

CAMISEA PROJECT: FACT SHEET

The Camisea Project in Peru is enabling that country to become one of the few in Latin America able to meet its own internal energy needs. It is making natural gas available to industrial and residential customers, providing significant revenues to the federal and regional government, improving Peru's trade balance, and helping to improve air quality. The project is projected to add a percentage point to Peru's growth rate every year of its 30-year life, which will help reduce poverty, increase tax revenue and export earnings.

The Camisea Project is located in areas extremely rich in biological diversity and traditional human cultures that could be put at risk if the project were not properly planned, constructed and operated. In Camisea, the IDB is taking a proactive approach in financing private sector projects by helping to address potential environmental and social problems to ensure that the project meets sustainable development goals. At the same time, the IDB is working to leverage the opportunity to benefit the local population and protect the environment as well as address issues in the project area that go beyond Camisea itself. In this regard, the IDB's financing for the project includes programs to strengthen Peru's ability to oversee and regulate not only Camisea, but also other important issues, on an ongoing basis. The project also includes environmental and social risk mitigation as well as revenue sharing provisions aimed at supporting development of local communities. Through its integrated and innovative approach to problem solving, the IDB is leveraging its relatively small financial contribution to Camisea to achieve a greater good for Peru.

The Project at a Glance

Camisea consists of three separate but interrelated projects with a total cost of approximately \$1.7 billion. The upstream component consists of exploration and exploitation of gas deposits in the Camisea field, processing facilities at Las Malvinas located 431 kilometers east of Lima, and a fractionation plant and marine terminal for natural gas liquids on the Pacific coast south of Pisco, all under the responsibility of a multinational consortium led by the private firm Pluspetrol. The downstream component includes 714 kilometers of a natural gas pipeline from Las Malvinas to Pisco and from Pisco to Lima, and a separate 540-kilometer natural gas liquids pipeline from Las Malvinas to Pisco. Both pipelines are the responsibility of the private firm Transportadora de Gas del Peru. The distribution component, being carried out by the private firm Tractebel, will provide natural gas to industry and households in Lima and Callao. The project has presented significant challenges, including pipeline construction in the jungle and over the Andes, gas development in lands belonging to indigenous peoples, and constructing the marine terminal close to a marine national park

IDB Involvement

The IDB has participated in Camisea to ensure adherence to the principles of sustainable development, which includes strong environmental and social safeguards and specific actions to create benefits for local populations and the environment. The Bank has provided two loans for the project: a \$75 million loan to Transportadora de Gas del Peru (TGP) to help finance a portion of downstream component; and a \$5 million loan to the Government of Peru to strengthen its capacity and coordination to supervise, monitor, and inspect the project's environmental and social aspects and to carry out actions to create sustainable and balanced development in the project's area of influence.

The IDB became involved in the Camisea Project in late 2001 before any construction activities had gotten underway. The Bank committed, and continues to commit, significant resources to help ensure the environmental and social sustainability of the project, including the assignment of a large team of technical experts--both Bank staff and external consultants and advisors—in the areas of environmental management, social protection, health and safety, labor, engineering, and law and finance¹. The IDB's participation was instrumental in terms of project financial structuring and mobilization of financing.

The IDB's role has gone far beyond the successful project structuring, mobilization of financing, and mitigating the impact of the downstream portion of Camisea, which is the only part of the project that it is financing. The IDB is bringing its expertise and sustainability criteria to bear on all three project components, and has identified and required various improvements in project design, plans, procedures, and standards. The IDB helped establish a series of mechanisms to supervise the implementation of Camisea's environmental and social protection measures in order to provide credible and transparent information. The Bank's supervision and monitoring system, with the assistance of independent external consultants, started in 2002 during construction and well in advance of the IDB formal approval of financing, and included full-time specialists in the field during construction and at least quarterly during operations; with such supervision reports available to the public. IDB's continued participation helps ensure the project's ongoing environmental and social sustainability of protection measures. The IDB participation has also focused on developing opportunities to enhance benefits and addressing broader environmental and social issues in the project area. The IDB role has allowed for enhanced opportunities for public consultation and participation and assisted in enhancing the capacities of project stakeholders.

