ENVIRONMENTAL AND SOCIAL STRATEGY (ESS)

PETROX NORTH COAST TERMINAL

I. BASIC FACTS

Date:	December 2015
Country:	Dominican Republic
Sector:	Transport/Logistics
Project name:	Critical Infrastructure to Support the Transportation Sector in the Dominican Republic
Project Number:	DR – L 1081
Borrower:	Petrox Dominicana S.R.L., an SPV established under the laws of the Dominican Republic
Sponsors/Shareholders:	The Idemitsu Group and Petrox Dominicana Holding Ltd.
Total Project Cost:	Approximately US$134 million
IDB A-loan:	Up to US$53.5 million
EIC:	A

II. PROJECT DESCRIPTION AND ENVIRONMENTAL AND SOCIAL CONTEXT

A. THE PROJECT

2.1 Petrox Dominicana Holding Ltd. ("Petrox" or the "Company") is a special purpose vehicle created to develop, construct and operate the Petrox North Coast Terminal. This facility includes an onshore liquid fuel terminal, supplied by a single point mooring system (also known as a "mono-buoy") located approximately 2,240 meters (m) offshore; it also includes three submarine pipelines from the mono-buoy to the shore and three onshore underground pipelines connecting to the terminal. Petrox is seeking financing from the IDB for these facilities, which together comprise the Project. The terminal will be located in the Puerto Plata region of the north coast of the Dominican Republic. The Project is designed for an initial throughput of about six million barrels of petroleum products per year and will have sufficient capacity for storage of 545 thousand barrels (bbl)1 of refined products, including gasoline, diesel and jet fuel. The Petrox North Coast Terminal will provide a service to third parties, where offshore suppliers and local distributors will pay fees for usage and storage; Petrox will not own the fuel products inventories.

2.2 This project originally was reviewed by the IDB and an Environmental and Social Due Diligence (ESDD) conducted between 2007 and 2012 before the project went on hold. This information will be revised and updated during a new ESDD, but the information below is based primarily on this information.

B. PROJECT LOCATION

2.3 The project is located in the northern coast of the Dominican Republic, in the municipality of Puerto Plata. The Terminal will be built within an industrial area (Free Trade Zone - FTZ), situated on the west bank of the San Marcos River, about 2.5 kilometers (km) from the center

[1] A barrel (bbl) is a unit of measurement for oil products and it is equal to 149 liters or 42 US gallons.

of the town. The Project Location and general facilities is shown on Figure 1. Beyond the Terminal three buried pipelines will run to the coast where they will connect to three subsea pipelines. The onshore route will pass closely beneath an existing paved secondary road for about 1.5 km near the neighborhoods of El Javillar, Costambar and Cafemba. The offshore pipelines will run offshore from the tie-in point at a location on the shore called Punta Cafemba in the San Marcos River estuary; from there they will head roughly north until reaching the point of the mono-buoy. Details of these components are presented below.

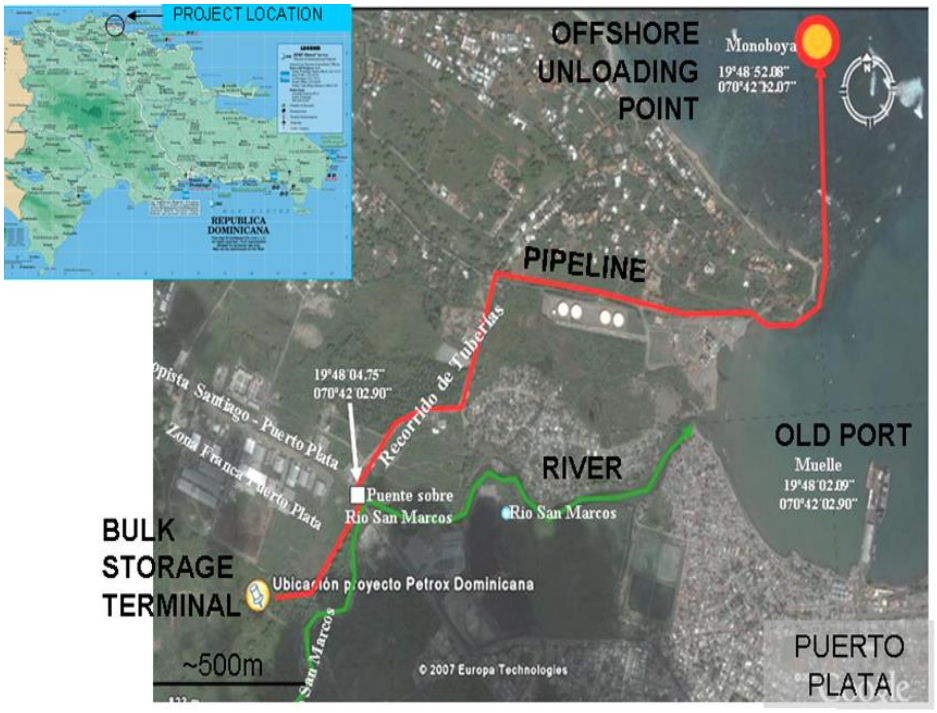

Figure 1: Project Location

C. COMPONENTS AND FACILITIES

2.4 The project has five components, as follows:

Offshore Reception Point (Mono-buoy)

2.5 The mono-buoy will be anchored on the seabed at a water depth of 34 m. Floating hoses will connect to tanker ships for fuel offloading and transportation to the Terminal via pipelines (see figure 2). From the offshore mono-buoy to the Terminal, the pipelines will have a total length of approximately 5,000 m. The mono-buoy will be anchored by six chains on the sea floor and a pipeline end manifold (PLEM) will connect the hoses to the fixed subsea pipeline transporting the product to the onshore Terminal. The PLEM is fitted with valves which will be remotely operated from the Terminal. Approximately 20-22 fuel vessels per year are expected to station at the reception point

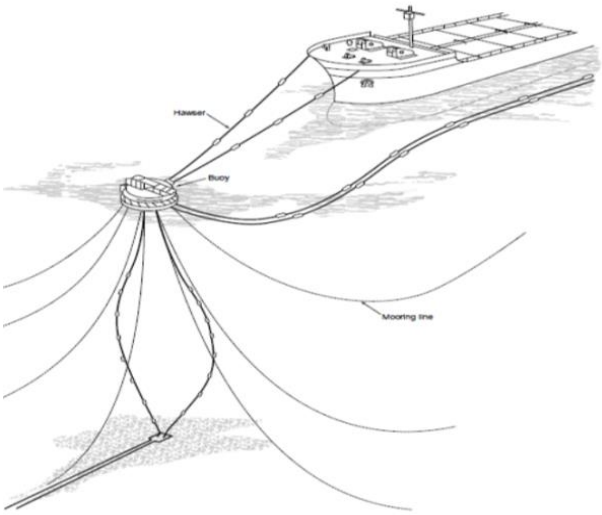

Figure 2: Mono-buoy

and will station for 24 to 36 hours each. The SPMB is designed for tankers of maximum 47,000 DWT (Dead Weight Tonnes). The mono-buoy and the pipeline system will be sized to allow an average flow rate of 12,000 to 15,000 bbl per hour.

