DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK



HAITI

SUPPORT FOR TRANSPORT SECTOR IN HAITI V

(HA-L1098)

ENVIRONMENTAL AND SOCIAL MANAGEMENT REPORT

(ESMR)

July 2015

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# LIST OF ACRONYMS

AASHTO American Association of State Highway and Transportation Officials

CE Commission d’Expropriation

CPA Comité Permanent d’Acquisition Amiable

E&S Environmental and Social

EA Environmental Assessment

EHS Environmental Health and Safety

EIA Environmental Impact Assessment

ESG Environmental Safeguards Unit

ESMP Environmental and Social Management Plan

ESMR Environmental and Social Management Report

ESS Environmental and Social Strategy

IFC International Finance Corporation

KBA Key Biodiversity Area

MDE Ministry of the Environment

MTPTC Ministère des Travaux Publics, des Transports et des Communications

MWP Multiple Works Program

QRR Quality Risk Review

RN Route Nationale

ROW Right-of-Way

RP Resettlement Plan

TSP Transport

UCE Unité Centrale d’Exécution

WHO World Health Organization

# PROJECT SUMMARY TABLE

|  |  |
| --- | --- |
| Country | Haiti |
| Sector | Transport |
| Project Name | Support for Transport Sector in Haiti V (HA-L1098) |
| Beneficiary | Republic of Haiti |
| Executing Agency and / or Company | Ministère des Travaux Publics, des Transports et des Communications (MTPTC) through Unité Centrale d’Exécution (UCE) |
| Transaction Type | Grant |
| Total Project Cost (in US Dollars) | US$ 65 Million |
| IDB A-Loan (if applicable) | N/A |
| B-Loan/Co-lenders | N/A |
| Environmental Category | A |

# PROJECT DESCRIPTION

## Project Components

* 1. The proposed operation Support for Transport Sector in Haiti V is intended to finance the last tranche of road at the Route Nationale 1 (RN-1) corridor which extends from Port-au-Prince to the second largest city, Cap Haïtien, on the North Coast. This last segment runs from Camp Coq to Vaudreuil at the outskirts of Cape Haïtien The proposed operation also includes 29.5 km of road rehabilitation as well as technical and administration support through three components:
* **Component 1. Civil works and supervision.** This component will finance: (i) rehabilitation, improvement and/or maintenance works in the national transport network; (ii) mitigation of social and environmental impacts; and (iii) supervision of civil works by specialized firms.
* **Component 2. Strengthening of road infrastructure sector.** This component will finance: (i) acquisition of maintenance equipment and supplies necessary to carry out maintenance activities; (ii) implementation of a management system for the maintenance unit; (iii) training of maintenance unit’s personnel; (iv) implementation of road safety campaigns; and (v) training of women in construction and maintenance works.
* **Component 3. Engineering, socio-environmental studies and administration.** This component will finance: (i) administration of the works and services by the UCE; (ii) monitoring and evaluation; (iii) sector studies,[[1]](#footnote-1) engineering designs, and environmental and social impact assessments to be developed for future operations; and (iv) financial and socio-environmental audits.
  1. The proposed Support for Transport Sector in Haiti V is designed as an investment grant for a Multiple Works Program (MWP) to be implemented in a period of five years. The 29.5-km section of the RN-1 between Camp Coq and Vaudreuil was chosen as a representative sample. An additional set of road segments, meeting agreed criteria, might be identified during the execution of the program, although 80% (US$ 40 million) of the grant will be invested in the rehabilitation of the 29.5km km segment with the rest of the resources in other roads, intersections, etc. Any future intervention will have to meet the eligibility criteria to be included in the Operational Manual.
  2. The proposed works include 29.5 km of road rehabilitation, markings and signaling. The road surface of the selected section is in relatively good condition, having been resurfaced in 2013. However, some potholes remain and deterioration has already begun in certain segments. The rehabilitation of the road includes the design and construction of two major intersections: i) one that provides access to the city of Plaine-du-Nord (a future bypass to Cap-Haïtien, for which a detailed design of a roundabout has been already prepared; and ii) an intersection with Route Départementale 14 to Limbé. The intersection with Route Départementale 14 will also be studied under the current project to regulate speeds, improve security, and improve and regulate the design. There are road hazards as a result of blind curves and abandoned vehicles. Road signs and markings (both horizontal and vertical) are inadequate. In urban areas, the road is closely bordered by properties, houses, markets, gardens and businesses in spite of which no sidewalks are present for pedestrians’ ease and safety. Consequently, the proposed works will also address some issues that affect road safety for pedestrian and motorists according to established national road safety standards.
  3. This operation is part of the Bank’s ongoing efforts to improve the roads in Haiti and prioritizes the rehabilitation of existing primary/national roads (routes nationales – RN), seen as essential to connect Haiti’s main cities. Other current operations include rehabilitation of secondary and tertiary roads. This operation comes as the fifth operation to Support the Transport Sector in Haiti, in addition to six road/infrastructure rehabilitation programs/projects, over the past eight years.[[2]](#footnote-2) In relation to this corridor, the Bank has financed the rehabilitation of the segments between Bon-Repos – Saint Marc (2348/GR-HA and 2663/GR-HA), Gonaïves-Ennery (2794/GR-HA), Ennery-Plaisance (3085/GR-HA) and Plaisance-Camp Coq (3190/GR-HA)comprising around 101 of the 250 km corridor.

2.5 Project schedule: The proposed grant for the project will be presented to the IDB Board of Directors on October 2015. Final road designs and resettlement plan were finalized in mid-2015. Following approval by the IDB Board, the bidding process should begin within a period no longer than 2 months. The works for the sample project are expected to start on March 2016 and shall be completed in a period of 24 months.