Stakeholder Involvement

The IDB has helped to strengthen stakeholder participation in the Camisea Project. These are in addition to the numerous activities being carried out by the various

¹ This has included over 25 technical specialists and the IDB has performed over 30 missions (site visits) to Peru to help establish and maintain a financially viable and environmentally and socially sustainable project.

project companies and governmental agencies involved.² The Bank held 13 public meetings in the project area and one in Washington during the Bank's due-diligence. The IDB continues to hold semi-annual public meetings on the project. Extensive project information on Camisea is available to the public (e.g., see sources of additional information). This includes detailed environmental, social and health and safety management plans and systems for the companies involved, and various independent, governmental or community supervision/monitoring reports on the status and compliance of the project with its environmental and social commitments and requirements. Stakeholder participation in the project has clearly helped to increase knowledge and capabilities of civil society, private sector companies, the Government of Peru, and the financial community.

Social and Environmental Safeguards

Environmental, social, and health and safety management for the Camisea Project will be carried out for the entire life of the project: from the concept and design stages, through the construction of the facilities, and throughout the operational period of the project. Specific project design concepts and criteria to minimize potential impacts or risks were implemented (e.g., using existing areas already impacted or affected, using "offshore" approaches for the well sites and pipeline construction, and minimizing pipeline right-of-way). In addition, over 30 detailed plans, which contain various specific procedures and standards/criteria, have been developed to manage the risks and impacts of each component of the Camisea Project during both construction and operation, which include increased environmental and social safeguards. These plans have undergone extensive reviews and enhancements at different stages of the project by civil society, technical experts, Peruvian officials and IDB staff. Extensive project-specific environmental and social technical and financial requirements have been incorporated in the loan agreement between IDB and TGP. Failure to meet these conditions could lead to specific consequences, such as financial remedies, declaring the loan to be due and payable, or enforcement of all or any part of the security. The IDB also executed a letter of agreement with the consortium of the upstream component that requires compliance with various environmental and social requirements. Failure to comply with this agreement could result in a default under the IDB and TGP loan agreement. The extensive environmental and social risk management system established has not only allowed for the proper assessment and mitigation of risks, but also in helping prevent negative environmental and social impacts.

² The consultation and participation process for the Project as a whole has engaged thousands of stakeholders in what is considered as the most extensive public consultation process known for a proposed industrial project in Peru. Over 400 consultations took place with the Government of Peru, local and international non-governmental organizations (NGO's) and most importantly with the locally affected communities in the direct and indirect influence of the project. Several dozen individual meetings were held with the GOP, local, national and international NGO's, private, and public organizations in Peru and internationally.

The GOP, working with the IDB, established a Letter of Commitment in which the GOP formalizes its responsibilities for addressing environmental and social issues and opportunities associated with the Camisea Project and more broader those in the project area. This includes increased protection for the Nahua-Kugapakori indigenous area, which is the first and only time in Peru such enhanced legal protection has occurred; government actions on right-of-way migration control; land titling along the pipeline's area of influence (outside of right-of-way) for more than 5,300 families/lots and over 20,000 properties have been registered; property of 20 of 28 native communities of the area have been registered, two have titles; actions to promote environmental sustainable developmental strategic planning for the Lower Urubamba area; actions to address health issues in the Lower Urubamba area, especially associated with indigenous populations; actions to enhance the GOP's environmental and social legislation and guidance related to future oil and gas development; and specific contractual requirements for oil and gas fields in the area of Camisea Project. Financial and technical support to implement actions needed to fulfill these commitments is provided as part of the IDB loan to the GOP. The GOP also established a specific entity to coordinate among the various governmental agencies involved in the project.

Supervision

Given the high profile of the project, it is essential that the stakeholders be able to participate in the process of supervision and monitoring to ensure fulfillment of the various environmental and social requirements. Supervision is being carried out by three sets of participants: independent environmental and social consultants reporting to the IDB, GOP agencies, and local community and civil society groups. The IDB independent supervision of the project involved technical specialists in the field full-time during construction and intensive quarterly reviews and site visits during operations. In addition, the IDB has carried out over 30 missions to Peru related to the Camisea Project. The GOP, with financial assistance from the IDB, carried out programs to improve the institutional capacity of various Peruvian government institutions directly involved in the inspection, supervision and monitoring of the Camisea Project. In particular, OSINERG, the governmental entity responsible for supervising the project, was significantly strengthened with over 21 inspectors assigned during construction and 12 for operation. The project also involved the creation of the Camisea Project Ombudsman and enhancements to the "Defensoria del Pueblo" to better respond to concerns and complaints by the locally affected population. Results from the various monitoring and supervision programs are made available to project stakeholders, which include local populations and non-governmental organizations. The IDB has also collaborated with Peruvian civil society to design a supervision and support system to serve the specific needs of civil society. Various environmental and social monitoring plans with specific criteria to evaluate performance have been established and subsequently reviewed by an expert working group that included experts identified by Peruvian nongovernmental organizations, civil society, and the IDB and its external expert consultants.