Offshore Pipeline

2.6 The offshore pipelines will include two 16'' and one 12'' diameter pipelines, which extend approximately 2,240 m from the mono-buoy to the landfall tie-in location. These pipelines will be installed underwater using the "off-bottom tow method," which utilizes a tugboat and buoyancy modules to direct one or more pipelines to the appropriate location. The offshore pipeline installation will involve trenching from the mean high water line on the beach to just beyond the surf break offshore; the total length that this entails will depend on the bathymetry, but is not anticipated to be very far offshore. This trenching is needed at the shoreline where the wave action and currents can affect the stability of the pipelines. The trench will be approximately 2.5 m and 2.0 m deep and some blasting may be required in this area. The remainder of the pipeline route will have the pipelines sitting directly on the seabed where a 4 inch coating of concreate will increase their weight and keep them secure on the seabed. Further details on the specific methods for each section of pipeline are still pending and will be reviewed prior to the ESDD.

Onshore Pipeline

2.7 The onshore pipelines will tie-in from the offshore pipelines at the beach shore and continue to the Terminal facilities, buried at approximately 2 m deep. The total length will be approximately 2,600 m. From the beach the pipelines will follow the route an existing road, pass under an existing highway, cross under the FTZ and into the Terminal. The section of the pipelines runs adjacent to the communities of El Javillar, Costambar and Cafemba. It will also run alongside the property of an existing power plant that serves Puerto Plata—the Operadora San Felipe (OSF).

Onshore Terminal Facility

2.8 The Terminal property is about 12.5 hectares (ha) and is currently undeveloped. The Terminal will have eleven fuel tanks (estimated full networking capacity is 545,000 bbl), plus one fire water tank with capacity to 1,768,000 gallons of water. Two tanks will be for premium gasoline; three for regular gasoline; three for jet fuel and three for diesel. The layout for the onshore bulk terminal is shown in Figure 3. In addition to the 11 tanks, the facility will include an oil-water separator for site runoff, spill retention berms at 110% of tank volume (the international industry standard). At the onshore terminal facility, there will also be loading racks for tanker trucks (four trucks at a time). The loading rack will be fitted with a vapor control system for the gasoline racks, a feature added during the original ESDD to improve safety, reduce loss, and reduce fugitive emissions. This system will collect any vapors and destroy them in an enclosed flare. The jet fuel and diesel do not produce enough vapors to warrant such a system.

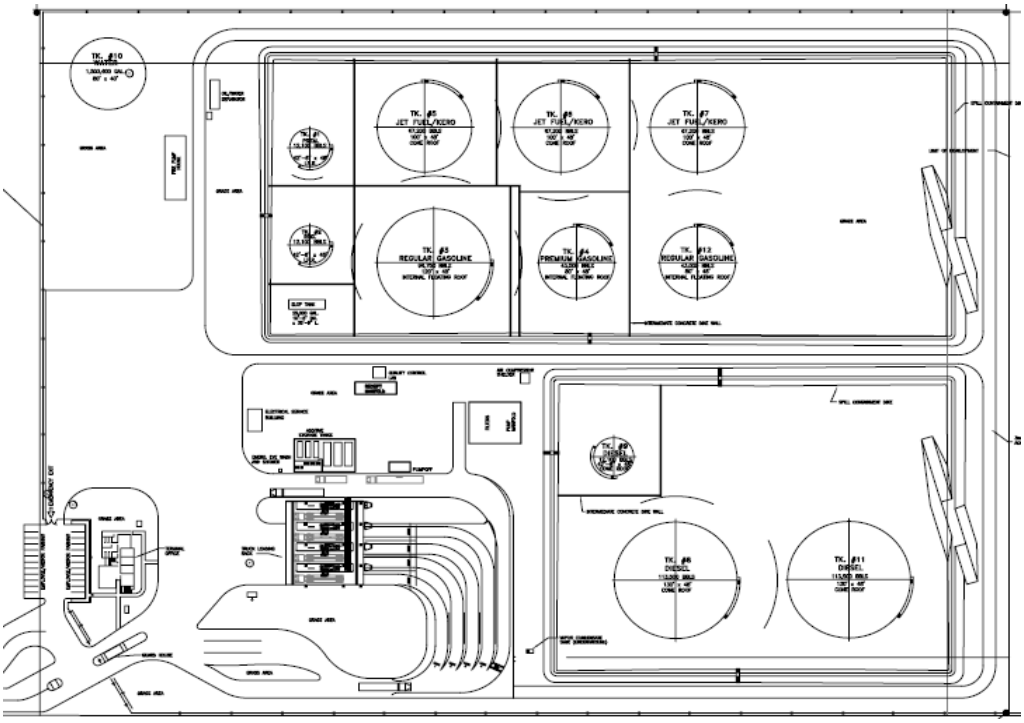

Figure 3: Terminal Layout

Terminal Access Road

2.9 An access road is necessary to connect the Terminal to the main road, Highway 5 (Santiago – Puerto Plata) and will be located immediately behind the FTZ. The access road to the Terminal will be paved with one lane in each direction until approaching the last 500 m from the Terminal where it will then open to double lanes for the section closer to the Terminal. The wider, double lanes will allow for quick maneuvering of tanker trucks and other vehicles at the entry of the Terminal. This will allow for more flexibility and maneuverability in the case of accidents, emergencies, or in when waiting in lines for loading/unloading operations.

Land-Use Agreements

2.10 The property where the Terminal will be built is under a Sales Purchase Agreement and will be fulfilled when the Project is approved by the Bank. Within the FTZ, the Company has formalized an agreement for purchasing the right of way (ROW) to install the onshore pipelines underground for the portion of the route passing beneath the FTZ. The section of the pipelines that runs from the FTZ, past the nearby neighborhoods and along the boundary of the OSF has been secured by the DR government and the municipality of Puerto Plata. A certificate of non-objection to use the land was issued by the Puerto Plata Municipality on February 12, 2007. Petrox also received a non-objection from the Marine and Port authorities to install the mono-buoy at the selected offshore location. A Port Concession Agreement is pending the final Project construction drawings. It will need to be confirmed if these non-objections and agreements are still valid.