## Environmental and Social Setting

* 1. The road between Camp Coq and Vaudreuil forms an integral part of the RN-1 corridor which connects Haiti’s economic and productive poles. This 29.5 Km road section passes through a varied geography characterized by sinuous hillsides in mountainous areas (Camp Coq sector) where rock falls and landslides are common, particularly in the rainy seasons in the Morne Beudoret sector. The road transitions to a straight flat road on the outskirts of Cap Haïtien/Vaudreuil in the coastal plain; and urban areas.
  2. **Environment**: The study area is characterized by a climate of the type humid tropical, defined by two rainy seasons and two dry seasons (Paul, 2011). The first rainy season starts in April and May (Les Alizés) and the second, defined as the hurricane season extends from July to November (Northeastern and east west winds). The dry season is from June to July and from November to March. This past season (November to March) is fresh because of the influence of the winter weather in the northern hemisphere in the equatorial zone. Conversely, between July and November, the presence of heat exchange from the equator to the polar regions favors the presence of atmospheric depression and the emergence of cyclones. In the study area, the average annual temperature varies between 15 ° C and 22 ° C in the mountainous areas compared to 28 and 32 ° C in low-lying areas (Paul, 2011). The average annual rainfall is 1,400 mm.
  3. Haiti is located within the Caribbean’s hurricane corridor, where along with the summer rain August marks the start of the hurricane season. For several months of the year high winds threaten to turn into potentially damaging tropical storms. Haiti’s vulnerability to hurricanes is exacerbated by the considerable deforestation by the steep sided mountains. In these conditions the heavy seasonal runoff causes significant soil resulting in erosion and flooding in the lowlands.
  4. Deforestation is a significant problem in Haiti. Loss of forest to charcoal, timber and to agricultural land over the last three centuries has reduced forest cover from 75% to 1.5% in that period.[[3]](#footnote-3) Forests located near to Camp Coq are illegally logged for wood and charcoal that is sold in its weekly Sunday’s market.
  5. Between Camp Coq and Limbé, the RN-1 runs for approximately 9 km parallel to the River Limbé, a critical natural habitat site. A preliminary assessment shows that the Limbé watershed is, in spite of some forest loss, a relatively healthy functioning ecosystem with significant tree cover, evapotranspiration, rainfall, retention of soil and water in the ground etc. It is likely that the river contains healthy populations of aquatic and endemic species.
  6. The rest of the road, specifically between Limbé and Vaudreuil, passes for approximately 15 km through the Côtes-du-Nord Key Biodiversity Area (KBA) (See Figure 2). KBAs are internationally important areas that are essential for conserving biodiversity. The KBA is home to 36 species of threatened animals and plants, including amphibians, birds, trees, reptiles, fish and corals. Of these, six are critically endangered, including three reptile species, one fish species and two coral species.[[4]](#footnote-4) It is expected that the area around Baie de l’Acul, including part of the KBA will become a formally protected area in the near future.
  7. Haiti is seismically active as it sits astride the Enriquillo-Plantain Garden fault in the south and the Septentrional fault in the north. The shallow nature of the faults makes Haiti prone to earthquakes.

2.13 **Social**: The project traverses urban and semi-urban areas as well as rural areas of four communes: Plaisance, Limbé, l’Acul-du-Nord and Plaine-du-Nord. The last two located at the Nord Department avec an estimated population of around one million (IHSI, 2012). Limbé, with a population of 81,403 inhabitants is the most populated commune; 58% of its population concentrates in the town of Limbé, which is the most important city in this section of the corridor. The project crosses six sections of this commune. The l’Acul-du-Nord Commune comprises an estimated 53,353 inhabitants of which 20,688 are located at the village of l’Acul-du-Nord; two of its six sections are next to the road. Finally, the project crosses the section Morne-Rouge of the Plaine-du-Nord commune; this is a rural section with an estimated population of 14,526 inhabitants. The combined population of the sections crossed by the project is of 156,477 habitants (IHSI, 2012). The most important urban areas are located around Camp Coq, Limbé, Morne-Rouge and Vaudreuil. Limbé is the most important town with an urban population of 46,891 inhabitants, representing 30% of the population within the vicinity of the project.

**Communes ‘Population in the Project’s Area**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Commune** | **Total Population** | **Urban** | **Rural** | **Households** |
| Plaisance | 66 403 | 66 403 | 49 093 | 12 635 |
| Limbé | 81 403 | 50 420 | 30 983 | 15 476 |
| Acul-du- Nord | 53 353 | 11 598 | 41 755 | 10 964 |
| Plain du Nord |  |  | 14, 526 |  |

Source: IHSI, 2012

* 1. **Economic activities**. Agriculture occupies 65% of the territory within the project’s influence area. Agricultural lands are dedicated to the production of subsistence crops such as manioc, yam, cabbage, and corn; there are also a few crops of pineapple and sugarcane; rice and coffee are also cultivated in this region. The only unoccupied lands are those too steep or unusable due to erosion. As is usual in Haiti, there are all types of land tenure situations present: titled lands with legal ownership; land owned by the State; occupied lands under annual payment agreements with the legal owner, and lands occupied by squatters. This situation has been taken into account in preparation of the Resettlement Plan (RP), particularly to estimate compensations according with IDB’s policy on Involuntary Resettlement (OP 710).
  2. Some industrial activities exist along the road to Limbé and Morne Rouge. There are several markets along the road at: Limbé, Soufrière, Camp-Coq and Acul-Jeannot. The Limbé market is the most important one because of its strategic location in the region that gives it some commercial advantages respect neighborhood communities and in the trade towards Cape Haïtien. (Mairie de Limbé, 2010). There are also small business stalls selling food and others goods along the road. A timber market located near Camp Coq operates on Sunday’s trading wood and construction material. This leads to a reduction in traffic lanes to only one on market days. All kind of vehicles, moto-taxis, trucks and tap-taps stop alongside the road for rest and to pick up/drop off passengers. This can occupy lanes and block traffic.

## Alternative Analysis

* 1. The proposed works are intended to meet the standards established for a national road regarding road quality and posted speed limits. However, the UCE agreed with the Bank to adapt these requirements in order to reduce potential risks of accidents. The presence of homes, buildings, businesses, gardens etc., in the immediate vicinity of the road make it difficult to meet standards and safety margins without affecting these assets. To reduce such impacts widening the road in densely populated urban areas and in some of the steeper mountain areas was reduced to the minimum acceptable for speed and safety. Final design analyzed several alternatives to meet national road standards while reducing social impacts, particularly involuntary resettlement.
  2. Eligibility criteria for future works to be financed under the MWP will be included in the Operation Manual. The criteria for works to be eligible for financing under this MWP will include the assessment of environmental and social impacts along with technical standards, as well as restricting eligible works to environmental impact Category B operations.

# COMPLIANCE STATUS AND PROJECTS STANDARDS

## Appraisal Process: Local and IDB Requirements

* 1. The Haitian Ministry of the Environment (MDE) is responsible for national environmental and social laws and regulations. An Environmental Impact Assessment (EIA) law has been drafted and approved by the Parliament, and the decree for its application approved;[[5]](#footnote-5) however the Ministry has limited capacity to enforce it. Similarly, the department within the MDE responsible for EIA is under creation but is not yet fully operational. As such, the MDE does not review or approve EIAs, nor deliver environmental permits.

* 1. The MTPTC is the Government executing agency which has established for this purpose the UCE. The UCE hired a consulting firm (WSP Canada Inc - GENINOV) to prepare the EIA for the rehabilitation of the 29.5km section of RN1 between Camp Coq and Cap-Haïtien. This EIA also covered the 10km section of RN-1 from Plaisance to Camp Coq, which is supported by a previous IDB grant (HA-L1089) The EIA was completed early in 2015. In general, the EIA is adequate, and identified all key impacts and mitigation measures, including environmental, social, construction, operation, and direct impacts. The RP for both sections was completed in mid-2015.
  2. The legal and institutional framework in Haiti regulating compensation and resettlement is outlined by a number of laws that directly or indirectly impact the right of ownership, expropriation, and compensation. In Article 36-1, the Haitian Constitution provides the Government with the right to expropriate land for public purposes as long as it follows certain procedural safeguards and provides appropriate compensation to entitled individuals. Expropriation is generally managed through the expropriation law (22 August 1951) as amended on 18 September 1979. It tasks the Comité Permanent d’Acquisition Amiable (CPA) in MTPTC to manage the expropriation process and clarifies that the expropriation process should contain three steps: a) identification of affected properties and asset inventory; b) verification of land deeds; and c) valuation of assets. The CPA includes two MTPTC engineers who are part of the Expropriation Commission (Commission d’Expropriation, CE).