Creating Benefits

The IDB has leveraged its role in the Camisea Project from one of mitigating negative environmental and social impacts to developing and implementing programs that will improve the environmental and social conditions in the area of the Camisea Project and Peru as a whole. These actions have been developed in conjunction with the project's consortium companies and the Government of Peru, and with assistance from the IDB loan to the GOP. Examples include creation of new protected areas in the rainforest area totaling approximately 925,000 hectares, including Otishi National Park, Ashaninka and Machiguenga Communal Reserves, and Megatoni Sanctuary and their respective management plans and financial resources to implement; implementation of various public and private sector initiatives to improve Paracas Bay which is an important resource that has suffered from years of contamination and impacts from other sources, including a strategic plan and creation of specific organization, designation of significant resources (e.g., over \$24 million) to properly manage the national marine park, monitoring programs and implement remedial projects. In addition, the GOP together with the IDB has used resources from the IDB financed Program for Land Titling program to complement TGP's land titling program along the right-of-way, resulting in benefits to present residents and helping to reduce the potential for migration into these areas.

Given that 50 percent of the project royalties go to the Department of Cuzco, the GOP and IDB have worked to improve systems that will promote sustainable investments. For example, regional sustainable development plans were developed in a participatory manner for the departments of Cuzco, Ayacucho and Huancavelica, and the province of La Convencion. These plans identify potential specific projects, and training has been provided to local governmental personnel. The IDB also actively promoted the need for an additional mechanism to return project benefits to local communities. The Peruvian Congress authorized the creation of a mechanism (FOCAM) to provide 13.16 percent of the royalties from block 88, and also block 56, project areas, which are some of the poorest areas in Peru, such as the Departments of Huancavelica, Ayacucho and Ucayali. As of January 2006, approximately \$23 million has been assigned. FOCAM represents a potential of approximately \$19 million/year from block 88 and approximately \$45 million once both blocks 88 and 56 are in operations.

Results

Project construction is complete and operations commenced in August 2004. During the 20 months of project operation, it has established solid financial performance and strong cash flow generation. The IDB's participation provided a catalytic role that helped lead to Peru's largest local capital market bond issuance for a single obligor (\$350 million). The project has resulted in numerous concrete benefits, including 2005 hydrocarbon exports greater than the estimated project average of approximately \$500 million per year reduction in the Peruvian hydrocarbon deficit. In addition, the project is estimated to result in a 30 percent reduction in marginal cost of

energy generation resulting in \$3.3 billion (net present value) over the concession period in direct benefits to electricity end-users and improving competitiveness of Peruvian industry. As of December 2005, royalty payments to Peru by the upstream project were approximately \$264 million, of which approximately \$132 million goes directly to the Department of Cuzco (i.e., 50 percent). The substitution of expensive fuels for natural gas with industrial users has started (e.g., 87 customers as of March 2006) which improves competitiveness of Peruvian industry and increases output by \$5.4B. Conversion of vehicle engines from gasoline fuel to natural gas has also started, and could add \$30 Million (net present value, NPV) in savings. Natural gas is being already supplied to 2,600 residential and commercial customers, generating another \$91M (NPV) in savings. Approximately \$23 million, as of January 2006, is directly assigned to support local and regional governments in the project area via the social and economic development fund for Camisea (FOCAM).

The potentially major negative environmental and social impacts associated with construction activities did not happen, in particular the concerns raised prior to project initiation. Erosion control and revegetation have been successfully carried out along the pipeline pathway despite difficult terrain, with over \$20 million being spent, and lower than expected observed failure rates during operation phase. Dredging and underground pipeline installation in Paracas Bay associated with the marine terminal has been carried out with minimal impact and has involved real-time monitoring system and decision-making. Programs to compensate local communities have been effective, with approximately 2,650 persons compensated for impacts associated with the pipeline construction and 25 communities with the upstream component; with effectively no material claims. There has been ample opportunity for stakeholder input.

Through the participation of project stakeholders, an environmental and social management system of the entire project has been implemented to help ensure that all risks and impacts are adequately mitigated. Environmental and social benefits have been created as well as initiatives to deal with medium and long-term issues. There are various supervisory systems to provide credible and transparent information on project environmental and social performance. There is enhanced capacity among the project companies, GOP, and local civil society with respect to dealing with environmental and social issues.