D. ENVIRONMENTAL AND SOCIAL SETTING

2.11 The Environmental and Social setting presented below is based on the ESDD previously conducted, in particular the EIA completed in 2007. The EIA will be updated during the ESDD,

particularly to consider new policies, procedures, or issues that may not have been covered in the manner IDB currently requires them (see Section 3.1).

Onshore Component

2.12 The onshore Terminal site area (12.5 ha) has been used in the past for sugar cane plantations, quarrying and cattle grazing and has been considerably degraded and cleared of vegetation. Currently, the land is unoccupied but occasional cattle from neighboring families graze on the property. Old unrestored quarry pits remain on the site and these have been filled with waste over the years. Most of the waste consists of construction debris, but there is uncertainty as to potential sources of contaminants that could pose potential health hazards or contaminated soil and groundwater (see Section 4.8).

2.13 Bordering the onshore Terminal area is the San Marcos River. This River is heavily impacted by sediments and organic contamination transported from the port its river banks are considerably degraded with visible erosion processes taking place due to the lack of vegetation, although some sections of the river along the property have a few trees that reach up to 15 m high.

2.14 There is a small community to the right of the FTZ, which will border the access road from the Puerto Plata-Santiago highway to the onshore terminal site. This community consists of a few houses and will not need to be relocated as the properties will not be directly impacted by the Terminal site or its access road. Regarding the communities that border the road where the onshore pipelines will be installed, Punta Cafemba is a middle-class neighborhood, which includes an enclosed beach condominium in the Costambar area. El Javillar is mostly a working-class community, accessed only through the secondary road where the pipeline will be built. El Javillar is an economically poor neighborhood with few services (e.g., health unit, churches), and some road paving. Children from El Javillar attend a local school and use the road on a daily basis to access the school and other local services. The neighborhood of Costambar, on the northern side of the area, is a closed “gated” community with ocean-view houses. It is visibly more economically prosperous with services including a golf course, restaurants, stores, clinics and travel agencies. Roads are asphalted and well kept.

2.15 Based on the EIA, site visits and other studies done as part of the original ESDD, in terms of natural vegetation, there are no native species or endemic species at the project area. As for local fauna and flora, species are well distributed, given the level of intervention and human uses in the project area. The presence of coastal or mangrove birds have been noted, but with limited abundance.

2.16 The geological and hydrological conditions in the region have not yet been conclusively determined, in particular in the Terminal site area. These conditions are important to determining the level of vulnerability of the site from potential contamination from Project construction and operations, and/or from potential accidental spills, especially from the underground pipelines. The Bank will require the Company to conduct further assessments prior to any action on the property. The Company has already prepared the scope of work for soil and groundwater assessments and these have been approved by the Bank.

2.17 The final section of the onshore pipeline area before it reaches the coast is uninhabited, but is used as a public space where people walk. The ground is mostly composed of limestone covered with small scrub vegetation. A full investigation of the presence, or likely presence, of threatened species or other key species that are known to potentially occur along the pipeline route and Terminal location should be included in the revised EIA.

2.18 There are several terrestrial protected areas in the region ranging from parks to monuments (see Figure 4), which have been inventoried in the 2014 document, "Espacios Naturales Protegidos de La Provincia De Puerto Plata 2014."[2]

Figure 4: Protected Areas

2.19 The most relevant to the Project are the "Parque Nacional Litoral Norte de Puerto Plata," a municipal park important for its use as public space, recreation, and for its ocean views; and the, "Monumento Natural Loma Isabel de Torres," which is a monument in the mountains with botanical gardens of endemic species and panoramic views of the countryside and ocean. The entire Puerto Plata region is historically important as one of the earliest European settlements of the "New World" and many sites are located in the area, although none have been located on the site itself.

Offshore Component

2.20 The area where the pipeline starts its offshore leg is a semi-enclosed bay area in the estuary of the San Marcos River at a location called Punta Cafemba. This area is part of the shipping channel of the Puerto Plata Port, and has been heavily impacted by both the dredging of the port canal that took place in the 1970s, and the continuous deposit of sediments and organic contamination that are transported from the Port and upstream sources in the San Marcos River to the bay area. Other industrial activities, like the cooling water intake and outflow pipes

[2] http://www.medioambiente.gob.do/Documents/Libro%20MEDIO%20AMBIENTE2014web.pdf

for the OSF power station and fuel lines for the Port have also impacted the quality of the marine environment. The area continues to be polluted from plastic materials and other debris coming from the surrounding areas.

2.21 The mono-buoy will be adjacent to the existing Port channel, where vessels already circulate and dock, but out of the way enough to prevent interference with regular shipping traffic. Additional evaluation may be necessary of the specific routes of the Project tankers in the shipping channels beyond the port.

2.22 Two studies conducted in 1995 and 2008 confirmed that the health of the coral reef in the Bay has already been largely compromised by significant amounts of contamination and degradation caused by the constant movement of sediments from the activities of the Port itself. Fish species found in the project area show low diversity and quantity levels (e.g., mostly due to overfishing). Coral reefs are a popular tourist attraction of the Caribbean region and are an important natural habitat. However, during original ESDD it was also confirmed that there is no coral reef development to serve as diving attractions at that location. Most tourist operators take visitors up to Playa Dorada and Sosua (a few Km from the Project site), and there has not been any record of diving activity in the area between Cofresi and Cafemba, probably due to its degrading status, low visibility and other pollution sources in the area. This situation will need to be confirmed and, as necessary, updated during the ESDD.

2.23 The pipeline route through the bay will follow the general path of the shipping channel until beyond the extent of the coastal reef system, and then turn northerly and run offshore to the buoy location. The water conditions once beyond the buoy point are more typical of open coastal environment, with hard substrates, oceanic salinity levels, and clear high energy water. At the time of the original ESDD there was no significant fishing (commercial or artisanal fishing) in this area. Both fishing and tourism boat traffic is quite limited, since most of the tourism attractions are at a somewhat distance location from the Port entry area (e.g., Sosua, Playa Dorada).

