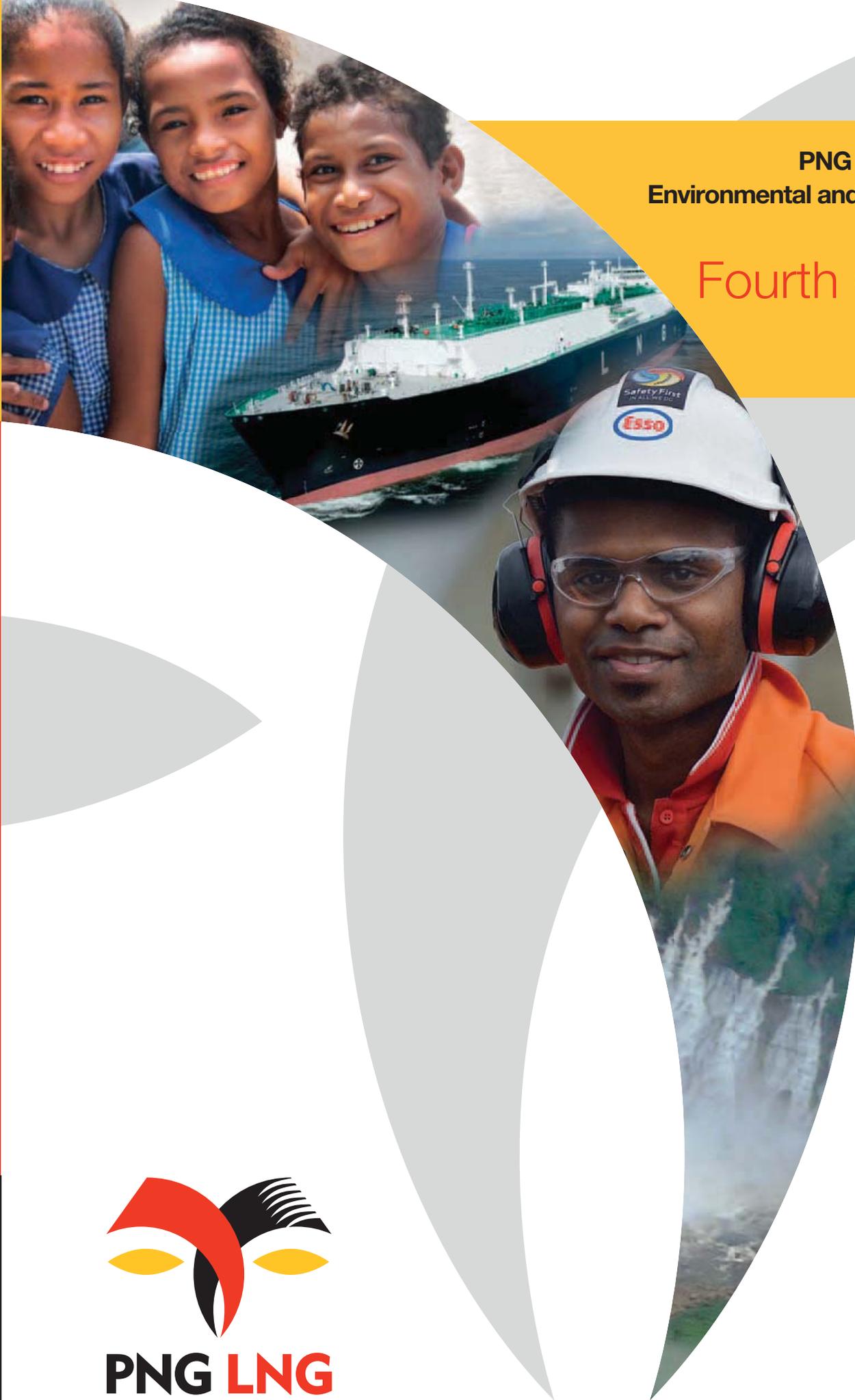


**PNG LNG Quarterly
Environmental and Social Report**

**Fourth Quarter
2011**



PNG LNG

*Energy for the World. Opportunity for Papua New Guinea.
Eneji Bilong Wol. Luksave Bilong Papua Niugini.*



Developing partnerships to secure Papua New Guinea's future

“In addition to employment and business opportunities associated with the Project construction, we are supporting local communities by developing partnerships that focus on education, health and capacity building.”

Decie Autin, Project Executive, Esso Highlands Limited

Lessons from other global resource extraction projects show that best practice approaches to community development are based on strong and sustainable partnerships. When community leadership and ownership is achieved, local skills and institutions can be developed, community expectations are more effectively managed, and projects are more likely to result in positive and sustainable outcomes.

