

## **The Peru LNG Project and the Inter-institutional Coordination Between IDB and IFC**

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### **Introduction**

The Peru LNG Project is a strategic element in Peru's energy plan to exploit the gas reserves in the Camisea fields. The Project consists of the development, construction and operation of a liquefied natural gas (LNG) plant in the coast of Peru, South of Lima, a related marine terminal with a breakwater (and a temporary quarry for its construction), and an approximately 408 km 34" natural gas pipeline from pump station 3 of existing TgP pipeline in the highlands to the coastal LNG plant.<sup>1</sup>

The Project liquefies natural gas from Blocks 56 and 88, operated by a separate consortium led by Pluspetrol, and exports the LNG to available markets. Additional existing facilities related to the Project are operated by other companies and are not to be financed by the Lenders, thus representing potential risk factors: the Malvinas Gas Separation Plant; the TgP natural gas pipeline; the NGL pipeline from Malvinas to the fractionation plant and marine terminal near Pisco; and the existing Pisco fractionation plant, which is used to process the liquids into diesel, naphtha, propane, butane and condensate.<sup>2</sup>

The Project financing involved three Export Credit Agencies, the Inter-American Development Bank (IDB) and the International Finance Corporation (IFC). Therefore, the due-diligence (DD) process on the environmental, social, health and safety (ESHS) and labor safeguards required a great effort of coordination among multiple financial institutions (FIs) and their policies and processes. The harmonization between IDB and IFC was fundamental to create a critical mass to reach agreement in the approach to Lenders' ESHS requirements.

The IDB and IFC's approach to DD for Category A projects, such as the Peru LNG, involves the assistance of an independent ESHS consultant (the Consultant). In this case DD included the review of several EIAs and management plans prepared for each Project component (Plant, marine terminal, and breakwater; quarry; and pipeline), and meetings with appropriate personnel and stakeholders. In addition, the assessment of the ESHS risks associated with the Blocks 56 and 88 and TgP pipeline involved site visits and an overall review of the ESHS management systems of these related facilities.

Given that the Project started construction activities during the process of DD, the Lenders required the Consultant to monitor the Project's compliance throughout construction until financial close. In addition, the Consultant also assisted in the oversight of the ESHS aspects of Block 56 ongoing activities. The Independent oversight consisted of monthly site visits to Project activities, meetings/discussions with the contractors and environmental inspectors; discussions with local residents and civil authorities; reports to the Lenders on the Project's ESHS performance, and recommendations to correct deficiencies.

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<sup>1</sup> A new pipeline from the Camisea production fields to the LNG facility was not required, given that the natural gas is transported through the rainforest via the existing 211 km of 32" TgP gas pipeline, which at the time, in anticipation of a future export project, was built with extra design capacity to prevent the need for additional construction activities in the jungle

<sup>2</sup> To accommodate the production from Block 56, the plants at Malvinas and Pisco required expansions, both within the existing facilities' footprints.

During the site reconnaissance the teams visited the pipeline RoW (right-of-way), the LNG plant and the quarry, campsites and all relevant areas directly and indirectly potentially impacted by the Project, to verify that the final pipeline route, including micro-routings, complied with all aspects of environmental, social and cultural heritage considerations. During DD, the Lenders, either as a group or individually as institutions, met with international NGOs and civil society groups to discuss their views on the Project and hear suggestions for improvement in the Project design and/or monitoring.

### *EIA review*

An Environmental and Social Impact Assessment (ESIA) for each of the Project's components was prepared, as required by Peruvian legislation: (i) for the Peru LNG Plant component, including the breakwater and terminal; (ii) for the rock quarry used as a source of materials for the breakwater; and (iii) for the natural gas pipeline. However, their scope did not fully address the IFC's and IDB's requirements, including requirements regarding cumulative impacts. Therefore, supplemental impact studies, reports and management plans, including a Cumulative Environmental Assessment Report were required. Substantial coordination among Lenders was necessary to establish the scope of the supplemental information, to take into consideration the ESHS and labor policies of each FI. Given the timing of DD and the Project schedule, the supplemental information focused mainly on impacts from construction, including environmental and health and safety impacts, such as biodiversity, labor conditions, and security, as well as social impacts (e.g., compensation for the easement and ancillary facilities), consultation, and adequate consideration of indigenous peoples.<sup>3</sup> The principal requirement for IDB and IFC is the establishment of an ESHS Management System to be followed by the Project at all times, including by the EPC Contractor and subcontractors, during the construction phase. The Management System includes a number of plans developed to ensure compliance with the Project Standards and commitments (captured in the "Project Environmental and Social Standards" and in the Commitments Register).

