically: (i) direct and indirect impacts leading to ecological degradation of the mangrove, sea grass, and the coral reef ecosystems in Caracol Bay; (ii) degradation of surface and ground water; and, (iii) negative impacts on local livelihoods resulting from poorly managed population influx and urban development and cumulative impacts.

This operation triggers the following directives in the IDB’s Environment and Safeguards Compliance Policy (OP-703): B.1 (IDB Policies); B.2 (Country Laws and Regulations); B.3 (Screening and Classification); B.4 (Other Risk Factors); B.5 (Environmental Assessment Requirements); B.6 (Consultations); 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. The Project also triggers the IDB’s Disaster Risk Management Policy (OP-704); Policy on Gender Equality in Development (OP-761); and, Access to Information Policy (OP-102).

Table 3.1 below summarizes how the Project meets and/or will meet the requirements of the IDB’s Safeguard Policies and Directives.

**Table 3.1: Compliance of Project with IDB Safeguard Requirements**

| **Operational Policy** | **Aspect**  **(if applicable)** | **Project Compliance Status** |
| --- | --- | --- |
| 1. **OP-703** | | |
| **B.1. Bank Policies** | OP-704: Disaster Risk Management | **Compliance requirements expected to be met.** See Section II of this table. |
| OP-761: Gender Equality in Development | **Compliance requirements expected to be met**. See Section III of this table |
| OP-710: Involuntary Resettlement | **Compliance requirements expected to be met.** See Section IV of this table |
| OP-102: Access to Information | **Compliance requirements met.** All relevant environmental and social assessments have been timely disclosed. |
| OP-765: Indigenous Peoples and Strategy for Indigenous Development | **Not applicable.** |
| **B.2. Country laws and regulations** | Haitian Legislative Decree of January 2006 | **Compliance requirements expected to be met.** The Decree 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). Compliance is expected through the satisfactory implementation of the EHS Management System and Rules and Regulations of the Park, as well as the tenant Environmental and Social Management Plans (ESMPs), with SONAPI’s capacity for enforcement. |
| Haitian Law No. CL 01-2009-001 of March 2009 | **Compliance** **requirements expected to be met.** In 2013 the UTE sought DINEPA[[11]](#footnote-11)’s approval to operate the PIC’s water supply and approval was conditionally granted contingent upon the implementation of the recommended drinking water monitoring program. Following submission of the technical dossier of water quality monitoring results to DINEPA, the PIC’s water source was certified as fit for human consumption in May 2014. The certification is contingent upon the successful implementation of the specific conditions annexed to the Certificate. The Bank has been supporting this process and in February 2015, hired an international expert to evaluate the operational requirements of the water supply system. The process is underway to hire a Water Manager who will be tasked with implementing these recommendations. |
| Haitian Labor Code | **Compliance requirements expected to be met** through the satisfactory implementation of the Rules and Regulations of the Park, and tenant ESMPs, with the capacity for enforcement as well as the monitoring by Better Work Haiti (BWH) for the garment manufacturing tenants as well as by SONAPI.  Compliance with national labor law and core labor standards is monitored by BWH as part of the United States Haitian Hemispheric Opportunity through Partnership Encouragement Act (HOPE II) legislation. The tenth BWH compliance report (April[[12]](#footnote-12) 2015) reported that S&H Global, is not in compliance with certain articles of the labor code, specifically (i) compensation (wage information, use and deduction); (ii) contracts and human resources (dialogue, discipline and disputes); and (iii) occupational safety and health (chemicals and hazardous substances, emergency preparedness, health services and first aid, OSH management systems, welfare facilities, working environment and worker protection).  As part of the Rules and Regulations, specific labor requirements are included and SONAPI will have the right to audit the tenants up to 3 times per year. The PIC EHS Manager will verify S&H Global’s compliance with occupational health and safety practices, as part of the EHS management system  Non-compliances with the labor code have been observed at workers from the laboratory facilities, who work overtime without the appropriate remuneration. The Bank will continue to work with Better Works Haiti to provide training to Tenants and SONAPI to ensure there is compliance with Haitian Labor Laws. |
| Transportation  (Art. 466, 91: Haitian Labor Code) | **Compliance requirements met.** The Haitian law requires that transport be provided to workers free of charge in non-urban industrial area.  The existing transportation program needs to be improved in terms of capacity and safety since the number of workers using the system is growing fast. To ensure the improvement of the system, SONAPI will need to implement the passengers counting system, buy additional buses and implement the long term strategy addressing sustainable costs, multimodal transportation options, private management of the transportation system, and the organization of services for 2015 and beyond To comply with this it will be critical that funds are available to finance this implementation of this plan. |
| Food Service (Art. 462: Haitian Labor Code) | **Compliance requirements expected to be met**. Haitian Labor code Art. 462 stipulates that where there are insufficient facilities for the purchase of food, refreshments and appropriate meals, measures should be taken to make such services available to workers. Compliance will be met through the preparation and implementation of the food provision management plan. |
| Maternity leave (Law 7, Chapter VII Art. 321-322 and 330) | **Compliance requirements expected to be met**. Haitian Labor codes Law 7, Chapter VII sections 321-322 and 330 stipulates that pregnant women are to receive 12 weeks paid leave, 6 weeks prior to the pregnancy and 6 weeks after birth.[[13]](#footnote-13) Pregnant women are also to receive two 30 min breaks throughout the workday prior to pregnancy and two breaks after pregnancy for breastfeeding. To ensure compliance, as part of the rules and regulations of the PIC, SONAPI will audit tenants (including the requirements for pregnant employees and maternity leave). |
| Adequate sanitary facilities  (Haitian Labor Code Law 8 Chapter V Art. 439, 469, 470 and 473) | **Compliance requirements expected to be met**. Haitian Labor Code Art. 439 requires proper sanitation and adequate facilities for washing and drinking water available in suitable location and sufficient quantities for men and women (Art. 469 and 470). Compliance will be met through the construction of additional sanitary facilities in the cafeteria and assurances by the SONAPI that the facilities meet the standards of the Haitian Code of Labor. |
| Contribution to health insurance and pension programs (Haitian Labor Code Law Chapter III – Art. 481) | **Compliance requirements expected to be met**. Art. 481 of the Haitian Labor code stipulate that every worker should have a health card. To ensure compliance, as part of the Rules and Regulations of the PIC, SONAPI included specific documentation requirements proving compliance with the Haitian regulation. Employers are required to contribute to national health insurance and pension schemes implemented by OFATMA and the National Office for Old Age (ONA), which fall under the Ministry of Social Affairs and Labor. |
| **B.4. Other Risk Factors** | Environmental Governance Capacity | **Compliance** **requirements expected to be met**. To address the low capacity of SONAPI and absence of adequate PIC Management Plans for operation, SONAPI has put in place an EHS management team and a specific EHS budget is available and will be disbursed by the end of August 2015. An EHS Management System is being developed of which key elements should start implementation before the end of the year. UTE is working with an external firm (BETA) to help them with the supervision of the construction including EHS aspects.  In addition, SONAPI is expected to create and put in place the Environmental and Social Sustainable Development Mechanism (ESDM) to support environmental and social sustainable development activities in the surrounding communities and reduce the risks of social conflicts. |
| **B.5. EA Requirements** | Environmental Baseline | **Compliance requirements expected to be met.** A rapid ecological baseline for Trou-du-Nord was completed under the second operation HA-L1076. Contracts for the biological and socio-ecological baselines for the PN3B have been signed to develop the management plan for the protected area. |
| ESMP | **Compliance requirements expected to be met through the following:**  For all previous operations the ESMPs for construction have been prepared.  The UTE will present a construction ESMP for this operation.  The grievance mechanism procedures have been prepared and will need to be implemented by SONAPI.  The ESMP for operation of the WWTP has been approved by the Bank and will be implemented.  The key documents of the EHS Management System for operation have been approved and will be implemented before December 2015 and the tenants will prepare their ESMPs. |
| Indirect and Cumulative Impacts | **Compliance requirements expected to be met.** Significant indirect impacts have not yet been experienced. Preliminary cumulative impacts have been assessed through a CIA in 2012. An updated CIA was finalized mid-November 2015 and some of the recommendations will be budgeted and implemented by early 2016.  Studies under the Emerging and Sustainable Cities TCs (HA-T1185 and HA-T1186) looking at specific land-use and development plans for nearby towns are ongoing. Early results show the potential for growth in the key surrounding cities (Terrier Rouge, Trou-du-Nord and Limonade). Caracol will need to manage its population adequately to ensure potential impacts to the PN3B are mitigated. |
| **B.6 Consultation** | Stakeholder engagement Plan | **Compliance requirements expected to be met** through the implementation of the Stakeholder Engagement Plan and Feedback Mechanism. |
| **B.7. Supervision and Compliance** | Supervision of Construction Phase and Operation Phase | **Compliance requirements expected to be met**. Construction activities supervised by an independent Supervision Firm - BETA Ingénieurs-Conseils.  The UTE will submit monthly and semi–annual compliance reports for construction.  The SONAPI EHS Manager and other team members have been hired and the structure of the EHS Management team presented. The process to hire a water Manager is underway.  SONAPI submits monthly compliance reports and certificates for operations as well as semi-annual compliance reports.  An independent consulting firm has been hired by the Bank since 2013 to supervise safeguard compliance in both construction and operation quarterly. |
| **B.8. Transboundary Impacts** | Transboundary Aquifer | **Compliance requirements met**. No transboundary impacts have been identified to date. Long term transboundary impacts (once the PIC is fully operational) are not expected to occur.  The TC on Water Availability, Quality and Integrated Water Resources Management in Northern Haiti (HA-T1179) and the biological baseline will help assess and monitor the risks of any impacts occurring. Based on that assessment, if necessary, mitigation measures will be implemented in accordance with Directive B.8. |
| **B.9 Natural Habitats and Cultural Sites** | Significant conversion of Critical Natural Habitat or Natural Habitat | **Compliance requirements expected to be met.** Chance find procedures have been included in the construction ESMP.  Specific funds have been allocated to help with the establishment and management of the PN3B.  Required analyses and key mitigation and monitoring measures must be implemented in a timely manner to avoid conversion or degradation of CNH and to minimize impacts on NH. |
| **B.10. Hazardous Materials** | Temporary Hazardous waste facility | **Compliance requirements expected to be met** through the implementation of the Waste Management Plan and the construction of the temporary hazardous waste facility by the end of 2015. |
| **B.11. Pollution Prevention and Abatement** | Wastewater and waste | **Exception to OP-704 related to Directive B.11 applicable.** Independent verification of wastewater quality indicated that all parameters for treated wastewater met the required standards, with the exception of total coliforms and color and the exception to OP-703 related to Directive B.11 will continue to apply until the effluent discharge standards are met, in accordance with the exception granted under operation HA-L1081. To assist the GOH in ensuring future compliance with Directive B.11, the IDB contracted an expert firm to evaluate potential impacts to aquatic life and human health. Based on the outcomes of their evaluation, the IDB and the GOH will prepare an action plan with specific mitigation measures which the GOH will be required to implement.  Adequate waste management at the temporary facility and the PIC will be provided through the SONAPI and the contracting of specific waste management firms. Waste management plans and procedures will be implemented. |
| **B.12 Project Under construction** |  | **Compliance requirements met** since the Bank has relevant requirements and action plans in place to ensure compliance with OP-703. Specific requirements set forth in Section V of this ESMR. |
| 1. **OP-704** | | |
| **Disaster Risk Management** | Disaster Risk Assessment and Disaster Risk Management Plan | **Compliance requirements expected to be met.** The level of risk for the Project (and area of influence) was classified as moderate and therefore, a targeted Disaster Risk Assessment (DRA) recommended. A preliminary DRA was developed under the remediation plan for HA-L1081 in 2013 and will be updated in 2015 including climate change risks and a Disaster Risk Management Plan (DRMP). |
| 1. **OP-761** | | |
| **Gender Equality in Development** | Equal job opportunity | **Compliance requirements expected to be met**. Currently, 67% of workers are women. In order to ensure equal access for women and men to jobs and career progression, SONAPI will organize sensitization sessions on jobs that provide equal opportunities for both men and women and will encourage tenants to conduct training sessions that would allow employees to gain skills necessary for professional and personal advancement. |
| 1. **OP-710** | | |
| **Involuntary Resettlement** | Outstanding liability from previous operation. | **Compliance requirements expected to be met.** The first operation of the Program HA-L1055, involved Compensation and Livelihoods Restoration Plan for the 383 affected persons impacted by the PIC. Currently there are 10 people that have not received their final compensation because of the delays at the IDB housing site. The UTE prepared an Alternative Resettlement Plan for the remaining 10 people and will implement it. |