2.24 To the northeast of the project site, there is a marine sanctuary, which covers an extension of approximately 3,740 km^2 (see Figure 5). The "*Santuario de Ballenas Jorobadas del Banco de la Plata*" (created in 1986 and expanded in 1996 Public Decrees 319-86 and 233-96 respectively) includes other important areas for whale reproduction, such as "*Banco de la Navidad*" and "*Litoral de Samana*." The sanctuary is known as The Marine Mammals Sanctuary of the Dominican Republic and it is the biggest and most important marine protected area in the country. The Park has a management plan. However, regarding special requirements or restrictions for the passing of commercial vessels in the Sanctuary, there seems to be no additional controls or measures implemented by the Port

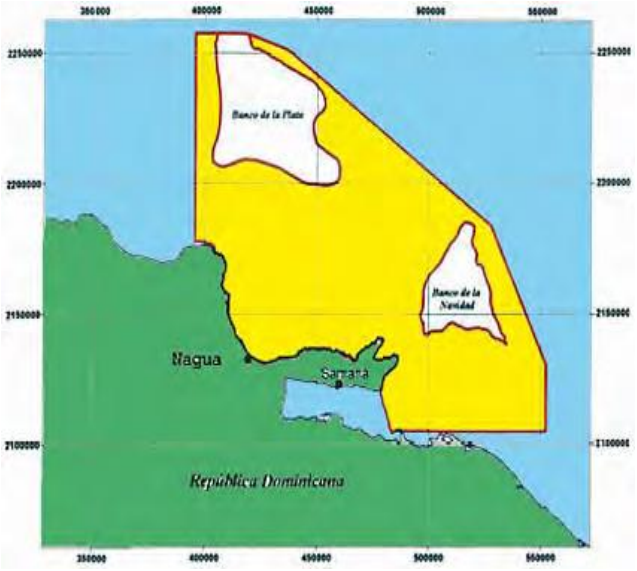

Figure 5: Marine Reserves

Authorities or SEMARENA. The revised EIA and the new ESDD will include a review of the proximity of Project ship traffic to this area and the associated impacts and risks.

2.25 The risk for natural disasters is relevant for the project since the project area is located in the north region of the country, where it is influenced by the tropical-marine regimen, consistent with heavy rainfall, high winds and humidity. Tropical thunderstorms and tornados are typical of this area. Seismic risks are also present. Between 1971 and 1997, the region experienced about 61 natural events, leaving an average of about two events per year. These natural events constitute a serious economic and social problem for the region and are of even worse impacts in urban areas with insufficient drainage capacity and intensive urbanization processes. Exacerbation of these risks by climate change is an issue that will need to be complimented in the revised EIA as it was not fully assessed.

E. ALTERNATIVE ANALYSIS

2.26 A basic alternatives analysis was conducted as part of the 2007 EIA; but because the site had already been selected and project design work begun, most of the analysis was a review of the decisions already taken rather than a decision making tool. The project was initiated as a joint venture between Exxon and Texaco in the mid-1990s, and much of the early decisions made during that period. The project justification is based on the assumption that the country is currently dependent upon just one import location in the south of the country for all its refined fuel products and that a second location is needed, especially for the northern parts of the island. The site location was selected based on a combination of economic factors, road safety requirements, amount of tanker truck transport needed, and environmental and social considerations.

2.27 From the economic side, a site in the north had a clear benefit to other regions because of the savings in the cost of transporting the fuel. Market studies showed that northern area was approximately 30% of all of the fuel of the country. Different coastal sites around the northern region were reviewed, focusing on larger populations areas such as Santiago and Puerto Plata. Four key areas were considered: the roads to be used, especially the safety of the tanker trucks on them; environmental considerations, especially offshore; minimizing ground freight; and political and social factors. Using these criteria the locations were narrowed down to four: la Isabela, Luperon, Puerto Plata and an area next to La Unión Airport. La Isabela was ruled out due to the main road's poor condition presenting a safety issue, seismic risks and as well as the social perspective of too many cultural, historical and archaeological resources.

2.28 The water off Luperon was too deep for a cost-effective construction of the buoy and was primarily ruled out for that reason; it also had poor road infrastructure. The airport was an attractive option because it was the biggest market and much of the fuel would go directly from the terminal to the airport without the need for tanker transport. However for political reasons it seemed there was a low probability of approval from the authorities. Puert**o** Plata was originally considered without a buoy, but rather with the ships coming directly into the port. This was eventually rejected because of the shallow draft and limited maneuverability. The final section with the buoy, although costing more than coming directly to the port, was determined to be the best choice. The combination of good roads, and close proximity to the market of the airport.

2.29 The location of the terminal itself what chosen using criteria including a need for: safe for the movement of the tanker trucks, proximity to Puerto Plata for unloading, access to the main road, and minimal environmental and social impacts. The onshore pipeline route was selected so that it would maximize the use of existing infrastructure – roads and rail lines primarily – and minimize impacts and disruption onshore, but the route assumed that the fuel would come from the port, not a mono-buoy.

2.30 Once the joint venture was replaced by Petrox, the idea of the mono-buoy was reevaluated and determined to be a better option. It would reduce the risk of accidents in the harbor; it would reduce the numbers of ship trips from 36 to 15 per year, taking pressure off the port. At this point the EIA includes a more detailed alternative analysis of the options for the onshore and offshore pipelines and design details of terminal. The onshore pipeline route did not change much and generally follows existing roads, the rail line, until it reaches the connection with the offshore pipeline. One change was made, which was to avoid the potential risks associated with the pipeline crossing the San Marcos River on a bridge. Instead it has been routed down a street in an area where the construction will disrupt local road users and will need to be addressed.

2.31 Two marine alternatives were reviewed and the key issue was bathymetry, with one option having slopes on the seabed that presented challenges to construction stability. In addition, the chosen alternative seabed conditions would require less blasting to lay the pipeline and therefore less damage to the seabed habitats.

III. ENVIRONMENTAL AND SOCIAL COMPLIANCE STATUS

A. COMPLIANCE WITH ENVIRONMENTAL ASSESSMENT AND PERMITTING REQUIREMENTS

3.1 The project was approved by SEMARENA -- the government`s environmental agency, based on an Environmental Impact Assessment prepared in 2007. That EIA, as requested by the Bank, was revised to include the evaluation of other topics that were not included in the initial study (e.g., marine impact assessment). This revised version of the EIA was not resubmitted to SEMARENA, but will be by the Company at the time of permit renewal or extension request. The requirement to resubmit the EIA to SEMARENA was a special condition required by the Bank as part of the first ESDD. Before this resubmission, however, the EIA will need to be revised again to include changes in the environmental and social conditions of the site and associated conclusions. There are also several issues that may need to be enhanced such as cumulative impacts which were not covered in sufficient detail to meet IDB's current review practices. The social baseline will also need to be updated and additional consultation and stakeholder engagement undertaken. This is especially important as the original ESDD had identified social sensitivities regarding the placement of the underground pipeline that will need to be reevaluated and additional discussions held with the affected community.