**Consultation**

* 1. This category “A” project comprised two consultation phases. The first consultation of the EIAS was conducted in October 2014 among stakeholders within the project area. At that time most of the consultation activities were conducted with directors, higher level ministries and institutions.
  2. A second consultation was carried out in February 2015 by the MTPTC, WSP and GENINOV; this was a wider consultation comprising authorities and population of the four communes crossed by the project. Consultation was conducted in the sites with the highest population: Camp-Coq, Limbé and Vaudreuil; this process comprised a presentation of the project, its potential environmental and social impacts and proposed mitigation measures. In May 2015 specific consultation about resettlement impacts was conducted during preparation of the RP; local authorities and population expressed their concerns about the scope of the impacts, compensation mechanisms and mitigation measures. Prior to first disbursement the resettlement strategy will be further consulted in order to agree specifically on resettlement options particularly regarding relocation of houses into new plots. This process should present feasible options for relocation including: (i) house construction by the road contractor; (ii) support to PAP to identify land and rebuild houses; (iii) an economic plan for vendors losing their sale centers; (iii) a program to relocate and rebuild community water points before being affected by road construction.

**Environmental and Social liabilities from other segments on RN1 supported by previous IDB grants**

* 1. The Bank has been financing several operations for the rehabilitation of roads along RN1 including: (a) Gonaïves-Ennery (HA-L1058) approved in 2012, where construction has been ongoing for more than 16 months; (b) Ennery -Plaisance (HA-L1079) approved in 2013 where construction began on March 2015; -and Plaisance-Camp Coq (HA-L1089) approved in 2014. These roads account for approximately 101 of the 250 km corridor and thus complement each other supporting the connectivity between Port–au-Prince with Cape Haïtien, the two major ports in the country. Therefore social and environmental liabilities from these projects (described next) should be taken into account for this proposed operation.
  2. Construction is well advanced in the Gonaïves-Ennery and has started just recently in the Ennery-Plaisance section; a supervision mission conducted by the Bank in March 2015 identified that both in Gonaïves-Ennery and Ennery-Plaisance sections construction was not being conducted in accordance with the environmental plans agreed upon approval of the grant, particularly failure to complete resettlement before the start of construction works. In addition, the supervision mission identified inadequate extraction of sand and gravel from the Gran Rivière River. A report from AC&A states that approximately 7,632 m3 of gravel, sand and rocks were extracted from the Grand Rivière (PK 20 + 800 of the section Ennery -Plaisance). As such, in accordance with OP-703, Directive B.14 which states that for a proposed operation that has the same executing agency/borrower for which the Bank has approved a recent operation and presents environmental or social liabilities, the executing agency/borrower must take appropriate action to remedy such liabilities, or agree with the Bank on an appropriate course of action consistent with the executing agency’s/borrower’s responsibility, prior to the Bank’s decision on a new phase or loan.

3.10 To address identified risks a Remedial Environmental and Social Action Plan has been discussed with the UCE comprising: (a) the Government of Haiti committing budget and the UCE conducting approved RPs for both Gonaïves-Ennery and Ennery Plaisance; (b) the government of Haiti officially approving the RP recently completed for the section Plaisance-Camp Coq and committing the budget to complete resettlement before construction begins; (c) the UCE ensuring in coordination with the Supervision firm, construction contractor’s compliance with the environmental plans. Additionally, it is recommended hiring a specialized firm or NGO to monitor resettlement implementation along the four sections to supplement the UCE’s capacity. The principal elements of the Remedial Environmental and Social Action Plan for the two segments being constructed are:

3.11 **Gonaïves-Ennery (HA-L1058)**

* The Contractor, with support from the supervision firm, shall:
  + Prepare and implement the following plans as specified in the Contract: Communication Plan; Environmental Monitoring Plan; Health and Safety plan; Waste Management Plan; Erosion and Surface Water Management Plan; Hydrocarbon, Hazardous Materials and Spill Prevention Management Plan; Traffic Management Plan; Site Closure Plan; other environmental measures under the ESMP.
  + Ensure that extraction of construction material from rivers is only permitted as a last resort when material is not available from quarries, and only when river mine site selection has been demonstrated to have been based on rigorous environmental (physical, and ecological) evaluation.
  + If after rigorous environmental evaluation construction material is permitted to be extracted from rivers then a series of guidelines to be developed by the Bank and UCE must be followed in order to ensure that the maintenance or improvement of the health of the river, and that river mining activities will not to disturb the natural drainage of the water, will not generate high volumes of sediments, avoids upstream and downstream erosion, and avoids negative impacts to the river ecosystem. In doing so, the following requirements will be enforced by Contractor and AC&A:
    - Only materials outside the active watercourse active of the river (ie in the floodway watercourse) can be exploited and only when the flows and water levels are low and that the material can be mined without impacting the active waterway.
    - The collection of material, in any way shall not interfere with the water supply canals and irrigation water intakes.
    - The movement of the machinery must avoid the active channel of the watercourse.
    - The initial natural conditions must be maintained throughout the process.
  + In cases where river mining has already taken place for the rehabilitation of the road, the construction firm shall take the necessary measures to ensure the re-establishment of natural conditions in the river.
  + Use of native plant species: the Contractor and the Supervisor shall ensure that plans for planting vegetation for slope protection includes only native species.
  + Implement dust control practices ensuring that work areas are sufficiently watered, particularly in populated areas. To the extent possible, water should be collected from rainfall at campsites and other structures for this purpose, and not taken from rivers.
* The supervision firm (AC&A) will prepare monthly supervision reports including specific information about execution of above-referred plans.

**Resettlement**:

* The UCE: (i) will complete resettlement and compensation payments; (ii) will register and present progress report about payments by the Expropriation Commission of the Ministry Finance; (iii) will ensure the permanent presence of an official from the UCE or the supervision firm at the project site (Gonaïves-Ennery) until resettlement completion; (iv) will put in place a complaints mechanism and will report on solution reached; will monitor the RP and produce an assessment of reestablishment in accordance with agreed indicators.

3.12 **Ennery-Plaisance (HA-L1079)**

* The Contractor, with support from AC&A in its role as the supervision firm, shall:
  + Prepare and implement the socio-environmental plans per the Bidding document: (i) Communication and Consultation Plan, (ii) Conservation of Biodiversity, (iii) Environmental Monitoring Program, (iv) Workforce Management Plan, (v) Health and Safety plan, (vi) Waste Management Plan, (vii) Erosion and Surface Water Management Plan, (viii) Hydrocarbon, Hazardous Materials and Spill Prevention Plan, (ix) Traffic Management Plan, and (x) Site Closure plan.
  + Ensure that extraction of construction material from rivers is only permitted as a last resort when material is not available from quarries, and only when river mine site selection has been demonstrated to have been based on rigorous environmental (physical, and ecological) evaluation.
  + If after rigorous environmental evaluation construction material is permitted to be extracted from rivers then a series of guidelines must be followed in order to ensure that the maintenance or improvement of the health of the river, and that river mining activities will not to disturb the natural drainage of the water, will not generate high volumes of sediments, avoids upstream and downstream erosion, and avoids negative impacts to the river ecosystem, In doing so, the following requirements will be enforced by Contractor and AC&A:
    - Only materials outside the active watercourse of the river (i.e. in the floodway watercourse) can be exploited, and only when the flows and water levels are low and that the material can be mined without impacting the active waterway.
    - The collection of material, in any way shall not interfere with the water supply canals and irrigation water intakes.
    - The movement of the machinery must avoid the active channel of the watercourse.
    - The initial natural conditions of the river ecosystem must be maintained throughout the operation.
  + Provide access to the sites at km 21 and km 25 to ensure that actions do not negatively affect water quality, sedimentation, turbidity.
  + Submit to AC&A a design of the septic tank and a hazardous material spill management plan for its approval and further construction and implementation respectively.
  + Ensure compliance with water discharge limits in in nearby creek.
* The supervision firm will prepare its monthly reports according to the plans mentioned above to facilitate supervision activities