1. ***Project Standards and Requirements***

Specific standards applied to this operation are those in the International Finance Corporation (IFC) General Environmental, Health, and Safety Guidelines, as well as sector specific guidelines, for Waste Management Facilities, Textiles Manufacturing, and Water and Sanitation.

The PIC EHS-MS is consistent with ISO 14.001 and OHSAS 18.001.

1. **Key Environmental and Social Impacts, Risks and Mitigation**
2. **Positive Impacts**

The Project will contribute to the socioeconomic development of Northern Haiti, provided there is adequate management of the environmental and social impacts and risks. In addition to the existing 7,700 jobs, the PIC will likely generate economic activity and additional jobs estimated as more than 20,000 at the end of 2020, with benefits spilling over into the surrounding population of the North and Northeast Departments. To assess the current impacts of these investments on the local population, the IDB is conducting a socio-economic survey, which is expected to provide preliminary results by the first quarter of 2016. One positive impact has been the access to electricity for approximately 9,000 households in the communities surrounding the PIC (e.g. Caracol, Trou-du-Nord, Limonade, Terrier Rouge and Quartier Morin), which receive electricity generated by the PIC’s power plant.

The creation of the PN3B in 2013 is also expected to have a positive impact on the region and, with adequate management, foster the sustainable use of coastal natural resources, provide alternative and sustainable livelihoods for its inhabitants, and support tourism development.

The development of a structured process of land use planning for the Northeastern Corridor through the 2012 Regional Master Plan, and the urban development plans for the towns surrounding the PIC (Caracol, Terrier Rouge, Limonade, and Terrier Rouge) under the ESCI studies, if implemented, are also likely to have positive impacts in the development of the region. The creation of a new regional coordination agency (Autorité d’Aménagement du Nord et du Nord-Est – ANNEE) is also anticipated to be positive for land use in the region.

1. **Key Environmental and Social Impacts and Risks**

Because the overall intention of placing the Industrial Park in the Northern Region was aimed at bringing population and economic development to the region, the environmental and social long term and indirect negative impacts of the PIC are much broader than the actual project site and extend throughout the Northeastern Corridor. The PIC has also the potential to generate significant negative environmental and social impacts, which, if not properly managed could undermine and thwart the expected benefits from the Park. This is particularly true if population influx attracted by the job opportunities provide by the PIC is not provided with adequate housing, infrastructure, and public services (such as energy, education, health care, citizen security, etc, all of which are already deficient in the region). This population growth can cumulatively lead to unruly urban development, disintegration of social structures, un-safe urban areas, ecological degradation of the mangrove, sea grass, and the coral reef ecosystems in Caracol Bay, part of the recently created PN3B degradation and contamination of surface and ground water, and ultimately negatively affect the livelihoods of the residents. This scenario would create an environment not conducive for the PIC to expand and thrive. In addition, it would also hinder any potential economic growth in other promising economic areas, such as tourism.

* 1. In addition, deficiencies in the operation of the PIC, particularly its anchor tenant (S&H Global), presently the main employer and primary producer of effluent, waste, hazardous waste, and air emissions, as well population influx attracted by employment opportunities can also have important negative impacts not only in the PIC itself, but also in its surrounding areas and communities. Water, soil and air contamination, occupational health and safety accidents, workers’ dissatisfaction with lack of a grievance mechanism, non-compliance with labor standards, deficient food provision, insufficient facilities for women hygiene, and unsafe transportation, among others, can also create potential social unrest that can affect the viability and sustainability of the PIC in the medium to long-term. To date, population influx has been minimal because of the lower than expected growth rate of the PIC and application of the PIC’s policy to contract local employment through kiosks in the surrounding communities of Trou-du-Nord, Caracol, and Limonade. However, it will be increasingly difficult to control it, particularly since S&H Global has recently diverted from this policy, which could have unanticipated consequences.

1. **Environmental and Health and Safety Impacts and Risks and Mitigation**

***Construction phase***

Ingeneria Estrella (Estrella) is the main contractor responsible for construction of the PIC. Fulltime supervision of construction activities is currently undertaken by BETA Ingénieurs-Conseils (BETA) on behalf of the UTE, while the IDB undertakes regular supervision visits to assess the project as a whole. All new construction contractors or sub-contractors must present an ESMP aligned with the IDB’s policy for non-objection by the IDB and are subject to supervision and monitoring by the aforementioned parties.

Estrella has demonstrated improvement in EHS practices over the four years of construction. These improvements include better general housekeeping, improved solid waste management including hazardous waste, use of safer scaffolding structures, more frequent and timely inspections of fire extinguishers, and better implementation of EHS management procedures in general. Recent changes in their EHS management team have led to some setbacks in their overall EHS performance. These were discussed during due diligence and applicable corrective measures agreed (See sections V and VI). Due to the smaller scale of construction activities in this operation, the overall impacts from construction will likely be of a smaller magnitude than during the earlier phases. These are expected to include typical environmental impacts and health and safety risks that can be managed and controlled with the correct application of Estrella’s ESMP for Construction.

No significant incidents (i.e. spills) have been reported to date, and Estrella typically implements adequate management procedures to avoid, control and respond to spills. However, during the recent analysis mission the inadequate disposal and treatment of domestic sewage was identified as the probable source of contamination of the PIC’s main productive well. Corrective measures have been requested to ensure the issue is addressed as a matter of urgency (See sections V and VI). The improper handling, transport and disposal of liquid, solid and hazardous waste were swiftly corrected during previous operations. Estrella implements a solid waste management plan, which includes recycling (internally to the company) and the transport and disposal of solid waste at the PIC’s temporary waste disposal site, currently managed by SONAPI. Moderate quantities of hazardous wastes are temporarily stored in an adequately built and operated storage facility inside their construction campsite.

Similar to previous operations, the Occupational, Health and Safety (OHS) impacts and risks are typical of medium scale construction activities. Lack of Personal Protective Equipment (PPE), including for workers working at heights, vehicles surpassing on-site speed limits, lack of demarcated safety areas, lack of safety access and means of egress in excavation sites, as well as unsafe scaffolding planks, were still observed onsite, despite progress made through previous operations. Notwithstanding, no fatalities or serious injuries have occurred during construction. Sub-contractors recorded mostly minor injuries and a similar pattern is expected in the current operation.

***Operation phase***

**Institutional Capacity and EHS Management.** As of May 2014, SONAPI is responsible for the operation of the PIC, including EHS aspects. Reinforcing its capacity to manage EHS aspects is vital to the PIC’s long-term sustainability. Despite a new EHS Manager and a core EHS team, SONAPI still lacks sufficient human, technical and financial resources to adequately manage EHS aspects. The PIC is operating without adequate oversight and management of water resources, without a piped supply of potable water, with inadequate monitoring of groundwater abstraction, with inadequate solid waste management, with inadequate pest control, and inadequate emergency response. Similarly, the grievance mechanism has not been implemented and the provision of food and transportation for workers is deficient.

The continued operation of the PIC with limited EHS oversight negatively impacts the availability and quality of water, could result in soil contamination, could impact workers’ health, and could potentially contribute to degradation of the PN3B. The weak environmental and social management capacity of SONAPI could also exacerbate potential social issues: (i) labor grievances; (ii) social exclusion of surrounding communities due to a perceived lack of benefits from recent investments in the area; and, (iii) social unrest due to an inability to readily address workers’ and communities’ grievances because of a lack of functioning grievance mechanisms. SONAPI has hired a grievance officer in mid-November to be able to implement the grievance mechanism.

**Water and wastewater impacts.** Surface and groundwater in the region is highly interconnected. Therefore, if the expansion and operation of groundwater production is poorly managed, there may be a risk of localized impacts to the aquifer and the *Trou-du-Nord* River. For example, the improper siting of productive wells or the over abstraction of groundwater could lead to a reduction in flow to nearby community wells as well as to the river particularly during the dry season. Although the PIC’s water distribution network is fully operational, water quality has not achieved the intended standards[[14]](#footnote-14) resulting in potential health, financial, and reputational risks. A thorough review of the water supply system was undertaken in February 2015 by an independent expert who cited numerous technical, operational and administrative problems associated with the operation and maintenance of the system, including but not limited to, persistent problems obtaining disinfectants, softening agents, replacement parts, and maintenance tools.