### *Cumulative Effects Assessment (CEA)*

Upon Lenders' request, the Project prepared a CEA within an area of influence (AI) that extended 20 km to each side of the pipeline, in the departments of Ayacucho, Huancavelica, Ica, and Lima. This AI included the LNG facilities, the quarry, and the existing TgP pipeline, as well as Pluspetrol's Fractionation Plant and marine terminal, Pisco Port and a number of existing fishmeal plants. The methodology was based on the concept of Valued Ecosystem Components (VECs) and a comprehensive screening was conducted to identify existing or reasonably foreseeable third party projects occurring within the AI with potential for physical, chemical or other vectors' interactions. Approximately 2000 plans, programs, projects or initiatives were reviewed, with only 35 assessed as potentially relevant and examined in greater detail, of which only four were considered to have measurable interaction with the Project. The most relevant is the existing TgP pipeline, where cumulative effects could include potential social impacts, erosion and sedimentation, and impacts to sensitive habitats, mainly wetlands (peat bogs or *bofedales*). The CEA concluded that (i) given their isolation, no cumulative effects are likely in relation to the Plant/marine facility or the quarry; (ii) no significant cumulative effects would arise from interactions with the Port of San Martin and Paracas Bay, given the distance from the Project components and the relatively small increase in marine traffic in the Port of San Martin and Paracas Bay; and (iii) that the Project will have "a net positive cumulative impact as a result

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<sup>3</sup> Also due to the Project's schedule, requirements for the operational phase of the Project were established in the Loan Agreement, as conditions prior to Project operation.

of a combination of factors: tax revenues, royalties, jobs creation and export revenues” in a socio-economically depressed area.

### *Compliance with Lenders’ Requirements*

From the IFC’s perspective the following were considered applicable to the project PS1: Social and Environmental Assessment and Management Systems; PS2: Labor and Working Conditions; PS3: Pollution Prevention and Abatement; PS4: Community Health, Safety and Security; PS5: Land Acquisition and Involuntary Resettlement; PS 6: Biodiversity Conservation and Sustainable Natural Resources Management; PS7: Indigenous Peoples; and PS8: Cultural Heritage. Each of the PSs was analyzed and the aspects that were not fully addressed within the original documents were covered by the supplemental information. Areas of high interest and which were critical for the approval within IFC policies included: (i) environmental, social, health and safety management systems which included the capacity of the Company to manage the project; (ii) management of Indigenous Peoples in the Andean communities for which a specific “Rural Andean Communities” plan was prepared including the Company’s strategy to minimize the potential impacts and enhance the benefits to the communities. This strategy also included the community engagement to be conducted in a culturally appropriate manner; (iii) Land acquisition and compensation along the pipeline route was key for the Lenders and a Public Consultation Management Plan (PCMP) which provides procedures to conduct consultations, negotiation and compensation for the acquisition of the easement of the ROW was prepared by the Company; (iv) Biodiversity Conservation and Sustainable Natural Resources Management; (iv) cultural heritage; (vi) monitoring programs established by the lenders group; and (vii) disclosure of information.

From IDB perspective, the following requirements applied to the Project: the Environment and Safeguards Compliance Policy (OP-703), the Indigenous Peoples Policy (OP-765), the Information Disclosure Policy (OP-102), the Involuntary Resettlement Policy (OP-710), and the Information Disclosure Policy (OP-102). With respect to OP-703, the Project was classified as Category A according to Directive B.3. and also reviewed to comply with the EIA requirements of Directive B.5, the consultation requirements of Directive B.6, and the adherence to all applicable laws according to Directive B.2. Particular attention was given to ensure the Project does not significantly convert or degrade critical natural sites or damage cultural sites as prescribed by Directive B.9. Waste management procedures and standards, and pollution and emissions limits were also reviewed to ensure compliance with Directives B.10 and B.11. Project components that were under construction at the time of due-diligence were satisfactorily reviewed for compliance in accordance with Directive B.12.