**Resettlement**

* The UCE jointly with the Contractor and the Supervision will corroborate that the final technical design conforms specifications intended to minimize impacts in urban areas as agreed, mainly in the center of Plaisance, and that an adequate solution is in place for the Carrefour Puilboreau / Marmelade market.
* The UCE: (i) will complete resettlement and ensure compensation payments is completed before construction reaches affected population; (ii) will register and present progress reports about payments by the Expropriation Commission of the Ministry Finance until all PAP is compensated; (ii) will ensure the permanent presence of an official from the UCE or the supervision firm at the project site (Gonaïves-Ennery) until resettlement is completed; (iv) will put in place a complaints mechanism and report in solutions reached; (v) will monitor results of resettlement plan according with agreed indicators.

## IDB Safeguards Policies

Category

* 1. The proposed operation has considered all relevant IDB safeguards policies. In accordance with the impacts identified in the EIA and RP the project is a category “A” mainly because of the magnitude and complexity of resettlement impacts and the need to address social and environmental liabilities of previous segments on RN1 financed by the Bank.

Capacity of the executing agency

* 1. The capacity of the implementing agency (UCE) to manage environmental and social matters has increased regularly over the past five years with the hiring of four environmental and social specialists (two each) at its headquarters. The UCE assigns E&S specialists to the work sites for major works. However, the increasing number of projects prepared in the last years has been adding pressure to the UCE; further capacity might be necessary to adequately manage social and environmental matters during construction. Closer Bank’s supervision is also necessary to ensure compliance and support to the UCE. In particular the hiring of an experienced firm or NGO is recommended to monitor resettlement process and its evaluation.
  2. The proposed operation will comply with OP 703 Directive B.5 by incorporating into the ESMP the following actions agreed during the analysis mission:
* **Monitoring**: the UCE with the support of IDB will ensure that mitigation measures are monitored over a period of two years after completion of works, either by including it in the supervision firm’s contract, or by hiring a separate firm for this purpose; monitoring will include reaching agreements about monitoring indicators.
* **E&S** **baseline**: the works contractor will carry out an E&S baseline before start of works. The environmental baseline must include data on water quality and species diversity in both aquatic and terrestrial habitats, extent of forest cover, and establish meaningful indicators of environmental health which can be monitored during and after construction.
* **Extraction of gravel from riverbeds**: the River Limbé is a critical natural habitat site, and cannot be subjected to gravel extraction. The contractor, with help from the supervision firm, will identify alternative quarry sites based on existing knowledge, geological maps, and cost alternatives;
* **Native** **species**: the consultant will specify, and define, the use of native species in revegetation;
* **Gender**: contractors bidding for works will include measures for hiring women in their proposals.
* **Local** **labor**: contractors bidding for works will include measures for hiring local labor in their proposals;
* **Indirect and cumulative impacts**: during implementation, the contractor and supervision firm will propose general mitigation measures such as capacity building, learning events, workshops, raising awareness, education campaigns, training and information campaigns, etc. to address indirect and cumulative impacts.
* **Resettlement:** The government will allocate the budget to ensure promptly implementation of RPs.
  1. In compliance with OP 703 Directive B.6 two consultations phases have been conducted as explained in points 3.6 and 3.7 above.

* 1. With regard to Directive B.9 (Natural Habitats and Cultural Sites), the proposed operation will not significantly convert or degrade critical natural habitats, or affect protected areas or critical cultural sites. Most of the area of influence area between Limbé and Vaudreuil (approximately 18 km) is located within the Côtes du Nord KBA, home to endangered species. Also, the road runs along 10 km approximately along the Limbé River. Special mitigation measures will be required to avoid environment impacts over these areas, particularly avoiding gravel extraction and applying an adequate management of gravel extraction when there are not feasible options. In addition to standard environmental mitigation measures during construction (mitigation of noise, dust, traffic disturbance, erosion, sedimentation, etc.) and during operation (erosion control measures, planting native vegetation along the road, awareness, communication and outreach with local communities and organizations) is recommended. Capacity building of local entities and management systems is also required.
  2. The rehabilitation works will not affect critical cultural sites such as cemeteries, as works are conducted mainly on the existing ROW. The Bois-Caïman site, where a religious ceremony takes place annually is in the proximity of the road. Every August, a pilgrimage is conducted to this site to commemorate the launching of the Haitian revolution in 1791. Works’ planning will take into account this activity to avoid disrupting access to this important cultural heritage site.
  3. Regarding B.10 (Hazardous Materials) and B.11 (Pollution Prevention and Abatement), procedures for waste management, pollution and emissions limits will be covered in the ESMPs under adequate solid waste and wastewater management plans and disposal sites.
  4. Disaster risks are estimated to be moderate in this road section. To satisfy the Disaster Risk Management Policy (OP-704), international standards addressing natural disasters impacts (cyclones, floods, earthquakes) will be incorporated in the construction contract.
  5. To comply with OP-710 (Involuntary Resettlement) an RP has been prepared. Consultation to reach agreements about resettlement alternatives will be conducted prior to first disbursement. The Government of Haiti will timely allocate the budget to complete resettlement before works start, which, are anticipated to begin 18 months after the approval of the grant by the IDB Board. The UCE will monitor RP implementation and compliance to ensure reestablishment of livelihood conditions.
  6. Policy OP-765 (Indigenous Peoples Policy) does not apply as there are no indigenous people in Haiti.
  7. Finally, the proposed operation complies with OP-270 (Gender Equality in Development) as it will benefit all people under the project and does not present any specific risks for women. The RP comprises provisions to ensure women are consulted, participate in decision-making and are adequately compensated as necessary. The project will provide targeted training opportunities to increase women’s participation in job creation during construction. It will also include opportunities for recruiting women in request for bids from contractors, and contractors will provide descriptions of how they will provide employment opportunities to women as part of their proposals. The project will take into account possible actions for supporting established women entrepreneurs that will either already be present during construction or attracted to the area as vendors selling water, food, and other goods within the framework of the project (facilities in public markets for instance).