A TC on Water Availability, Quality and Integrated Water Resources Management in Northern Haiti (HA-T1179) was developed primarily to quantitatively assess current and future water availability and analyze water quality and stakeholder demand to inform an Integrated Water Resources Management (IWRM) Plan for the Trou-du-Nord watershed. Preliminary results were presented to the IDB project team and subsequently shared with SONAPI and the UTE in October 2014. The results focused mainly on establishing the information gaps and identifying future research opportunities.[[15]](#footnote-15) To adequately manage the complex aspects related to water for the PIC, as a condition of HA-L1081, SONAPI committed to hiring a Water Manager to develop and implement a water resources management strategy designed to adequately manage water supply, wastewater, storm water runoff and water resources. After significant delays, the hiring process is underway and expected to be finalized by March 2016.

The PIC’s WWTP began receiving wastewater July 24th 2014; however, owing to high evaporation (to air) and evapotranspiration (by macrophytes) rates, the plant took significantly longer than anticipated to reach maximum capacity. Additionally, in May 2015 the main anchor tenant began producing effluent from washing activities; however, as wastewater was not being discharged to the environment during the filling phase, Directive B.11 did not apply. The filling phase was completed on September 23rd 2015 when the WWTP entered the calibration phase and final treated effluent began to be discharged to the Trou-du-Nord River rendering Directive B.11 applicable once again.

During this calibration phase and as a result of the additional wastewater being produced from washing activities, wastewater quality is being closely monitored at each stage of the treatment process. Independent verification of final treated effluent indicated that all parameters are within the required standards except for total coliforms and color. Therefore, the exception to OP-704 related to Directive B.11 granted under operation HA-L1081 will remain applicable until the effluent discharge standards are met. To assist the GoH in ensuring future compliance with Directive B.11 and in accordance with the exception to OP-704 related to Directive B.11, the IDB contracted an expert firm to evaluate potential impacts to aquatic life and human health and, based on the outcomes of their evaluation, the IDB and the GoH will prepare an action plan with specific mitigation measures, which the GoH will be required to implement. Potential mitigation measures include a pre-treatment facility designed to treat wastewater produced from washing activities. Funds have been allocated, a preliminary design has been approved and, if necessary, construction could begin prior to the end of 2015.

The WWTP also includes a test laboratory staffed by one full-time technician tasked with monitoring wastewater quality. Standard Operating Procedures (SOPs) and Quality Assurance and Quality Control procedures (QA/QC) must be enhanced for the laboratory to be considered fully operational and to comply with the conditions established in the previous operation HA-L1091 and ensure the sustainable, long-term operation of the WWTP.

**Impacts of solid wastes**: The Northeast does not possess an adequate waste management facility for the final disposal of solid wastes. To overcome this limitation, the PIC has been operating a small temporary solid waste facility situated 3 km west of the PIC.[[16]](#footnote-16) Estrella managed the site until SONAPI took over management of PIC operations in May 2014. Although a definitive landfill was included as part of HA-L1076, it is still under evaluation. Initially the temporary facility received only construction wastes, but once the PIC became operational in 2012, it became the only option for the discharge of all solid waste produced by tenants. The temporary waste disposal site has serious deficiencies that could result in soil and groundwater contamination. A solid waste management plan was prepared in early 2015, but has not yet been implemented. The EHS impacts and risks have increased and site management has deteriorated significantly. During due diligence, SONAPI agreed to implement an EHS corrective action plan to: (i) correct existing deficiencies (sort waste and prepare cells); and, (ii) manage the site adequately over time (i.e. compacting, access control, recycling of recyclable materials, etc.). Sections V and VI details the measures to be taken to mitigate those impacts.

In addition to domestic wastes, the PIC also produces limited volumes of hazardous wastes, for which adequate treatment and final disposal does not exist in Haiti. Therefore, an adequately designed facility, financed under the fourth IDB operation (HA-L1091), is expected to be built inside the PIC by the end of 2016 with a view to temporarily storing the hazardous wastes until a permanent solution is established.

**Occupational Health and Safety (OHS).** The OHS risks and impacts that may occur during operation are similar to those of medium to large industrial facilities and are associated with the operation of equipment and machinery, as well as those associated with the use and manipulation of potentially harmful materials, such as fuels, lubricants, chemicals and solvents. During operation, these risks could also include an unsafe work environment, exposure to high levels of noise, dust and physical and chemical hazards. The type of operational activities performed by tenants may lead to an increased risk of potential accidents, including fires and explosions.

During the July 2015 analysis mission the IDB confirmed that SONAPI has not yet started implementing its EHS-MS. Other safety risks identified during the due diligence visit include potential problems related to the firefighting system, including the absence of sprinklers in some buildings and the lack of dedicated firewater storage, which is instead reliant on the industrial water supply system.

To ensure that OHS is adequately managed SONAPI agreed to: (a) start implementing OHS plans and procedures (see section V for more details), and (b) address deficiencies in the firefighting system.

Better Work Haiti[[17]](#footnote-17) (BWH) monitors compliance with international labor and occupational, health and safety aspects of the garment manufacturing factories. The main findings of the 10th BWH Compliance Report[[18]](#footnote-18) indicate there are no major non-compliances in relation to critical aspects, such as child labor and forced labor, there are repeated failures to comply with minimum wage requirements,[[19]](#footnote-19) the number of doctors and nurses available on site, lack of adequate accessible toilet facilities, lack of adequate eating facilities, and trained personnel for firefighting,. S&H Global was found to be noncompliant, specifically in relation to health services and first aid, chemical and hazardous substances, and emergency preparedness. BWH continues to work with the factories to address areas of significant non-compliance, whereas the IDB continues to promote occupational health and safety training to workers, tenants and contractors through two recently approved technical co-operations (HA-T1182 and HA-T1209).

1. **Social Impacts and Risks and Mitigation**

***Construction Phase***

The social impacts and risks from this next phase of construction at the PIC are similar to those associated with the previous operations. At this stage, the key potential impact is related to the inappropriate application of the local employment policy by Estrella and other sub-contractors, as it has the potential to generate complaints and unrest in nearby communities. Other relevant potential social impacts include an increase in vehicle-pedestrian accidents due to an increase in traffic of heavy truck and vehicles.

Strategies implemented by Estrella have been successful in minimizing these impacts and risks listed. Such strategies include the Local Employment Plan to ensure preferential hiring of locals from the towns surrounding the PIC; hiring only through kiosks installed in the surrounding towns to avoid hiring at the gate[[20]](#footnote-20) or though representatives of the communities; and provision of free transportation to the workers.[[21]](#footnote-21)

***Operation Phase***

The most critical impact of the PIC’s operation is the potential population influx, which could lead to uncontrolled urban development in the surrounding areas and related potential cumulative impacts, including, but not limited to, the potential degradation of the PN3B through increased salt and mangrove extraction to supply the needs of a growing population. Uncontrolled growth can potentially exacerbate the competition for already scarce natural resources, infrastructure and public services, for example, leading to a spike in gender-based violence and the spread of epidemiological disease.

**Workers’ Transportation.** The workers’ transportation system is currently being managed and subsidized by SONAPI. It involves 30 buses acquired by SONAPI using drivers from the Haitian Union of Transporters and 13 additional rented buses, for the workers’ daily commutes. The buses currently operate two morning shifts and three afternoon shifts (an additional one for overtime workers) covering more than 6,500 workers. There are four designated bus stops in different areas in the communities of Caracol, Trou-du-Nord, Limonade and Terrier Rouge. However, the current system is insufficient for the number of workers, and will continue to be insufficient as the worker population grows. Lack of transportation to and from Cap-Haitian represents additional risks for female workers[[22]](#footnote-22) that must be addressed. In addition, SONAPI lacks sufficient operational resources (16 boarding inspectors only) to effectively control the boarding system, the overall safety conditions of the buses, and to ensure drivers comply with the maximum capacity and maximum speed limits. At present, buses are overcrowded, the boarding process is sometimes unruly and unsafe, and drivers often speed, increasing the risks of accidents.

An adequate transportation system is key to avoid uncontrolled urban development outside of the PIC. SONAPI has hired a Communications Officer that is also acting as Transportation Coordinator, and is in the process of putting in place the recommendations issued by an independent expert hired by the IDB to enhance operational planning of the system, so that it can serve the PIC needs for the next year, when the number of workers is estimated to reach 10,000, including automated access control to ensure the system is used by PIC workers only. The expert also provided advice on the design of a bus depot (e.g., bus washing, parking, maintenance, and more efficient itineraries) and using a private bus operator for the transportation of workers.

To respond to the long-term demand the IDB is promoting cooperation among: (i) the Emerging and Sustainable Cities Initiative, to develop a long-term transportation plan that focuses on the four cities closest to the PIC; (ii) a consultancy to develop a Business Plan for a multimodal business park (terminal) to serve the North/Northeast Region and the PIC; and, (iii) a TC (HA-T1183) to address urban development of the buffer zone adjacent to the PIC. Human and financial resources to manage the workers’ transportation are expected to be secured through (i) SONAPI’s income from the tenants, (ii) outsourcing of the system, and, (iii) procurement of the needed additional buses (through the IDB operation and the GoH).

**Food Provision for Workers.** To integrate the local community and small businesses with the PIC and to help avoid the concentration of food vendors outside the Park’s entrance, independent cooks sell food to the workers inside the PIC during breakfast and lunch hours. Food is currently prepared off-site and brought onsite by over 125 independent cooks from the community. In addition, there is a third-party restaurant onsite that caters to middle management and supervisory level workers (approximately 50 meals per day) while providing an additional 100 meals/day to the general workers. The risks of food poisoning and the potential for a cholera outbreak increase with the growing number of tenants and workers, given that, except at the restaurant, there is no quality control for food safety and hygiene standards. As employment at the PIC continues to rise, it is essential that SONAPI develops a long term sustainable model for food provision.

The availability of affordable meal options, together with incentives to keep employees on-site during meal times, is an important component of the influx management strategy and is likely to reduce the likelihood of informal food-service providers gathering outside of the PIC main gates. In 2014, with the help of the IDB, SONAPI hired an expert to train 22 of the cooks in hygiene and health and safety;[[23]](#footnote-23) this training should continue to cover all cooks working inside the PIC. It was also agreed that SONAPI will hire an expert to develop and implement a food provisioning strategy, including a diagnostic of the current situation and preparation of the proposed strategy. SONAPI will then hire the competent workforce and implement the strategy (see section VI).