Although the definition of Associated Facilities was different under each Lender’s policy, a common approach to all the facilities associated with the Project was to address these aspects as risks to the Project and to the Lenders. The evaluation of risks was based on the residual potential impacts, after implementation of the existing or proposed management strategies and plans. As a result, the Lenders concluded that only Blocks 56 and 88 would represent potential significant risks in biodiversity and indigenous communities<sup>4</sup>, which required actions beyond the implementation of existing management plans for the individual projects.

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<sup>4</sup> For the IDB the risk evaluation was performed taking into account: (i) the findings of the independent consultants involved in the due diligence of the PERU LNG Project; (ii) detailed reviews of over 80 project documents related to the Upstream and the Downstream components of the Camisea project, including reports of the 2006 Environmental and Social Independent Audit, the Camisea project’s independent environmental and social supervision reports by Matrix Consultants, and the Exponent report on the TgP

## *ESHS Management*

The cooperative work by the Lenders' ESHS teams was instrumental to ensure the Project's high standards of design, construction and operation. To that aim, the Lender's group diligently reviewed and approved a sophisticated ESHS management system (ESHS-MS) to cover all Project components and all different contractors. The ESHS-MS and all its management plans were also included as a covenant within the Project's loan documentation, including additional management plans designed to mitigate the risks associated with Blocks 56 and 88.

The comprehensive ESHS-MS, including management plans, organizational systems and implementing documentation, constitute the operational backbone of the ESHS-MS of the Project, as required by IDB and IFC policies. The Project ESHS-MS that was approved at financial close includes policies, procedures, and industry standards for the construction phase.<sup>5</sup> The ESHS-MS is aligned with ISO 14001, for environmental management and OHSAS 18001, for health and safety, and has been divided into the following three levels:

- i. Level 1 – ESHS Management System documents: Policy Statements, Manual, Commitments Register, and Source Documents;
- ii. Level 2 – PERU LNG Project Environmental Standards, Corporate plans, procedures, guidelines, and CMPs; and
- iii. Level 3 – Construction contractor and subcontractor documents: plans, procedures, operational guidelines: ESIPs that must comply with CMPs and the Project's policies.

The Project ESHS-MS includes corporate policies for Health and Safety, Environment and Community Relations, as well as a Code of Business Conduct. The *Code of Business Conduct* provides the basic guidelines to help Company employees make legal and ethical decisions in relation to the Project. An additional Code of Conduct for all Project workers is included in the Local Hiring and Purchasing Plan, as part of the ESHS-MS plans and procedures. In addition, each construction contractor engaged in the Project was also required to develop and implement an ESHS-MS that was designed to manage the specific ESHS aspects of their activities.

The key Level 1 document is the ESHS Manual, describing the system as a whole, including relationships between different levels, responsibilities for performance, and key objectives and mechanisms, including meeting and reporting routines, auditing frameworks and training requirements. Level 2 documents include all corporate documents developed for the Project in relation to ESHS management, including the Project Environmental and Social Standards which establishes the more stringent of the applicable national and international numeric standards and the Contractors' Management Plans (CMPs) developed to be included in the bidding process, to be taken into consideration by contractors when developing their own implementation system and plans (which constitute the Level 3 documents). The Level 3

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Pipeline Integrity Analysis; (iii) review of Block 56 project impact management strategies and plans; (iv) results of the IESM for PERU LNG; (v) six site visits performed by the Project Team as part of the PERU LNG due-diligence and the Camisea Supervision; (vi) interviews with PERU LNG, Pluspetrol and TgP personnel and government officials; (vii) meetings with affected communities; and (viii) review of the CEA for Block 56 and the PERU LNG Project.

<sup>5</sup> As mentioned before, due to the project schedule, requirements for the operational phase of the Project were established in the Loan Agreement, as conditions prior to Project operation

documents include the specific ESHS implementation management plans (ESIPs) prepared by each contractor to further develop each of the Level 2 CMPs for each component of the Project.