Compliance with IDB Policies and Directives are summarized in next table

| **Policy / Directive** | **Compliance status** | **Compliance Rationale** |
| --- | --- | --- |
| **OP-703 Environmental and Safeguards Compliance** |  |  |
| B.1 Bank Policies | Applicable policies have been identified and means of compliance have been incorporated in point 6.2 of this ESMR | Project execution will follow grant’s agreements. The Grant Agreement will require that the Project and any other eligible works under the MWP, the Beneficiary and the Executing Agency will, at all times during the life of the Grant Agreement, comply with requirements described in point 6.2: |
| B.2 Country laws | The project has incorporated compliance with country laws and regulations in the POD and in this ESMR | Beneficiary will follow Grant Agreements. The Grant Agreement will require that the Beneficiary and the Executing Agency will, at all times during the life of the Grant Agreement comply with country laws and regulations |
| B.3 Screening and Classification | Categorization has been established according to identified risks as category A. Means of compliance have been followed: consultation, RP. | The project has complied with consultation for category A projects and will be in compliance by implementing RP and environmental plans. |
| B.4 Other Risk Factors | EIAS has identified disasters risks as moderate. International standards addressing natural disasters impacts (cyclones, floods, earthquakes) will be incorporated in the construction contract. | Compliance with international standards addressing natural disasters impacts (cyclones, floods, earthquakes) will be incorporated in the construction contract. |
| B.5 EA Requirements | EIAS completed according to Bank’s guidelines. adequate assessment process | Compliance: Follow EIAS and comply with environmental action plan. |
| B.6 Consultations | Project has undergone two appropriate public consultations established by category A project. according to comprising | To be in compliance specific consultation regarding resettlement impacts was conducted in May 2015 during preparation of the resettlement plan. |
| B.7 Supervision and Compliance | Internal supervision and reporting | The Bank will monitor the Project’s environmental, social, health and safety, and labor aspects through site visits, review of documentation and supervision missions. The Bank will conduct an ex-post evaluation of the Project’s Environmental, Social, Health and Safety (ESHS) performance immediately prior to end of construction; the evaluation will identify any potential liabilities and non-compliances and identify corresponding mitigation measures |
| B.9 Natural Habitats and Cultural Sites | EIAS identified the need for protection for KBA and rivers as necessary. | Bid Bidding documents will incorporate compliance with the ESMP. A covenant, prohibiting: the exploitation of borrow pits and quarries, and disposal of fill material, in environmentally and socially sensitive areas, KBAs and riverbeds will be included. |
| B.10 Hazardous Materials | EIAS has identified the need of adequate waste management | ESMP will incorporate adequate management and disposal of waste management |
| B.11 Dust, noise | Dust and noise are expected to increase during construction | ESMP will incorporate adequate management and disposal of waste management |
| **OP-710 Involuntary Resettlement** | The project will cause involuntary resettlement. Accordingly a RP has been prepared. Consultation about resettlement impact has been conducted. | To be in compliance additional consultation to reach agreements about resettlement alternatives will be conducted prior to first disbursement. The Government of Haiti will timely allocate the budget to complete resettlement before works start. |
| **OP-704 Disaster Risk Management Policy** | EIA has identified disaster risks as moderate | To satisfy the Disaster Risk The  The project will apply international standards addressing natural disasters impacts (cyclones, floods, earthquakes) will be incorporated in the construction contract. |
| **OP-270 Gender Equality** | Potential to benefit women during construction. | Contractors bidding for works will include measures for hiring women in their proposals |
| **OP-102 Access to Information Policy** | Project information disclosure | EIAS has been disclosed |

## Standards to be applied to the Project

* 1. In the absence of numeric standards from local law, the project will use the standards referred to in the International Finance Corporation (IFC) Environmental Health and Safety (EHS) Guidelines, such as the World Health Organization (WHO) Guidelines for Community Noise.
  2. Regarding building codes for bridges, culverts and drains, new construction, repair and reinforcement of structures will comply with the standards set out in the Interim Calculation Rules for Buildings in Haiti (Règles de calcul intérimaires pour les bâtiments en Haïti).
  3. The road design criteria is based mainly on the principles outlined in the Policy on Geometric Design of Roads and Streets of the American Association of State Highway and Transportation Officials (AASHTO) and on the Quebec Ministry of Transport road design standards (Volume I), as referenced by the consulting firm hired by the UCE. Given the terrain and the high number of curves, certain elements of these standards were adapted to minimize changes to the existing ROW, without compromising the safety of road users, while reducing the scale of works.

# ENVIRONMENTAL AND SOCIAL IMPACTS AND RISKS AND MITIGATION

## Summary of Key Impacts and Risks

* 1. The entire 29.5 km the road proposed to be rehabilitated is environmentally sensitive; from Camp Coq to Limbé it runs for approximately 9 km parallel to the River Limbé, a critical natural habitat site and then from Limbé to Vaudreuil through the Cotes-du-Nord KBA. Due to the environmental sensitivity of this area, the design of the road as well as construction activities require measures to protect the river Limbé and its tributaries as well as the KBA to avoid negative environmental impacts. Mitigation measures will include a total avoidance of mining construction materials from the Limbé River and the KBA, the use of least hydrocarbon polluting road building technology, the establishment of clear environmental guidelines and the training of all workers in their implementation. The rehabilitation of this section of road provides an opportunity to improve on the effectiveness of environmental impact mitigation measures of the current road, by implementing the above strategies to the full extent. Particularly for the KBA, storage areas and camps will have to be located outside this area. Also, drainages will be assessed to ensure adequate flowing of water to the coast.
  2. Other impacts include the typical environmental, social, and health and safety impacts related to low to medium scale construction, works associated with pavement operations and the decommissioning of workers accommodations and equipment maintenance and storage camps. These impacts include affectation of soils, vegetation, ground and surface water, air pollution, and fauna. They also include impacts on quality of life, such as loss of property and resettlement. Positive impacts include improved safety and connectivity contributing to the competitiveness of local and regional economy. Proposed mitigation measures are designed to prevent the occurrence of risks such as those materialized in the Les Cayes-Jeremie (HA-L1010 and HA-L1054.

## Key Environmental Impacts and Risks

* 1. The key risks of the proposed operation relates to the liabilities associated with the rehabilitation works in segments of the RN1 supported by the IDB, namely Gonaïves-Ennery and Ennery-Plaisance where construction has begun without completing resettlement as established in the legal agreements of these projects. These liabilities have been identified through the Bank’s supervision activities on the approved grants. UCE has agreed with the Bank to comply with the Remedial Action Plans, including adequate implementation of the Resettlement Plans and the elimination of the practice of quarrying in riverbeds, an activity that is very destructive to the aquatic habitat. The ESMP incorporates measures to seek alternatives to abandon this activity, including identifying alternative quarry sites based on existing knowledge and geological maps.
  2. The main environmental impacts and risks identified in the EIA are the following:
* impacts on soils (contamination through accidental hydrocarbon spills, contamination of clean soil with contaminated soil and erosion of soils);
* impact on ground and surface water (deterioration of water quality, reduction of availability, contamination by accidental spillage, and , sedimentation of water bodies);
* air pollution: temporary deterioration during construction is expected as well as increased levels of noise, shock waves from dynamiting);
* loss of vegetation (5.8 ha) and wetlands (2.9 ha);
* impact on fauna: loss of terrestrial habitat (16.2 ha), noise, disturbance, restrictions of movement;
* impact on aquatic fauna: loss or deterioration of habitat, modification of populations, restrictions to migration/movement.