**Labor Standards.** PIC textile manufacturing tenants benefit from preferential duty free-treatment through 2010 Haiti Economic Lift Program (HELP) providing they comply with national labor law and core labor standards. These standards are monitored by Better Work Haiti – unfortunately, S&H Global does not meet with all of these standards. In an effort to aid tenants with compliance to national labor standards IDB organized training on labor standards with the support of national and international labor experts. Over 150 supervisors and managers participated in a series of training geared to labor compliance in the manufacturing sector, and over 200 employees have received sensitization sessions on the issue. The SONAPI EHS management team received the same training sessions as part of their capacity building activities. In order to ensure continued compliance, lessons learned from the training sessions should be monitored and follow-up training modules should be prepared and delivered. A continuous labor training program can be valuable to tenants, their employees and SONAPI. Cross-cultural communication issues have contributed to a tense atmosphere and perceived and reported aggressions (documented in previous UTE reports and during gender and labor training sessions conducted by the IDB). Upper management staff is mostly Korean and many do not speak French or Creole, middle management staff is mostly Central American and do not speak French or Creole, to aggravate matters few of the upper management staff speak Spanish and therefore have trouble communicating with staff that deals directly with national staff. In order for employees to work under adequate labor conditions at the PIC these issues need to be addressed and SONAPI must insist that tenants adhere to national labor standards. The hiring of a grievance officer and the implementation of the grievance mechanism is necessary and would help to support compliance; SONAPI hired mid-November 2015 the Grievance Officer and now needs to implement the mechanism.

**Gender Equity.** The PIC employs a significant amount of women (approximately 67% of the total workforce, excluding contractors) the majority of whom are of childbearing age. Although there is a high female employment population, the Park environment shows specific issues related to gender. Currently, the PIC does not provide on-site childcare, adequate lactation facilities for breast-feeding, proper bathroom and sanitary facilities, access to clinic and dispensary. The lack of childcare (or the significant expense of alternative childcare offsite) can potentially create a barrier to more women joining the PIC workforce or being able to pursue senior positions with increasing responsibility. It can also eventually push many women out of the workforce to save money as the primary caregiver for young children. In addition, in many cases pregnant women and women that breastfeed are not provided adequate breaks by the tenants (as required under the Haitian Law). Adequate solutions must be adopted regarding meeting existing labor standards and advancing women employee’s career prospects.

**Involuntary Resettlement.** The new infrastructure that will be constructed inside the PIC will not involve any additional involuntary or economic displacement of affected people. However, there are 10 outstanding cases that require satisfactory closure to comply with IDB’s resettlement policy. When the 250 ha site was acquired, a Compensation and Livelihoods Restoration Plan was prepared as part of the original program (2552/GR-HA). The Land-for-Land component of the original Plan had to be abandoned due to conflicting interests of the stakeholders, which seriously delayed the implementation of the plan and ultimately led to the reconsideration of this component. The revised plan consisted of four options for the 442 affected persons impacted by the PIC. Those options are: (i) cash compensation for the 402 recipients that are not considered vulnerable and not at risk of impoverishment from cash compensation; (ii) compensation under the national pension system for those over age 65, an option accepted by 14 recipients; (iii) an adaptable letter of credit, whereby the UTE will purchase a lease-hold title for plots identified by affected farmers after reviewing the status of the land for 11 people; and (iv) a housing option for 10 recipients under the IDB Housing Program through the *“Fonds d’Assistance Economique et Sociale (FAES)”.* The final cash compensation has been disbursed to 402 affected persons without issue.

Although all recipients received land through the voucher program without any issue, the UTE, with the help of the Ministry of Agriculture, is seeking to provide technical assistance to the landowners through an IDB program. Furthermore, a lack of acceptable identification documents stalled the introduction of one person into the ONA pension program, while delays at the IBD housing site located in Terrier Rouge, have prevented the remaining 10 people from receiving the homes initially chosen as their method of compensation (option (iv) above). An attempt to place these 10 people at a USAID housing site failed due to the restrictions placed on rentals at that site making it necessary to seek alternative options. The UTE prepared an alternative resettlement plan for the remaining 10 people and will start implementing it in the coming weeks.

**Grievance Mechanism and Stakeholder Engagement.** Grievance Mechanisms for PIC workers and another for communities, as well as a Stakeholder Engagement Plan were developed. As part of the EHS Management System developed for the PIC, the Plan and Mechanisms were strengthened in line with international standards and best practices (UN Global Compact, Ethical Trading Initiative and Social Accountability International, among others), as well as its capacity to address specific labor requirements. However, SONAPI lacks the resources and personnel to adequately implement the Grievance Mechanism and the Stakeholder Engagement Plan. SONAPI hired a grievance officer in mid-November 2015 in order to implement the grievance mechanism.

**PIC Management Sustainability.** Several options for social support to the communities will be analyzed by the IDB as part of HA-T1181, including gender specific issues (i.e. maternity leave, equal career advancement), the design of a social corporate responsibility fund (or Environmental and Social Sustainable Development Mechanism– ESDM) for the PIC, involving a public-private partnership with the PIC tenants to fund investments in the communities, such as lactation facilities for the women employed at the PIC, adult literacy, after school activities (given that S&H Global’s hours of operation might extend to 6:30 pm daily to free employees on Saturdays), among others that will be identified and discussed within the PIC EHS Committee. Additionally, as part of the Rules and Regulations of the PIC specific provision for gender equity were included.

The PIC has introduced new management modules to SONAPI’s structure: The PIC Manager and the EHS Department. The EHS management team must enforce adequate environmental, social, and health and safety practices of its tenants and their employees through a variety of mechanisms, rules and regulations. In addition, all tenants (in particular textile manufacturing tenants) are often required to adhere to strict regulations enforced by buyers, and comply with national and international standards.

The manufacturing industry in Haiti has already developed a compliance support system through the Ministry of Labor, the *Comité Tripartite de la Mise en Ouevre de La Loi Hope* (CTMO-HOPE, particularly for the textile industry) and Better Works Haiti. These entities are part of a roundtable that also includes an independent Ombudsperson.

To ensure the sustainable management of the PIC, it is important that the PIC management and EHS team are integrated into these already established mechanisms, so that they participate in on-the-job training and understand the requirements that their tenants must comply to and how to provide them the needed support.

1. **Cumulative Impacts**

The project also poses key concerns regarding to incremental, cumulative and long-term impacts that, unless effectively managed, have significant potential to affect the quality of life of the population surrounding the PIC and degrade the natural resources, which in some cases are in better condition than in many other parts of Haiti. Any significant degradation of natural resources, such as surface and ground water, mangroves, forests, and the marine environment would put in jeopardy not only the livelihoods of the local communities but also any potential for broadening the economic base of the area. With a relatively intact coral reef and unique historical sites, the region where the PIC is situated has good potential for tourism. Unmanaged cumulative and indirect impacts may also affect the ability of the PIC to attract or retain tenants.

**Indirect, long-term and cumulative impacts**. 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-Haïtien and Ouanaminthe Corridor), in the medium to long-term they may also lead to negative indirect and cumulative environmental and social impacts. Lack of adequate land-use planning, zoning and enforcement coupled with insufficient public infrastructure, may pose high associated risks for the PIC’s social and environmental sustainability, including: (i) population influx from outside the area, which could generate social tensions, spread epidemiological diseases, exert pressure on already scarce and degraded natural resources, increase deforestation, and overload public services;[[24]](#footnote-24) (ii) informal settlements around the PIC, due to insufficient housing and accommodations available to meet demand from new workers, or an inflation in the cost of existing formal housing; (iii) increased safety risks due to increased road traffic accidents; (iv) unforeseen gender imbalances and gender-based violence in local communities, created by a largely female workforce at the PIC and high male unemployment in communities around the PIC; (v) heightened security risks due to population influx; (vi) labor issues onsite at the PIC if national labor laws and ILO standards are not adhered to; and (vii) social exclusion leading to tension in the communities if the influx of investments in the region do not lead to direct benefits to the population.

Moreover, an increase in local population combined with a lack of wastewater infrastructure in Northern Haiti could contribute to the existing contaminant load of surface and groundwater resources. This is particularly relevant to the PIC given its downstream location where even moderate changes to the upstream hydrological regime or upstream sources of pollution could critically disrupt the PIC’s current effluent discharge strategy, especially in the absence of a watershed management framework. Notwithstanding, new businesses also present opportunities, for example, agricultural production within the vicinity of the PIC could potentially benefit from treated wastewater being produced as the PIC for irrigation.

As part of the development of the Northern Regional Master Plan, a Cumulative Impact Assessment was finalized in 2012. The key driver for implementing the Northern Regional Master Plan is the development of a Regional Planning Authority (Autorité d’Aménagement du Nord/Nord-Est – AANNE). As part of the IDB’s support to CIAT, a high-level workshop was held in Northern Haiti in March 2015, focusing on (i) the CIAT Regional Planning Authority; and (ii) the update of the CIA. The event gathered a large audience of high level representatives of the government of Haiti.[[25]](#footnote-25) Similarly, representatives of large investments in the North and Northeast Departments also attended to present their projects and plans for potential expansions. Such participation by high-level representatives of the Haitian Government could be a clear indication of its commitment to the decentralization strategy for the North and Northeast Departments.

However, there continues to be an ongoing challenge in developing the institutional arrangements within the GoH to implement the recommendations of the CIA. The lack of adequate mechanisms, coordination and plans for the development and expansion of the growing urban centers in the North-Northeast region raised concerns of how to ensure the economic development fostered by the PIC will not result in an even more uncontrolled urban development along the Cap Haitien-Ouanaminthe axis.

**Risks of Informal Settlements.** To date the management plans developed for the PIC have successfully limited informal settlements around the PIC, with the exception of a small market at the main gate and few new houses along the road to, and within the small village of Caracol. However, as the job market increases and the local pool of potential workers becomes insufficient to fulfill the demand, the need for housing may quickly accelerate to accommodate workers who may arrive from outside the region. Without an adequate market of affordable low-income houses uncontrolled development may result.