Five spills have occurred from December 2004 through March 2006 in the natural gas liquids pipeline; four resulted in releases beyond the right-of-way and one small leak affected only a few square meters. All of the spills were located in the first 220 km of the pipeline, which includes the rainforest and ascent into the Andes; no spills have occurred in the immediately parallel natural gas pipeline, which has a larger diameter and a thicker wall (14-inch diameter versus 32-inch). The IDB, the GOP and the companies have taken these spills very seriously, and a series of actions have been put into place. The immediate action was to properly respond to the spill and address

and resolve -environmental and social impacts. The next is to assess the cause of the spills and then evaluate the overall pipeline integrity, and take appropriate measures to help reduce the likelihood of future spills. Investigations and reviews to date have not identified a systemic problem. In at least three cases, excessive forces exerted on the pipeline due to lateral earth movements contributed to the failures. Investigations continue on two spills as well as a series of investigations (e.g., pipeline integrity testing and studies) and risk mitigation actions by TGP (2006 budget of approximately \$23 million), the GOP and the IDB. The results of these investigations will be made public. While the actual environmental and social impacts associated with the spills were of relatively of small magnitude, especially in comparison to other petroleum transportation spills, they are still considered serious and have created significant concern among the local communities and Peruvian civil society in general.

As Camisea moves into the future, the IDB has identified some issues that require special attention. Of special importance is resolution of the spill-related issues and continued enhancements of environmental and social operational management systems. The IDB continues to work with the GOP in relation to their various commitments and with civil society to better satisfy their needs in terms of understanding the projects performance. Future activities in the Nahua-Kugapakori reserve need to take into consideration the experiences learned. The IDB continues to work with relevant stakeholders to address these and other issues as they arise, and take actions to enhance environmental and social benefits.

Lessons Learned

The IDB's experience with the Camisea Project also provides important lessons that will benefit the Bank, and hopefully others, when financing future large infrastructure projects of this nature. Lessons include the importance of pre-construction planning for erosion control associated with pipeline construction and for works in sensitive environments and indigenous reserves, in particular to improve acceptance by stakeholders; challenges involved with creating credible and effective supervisory systems to serve the needs of various stakeholders for extremely complex projects with extensive information and general lack of trust among stakeholders; importance of worker health and safety training during the early stages of pipeline construction; and the need for an effective communication strategy on environmental and social issues. It also has demonstrated the importance of mainstreaming environmental and social aspects into sectoral planing and addressing issues of mixed responsibilities, both between public and private entities, and among the different public entities and private companies.

The IDB's support for Camisea is an integrated and innovative approach toward private sector financing of mega-projects in which the Bank is leveraging its relatively small financial contribution to Camisea to achieve a greater good for Peru.

Additional Information

Further information on Camisea, is available at <http://www.camisea.com.pe/> ;
<http://www.iadb.org/exr/pic/camisea/camisea.cfm> ; and <http://www.camisea-gtci.gob.pe/>

CAMISEA PROJECT: BENEFITS TO LOCAL COMMUNITIES

The Camisea Project provides direct benefits to Peru in terms of provision of natural gas, increasing energy independence, and providing significant economic benefits. The IDB participated in Camisea to ensure adherence to the principles of sustainable development, which include strong environmental and social safeguards. The Bank's participation has also led to specific actions and initiatives that will create enhanced benefits for local populations and the environment. A summary of some of the significant benefits to local communities associated with the project as summarized below.

There are two principal means of returning project benefits to local communities, each associated with the allocation of royalty payments from the Upstream project component. According to the License Agreement established in 1999 between PeruPetro and a consortium of companies led by Pluspetrol Peru Corporation for the exploration and development of gas in Block 88 (typically called the upstream component of the Camisea Gas Project), the private sector consortium is obligated to pay royalties to the Government of Peru equivalent to 37.24 percent of the upstream component gross revenues. This License Agreement establishes that 50 percent of the royalties are assigned to the municipalities and regional government of the Department of Cuzco, for use for department, provinces and districts of Cuzco. As of December 2005, the Upstream Project has made royalty payments of approximately \$264 million, and thus \$132 million have been assigned to Cuzco.

As part of the IDB involvement, the IDB in 2002 and 2003 strongly encouraged the Government of Peru to improve the sharing of Camisea Project benefits with the local population in the direct and indirect area of influence of the Camisea Project. In this context, the Government of Peru, working with the IDB and Peruvian civil society, designed a potential mechanism known as the Camisea Fund. The proposed fund would have used 3.5 percent of the royalties from the Upstream Component (Block 88) to finance specific environmental, social and economic development projects in the area of the Camisea Project and would be managed by an independent entity.