3.2 Permits and non-objection letters from other governmental agencies, such as the Municipality of Puerto Plata, the Fire Department, the Civil Defense, the Dominican Navy, the Ministry of Tourism, the Ministry of Public Works, the Ministry of Industry and Commerce, and the Dominican Ports Authority, these were at several stages of completion at the time of the

original ESDD, but according to the Company all of these have been extended or have no expiration date and therefore are still valid.

3.3 Public consultation procedures are also established for licensing and permit processes. In relation to permits concerning Rights of Way (ROW) within the Free Trade Zone, for example, the Sponsors will have to ensure that appropriate communication and disclosure of information has been done and complies with permit and Bank regulations.

B. COMPLIANCE WITH IDB ENVIRONMENTAL SAFEGUARD REQUIREMENTS

3.4 The key IDB Safeguard Policies and Directives that apply to this project are IDB's Environment and Compliance Safeguards Policy, OP-703 Directives: B.3 (Screening and Classification); B.4 (Other Risks), B.5 (Environmental Assessment), B.6 (Consultations); B.9 (Natural Habitats and Cultural Sites), B.10 (Hazardous Materials), and B.11 (Pollution Prevention and Abatement); Information Disclosure Policy (OP-102); and the Disaster Risk Management Policy (OP-704). The Policy on Gender Equality in Development (OP-761) does not seem to apply, but this will be confirmed during the ESDD. The Involuntary Resettlement Policy, OP-710 may also apply related to the one family near the site that may need to be relocated (see 2.14) but this will need to be confirmed in the ESDD. The indigenous people's policy (OP-765) does not appear to be applicable, but this also will be confirmed.

3.5 In terms of Directive B.6 on consultations, there has been some public consultation and information performed on various occasions. For example, a public meeting was held Public in Playa Dorada and Costambar to inform affected population about the Project and collect their input. The Project Sponsor presented the project to a diverse audience of civil society organizations and representatives of local communities. During the process, people expressed their concern about jobs, risk of accidents, as well as emergency and/or contingency actions in case of accidents and oil spills. Since that time there have been no other formal meetings, but there have been regular discussions with the community, including local businesses and with the Puerto Plata authorities.

3.6 During the previous ESDD consultation was identified as an area where further actions were required. Revising the EIA provides an opportunity to conduct additional consultation with current information. This is especially important for those communities living along the onshore pipeline route, fishermen, tenants of the Free Trade Zone, and road users who may be disrupted during construction.

3.7 Based on the current Project information, and in particular the scale of the construction activities, the increases in risks from trucks on the existing roads, and the risks of site accidents, including onshore and offshore spills as well as natural disasters, the team proposes a classification of “A” under OP-703. Once the EIA has been revised, this classification can be reviewed and revised if necessary, and confirmed during the ESDD.

C. OTHER REQUIREMENTS

3.8 The ESDD will also review standards that may be applicable to the project. These include World Bank Group performance standards and ESHS Guidelines and Standards; international maritime standards such as MARPOL and SOLAS, as well as other international agreements.

IV. ENVIRONMENTAL AND SOCIAL IMPACTS AND RISKS

4.1 The key environmental and social impacts and risks that will be reviewed during the ESDD have been identified based on the conclusions of the previous ESDD as well as additional information. The most important impacts and risks, as discussed below, include the temporary but significant impacts during the construction phase where access to properties, business, and shipping and vessel traffic will be disrupted; potential accidents, especially during operations at the terminal, the mono-buoy or the pipelines could result in explosions, fires or spills; and risks of accidents from third parties such as the fuel tanker truck drivers and tanker ships; In addition, there is the potential to affect coral habitats that exist in the area of the offshore pipeline and other coastal habitats. There will also be visual impacts from the mono-buoy, especially when ships are present. These could be significant given the importance of coastal and panoramic views to the residents and the tourism of the area. These potential impacts and risks are discussed below.

A. ONSHORE CONSTRUCTION

Access and traffic

4.2 As described earlier, the onshore pipeline construction will entail the laying of underground pipelines in the areas of: (1) a free trade zone; (2) The Puerto Plata-Santiago highway (Highway 5); (3) a local paved road that gives access to important populated neighborhoods (Punta Cafemba, Costambar, El Javillar); (4) a public access pathway to the shore that is adjacent to an existing power plant (Operadora San Felipe - OSF) and an ocean front area used for walking or recreation. These works will involve the trenching works of the pipeline, handling of heavy equipment and vehicle movement, and closure of roads and public access routes. During construction walking and biking conditions will be impaired along the local roads, creating access issues for community, in particular the children that use that road to go to school. Moreover, the traffic in and out of the OSF will be rerouted to an alternate route, which will result in noise, dust and safety issues. The proposed alternate routing crosses alongside Punta Cafemba towards the campus of a local university and it could result in serious traffic, noise, dust and other safety problems. While temporary, these could create significant social and public disturbances, and public concerns about this issue have been raised by the public. Careful traffic management, including temporary access alternatives will need to be evaluated and developed during the ESDD.

4.3 The construction facilities for the fabrication and installation of the pipelines at the shoreline will require a significant amount of space for activities such as welding and connecting of pipelines, in addition to the storage and movement of heavy equipment for the fabrication of the pipelines. The beachfront fabrication facility will be constructed adjacent to the landfall point of the OSF. Along the paved road, a similar situation exists. Currently, there is limited space for adequate storage of equipment and materials, for the building and installation of the

pipelines, for removal of existing road material, and for the transit of heavy machinery. This situation poses concerns in terms of potential safety issues, and increased barriers to the movement of, and access for, pedestrians along the road. The ESDD will review the provisions planned by the Company to prevent and mitigate these impacts.

4.4 At the Terminal, fabrication facilities will be placed just outside of the property line and no major concerns are anticipated. The Company has the appropriate permission from the landowners to do so, and the facilities will be placed on areas that are unoccupied, barely vegetated and safe for workers. It is expected that the construction facilities will remain at their specific locations for the duration of the project construction and installation of pipelines, which is approximate 24 months.