Although implementation is still uncertain, the IDB is advancing some studies and assessments designed to address the main concerns through collaboration among various divisions within the IDB. It is critical that sufficient funds are allocated to complete and implement the outcomes of these studies and assessments in a timely manner. In addition, the multiplicity of proposals, loans, grant operations and TCs will require close coordination among multiple teams and divisions within the IDB. Among those, the IDB is financing urban planning solutions, including: (i) approximately 900 housing units (which are currently delayed), some within close range, e.g., 3 km from the PIC, including 242 units in Terrier-Rouge and 184 units in Ouanaminthe[[26]](#footnote-26); (ii) Urban Development Plans, with services to strengthen the urban growth of towns closest to the PIC, particularly Trou-du-Nord; and (iii) zoning and Communal Development Plans, which are designed to assist the private sector with investing in housing and the local population with building its own houses. Whereas this is clearly insufficient, other mechanisms will be discussed with the AANNE as part of the implementation of the Regional Master Plan.

**Community Safety and Security Risks.** An increase in activities in the PIC and surrounding areas will lead to an increase in traffic and safety risks for local communities. The security of the inhabitants of the region is tenuous and requires a carefully coordinated regional strategy between donors, local and national government entities, healthcare workers, and law enforcement that include monitoring traffic accidents, crime rates, cost of living, epidemiological data, and population growth. It is vital that the communities play an integral role in future urban planning schemes and directly influence projects meant to improve their livelihoods. In addition, according to the CIA, there is still a growing demand for public social services.

The IDB’s Transport Division is working to improve the transport network surrounding the PIC. Improvements to the road to Caracol include the identification of critical areas, the creation of bike lanes, and overall improved surfaces. As the IDB’s work with the Emerging Sustainable Cities Initiative evolves and the Regional Master Plan starts to be implemented, a hierarchy of transportation routes will be developed and implemented, thus reducing the current risks (as no hierarchy currently exists, and all types of traffic compete for space on the same roads).

**Natural Resources and Biodiversity.** In relation to natural habitats, there is the potential for population influx driven by new developments associated with the PIC to impact the availability and water quality of the *Trou-du-Nord* River. Moreover, there is a risk that the PIC will drive the significant conversion and degradation of CNH through indirect and cumulative impacts. Specifically, population influx could lead to (i) a loss of ecological services provided by mangroves, such as spawning grounds, ecotourism and protection against storm surges, resulting in a potential loss of livelihoods; (ii) significant depletion of fisheries through overfishing; and (iii) negative impacts on mangroves, coral reefs and beaches from the discharge of pollutants/solid waste.

The mitigation plan established in previous operations for a total of US$900,000 (US$ 300,000 in HA-L1055 and US$ 600,000 in HA-L1076) and the resources in HA-T1180 (US$180,000) are critical in providing support to the ANAP and to support the establishment and functioning of the PN3B. Unless funding is secured and activities implemented, the Project’s long term compliance with Directive B.9 of OP-703 cannot be guaranteed (risk of significant conversion or degradation of CNH). The socio-economic study and biological baseline are currently underway and should be completed by the end of 2015 or early 2016. Development of the sustainable alternative employment opportunities study has been seriously delayed, but is expected to be advanced during the coming six months.

Management and monitoring plans for the PIC related to water quality and biodiversity will be refined in accordance with the results of the biological baseline study. Of particular interest is the impact of the PIC on the water quality of potentially sensitive receptors: mangroves, coral reefs, sea grasses and aquatic life. Specifically, key mitigation and monitoring measures required are: (i) wastewater treatment within the PIC that ensures that effluent from the PIC does not exacerbate pressures on the habitats; (ii) a water quality and biodiversity monitoring plan must be developed and implemented based on existing information and must be functioning during the PIC’s operations to ensure that water quality remains within established standards; and (iii) the extended aquatic biodiversity baseline must be completed, building on the October 2013 rapid biodiversity baseline study, and the information acquired from this study used to adjust mitigation measures, water quality standards, and the approach to monitoring as necessary.

It should be noted that the aquatic baseline and the water quality baseline (already partially undertaken) are complementary products. The latter is designed to ensure that: (i) the PIC complies with regulatory requirements, e.g., the IFC EHS General Guidelines; and (ii) impacts to the surrounding environment from potential contamination at the PIC are routinely monitored. The former will then help to determine if the application of existing regulatory requirements is sufficient to maintain a healthy aquatic environment; and if not, develop complementary measures to be included in the ESMP to help ensure the sustainability of the aquatic environment. These two elements need to be addressed collectively through an integrated water and biodiversity quality monitoring program and the process of hiring a Water Manager to assist with this activity is now underway.

## Natural Disasters Risks

The PIC is located in an area exposed to natural hazards and has been classified as moderate risk, which could be exacerbated, particularly if those risks are not adequately managed. For this reason, and to meet compliance with OP-704, a preliminary DRA was prepared for HA-L1081 operation in 2013 and will be updated with new data and information from different sources including the Vulnerability and Risk Assessment of Natural Hazards, under the ESCI Urban Development and Climate Change Study for the Northern corridor, the flood simulation model (HA-T1179), the Emergency Response Plan (ERP) developed for the PIC, among others. As part of the updated DRA, a DRMP will be developed including proposals for the design of disaster prevention and mitigation measures, safety and contingency plans to protect human health and economic assets, and their estimated costs; an implementation plan; a monitoring program, and indicators for progress.

Based on the preliminary version of the DRA, the PIC design and construction incorporated specific measures to mitigate the principal risks (flooding, hurricanes and earthquakes) such as raising the buildings to avoid flooding and following construction standards to resist earthquakes and hurricanes. In addition, the ERP was developed to address emergencies related to such natural disasters. However, due to the limited capacity of SONAPI’s personnel, the ERP is not yet being implemented, what increases the risks for the PIC in case such an event should occur.

1. **Other Risks**

**SONAPI Capacity and Reputation Risks.** Taking into consideration the totality of the potential medium and long-term impacts and risks described in this document and the PIC’s environmental and social track record to date, overall the PIC, and in particular this last operation, poses a high reputational risk to the IDB. Of particular importance is the limited (or lack of) SONAPI’s capacity to ensure the PIC’s long-term sustainability, including that the PIC implements an adequate EHS management system so that its operation does not cause negative effects on the neighboring communities and the PN3B and the *Trou-du-Nord* River, a sensitive receiving body that receives the effluents of the PIC before discharging in the Caracol Bay. SONAPI’s failure to implement adequate environmental and social mitigation measures, along with the current deficient capacity of institutional agencies to plan and implement sustainable urban development in the region, in addition to the lack of coordination among donors in the Northern region, further exacerbates reputational risks for the IDB, the GoH and other international agencies involved currently investing in Northern Haiti.

In an effort to address these risks, the IDB will continue to develop parallel initiatives (operations and technical cooperation) to ensure that SONAPI has the technical and institutional capacity and tools available to adequately manage the EHS aspects of the Park in the long–term. At the same time will also support government agencies at the regional level, such as the CIAT and ANAP, as well as local municipalities, to ensure they have adequate capacity and sufficient resources to implement the recommendations of the Regional Development Plan for the Northern Haiti, ensure protection of the Three Bays National Park, as well as implement the recommendations from the IDB’s Emerging Sustainable Cities Initiative and from the updated CIA study for the communities surrounding the PIC.

To help ensure the long-term EHS sustainability of the PIC, the Bank approved June 18th 2015 the Technical Cooperation HA-T1209 “Strengthening of the PIC's Environmental, Health and Safety Capacity” (US$400,000). The TC will focus on the following key objectives: (i) enhancing SONAPI’s technical capacity to manage EHS issues, and in coordination with BWH improving the health and safety performance of textile and garment factories in the PIC; (ii) supporting the implementation of the recommendations from the Cumulative Impact Assessment Update by strengthening the institutional capacity of key national and sub-national level agencies such as ANAP, CIAT and the Municipality of Caracol; and (iii) supporting the design and implementation of a strategy for the PIC’s long-term EHS and disaster risk management sustainability (in collaboration with key stakeholders such as SONAPI, CIAT, ANAP and the Municipality of Caracol). More details are available in the approved TC Document. [[27]](#footnote-27)

1. **IDB Additionality**

To date, the IDB’s support to the PIC has contributed to important environmental and social achievements: (i) the creation of the PN3B in October 2013; (ii) the preparation of a Northern Regional Master Plan and facilitation of setting up of a Northern Regional Planning Authority; (iii) the development of a hydrologic model (Hydro-BID); (iv) the development of the key elements the SONAPI EHSMS; and, (v) training on H&S aspects, and labor and gender issues to PIC workers.

Additionally, as a result of the IDB involvement, the PIC will be the only industrial park in Haiti to include adequate management of solid wastes and effluents, as well as a water safety plan, and an ESDM.

1. **Management and Monitoring of Environmental, Social, Health and Safety and Labor Impacts and Risks**
2. **Management Systems and Plans**

***Construction***

As indicated in section 4.6, in order to adequately manage EHS aspects, the construction firm must follow the requirements outlined in the ESMP for construction. Estrella has already implemented an IDB-approved ESMP and is currently implementing specific checklists under the supervision of BETA.

***Operation***

The EHS management framework developed for the PIC is based on SONAPI’s (a) Rules and Regulations for the PIC, including EHS requirements; (b) the PIC’s EHS-MS; and (c) the tenants’ EHS-MSs and ESMPs. SONAPI is responsible for creating an EHS mechanism to further develop, implement and enforce all EHS aspects of the Rules and Regulations in addition to the EHS-MS upon tenants, contractors, subcontractors and visitors. An important part of SONAPI’s responsibilities is to ensure that each PIC tenant and contractor conducts its activities and operations in compliance with the PIC’s EHS-MS. To that end, tenants and contractors are responsible for submitting specific individual EHS-MS as well as an ESMP for operations consistent with the requirements of the PIC’s EHS-MS, which in turn must be implemented to the satisfaction of SONAPI.

**SONAPI’s Rules and Regulations.** SONAPI’s Rules and Regulations for the PIC were approved in early 2015 and provide the mandatory governance framework for the PIC.[[28]](#footnote-28) They are binding upon all stakeholders (SONAPI, tenants, workers, contractors, subcontractors, visitors, agencies of the Government of Haiti, and any other parties who access the premises or use the PIC). Notwithstanding, the due diligence exercise identified certain elements which require revision, specifically those related to wastewater management. In parallel, it is further recommended that wastewater parameters to existing and future Tenancy Agreements be significantly revised to better control wastewater regulations while strengthening SONAPI’s legal recourse in the advent of potential environmental liabilities resulting from the discharge of non-compliant effluent.