4.5 Most of these impacts can be mitigated through normal mitigation measures, including good management and spill preparedness, dust control, adequate management of blasting with dynamite, replanting/revegetating using native plant species, timing the works to avoid sensitive times of the year for species reproduction or migration; and restoring work sites to their natural state.

## Key Social Impacts and Risks

4.6 The main social impacts and risks are the consequence of the need for additional area within the ROW for construction activities and the augmentation of the transversal section of the road in some sections. The need for additional land will result in the affectation of land use, assets and property which in turn will require the relocation of property, shops, assets and resettlement of people. Despite most of the works will be conducted within the current right of way, according with to the EIA the construction will cause involuntary resettlement. The design comprised an analysis of alternatives to further reduce resettlement impacts.

**Affectation of land use, infrastructure, assets, economic activities, Resettlement impacts and mitigation**

4.7 In accordance with Bank’s policy on Involuntary Resettlement (OP 710) a RP has been prepared in order to: (a) mitigate resettlement impacts: (b) pay for land expropriations and compensations for affected assets; and (c) provide support to vulnerable population in order to reestablish and, if possible, improve, previous conditions.

4.8 The assessment of resettlement impacts, summarized next, presents a complex situation involving lands, buildings and community infrastructure as well as economic activities losses. In accord with the census conducted during May-June, 2015 by the consultant, the Population Affected by the Project (PAP[[6]](#footnote-6)) by one or several of the identified impacts along the road is 1,398; this number includes persons conducting activities within the right of way of the road (vending stalls). An estimated 9.92 hectares of agriculture land (distributed in small plots along the road) will be affected.. Housing is the main type of land affected (42.7%), followed by those dedicated to commercial activities (32.6%) and those dedicated to agriculture (22.2%) as summarized in next table.

**Impact and main use of affected land**

|  |  |  |
| --- | --- | --- |
| Type | Number | Percentage |
| Housing | 597 | 42.7 |
| Agriculture | 311 | 22.2 |
| Small businesses | 455 | 32.6 |
| Religious activity | 12 | 0.9 |
| Education establishment | 5 | 0.4 |
| Community water point | 14 | 1.0 |
| Health facility | 2 | 0.1 |
| Other (public administration | 2 | 0.1 |
|  | 1,398 | 100.0 |

Source: WSP PAR p56

* 1. The major impacts are those cases in which housing/businesses should move to a new plot; the PAP in this category is 254 distributed in different types of identified impacts as presented in next table:

PAP and number of affected population that should be relocated

|  |  |  |  |
| --- | --- | --- | --- |
| Main use of affected land | PAP | Number | Percentage |
| Housing | 17 | 60 (actual persons) | 3.2 |
| Business | 222 | 1,100 (5 per PAP) | 59.2 |
| Religious facility | 1 | N/A | N/A |
| Community water point | 14 | 700 (users) | 37.6 |
| Total | 254 |  | 100.0 |

Source: WSP PAR p58

4.10 Water point users should not resettle physically but it will miss access to water while the points are moved and rebuilt. Impacts on annual and perennial crops are identified separately because there is not an actual resettlement. These impacts are included in the eligible impacts for compensation as established in OP 710.

**Resettlement Plan (RP)**

4.11 Preparation of the RP follows principles and guidelines established in OP 710 and Haitian regulations. It takes into account impact’s assessment and consultation conducted with local authorities (CASEC, municipalities of Plaisance, Limbé, L’Acul-du-Nord and Plan-du-Nord and the North Environment Director) and affected population. Its main purposes are to: mitigate negative impacts and apply a compensation process to reestablish and if possible improve previous conditions.

**Eligibility criteria**

4.12 All affected population, final or temporary, regardless of ownership legal status, is entitled to compensation. Compensation comprises two major groups: (a) direct impacts on construction assets of various types; and (b) loss of land and agriculture activities.

PAP eligible per type

|  |  |  |  |
| --- | --- | --- | --- |
| Use of affected land | Compensation  (within the same plot) | Resettlement  (in a new plot) | Total |
| Building structures | 580 | 17 | 597 |
| Religious facilities | 11 | 1 | 12 |
| Community water center |  | 14 | 14 |
| Commercial Infrastructure | 233 | 222 | 455 |
| Education facilities | 5 | 0 | 5 |
| Health facilities | 2 | 0 | 2 |
| Other public buildings | 2 | 0 | 2 |
| Total\* | 833 | 254 | 1,341 |

Source: WSP, PAR Table 7-4, p63

\* Agriculture lands are not included in this total

4.13 The building structures comprise 397 actual buildings, 24 facilities such as showers, latrines, etc. 40 walls and 7 other structures.

4.14 The 5th of June was defined as the cut-off date for being eligible for compensation at the end of census and assets inventory conducted during the period of   
7th May-5th June, 2,015. From the total 1,398 PAP in the various types of identified impacts: 23.4% are entitled to one type of compensation,47.9 to two types, 174 to three types, 15.0% to four and 1.14% to five.

* 1. The RP has also evaluated the impact on economic activities including agriculture and commerce. Affected land assessment comprises all type of ownership and occupation currently common in Haiti. Economic activities estimates comprises those conducted in public (right of way) and private land.

**Economic impacts (agriculture land, crops and business)**

|  |  |  |
| --- | --- | --- |
| Type of impact | Unit | PAP to be compensated |
| **Agriculture land and crops** | | |
| Annual crops | 1.35 hectares | 69 |
| Fruit trees and wood | 6,393 trees | 738 |
| Direct land loss | 9.92 hectares | 1,234 |
| **Economic activities** | | |
| Small businesses | 216 sale points | 216 |

Source : WSC PAR Table 7-4 p 63

4.16 For the 22 constructions and 222 businesses that cannot be relocated within the boundaries of the exiting plots the situation is riskier due to the scarcity of land in the region. Therefore, it is necessary to design a specific relocation strategy to ensure re-establishment and avoid increasing poverty risk, housing alternatives and alternative sites for sale.

|  |  |  |  |
| --- | --- | --- | --- |
| **Use** | **Impacts** | **Persons affected** | **%** |
| Residential | 17 | 60 (actual number) | 6.7 |
| Commercial | 222 | 1100 (5 persons per stall) | 87.4 |
| Culte | 1 | N/A | 0.4 |
| Water community point | 14 | 700 users | 5.5 |
| Total | 254 | 1 860 | 100 |

Source: WSC PAR

**Compensation strategy**

4.17 The payment for land acquisitions and affected structures in the RP takes into account Haitian regulations including the establishment of the Commission d’Expropriation (CE) of the MTPTC as the organization responsible for land expropriation and payment assessment; estimates are valued according to commercial values. In the case of compensations not include in Haitian regulations, such as economic displacements, the consultants prepared compensation estimates following the principles established in OP 710. The PAR includes a detailed description of compensation estimated for each type of impact. The PAR also comprises complementary activities intended to contribute to re-establishment and improving conditions of affected population such as: (a) Cash-for-work, promote participation of PAP in this program in order to generate a temporary income; (b) provision of water to the communities currently using the centers that should be relocated and rebuilt. The PAR comprises a compensation payment if these water facilities are not rebuilt before resettlement[[7]](#footnote-7). The UCE will incorporate a strategy for the PAP that should be relocated outside their current location into the RP to be presented prior to presentation of this operation to the IDB Board.