Natural Habitats

4.5 There are not believed to be critical natural habitats on the terminal site or along the onshore pipeline route given that the area is an industrial zone already heavily impacted by human activity. The terminal site itself has been used for a number of purposes including aggregate extraction, cattle grazing and farming. There may be small areas of natural habitat in patches on the site, near the river, and at the costal landing point. The site conditions are not expected to have changed much since the original ESDD, but the baseline will be reviewed for the revised EIA, including the plans envisioned for the Environmental and Social Management Plans (ESMPs) that included a Biological Management Program.

Visual Impacts

4.6 The area of Puerto Plata is renowned for its views of the sea from homes and hotels as well as open spaces on the coast and from landmarks such as the *Monumento Natural Loma Isabel de Torres*. These views will be altered permanently and significantly especially during the times when ships are at the mono-buoy. The impacts are tempered somewhat by the distance from the shore and the position in the area of the existing shipping lane; however, this will be an additional industrial view on the sea that will be very different from the existing conditions and for which little can be done.

Air Quality

4.7 In terms of emissions, the Project has the potential to create direct and indirect emissions, including greenhouse gases; however these are not likely to be significant. The most notable emissions source prior to the original ESDD were fugitive emissions from the tanker truck loading racks, but these have since been redesigned with a vapor collection and destruction system. A full vapor recovery system would reduce the emissions to near zero, however the cost benefit ratio of that technology is not worth it given the low volumes of anticipated emissions. Nonetheless, these assumptions will be reviewed during the ESDD. In addition the ESDD will consider the emissions from other potential sources including: (i) loading / unloading of hydrocarbons during operations; (ii) hydrocarbons storage; (iii) dust emissions; (iv) other fugitive emissions; and, (v) combustion sources.

Soil and Water Quality

4.8 As discussed in Section 2.12, old dump sites have been noted which could lead to soil and groundwater contamination as well as risks to workers during construction. The likely level of this contamination and the need for additional studies or actions will be assessed during the ESDD. The Construction ESMP already contains procedures for completing the site assessment, as well as procedures and requirements for determining if site soils can be reused as fill material, provisions in case of suspected contamination, and procedures for contaminated soil management.

Social Impacts

4.9 The main social impacts and risks during construction include: (i) a relocation of one family that has lived adjacent to the Terminal site for several decades and will be affected by the pipeline installation; and, (ii) the temporary interruption of traffic in and out of the communities of Costambar, Cafemba, El Javillar and the OSF power plant site as discussed above. In terms of the potential resettlement, further details are required on this issue, which will be clarified during the revision of the EIA. In order to understand the full magnitude of the social impacts, a revision of the EIA is needed that includes a more detailed social baseline.

4.10 This additional baseline will include the identification of current key impacted communities and stakeholders and the identification of a communication strategy to reach the key stakeholders prior to construction to include public meetings, written, published and publicized information. From this a stakeholder engagement program will be developed that should include: (i) a description of activities, timing, and potential impacts (including traffic disruptions); (ii) a description of impact mitigation and a mechanism for responding to or addressing concerns; (iii) plan to include mechanisms to provide information concerning construction progress or changes; and (iv) a plan to include roles and responsibilities for the Company and Project contractors.

B. OFFSHORE CONSTRUCTION

4.11 As discussed in 2.6 the offshore pipeline installation will involve trenching from the mean high water line on the beach to just beyond the surf break offshore; the total length that this entails will depend on the bathymetry, but is not anticipated to be very far offshore. The trench will be approximately 2.5 m and 2.0 m deep. The remainder of the pipeline route will have the pipelines sitting directly on the seabed. The final positioning at the mono-buoy will be in approximately 34 m water depth anchored to the seabed. The construction works in the sea and coastal areas could increase water turbidity with adverse effects on seawater quality, coral habitats and other fish habitats. The ships and other vessels in the area during construction could also inhibit marine life movement. If proper dredging protocols are applied, these impacts can be reduced to localized effects. However, given the damage and poor state of the current ecosystems, including the corals, it will be important in the ESDD do determine what the cumulative impacts on these degraded habitats will be and what mitigation or other measures may be necessary.

C. OPERATION

Operational Safety and Emergency Spill Response

4.12 The major risks associated with project operations are: (i) the risk of accidents at the Terminal and onshore pipeline from the handling of fuel and other chemicals, resulting in personal injuries, property damage or environmental release; (ii) the risk of accidental spills in the ocean; (iii) risks from natural disasters including those exacerbated by climate change; and (iv) third-party risks associated with the tanker trucks at the terminal and when they leave the terminal with their fuel cargo, and with the tanker ships coming to the mono-buoy or travelling to or from the Project site.

4.13 From project design, the Company has already included safety features that contribute to minimizing these potential impacts and risks. A hazard analysis / risk analysis conducted during the original ESDD for the onshore facilities contributed input for project design and future management. A Health and Safety Plan (HASP) (see Section 4.22), will be developed and integrated into the operations ESMP.

4.14 In 2009, the Company contracted an emergency spill management company to assess the potential area at risk in case of an accidental spill at the offshore location, and to identify the shoreline areas likely to be impacted. The study showed a model-predicted footprint of sea surface oiling for the release, and indicated that, in terms of oil persistence on the water surface, the diesel fuel would have the most impact of the three products. Under the same environmental conditions, jet fuel and gasoline would evaporate more rapidly than diesel and would leave no oil on the surface within a matter of several hours. The suggestion is that a spill of jet fuel or gasoline is unlikely to have significant shoreline impacts, and that if either of these fuels reached shore, they would quickly evaporate. There would, however, be significant impacts in a localized area right around the point of the spill. The magnitude of this impact on the area would depend on whether that spill were located near more sensitive areas – for example a rupture in the pipeline near the shoreline may have a greater impact than one right at the mono-buoy location. To deal with the risk of potential spills offshore, the ESMP for operations includes an Oil and Hazardous Material Spill Contingency Plan and Emergency Response Contingency Plan.

4.15 Regarding the vulnerability of the north region to risks related to natural disasters the Project has integrated disaster-prevention features, including: (i) equipment that is resistant to high wind and ocean currents; (ii) a meteorological station installed in the coastal zone, equipped to measure air temperature, wind speed, and other variables that are critical for the Company`s early warnings about the safety of offshore operations in case of adverse weather events. In addition, the Company will establish, as part of its ESMP during operation, Safety Plans and procedures to be adhered to in case of natural disasters, and it will also have a Spill Contingency and Emergency Response Plan, in case of accidental spills.

General Operational Impacts

4.16 Apart from the risks discussed above, the operations of the Terminal and mono-buoy are not expected to create significant social or environmental impacts. There are, however several potential moderate impacts that will require management plans and procedures, and that will require further evaluation during the ESDD. These include increased vessel traffic not only

from the tanker ships but also other vessels such as support ships, transport vessels, etc.; restricted access directly around the area of the mono-buoy which other vessels will need to navigate around; perception and reputational risks from the presence of the mono-buoy and potential impacts on the nearby resorts areas.