**PIC EHS Management.** The key instrument to ensure adequate management of the EHS aspects at the PIC is to ensure that SONAPI implements an EHS-MS consistent with ISO 14001 for environment and OHSA 18001 for occupational health and safety. The implementation requires having a solid institutional structure, sufficient and suitable human, operational and financial resources, and appropriate management plans and procedures for its activities and operations. A framework for the complete EHS-MS for the PIC was developed in 2013 and finalized in 2014, with assistance of an external consulting firm hired by the IDB (see Figure 4). The key management plans and procedures (see Annex B) have already been finalized and approved by SONAPI and the IDB, and SONAPI is in the process of starting its implementation. The full structure of the EHS-MS is presented in Annex C.

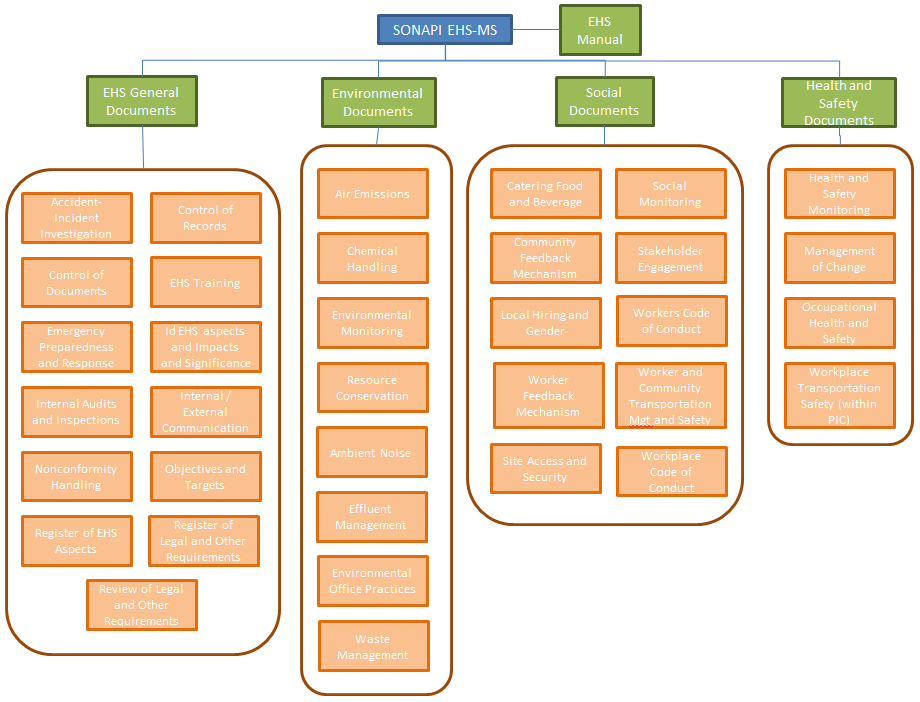


Figure 4 – SONAPI PIC EHS-MS structure

**Tenant’s EHS Management.** Under the EHS management framework for the PIC operations, tenants and contractors are required to comply with EHS management practices through two compliance mechanisms: i) the EHS requirements included in the Legal Tenancy Agreements[[29]](#footnote-29), and ii) SONAPI’s Rules and Regulations, also referred to in each tenancy agreement. Under both legal documents, each tenant is required to operate in compliance with the PIC’s EHS-MS and to submit to SONAPI for approval their individual specific environmental, social and health and safety management plan (ESMP).

1. **Remediation of Environmental Liabilities**

During the due-diligence, the IDB has identified numerous outstanding environmental[[30]](#footnote-30) liabilities from previous operations, several of which are deemed significant. Some of these environmental liabilities such as the hiring of a feedback officer and the requirements to improve construction EHS aspects were resolved prior to approval of the operation by the IDB’s Board of Executive Directors. Others that were not addressed in that limited timeframe have been included as first disbursement conditions in the Grant Agreement for this operation (see section VI).

In addition, prior to Board approval, the Executing Agencies (UTE and SONAPI) must:

1. Be in full compliance with all the Conditions established in the previous Grants (HA-L1055, HA-L1076, HA-L1081 and HA-L1091), or a Waiver has been granted by the IDB; and
2. Have no EHS impacts and risks that have not been, or are not being, adequately mitigated or compensated according to a mitigation/compensation action plan agreed with the IDB.

At time of Board approval, correction of any non-compliance or unmitigated EHS impacts and risks will be incorporated as condition for disbursement in the Grant Agreement for this operation.

1. **Monitoring and Supervision**

**Construction.** The construction is being supervised by three different entities to ensure adequate implementation of the ESMP and the EHS requirements: (i) the supervision firm contracted by the UTE on behalf of the executor (currently BETA), (ii) the EHS team of the UTE, and (iii) the IDB. Currently BETA employs two dedicated full time EHS specialists on-site and one additional health and safety expert one week per month for the supervision of the construction firm; they provide monthly reports to the UTE with specific actions to resolve non-compliances. The UTE reviews the reports from BETA and takes the necessary measures to follow-up with the construction firm. The IDB supervises construction four times a year through an independent consultant and provides recommendations to the UTE to improve compliance with the ESMP and EHS requirements.

**Operation.** The supervision and monitoring of the operation of the PIC is done by the IDB through seven to eight supervision missions of the environment safeguards unit per year focusing on each aspect such as wastewater, solid waste management, and the food provisioning system. In addition the IDB has hired an independent consulting firm (ERM) to perform quarterly supervision missions that result in specific recommendations to ensure compliance with EHS requirements.

However, once the IDB has completed the execution of this last operation (estimated 2020), it will no longer monitor the PIC’s activities. This will become the sole responsibility of SONAPI’s EHS Department, as part of the implementation and enforcement of the PIC’s EHS-MS. To that extent, it will be important to ensure that SONAPI and its EHS Department has sufficient capacity and resources to continue monitoring any new construction at the PIC as well as the tenants’ operations.

It is also of particular importance that the PIC supports the implementation of the PN3B, in particular the monitoring of natural resources, specifically: (i) the ongoing monitoring of water quality upstream and downstream of the PIC; and, (ii) monitoring of aquatic fauna in the *Trou-du-Nord* River, which may be impacted by the PIC’s activities and as prescribed in the forthcoming management plan. To protect the PIC and SONAPI from reputational risks it is important to coordinate monitoring efforts with ANAP and the PN3B to meet SONAPI’s obligations to monitor the effects of the PIC on this sensitive ecosystem.

1. **Environmental and Social Safeguard Performance Indicators**

In order to ensure long term sustainability of the PIC several performance indicators have been set up:

* Construction – As part of their monthly reports, BETA tracks EHS indicators through checklists for different aspects such as working at heights, use of PPE, scaffolding, evaluation of risks and training, excavations, waste management, fire hazards, vehicle maintenance, use and storage of chemical products, worker permits, sub-contractor requirements, and emergency response
* Operation – SONAPI has set up six objectives for 2015-2016: (i) finalize the prioritized documents of the PIC EHS management system; (ii) complete 100% of the hiring of the PIC EHS department staff; (iii) train 100% of the EHS staff based on a minimum basic EHS training program; (iv) start implementing the prioritized documents of the EHS management system (See Annex B); (v) finalize all documents of the EHS management system of PIC; and (vi) continuously improve the implementation of the EHS system. Specific indicators for the goals under each objective have been prepared and are being monitored. In addition SONAPI produces quarterly reports going over data such as the quantity of waste managed as well as employment figures.

The set of Key Performance Indicators for both construction and operation is presented in Annex D.

1. **Requirements to be Included in the Legal Documents**

Based on the conclusions of the environmental and social (E&S) due diligence, the conditions described below are required to be fulfilled for the Project, in form and substance satisfactory to the Bank.

The following conditions shall be included in the Special Conditions of the Grant Agreement and in other environmental and social (E&S) documents governing the execution of the project, thereby also triggering E&S provisions of the General Norms of the Grant Agreement and other applicable grant agreement provisions, including, among others: (i) consistency with Bank policies, (ii) notification of noncompliance, government inspections and regulatory reports and action, significant changes, judicial and arbitral claims, (iii) implementation of Corrective Action Plans, (iv) supervision arrangements, (v) contractual remedies, and (vi) document modification procedures.

Any substantive changes to any E&S provisions in later stages of operation approval and/or implementation will need to be discussed with, and agreed to, by the ESG specialist assigned to the operation