## Cumulative Impacts

4.18 The potential impacts from the road could be additional to impacts from other infrastructure projects in the immediate project area.[[8]](#footnote-8) The UCE will identify, with the support of the contractor and the supervision firm actions that may mitigate such impacts. The UCE, with the support of the Bank will organize events to enhance awareness and capacity building at the local level.

## Positive Impacts

4.19 The project will complete rehabilitation of the 250 km national road RN1 connecting Port-au-Prince with Cape Haïtien, the two most important seaports and airports of Haiti. The improved safety and connectivity will contribute both, the local economy and regional integration thus overall enhancing the country’s competitiveness and international trade.

## IDB Additionality

4.20 IDB participation in the project introduces health and safety standards for improved road safety and resilience to natural disasters. It has also a positive effect in local economy by ensuring local hiring and promoting women’s participation. Compliance with Bank’s environment and social policies will help to reduce impacts and incorporating mitigation measures that will enhance project quality. IDB participation also helps to the capacity building of the executing agency (UCE/MTPTC). Finally, the application of IDB safeguards ensures that the UCE addresses environmental and social impacts according to international standards.

# MANAGEMENT AND MONITORING OF ENVIRONMENTAL, SOCIAL, HEALTH AND SAFETY AND LABOR IMPACTS AND RISKS

## Description of Management Systems and Plans

5.1 The E&S systems and plans in place include (i) a supervision firm to be hired by the UCE; and (ii) the E&S, health and safety measures presented in the EIA.

5.2 The UCE will have the overall responsibility for the management of E&S matters as the Government’s agency responsible for the project. Standard IDB and UCE practice is to hire a construction firm to carry out works and a supervision firm to monitor and supervise the construction firm. The construction firm typically has its own environmental, social, health and safety guidelines and protocols, and the supervision firm will ensure that these are implemented. Furthermore, certain requirements e.g., to carry out an E&S baseline before start of works, will be supervised and monitored by the supervision firm.

5.3 The supervision firm to be hired to supervise construction will assume the responsibility of supervising the construction firm, advising and guiding it in technical and E&S issues. The supervision firm will also liaise directly with the UCE and the IDB reporting on project progress and performance.

5.4 ESG analyzed the EIA prepared by the E&S consultant (WSP Canada Inc.) and found to be overall of good quality; it took into account the comments of residents, NGOs, municipalities, organizations within the area; was well illustrated with maps and photos; and was thorough both from a social and environmental point of view. The study represented some best practices and considered some innovative actions such as: “the creation of new community space or corridors as alternatives to the road”; the development of “safe facilities for merchants”; and “building sidewalks in urban areas”.

* The numerous mitigation measures presented are in general feasible such as the proposed control of dust; planting of native trees; use of gabions; adjustment to avoid affecting cultural and public buildings (cemeteries, churches, schools, etc.) and includes a resettlement plan to address impacts, mitigating damages and proposing adequate compensation for loss of property. During Analysis specific actions were agreed to fill up in identifies weaknesses, namely the following:
* Conducting awareness and information campaigns, as well as training on reforestation, control of poaching etc.
* Protection of the Limbé River which contain a relatively healthy functioning ecosystem with significant tree cover, evapotranspiration, rainfall, retention of soil and water in the ground etc. It is likely that the river contains healthy populations of aquatic and endemic species. For this reason, and following the precautionary principle, gravel extraction from the riverbed will be prohibited and alternatives will be found.

## Monitoring and Supervision

5.5 Monitoring and supervision during the construction phase will be the responsibility of the supervision firm. The activities, criteria, monitoring indicators, timing, etc., have been initially described in the EIA, and will be completed by the construction firm and supervision firm during bidding.

5.6 During a period of two years after completion of works the IDB and the UCE will ensure that the viability of mitigation measures is monitored, either by (i) including it in the supervision firm’s contract, or (ii) by hiring a separate firm for the purpose, over the two-year period. This includes reestablishment of livelihood conditions of population affected by involuntary resettlement. This option is particularly important for monitoring resettlement and reestablishment.

# REQUIREMENTS TO BE INCLUDED IN THE LEGAL AGREEMENTS

6.1 The following covenants and requirements will be included in the legal documentation of the Grant Agreement with the Client:

6.2 **At All Times.** The IDB will require within its Grant Agreement that the Project and any other eligible works under the MWP, the Beneficiary and the Executing Agency will, at all times during the life of the Grant Agreement, comply with the following requirements:

1. Compliance with the conditions in the EIA, RP, ESMP and associated environmental and social plans including adequate environmental and social staffing, budget, scope of work and institutional arrangements to implement and monitor proposed mitigation activities for the eligible sample, i.e. the 29.5 km road section;
2. Compliance with Remedial Action Plan to address liabilities
3. Compliance with the eligibility criteria for financing any additional works under this MWP, including the assessment of environmental and social impacts along with technical standards, as well as restricting eligible works’ to environmental impact Category B operations.
4. Compliance with all relevant IDB policies such as the Environment and Safeguards Compliance Policy (OP-703), the Involuntary Resettlement Policy (OP-710), the Disaster Risk Management Policy (OP-704); the Policy on Gender Equality in Development (OP-270); and the Access to Information Policy (OP-102), and their respective guidelines.
5. Prompt notification to the Bank of any environmental and social non-compliance and any accidents or other new environmental and social risks and impacts related to the Project and any of the works supported by the MWP, and corrective actions taken.

6.3 **To be included in Bidding Documents for Works.** Include the following key environmental and social requirements in the Project’s contractual documentation:

1. Requirements for the contractor’s compliance with the ESMP, EIA and RP;
2. A covenant to promote local hiring, especially of low-skilled labor and women;
3. A covenant prohibiting the exploitation of borrow pits and quarries, and disposal of fill material, in environmentally and socially sensitive areas, including KBAs and riverbeds;
4. A covenant to design and built infrastructure according to international safety standards for natural hazards (seismic, flooding and hurricanes in particular);
5. A covenant mandating the preparation and submittal to UCE of environmental and social reports to be issued on quarterly basis
6. A covenant for the construction firm to carry out an E&S baseline before start of works.

6.4 **Prior to Board presentation.**

1. Submit along the RP a relocation strategy for housing that should be rebuilt in new plots, and government’s commitment to provide budget to complete resettlement before construction starts.
2. Submit the agreed Remedial Action Plan to address identified liabilities, as described in points 3.11 and 3.12 above, including: (a) progress report on resettlement in the roads with ongoing construction works: Gonaïves-Ennery and Ennery-Plaisance; (b) UCE officially approving resettlement plan for the Plaisance-Camp Coq segment and Ministry of Finance committing the budget to complete resettlement before construction begins; (c) the UCE in coordination with the Supervision firm ensuring compliance with the environmental action plans.