The cooperation between IDB and IFC during the review of each of the numerous plans was instrumental to reach an agreement to result in documents that could be managed and monitored during Project implementation.

### *Lenders Additionality*

PERU LNG is committed to have important additionality programs that extend beyond the mitigation of impacts. As part of the Project's promotion of sustainable social and economic development, budgets for individual community development projects are established based on the scope of community needs, as well as business continuity needs. Approximately US\$ 6.6 million were invested during construction and rolling budgets will be determined annually during operations. As part of enhancing the economic development of the areas of influence of the Project, IFC also participated with two principal added value projects: Business Linkages and Enhance Royalties Investments (ERI). The first aimed at promoting economic development in the cities of Cañete and Chincha, which are the closest localities to the Peru LNG plant. It seeks to maximize opportunities for local businesses and helping increase local communities' income. The program includes three main components: (i) Supplier Development: Support local small and medium enterprises (SMEs) in becoming suppliers and providers of goods and services to the Project and other large corporations, by assisting them to meet the buyers' quality, safety and delivery standards through training programs. (ii) Demand Identification: Identify the potential demand of large corporations that can be met locally; and (iii) Institutional Capacity Building: Help local business associations develop and improve their long-term business support programs, and other services to the local business community, and prepare and train a pool of local consultants that can assist local businesses in their future consulting needs. The ERI aims at improving municipal investment management in three municipalities in the direct area of influence of the Project's pipeline: La Mar and Huamanga, in Ayacucho, and Huaytará, in Huancavelica.

The IDB focused its added value on cooperation with the Government of Peru (GOP) in the management of the social and environmental risks in the hydrocarbon sector. Specifically, the Bank involved the GOP in additional and complementary projects, such as a Programmatic Loan for a New Sustainable Energy Matrix; and Technical Cooperation for a Sustainable Energy and Biofuels Strategy and the Sustainable Development of the Lower Urubamba. The Bank is also supporting the GOP's specific needs for strengthening the capacity of local and regional governments to access the resources generated by the gas developments more efficiently and within long term sustainable development planning.

### *Supervision and follow up*

As part of IDB and IFC's ESHS policies and procedures, projects are supervised for the life of the loan. The Lenders' approach for supervision of all three components of the Project and the associated facilities involves an independent Consultant performing field inspections at a minimum on a quarterly basis until the first year of operations. Subsequently, the Consultant will perform semi-annual site visits and reviews until one year after Project Completion, and annual site visits thereafter for the life of the loan. The Consultant, although paid by the Project, is managed by the Lenders and reports solely to the Lenders, with all reports made available to the public. To date, both IDB and IFC ESHS teams have participated in all quarterly site visits performed by the Consultant, which total 9 since June 2008, when the loan contract was signed.

### *Lessons Learned*

Coordination between IDB and IFC enabled the teams to benefit from each other's expertise on particular knowledge areas as well as geographic regions of the country. Among the lessons learned, the following seem more relevant: (1) Build upon previous experiences to enhance the Project's design and performance. Enhanced construction techniques reduced the impacts and enabled a better restoration of the wetlands in the highland areas known as *bofedales*. Similarly, the Project enhanced the design of the Camisea participatory community monitoring. Additional lesson learned relates to restoration activities in high altitudes. Although difficulties of restoring the RoW above 4300 masl. were experienced in past projects in Peru, there were expectations that the enhanced bio-restoration program would achieve better results. Nevertheless, it has been proven that the difficulties rely on the harsh environmental conditions, as the difficulties in RoW restoration remain; (2) Strong participation in the negotiation of the legal documentation. As a high profile project, legal documentation was complex and the legal counselors for the Borrower aggressive. Alignment between the IFC and IDB was fundamental to ensure adequate leverage for the ESHS requirements, particularly in relation to financial close, first disbursement and Project Completion requirements. In relation to the Lenders' oversight and leverage over the associated facilities in the associated facilities, the "best efforts approach" adopted has proven less than ideal. Nevertheless, it appears that there are no similar experiences among the multilateral development banks from which the Lenders could have benefited at the time.