1. **Conditions Precedent to First Disbursement**
   1. Prior to First Disbursement of the Grant, the beneficiary must, to the satisfaction of the Bank through the SONAPI, fulfill the following conditions:
2. Present the ESMP approved by SONAPI for each of the tenants currently operating at the PIC or present proof that legal actions have been taken to terminate lease contracts of tenants that are not in compliance.
3. Show evidence that the PIC has a trained Emergency Response team and sufficient resources to control a level II fire.
4. Present the food provision management plan.
5. Show evidence that they have sufficient financial, human, and operational resources to monitor the environmental and social aspects of the PIC, including the water quality in the *Trou-du-Nord* River
6. Have signed with ANAP an interinstitutional agreement whereby SONAPI commits, inter alia, to: (i) participate in regular meetings with the ANAP, (ii) monitor the water quality in the *Trou-du-Nord* River and; (ii) inform regularly ANAP of developments in the PIC, including expansion plans and EHS aspects.
7. Comply with EHS requirements in regards to transportation: (i) have secured the area where the rented buses are parked during the day; and (ii) have installed access controls in this area to ensure that it is clean and kept free of unauthorized persons.
8. Comply with EHS requirements in regards to waste management: (i) have signed the contract with a company to rehabilitate the temporary site for solid waste management; and (ii) have signed the contract with a company to ensure proper management of short and long-term waste, including the management of the temporary solid waste management site.
9. **Environmental and Social Safeguard Measures post First Disbursement**
   1. No later than seven months after First Disbursement of the Grant, the following conditions shall be fulfilled in form and substance satisfactory to the Bank:
10. SONAPI must present evidence that the food provision management plan is fully operational and consistent with the food strategy approved by the Bank.
11. SONAPI must provide evidence that the Stakeholder Engagement Plan is being fully implemented.
    1. No later than eighteen (18) months after First Disbursement of the Grant, the following conditions shall be fulfilled in form and substance satisfactory to the Bank: SONAPI must have put in place a financing mechanism aimed at supporting environmental and social sustainable development in the surrounding communities (ESDM).
12. **Conditions Applicable Throughout the life of the Grant Agreement** 
    1. The IDB will require in its Grant Agreement that the Program, the Beneficiary and the Executing Agencies specified below, at all times during the life of the Grant Agreement, comply with the following requirements (UTE/MEF for construction and supervision of construction activities, referred to as “construction activities”, and SONAPI for the operation of the PIC, referred to as “operation activities”):
13. Comply with the following IDB policies: Environmental and Safeguards Compliance Policy (OP-703), the Disaster Risk Management Policy (OP-704)), the Involuntary Resettlement Policy (OP-710), and the Operational Policy on Gender Equality in Development (OP-761), as well as their respective guidelines, which the Beneficiary and the Executing Agencies acknowledge to know in their entirety.
14. Obtain all authorizations, licenses or permits relating to EHS, which are necessary for the execution of the Project, submit copies to the IDB, and implement respective requirements.
15. Request non-objection of the Bank for any material change that could have negative EHS impacts.
16. Agree to fully cooperate with the Independent Consultation and Investigation Mechanism (ICIM) of the Bank, provided that ICIM covers its own costs (UTE for construction activities and SONAPI for operation activities)..
17. Implement the following specific actions during the period of effectiveness of the Grant Agreement: (i) Consultation activities, information disclosure, participatory monitoring, and grievance management related to EHS aspects of the program, as specified in the ESMP and the Grant Agreement; and (ii) Ensure that all suppliers, service providers, companies or persons, and their subcontractors, hired by the Beneficiary comply with the EHS requirements applicable.
18. Within 15 days following its occurrence or identification: (i) for any substantial non-compliance with any of the EHS requirements, the UTE for construction activities, and SONAPI for operation activities and the EHS-MS, must send a written notice to the IDB and (ii) for any substantial impact, event, claim or complaint about EHS aspects of the PIC constructions or operations, the Beneficiary shall send a written notice to the IDB and other affected stakeholders and develop and start implementation of the corrective action plan referred to in section 6.7 f) .
19. SONAPI shall submit to IDB, no later than 15 days following its signature, copies of each PIC lease/tenancy agreements signed during the execution of this Grant Agreement.
20. SONAPI must implement the EHS-MS consistent with ISO14001 and OHSAS 18001.
21. SONAPI must maintain in place at all times a PIC Manager, an EHS Manager, an EHS core team of at least five (5) different officers (environment, social, communications, feedback, and health and safety officers), and a Water Resources Manager.
22. SONAPI must maintain in place at all times the ESDM).
23. UTE/MEF must comply at all times with all requirements set forth in the ESMP for the PIC.
24. UTE/MEF must present before the start of construction of component I the PGES for the Bank’s non-objection.
25. **Monitoring and Reporting**
    1. The Beneficiary, through the Executing Agencies, must implement the internal EHS supervision and audit arrangements, and the provisions for correction of non-compliances and remediation of negative impacts, such as EHS Management System mechanisms for continuous improvement (UTE for construction activities and SONAPI for operation activities).
    2. During the construction phase, the UTE/MEF must submit monthly EHS supervision reports following the format agreed with the IDB, within thirty (30) days following the end of each calendar month.
    3. During the disbursement period of the Grant Agreement, the SONAPI must submit monthly EHS supervision reports following the format agreed with the IDB, within thirty (30) days following the end of each calendar month.
    4. For two (2) years following the date of last disbursement, the SONAPI, must submit semi-annual EHS Compliance Reports, within sixty (60) days following the end of each semester of the fiscal year.
    5. Starting three (3) years after, and until five (5) years following, the date of last disbursement, SONAPI must deliver to the IDB, Annual EHS Compliance Reports within sixty (60) days following the end of each fiscal year of the beneficiary.
    6. For four (4) years after the last disbursement SONAPI shall allow for an independent panel of experts, paid by the IDB, to do a yearly audit of environmental and social performance of the PIC and allow for public disclosure of the results.

**Annex A**

**List of Environmental Assessments produced in relation to the previous PIC operations**

|  |  |
| --- | --- |
| HA-L1055 | |
| 1. Rapid Ecological Baseline – Trou-du-Nord | <http://www.iadb.org/Document.cfm?id=38957723> |
| 1. Environmental and Social Impact Assessment (ESIA) | <http://www.iadb.org/Document.cfm?id=36185911> |
| 1. Environmental and Social Management Plan (For the Construction Phase) | <http://www.iadb.org/Document.cfm?id=36389679> |
| 1. Environmental Assessment – Temporary Landfill | <http://www.iadb.org/Document.cfm?id=36753886> |
| 1. Resettlement Plan | [http://www.iadb.org/Document.cfm?id=36473886](http://www.iadb.org/Document.cfm?id=36389679) |
| HA-L1076 | |
| 1. Preliminary Hydrological Assessment Final (French) | [http://www.iadb.org/Document.cfm?id=36454424](http://www.iadb.org/Document.cfm?id=37091614) |
| 1. Alternative analysis for the Wastewater Treatment Plant (WWTP) | <http://www.iadb.org/Document.cfm?id=38931058> |
| 1. Environmental Assessment for Temporary PIC Solid Waste Management | <http://www.iadb.org/Document.cfm?id=38557908> |
| 1. Environmental and Social Management Plan (For Operational Phase) | <http://www.iadb.org/Document.cfm?id=37301037> |
| 1. Cumulative Impact Assessment | <http://www.iadb.org/Document.cfm?id=37092181> |
| 1. Environmental Assessment -Temporary Sewage Treatment System | <http://www.iadb.org/Document.cfm?id=38557908> |
| 1. Social Impact Assessment | <http://www.iadb.org/Document.cfm?id=37091614> |
| HA-L1081 | |
| 1. Update of Cumulative Impact Assessment | <http://www.iadb.org/Document.cfm?id=39970805> |

**ANNEX B**

**EHS Prioritized Documents**

The following procedures, guidelines and of the EHS Management System were prioritized:

* + EHSP-01: EHS Management System Manual
  + EHSP-05: Emergency Preparedness and Response Procedure
  + EHSP-06: Nonconformity handling
  + EP-04, EI-04A and EI-04B: Waste Management Procedure (EP-04), Instruction (EI-04A) and Guideline (EI-04B)
  + EP-07 and EI-07: Handling and Storage of Chemicals Procedure (EP-07) and Instruction (EI-07)
  + SP-01: Community Grievance Mechanism Procedure
  + SP-02 and SI-02: Workers and Community Transportation Management and Safety Procedure (SP-02) and Instruction (SI-02)
  + SP-03: Site Access and Security Procedure
  + SP-04 and SI-04: Stakeholder Engagement Procedure (SP-04) and Instruction (SI-04)
  + HSP-01: Workers Transportation Safety (within PIC) Procedure
  + HSP-02: Occupational Health and Safety Procedure

**ANNEX C**

**PIC’S EHS-MS Structure**

The PIC’S EHS-MS is structured in four modules:

(a) General documents,

(b) Environmental,

(c) Social, and

(d) Health and safety.

Each module includes management plans, procedures and instructions, as required.

1. General documents module: Apply to all three areas (environmental, social, and health and safety) and include the management plans and procedures to address identify/review/register of EHS aspects and impacts, review/register of legal requirements, EHS management objectives and targets, control of documents and records, EHS training, internal/external communications, internal audits and inspections, accident/incident investigation, non-conformity handling, and emergency preparedness and response.
2. Environmental module: Includes procedures and instructions to address air emissions, liquid effluents, ambient noise, handling of chemicals, solid wastes (including hazardous wastes) and environmental office practices, as well as requirements for environmental monitoring and resources management.
3. Social module: This module includes the PIC’s local hiring and gender policy, stakeholder engagement plan and procedures, site access and security, and addresses workers’ food provision and workers’ transportation management and community safety, workers’ and workplace code of conduct, two separate grievance mechanisms (community feedback and workers’ feedback mechanisms), and requirements for social monitoring.
4. Health and Safety module: Includes occupational health and safety management plans and procedures, requirements for workplace transportation (inside the PIC), a management of change procedure, and health and safety monitoring requirements.