D. THIRD PARTY IMPACTS

4.17 There are several potential impacts that are beyond the direct influence of the project in that they are related to the activities of third parties. These third parties include in particular the tanker ships arriving at the mono-buoy, the tanker trucks taking delivery of the fuel from the terminal, especially when they have travelled well beyond the location of the Project facilities. In terms of the ships, there could be impacts related to their shipping routes, especially if they travel through the protected areas. Not only are there risks of spills if there is an accident, but the presence of such large ships can affect the movement and breeding patterns of marine animals, especially mammals. Issues associated with blast water exchange may arise as well as disposal of ship waste on arriving at the terminal.

E. CUMULATIVE IMPACTS

4.18 Cumulative impacts were not specifically addressed as a separate discussion in the previous EIA but were looked at more as incremental impacts on areas like traffic and marine habitats (corals in particular). The revised EIA will be required to include a specific discussion on cumulative impacts and the relevant mitigation measures, if any. Based on the information to date, the most important cumulative impact will be the increase in the number of tanker trucks using the Puerto Plata city roads and highway to deliver fuel from the terminal. The Puerto Plata-Santiago highway currently carries all the traffic related to the port activities. Secondary road impacts may also be important especially as some of the roads beyond the main road are not always in good condition. This could increase wear and tear on the roads, thus increasing safety risks. This then could put communities along the routes of these trucks at risk. Increase air emissions, effluent, and waste generation are not likely to be significant because the volumes generated from the terminal will be relatively small. What will need further evaluation is the local capacity to receive waste, especially during construction, as well as stresses that could be put on local services.

4.19 Coral and other habitats in the area have already been degraded from other activities in the area including dredging and industrial pollution. The ESDD will review the incremental impacts from the Project and what this may add to the existing stresses on this area. Given that there are several areas nearby with more healthy and productive coral habitats, this may not be a significant issue beyond the Project locality.

4.20 Additional possible cumulative impacts that will be evaluated in the ESDD include: (i) impacts from the increase in the size and number of vessels using the area, especially the Puerto Plata Port and other facilities and potential interference with existing marine traffic; (ii) the development of new routes for the vessels through important marine conservation areas; and (iii) potential induced development or accelerated develop because of the more easily available fuel.

F. MANAGEMENT PLANS AND PROCEDURES

4.21 During the original ESDD, the IDB worked with Petrox to determine the key management plans and procedures that would be required to ensure that the Project would meet IDB

environmental and social requirements. Key to these was the planned ESMPs. There was one for the construction phase which had already been written, and an ESMP for operations, a framework of which had also been prepared. These plans will be reviewed during the ESDD and any necessary changes included as Project requirements. A summary of the key plans is presented below.

4.22 The Health and Safety Plan (HASP), will use a Zero Incident management approach, in which the goal is zero incidents, zero injuries. The Plan will identify specific control measures to dramatically reduce the probability of incidents. The Plan begins with training of all management personnel in the Terminal, but also includes safety training and education to the communities living in nearby areas. Proper warning signs will be placed to alert the public to the location of the pipelines and facilities. For the offshore segment, buoys will be placed to define the pipeline corridors. For the onshore segments, markers will be placed along the pipeline route. Regular inspection patrols will be carried out along the route, but the Company will also ensure that the whole system is maintained and operated with sophisticated mechanisms to automatically identify and isolate the affected pipeline sections with trouble.

4.23 The ongoing safety orientation and training will give employees and the community, the knowledge and skills to avoid incidents (personnel), or to react to incidents (communities). An information sharing and education program will prepare the communities for emergency response and evacuation in the event of accidents. Residents will be cautioned of the hazards associated with such activities as open burning and illegal excavation in the pipeline vicinity.

G. CONSTRUCTION ESMP

4.24 The Sponsors have prepared and are committed to implementing an Environmental and Social Management Plan (ESMP) that describes the actions that will be taken during construction, mainly in terms of: (i) generic good practice measures which will ensure that the facilities are built and operated in compliance with applicable laws and regulations, and to standards of international best practices; and, (ii) site-specific measures, the implementation of which is required in order to validate the basis (and conclusions) of the EIA and subsequent evaluations. The ESMP is supported by a suite of project-wide plans that were based on the identified risks mentioned above. The Plans set out the standards and requirements applying to the particular topics just mentioned and will address appropriately all environmental, social, health and safety concerns. Moreover, the Company is responsible for ensuring that its contractors will adhere to the standards and requirements of the ESMP whenever they apply to the particular activities regarding the construction and installation of the pipelines.

4.25 Petrox will maintain an effective Environmental, Health and Safety Management System (EHSMS) in order to ensure that the protection of the environment is given a high priority throughout the Project. The ESMP is part of the EHSMS. The aim of the EHSMS will be to ensure that environmental requirements are identified, planned, achieved, maintained, documented and, where appropriate, improved. The following components are part of the EHSMS: environment, health and safety performance requirements and criteria; planning of the EHSMS; verification of the activities performed; continuous improvement of the process; and, retention of documentation and experience.

4.26 The ESMP include a Social Impact Management Plan (SIMP) to be implemented during construction. The Plan includes management practices dealing with operational policies; employment policies; public consultation and information disclosure; grievance mechanisms; and, monitoring for compliance. The Plan will additionally determine roles and responsibilities for Petrox and contractors, as well as costs associated with the SIMP, and a schedule for consultation and monitoring of potential impacts on the potentially affected communities and individuals. The ESMP has included an environmental policy and Petrox will hire an Environmental Health and Safety Officer (ESO), who will reportedly be responsible for ensuring the overall effective implementation of the ESMP.

H. OPERATION ESMP

4.27 The Sponsors have prepared a draft annotated table of contents for the operation ESMP that includes a few sections which will address EHSMS, policies, and resources for the adequate management of EHS issues during operations. This ESMP will be fully detailed and completed six months prior to the start of operations, and will require the Bank`s review and approval before operations start.