However, in December 2004, the Peruvian congress passed a law, referred to as FOCAM, which while returning project royalties to the project area did not meet all the objectives established in the draft Camisea Fund. On the positive side, FOCAM provides for revenue sharing of a portion of the royalties from not only the Upstream Block 88, but also future royalties from Block 56 (presently envisioned to provide natural gas to a proposed liquefied natural gas project, for export). Specifically, FOCAM requires that 13.25 percent of the total royalties from both Block 88 and 56, be directly distributed to local and regional governments in the area of influence of the Camisea project. Thus FOCAM will provide substantially more resources to local governments than had been proposed in the original Camisea Fund (e.g.,

approximately \$17 million/year from block 88 and approximately \$40 million once both blocks 88 and 56 are in operation). However, FOCAM does not provide for an independent entity to administer the fund, resources are available only to local governments and not other private or community organizations, and does not allow for financing productive projects or federal environmental protected areas created associated with the Camisea Project (note: financing of these protected areas was subsequently incorporated into the federal budget).

Specific data on the transfers authorized and accredited under FOCAM (and gas royalties) to regional and local Governments can be accessed at the MEF's website for economic transparency <http://transparencia-economica.mef.gob.pe/>. In the 14 months since the law came into effect (April 2005 to June 2006), the Central Government has deposited roughly \$33.5 million in the FOCAM account. While no specific projects have yet been implemented, a significant number of projects are at various stages in the process for approval as part of the National Public Investment System (known as SNIP).

Both Cuzco and FOCAM resources are being facilitated by a series of actions including:

Development of regional sustainable development plans, in a participatory manner, for the departments of Cuzco, Ayacucho and Huancavelica, and the province of La Convencion. These plans identify potential specific projects, and training has been provided to local governmental personnel.

Training programs to local governments on public sector investments and the Peruvian budget and appropriation regulations.

Besides the use of project royalties, there are other significant direct benefits to local communities associated with the project, based on the IDB's involvement. These include:

Access to natural gas to residential customers and improved air quality through fuel replacement with natural gas (in Lima area).

Implementation of various vaccination programs for different local indigenous communities in the lower Urubamba (over 2300 persons) and development of enhanced governmental health protection plan for indigenous communities in Lower Urubamba

Creation of increased protection for the Nahua-Kugapakori indigenous area (indigenous peoples living in voluntary isolation), which is the first and only time in Peru such enhanced legal protection has occurred, and subsequent development of protection plan.

Creation of new protected areas in the rainforest area totaling approximately 925,000 hectares, including Otishi National Park, Ashaninka and Machiguenga Communal Reserves, and Megatoni Sanctuary and their respective management plans and financial resources to implement the plans.

Implementation of various public and private sector initiatives to improve Paracas Bay, an important resource that has suffered from years of contamination and impacts from other sources. This includes development of a strategic plan and creation of specific organization, designation of significant resources (e.g., over \$24 million) to properly manage the national marine park, monitoring programs and implementation of remedial projects.

Land titling program for properties along the pipeline right-of-way (over 16,000 properties).

In characterizing each of these benefits (those just listed as well as those associated with FOCAM), it is important to differentiate between the mitigation of potential impact or risk, which is necessary for a project to be considered viable or feasible, and actions taken to enhance positive impacts and/or create benefits. When evaluating project performance, risk/impact mitigation must achieve a minimally acceptable level, whereas any additional benefit is positive by definition (and the IDB of course seeks to maximize such benefits).

The Camisea Project is also providing benefits to local communities through its overall impact on the economy. The overall cumulative economic impact, at approximately \$14.2 billion (NPV) is equivalent to 18% of Peru's 2005 GDP. This includes:

30% reduction in marginal cost of energy generation resulting in \$3.3 billion (NPV) in direct benefits to electricity end-users;

Substitution of expensive fuels for natural gas by industrial users will generate \$640 million (NPV) in savings

Gas supplied to 2,595 residential & commercial customers, generating another \$150 million (NPV) in savings

Conversion of vehicle engines from gasoline fuel to CNG representing \$30 million (NPV) in savings (3 CNG stations in Lima)

Approximately \$500M/year reduction in hydrocarbon trade deficit representing approximately \$3.2 billion (NPV)

The project is changing Peruvian energy matrix and improving the country's energy independence, allowing for the substitution of natural gas for expensive fuels among

industrial users and the use of natural gas by residential and commercial users. It is also allowing for the conversion of vehicle engines from gasoline fuel to natural gas.

An important indirect benefit, though one not easily quantifiable, is the enhanced institutional capacity of local civil society organizations in terms of participation in large infrastructure projects. Similarly, while challenges still remain, the GOP's institutional capacity to develop environmentally and socially sustainable oil and gas projects in Peru has unquestionably progressed relative to the point at which the IDB's involvement in the project began.