6.5 **Prior to first disbursement of the grant proceeds.**

1. Updating PAP information and consultations with relevant stakeholders and presentation of a proposal for relocation of housing, small business and community water centers. The Government of Haiti will commit the budget for implementation of resettlement plan to be completed before construction starts.
2. Grievance mechanism designed to specifically address resettlement and compensation issues.
3. The UCE contract a specialized firm or consultant to: (i) monitor the implementation of the RPs in the RN1 segments financed by the Bank (Gonaïves-Ennery, Ennery-Plaisance and Plaisance-Camp Coq); and (ii) monitor the implementation of mitigation measures outlined in the Remedial Action Plan for the same segments. These activities should be included in the firm’s contract, specifying the staff to be in charge of such supervision and reporting processes. Contracting should be in place in order to implement the agreed Remedial Action Plan to supplement the lack of capacity of the UCE and ensure adequate compliance.

6.6 **Prior to Works.**

1. Submit an ESMP in form and substance satisfactory to the Bank, including:

* Communication plan and grievance mechanism;
* Surplus material/waste Plan;
* Hydrocarbon and Hazardous Materials Plan;
* Erosion Control Plan, including include measures to ban riverbeds being used as borrow pits (see above);
* Revegetation plan, specifying that the area (in hectares) to be revegetated/replanted should be at a minimum three times the area stripped/deforested; and that native species only be used;
* Health and Safety Plan;
* Traffic Management and Safety Plan;
* Emergency Response Plan;
* Capacity Building and Gender Equality Plan; Site closure Plan;
* Fauna: include a suitable mitigation measure to control poaching;
* Mitigation measures for indirect and cumulative impacts;
* Chance Find Procedure.

1. Satisfactory implementation of RP and completion of compensation payments; The UCE will submit the Bank a register of expropriations and compensation payments conducted.
2. An operational grievance mechanism specifically intended to address resettlement and compensation issues.

6.7 **Upon occurrence/identification of an environmental and social non-compliance or of a significant environmental and social impact or risk related to the Project:**

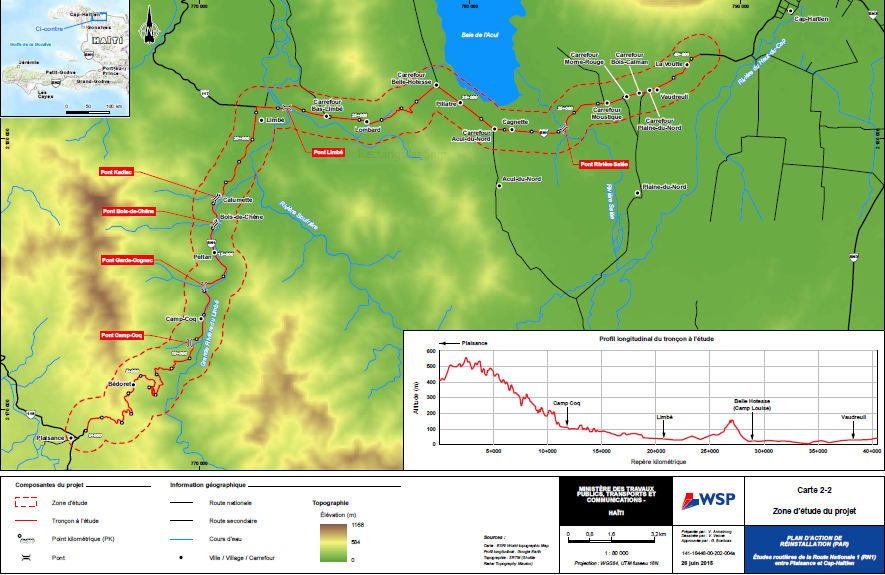
* 1. Notification to the IDB and other affected parties no more than 10 business days after the occurrence of the non-compliance or the significant environmental and social impact or risk related to the Project;
  2. Develop and implement remedial/corrective measures within 30 days from occurrence; if necessary a longer period should be proposed for Bank’s approval;
  3. Implement remedies identified and agreed during Project preparation (e.g., alternative design, elimination or delay of specific actions or components, specific action plans, etc.).

6.8 **Bank.** The Bank will monitor the Project’s environmental, social, health and safety, and labor aspects (e.g., site visits, review of documentation, etc.). Specific supervision missions will be scheduled to supervise resettlement and reestablishment. The Bank will conduct an ex-post evaluation of the Project’s Environmental, Social, Health and Safety (ESHS) performance immediately prior to end of construction; the evaluation will identify any potential liabilities and non-compliances and identify corresponding mitigation measures.

Figure 1



Figure 2



1. Sector studies including among others: (i) elaboration of a compensation and resettlement manual for Haiti and; and (ii) diagnostic and prioritization study for secondary and tertiary road networks in Haiti to be developed as a component of technical cooperation HA-T1198 approved in December 2014. [↑](#footnote-ref-1)
2. Project numbers, names and dates:

   HA-L1019 (2007) Rehabilitation of Road Infrastructure for Integration of the Territory;

   HA-L1024 (2008) Rehabilitation of Road Infrastructure for Integration of the Territory - II;

   HA-L1028 (2009) Rehabilitation of Road Infrastructure for Integration of the Territory - III;

   HA-L1046 (2010) Program to Support Transportation Sector Development in Haiti;

   HA-L1027 (2010) Rehabilitation of Road Infrastructure for Integration of the Territory;

   HA-L1054 (2011) Support for Transport Sector in Haiti;

   HA-L1058 (2012) Support for Transport Sector in Haiti II;

   HA-L1079 (2013) Support to the Transport Sector in Haiti III;

   HA-L1088 (2014) Institutional Strengthening and Reform of the Transport Sector;

   HA-L1089 (2014) Support for Transport Sector in Haiti IV;

   HA-L1098 (in preparation) Support for Transport Sector in Haiti V; [↑](#footnote-ref-2)
3. Depending on the source: The World Bank states that Haiti has 3.6% forest cover; while Bellande, A, states that the figure is 1.5% dense forest cover, and 15% “significant cover” which can include fruit trees (Bellande, A, 2009, Déboisement et Reboisement en Haïti: Quelques Eléments Pour Comprendre et Agir, Revue Conjonction, 221-222). [↑](#footnote-ref-3)
4. Reptiles: *Celestus warreni* (Giant Hispaniolan Galliwasp), *Dermochelys coriacea* (Leatherback sea turtle), *Eretmochelys imbricata* (Hawksbill sea turtle). Fish: *Hyporthodus nigritus* (black grouper). Corals: *Acropora cervicornis* (staghorn coral) and *Acropora palmata* (elkhorn coral). [↑](#footnote-ref-4)
5. Décret du 12 octobre 2005 sur la Gestion de l’Environnement [↑](#footnote-ref-5)
6. PAP comprises owners, occupiers, titled and non-titled land and users or private or public land; [↑](#footnote-ref-6)
7. A 250,000 gourd additional compensation for each water point not completed has been foreseen. [↑](#footnote-ref-7)
8. For example development in the North Corridor (Cap-Haïtien to Ouanaminthe), as well as existing pressures on the natural environment from charcoal burning, logging, farming, etc. [↑](#footnote-ref-8)