4.28 In terms of resources, the ESMP describes the human resources that will be available to ensure adequate EHS Management. The following describes the proposed structure: (i) Petrox will maintain a monitoring, audit, and review role to ensure Project construction activities are performed in compliance with the project agreements and applicable health, safety, social, and environmental standards; (ii) Petrox will ensure activities of contractors are conducted in accordance with “good practice “ measures, approved plans and permit conditions. In order to facilitate this, Petrox will monitor and evaluate the contractor`s activities and performance through a team of dedicated inspectors/auditors; (iii) the inspections/audits will be carried out in conjunction with the contractor`s management in order to ensure that areas of concern are rapidly addressed and the results of all inspections/audits are documented; (iv) Petrox will oversee community relations activities (pipeline and storage terminal) and will appoint an Environmental, Health and Safety Officer (ESO) to oversee compliance with all requirements, and all roles will reportedly be filled by appropriately qualified and experienced personnel; and (v) Petrox will develop an Environmental, Health and Safety Management Organization (EHSMO) to support both the onshore and offshore phases of this project. The EHSMO will be responsible for the performance of contractors and for ensuring that all commitments in the EIA, ESMP, and supporting management plan/protocols are translated into contractor`s requirements and that these requirements are implemented to the full intent and extent of original commitments. The EHSMO will consist of an Environmental, Health and Safety Officer and a team of environmental health and safety monitors, with appropriate skill sets and relevant experience commensurate with their roles and responsibilities.

4.29 Contractors will also be expected to demonstrate commitment to the ESMP. During the construction phase, the EPC Contractor`s management structure will include the dedicated role for Contractor`s EHSM. This role will be filled by an appropriately experienced and qualified person to the satisfaction of the Sponsors and this person and role will not be altered without the prior approval of the Sponsors. During operation, the ESMP indicate there will be a qualified and dedicated EHS Representative for the Terminal operations which will report to

the terminal general manager. The Company has assigned appropriate financial resources for the implementation of the ESMP and the EHSMS.

Oil and Hazardous Material Spill Contingency Plan and Emergency Response Plan.

4.30 The Oil and Hazardous Material Spill Contingency Plan and Emergency Response Contingency Plans are planning documents to demonstrate the potential response capability available to respond to a spill or other emergency situation that can arise during operations. They describe organizational lines of responsibility, procedures to be followed, and resources available when responding to spills, fires, and other site emergencies during the operations of the Project. Among other things, the plans will comprise of specific mechanisms to track spill movement in real time (based on actual wind, wave and current data at the time of the spill), along with pre-determining critical areas, features and structures to protect in advance of the slick approaching, as well as to detail appropriate guidelines and strategies for doing so.

4.31 Some of the Bank`s original concerns regarding potential major impacts and risks on the marine environment and tourism activities in the project area of influence have lessened. Environmental investigations conducted during project preparation have confirmed that the marine environment where the pipelines will be built is already significantly degraded due to its proximity to current shipping lanes of the city Port of Puerto Plata. In addition, information gathered on site and through studies indicated a very low level of tourism activities (such as diving, snorkeling) in the direct area of influence of the Project. Tourism vessels that circulate in that area of the coast are, in general, on their way to other more attractive touristic places in the northern coast of the DR (a few miles northern to where the mono-buoy will be placed).

V. STRATEGY FOR DUE DILIGENCE

5.1 The ESDD will include a careful evaluation of the revised EIA and associated documentation and it will also include a review of the preliminary ESMPs prepared as part of the first ESDD. It will also include the evaluation of the Sponsor's capacity to identify, mitigate and manage the environmental and social aspects and risks during the Project's life.

5.2 The Bank, with the assistance of an independent environmental and social consultant, will perform the ESDD, which will include the following:

a) Evaluation to confirm that the Project's direct, indirect and cumulative negative environmental and social impacts have been properly identified and evaluated, in particular: (1) risks from: accidents at the terminal and onshore pipelines from the handling of fuel and other chemicals, resulting in personal injuries, property damage or environmental release; accidental spills in the ocean from the subsea pipelines or the mono-buoy; natural disasters, especially extreme weather events; and third-party risks associated with the tanker trucks at the terminal and when they leave the terminal with their fuel cargo, and with the tanker ships coming to the mono-buoy or travelling to or from the Project site; and (2) impacts on: access to roads, businesses and neighborhoods and traffic safety; habitats, including sensitive marine and coastal habitats; soil and water quality, including site contamination issues; community issues, including the potential resettlement of one family near the terminal site; air quality; cumulative impacts.

b) Assessment of the Project's compliance with applicable IDB Bank environmental and social policies, including specifically the Environmental and Safeguard Compliance Policy;

Disclosure of Information Policy; Disaster Risk Management Policy and Involuntary Resettlement Policy; and the Gender Policy; International and Regional Agreements and applicable International Conventions.

c) Assessment Project compliance status with the applicable environmental, social, health and safety, and labor legal requirements in the Dominican Republic (e.g., laws, regulations, standards, permits, authorizations, applicable international treaties/conventions, etc.); in particular Project-specific legal requirements, including consultation.

d) Evaluate the proposed environmental and social plans, procedures, and documentation for Project construction and operation, including confirming that the plans define the Project-specific proposed environmental and social control, management, and mitigation measures, monitoring programs, costs, schedule of implementation, designated responsibilities, and that the ESMP has been developed based upon the assessment of the anticipated environmental and social impacts.

e) Confirmation that adequate health and safety plans and procedures will be established and implemented both for construction and operation (including sub-contractors) to address potential worker health and safety risks associated with the Project.

f) Confirmation that adequate contingency plans and procedures will be implemented during Project construction and operation (including contractors) to address potential accidental events (i.e., spills, explosions, fires, etc.). This may include an evaluation of third parties operating at the facilities.

g) Assessment of the Company's and its contractor's capacity to mitigate and monitor environmental, social, health and safety and labor aspects properly under their respective responsibility.

h) Evaluation of Project-related information disclosure and public consultation activities that have been performed including confirmation that the participation processes of stakeholders has been adequately conducted and that the proposed future actions to provide adequate ongoing information disclosure and public consultation with the local population is in compliance with IDB policies. This will include confirmation of adequate stakeholder engagement, and that the communities have participated meaningfully in pertinent decisions that affect them throughout the Project lifecycle and future proposed information disclosure.

i) Evaluate the identification of cumulative impacts and risks associated with the Project.

j) Calculate the overall greenhouse gas emissions for the Project.

k) Evaluate positive impacts of the Project and any additionality from IDB involvement.

5.3 As part of the Bank's environmental and social due-diligence, the Bank will prepare an Environmental and Social Management Report (ESMR) for consideration by the Bank's Environmental and Social Review (ESR) group. The ESMR will provide a synthesis of the relevant environmental and social aspects of the Project and the proposed Bank recommendations in terms of Project-specific environmental and social requirements.