**ANNEX D**

**PIC Environmental, Social, Health and Safety Key Performance Indicators (KPI)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No** | **Program** | **Indicator** | **KPI** | **Reporting Unit** | **Description** | **Target** | **Monitoring Frequency** |
| **CONSTRUCTION** | | | | | | | |
| **Health and safety (lagging and leading indicators)** | | | | | | | |
| 1 | H&S | OHSA Incident Rate | OHSA- IR | Unit | Total numbers of incidents multiplied by 200.000/ total worked hours by total workforce | ≤4 | Monthly |
| 2 | H&S | Lost Time Incident Rate | LTIR | Unit | Number of cases with lost work days, multiplied by 200,000 / total employee labor hours | ≤1 | Monthly |
| 3 | Training | Trained personnel | TR-HS | % | Percentage of personnel trained on H&S aspects / Total number of personnel | ≥ 70% | Monthly |
| **Environmental** | | | | | | | |
| 4 | E-MS | Env. Inspections (E-INS) | E-INS | Unit | Number of Environmental Inspections per month | ≥ 20 | Weekly |
| 5 | EHS-MS | EHS Nonconformities | EHS-NCF | % | Percentage of EHS Non-conformities corrected per month | ≥ 90% | Weekly |
| 6 | Domestic Solid Wastes | Recycling | W-REC | % | Percentage of recyclable wastes actually recycled | ≥ 10% over previous 6 months period | Semi-annually |
| 7 | Domestic Solid Wastes | Recycling | W-REC | % | Percentage of recyclable wastes actually recycled | ≥ 30% | End of year 1 (2016) |
| 8 | Domestic Solid Wastes | Recycling | W-REC | % | Percentage of recyclable wastes actually recycled | ≥ 100% | End of year 5  (2020) |
| 9 | Hazardous Solid Wastes | Storage | W-HAZ | % | Percentage of hazardous wastes adequately stored | 100% | Monthly |
| **Social** | | | | | | | |
| 1 | Local Employment | National workers | WORK-HAIT | % | Percentage of Haitian workers in relation to total workers | 80% | Quarterly |
| 2 | Local Employment | Local workers | WORK-LOC | % | Percentage of workers from the communities surrounding the PIC (including Cap Haitian and Ouanaminthe) in relation to total workers | 70% | Quarterly |
| 3 | Gender Equality | Women in total workforce | W-WORK | % | Percentage of women in the total workforce | 25% | Quarterly |
| 4 | Stakeholder Engagement | Community relations | COMM-REL | Unit | Number of activities with communities | ≥3 | Quarterly |
| **OPERATION** | | | | | | | |
| **Health and safety (lagging and leading indicators)** | | | | | | | |
| 1 | H&S | OHSA Incident Rate | OHSA- IR | Unit | Total numbers of incidents multiplied by 200.000/ total worked hours by total workforce | ≤4 | Monthly |
| 2 | H&S | H&S Inspections | HS-INS | Unit | Number of H&S Inspections per month | ≥ 8 | Weekly |
| 3 | Training | Trained personnel | TR-HS | % | Percentage of personnel trained on H&S aspects / Total number of personnel | ≥ 70% | Monthly |
| **Environmental** | | | | | | | |
| # | E | Environmental Incidents | E-Inc. | Unit | Number of environmental incidents in one | ≤ 2 | Monthly |
| 4 | E-MS | Env. Inspections (E-INS) | E-INS | Unit | Number of Environmental Inspections per month | ≥ 8 | Weekly |
| 5 | EHS-MS | EHS Nonconformities | EHS-NCF | % | Percentage of EHS Non-conformities corrected per tenant per month | ≥ 95% | Weekly |
| 6 | Biodiversity[[31]](#footnote-31) | Mangrove rehabilitation | MANG | m2 | Reduction in area (in square meters) of salt ponds in relation to 2015 baseline | ≥ 600 m2 | Semi-annually |
| 6 | Domestic Solid Wastes | Recycling | W-REC | % | Percentage of recyclable wastes actually recycled | ≥ 10% over previous 6 months period | Semi-annually |
| 7 | Domestic Solid Wastes | Recycling | W-REC | % | Percentage of recyclable wastes actually recycled | ≥ 30% | End of year 1 (2016) |
| 8 | Domestic Solid Wastes | Recycling | W-REC | % | Percentage of recyclable wastes actually recycled | ≥ 100% | End of year 5  (2020) |
| 9 | Hazardous Solid Wastes | Storage | W-HAZ | % | Percentage of hazardous wastes adequately stored | 100% | Monthly |
| 101 | Domestic Liquid Effluent | Compliance with standards | EFL | % | Percentage of samples that meet the standards | ≥ 80% | Monthly |
| **Social** | | | | | | | |
| 11 | Workers’ Grievances | Effectiveness of grievance mechanisms | W-GRIEV-EFF | % | Percentage of grievances received that are closed as per documentation, per month | ≥ 70% | Monthly |
| 12 | Community Grievances | Effectiveness of grievance mechanisms | C-GRIEV-EFF | Unit | Time for processing grievances from documented opening to documented closure | ≤ 15 working days | Quarterly |
| 13 | Local Employment | Tenants’ Local workers | T-WORK-LOC | % | Unskilled and skilled labor secured from local villages or communities surrounding the PIC, including Cap Haitian and Ouanaminthe, as a percentage of total workforce of tenants | ≥ 70% | Quarterly |
| 14 | Local Employment | Contractors’ Local workers | C-WORK-LOC | % | Unskilled and skilled labor secured from local villages or communities surrounding the PIC, including Cap Haitian and Ouanaminthe, as a percentage of total workforce of Contractors | ≥ 80% | Quarterly |
| 15 | Gender Equality | Women in total workforce | W-WORK | % | Percentage of women in the total workforce | ≥ 60% | Quarterly |
| 16 | Stakeholder Engagement | Communication | COMM | Unit | Number of meetings, workshops and other events held with stakeholders to review/discuss/present EHS matters | ≥ 1 | Monthly |
| 17 | Legal Compliance | Compliance with local laws | EHS-MS | % | E.g: Number of workers with OFATMA insurance. | 100% | Monthly |

1. The exception, as granted by the Board of Executive Directors, is in effect until the Permanent Wastewater Treatment Plant (WWTP) is completed and achieves the effluent discharge standards, in accordance with Directive B.11. The WWTP has been completed and is currently in the calibration phase. During calibration effluent discharge quality commonly fluctuates. Wastewater quality is being closely monitored and effluent discharge standards are expected to be fully met by August 1, 2016 at which time a progress report will be submitted to the Board. [↑](#footnote-ref-1)
2. Completion of the resettlement plans; full compliance with Haitian Labor Law; implementation of the workers’ and communities’ grievance mechanisms; maintenance of an adequate EHS management structure, with competent professionals, paid on time; adequate food provision to workers; and provision of potable water, among the most critical . [↑](#footnote-ref-2)
3. *Arrêté créant un parc national marin dénommé* : « *Parc des Trois Baies et des Lagons aux Bœufs* », published in The Moniteur, 11 December 2013. [↑](#footnote-ref-3)
4. Technical Cooperation (Water Availability, Quality and Integrated Water Resources Management in Northern Haiti) that finances studies related to the institutional governance for water management, data gaps in water resources management, and hydrological models for the Trou-du-Nord and Massacre Transboundary Aquifer [↑](#footnote-ref-4)
5. See <http://www.iadb.org/Document.cfm?id=39971479> for more details [↑](#footnote-ref-5)
6. Please find hereunder the link to the updated cumulative impact assessment of 2015: <http://www.iadb.org/Document.cfm?id=39859046>. [↑](#footnote-ref-6)
7. <http://www.ute.gouv.ht/caracol/images/stories/docs/environmental%20assessment%20of%20the%20usaidhaiti%20north%20park%20power%20project.pdf> [↑](#footnote-ref-7)
8. See document of HA-L1055: <http://www.iadb.org/en/projects/project-description-title,1303.html?id=HA-L1055> [↑](#footnote-ref-8)
9. See documents of HA-L1076: <http://www.iadb.org/en/projects/project-description-title,1303.html?id=HA-L1076> [↑](#footnote-ref-9)
10. The final resettlement dating from HA-L1055 is still pending. A lack of acceptable identification stalled the introduction of nine people into the ONA pension program and delays at the IDB housing site located in Terrier Rouge, have prevented the remaining 10 people from receiving the homes chosen as their method of compensation. [↑](#footnote-ref-10)
11. The National Water and Sanitation Directorate (DINEPA), was created under the law of 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, the criteria to be adhered to 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, such as the PIC. [↑](#footnote-ref-11)
12. <http://betterwork.org/global/?p=7370>. [↑](#footnote-ref-12)
13. The responsibility for paid leave is shared by OFATMA (*Office d'Assurance Accidents du Travail, Maladie et Maternité*) who are to provide payment for 6 weeks of the leave and the remaining 6 weeks is to be paid by the company. [↑](#footnote-ref-13)
14. Potable water should be treated to World Health Organization (WHO) drinking-water quality standards while industrial water should be softened to meet tenant requirements. Bacteriological contamination has been detected in the main productive well in addition to the water supply network, indicating contamination also occurs after the point of disinfection. Therefore, potable water is supplied by bottled water, which increases substantially the amount of plastic waste discharged in the PIC temporary site for waste disposal. The water softening system has been off-line for two months owing to technical and procurement difficulties. [↑](#footnote-ref-14)
15. The preliminary report provided “*information on the availability and quality of geospatial data for Northeast Haiti to assist in identifying watershed vulnerability around the PIC and to provide recommendations for improvements in geospatial data quality and availability that will enhance the assessment of water availability, and quality for the region. Upon review of the data gathered, it appears that most of Haiti suffers from a shortage of high-quality fine scale geospatial data that can be used in traditional watershed modeling analyses”.* [↑](#footnote-ref-15)
16. The lifetime of the temporary site could potentially be expanded until a permanent, long-term facility is operational. [↑](#footnote-ref-16)
17. See <http://betterwork.org/haiti/>. [↑](#footnote-ref-17)
18. See <http://betterwork.org/global/?p=7370>. [↑](#footnote-ref-18)
19. In relation to piece rate workers: the piece rate set at a level such that workers earn at least 300 Gourdes per day for ordinary hours of work. [↑](#footnote-ref-19)
20. As the number of construction jobs decreased the system has been modified and the kiosks are being used for operational jobs only. [↑](#footnote-ref-20)
21. Estrella has its own canteen that provides food for its international staff. The remaining workers use the same food provision arrangements currently operating at the PIC: local vendors are currently allowed to operate inside the PIC. [↑](#footnote-ref-21)
22. Security risks, mainly for the earlier shifts that need to leave Cap Haitian in the early morning when is still dark and few people are on the streets. [↑](#footnote-ref-22)
23. The first hygiene and food safety training was provided by the IDB in July 2014 as part of the components of the Social TC – HA-T1181. [↑](#footnote-ref-23)
24. Populations from the South may have educational and skills’ advantages, thus hindering the capacity of the local population to access new jobs at the PIC and other business developments. Additionally, an uncontrolled population influx can put a strain on already scarce resources and public services, leading to the growth of slums, increase in security risks, and epidemiological issues. [↑](#footnote-ref-24)
25. Including then Prime Minister, Mr. Evans Paul, Mr. Zephirin Ardouin, North Delegate, Mrs. Stephanie Villedrouin, Minister of Tourism. [↑](#footnote-ref-25)
26. Cahesse, the location for the proposed third site, will no longer be financed by IDB. [↑](#footnote-ref-26)
27. See <http://www.iadb.org/en/projects/project-description-title,1303.html?id=HA-T1209&page=1> for more details. [↑](#footnote-ref-27)
28. The PIC also includes off-site facilities that support its operations, such as the temporary waste disposal site. [↑](#footnote-ref-28)
29. These EHS requirements have been included in all the Tenancy Agreements signed by SONAPI as of today, except for the first two tenants (S&H Global and Peintures Caraïbes), which include instead a requirement to comply with all applicable laws, including the Labor Code, all environmental laws, and SONAPI’s Rules and Regulations for the PIC. However, given that the Rules and Regulations for the PIC include a requirement for tenants to operate in full compliance with the PIC EHS-MS, in practice all tenants are bind to the same EHS requirements. [↑](#footnote-ref-29)
30. As defined in the OP-703 Policy, the term “environment” is applied in a broad sense and includes social factors associated with environmental aspects [↑](#footnote-ref-30)
31. Note that this is not SONAPI obligation but will be monitored by the Bank, to the extent possible and while the Bank is engaged with the PIC. [↑](#footnote-ref-31)