Recognizing that improving health, education, community capacity, skills development and economic prosperity are shared goals, the Papua New Guinea Liquefied Natural Gas (PNG LNG) Project (Project) is developing inclusive and mutually beneficial partnerships with communities, Government, Landowner Companies (Lancos), non-government organizations and other key stakeholders, as it strives to create a legacy that will benefit the people of Papua New Guinea.

This is the eighth PNG LNG Quarterly Environmental and Social Report, which demonstrates how Esso Highlands Limited, as operator of the US\$15.7 billion Project, is working in partnership with stakeholders to deliver on safety, health, environmental and social management commitments. Esso Highlands Limited, a subsidiary of Exxon Mobil Corporation, is responsible for the Project's construction and operation and is developing the Project with co-venturers: Oil Search Limited, National Petroleum Company PNG Limited, Santos Limited, JX Nippon Oil and Gas Exploration Corporation, Mineral Resources Development Company Limited and Petromin PNG Holdings Limited, and their affiliates.

Social development

Through its National Content Plan, the Project recognizes that making the most of energy resources means not just developing oil and gas, but also people and capacity, to deliver sustainable benefits to local communities.

The Project is partnering with communities, non-profit organizations, Project contractors, the Government and other stakeholders, to build on the core strengths that help communities thrive. This involves a long-term focus on areas including health, education, women's empowerment, public policy and capacity building for local businesses.

For example, because education is key to economic development and employment growth, the Project is providing scholarships, upgrading school facilities and delivering school materials throughout the Project area.

This quarter, local companies were commissioned to build and deliver school desks to more than 20 schools to provide better classroom conditions and encourage improved attendance.

The Project is also working in partnership with Papua New Guinea's National Research Institute to develop a needs assessment of teacher training in the Project area. The assessment aims to identify formal training needs, such as teacher certification, as well as areas for continuous improvement nominated by the teachers themselves, to help overcome teaching challenges experienced in the classroom. The findings from this assessment will guide policy recommendations to the Department of Education for improving the quality of education in Papua New Guinea.

Other highlights for the quarter included the release of the fourth book in the series of Toea children's books, *Toea's Gulf Adventure*, and the opening of the Buk Bilong Pikinini community library at Koki. Made possible through the Project's support and refurbishment provided, in kind, by the Upstream Infrastructure contractor, the library is designed to instill a love of reading among community members.



Philomena Tom, aged 6, reading from her favorite book at the Buk Bilong Pikinini community library opening

Recognizing that agriculture is a major contributor to the livelihoods of Papua New Guinea's rural communities, the Project is also partnering with communities to grow fresh produce, build community nurseries and establish cashew orchards. In addition, numerous water projects were implemented this quarter, with 13 small water catchment projects undertaken in the Upstream North area alone.

The Project's Rapid Implementation Projects continue to provide opportunities within local communities. For example, this quarter, more than 100 kilometres of road clearing and road repairs were completed by village residents from Tindom Hill, Komo and the Hides area, providing much needed income for their communities.

Meanwhile, workshops to help build the capacity of Papua New Guinea businesses were conducted for Kikori-based organizations, and leaders in the Hides and Komo areas received management training during this quarter. This included Personal Viability training sessions designed to provide tools for improving livelihoods and managing social issues. The 136 participants covered topics such as promoting positive thinking, respect for others, making positive changes in life, budgeting for family needs and making money.

The Project's commitment to empowering women also expanded to supporting the World Bank's Women's Self Reliance Program. As a result, women in the Upstream and LNG plant site communities will be trained in areas such as basic financial skills, family life improvement skills and income generation through farming, sewing, baking or similar activities.

Pre-construction activities

In addition to the completion of pre-construction surveys for the 10-kilometre Gobe Spurline and the 2-kilometre Kutubu Spurline in the third quarter 2011, pre-construction surveys are now complete for the entire length of the 292-kilometre main onshore pipeline route. Only the pre-construction survey for the 24.8-kilometre Hides Spine remains.

100% of the 292-kilometre main onshore pipeline route surveyed

Table 1 – Contracts and construction highlights

Contract	Contractor	Major activities during the fourth quarter 2011
Upstream Infrastructure (C1)	Clough Curtain Brothers Joint Venture	More than 8 kilometres of the Hides Wellpad Access Road completed. Hides landfill cells completed, providing a central waste disposal facility for construction teams in Hides.
Offshore Pipeline (EPC2)	Saipem	Mobilized the offshore installation vessel. Completion of the onshore portion of the pipeline at Caution Bay. Initiated offshore pipe lay. Manufacture of all offshore pipe completed.
LNG Plant and Marine Facilities (EPC3)	Chiyoda and JGC	Start of work erecting the LNG tank walls. More than 50 percent of the marine jetty piles installed.
Hides Gas Conditioning Plant and Hides Wellpads (EPC4)	CBI Clough Joint Venture	Installation of the first foundation piles in the utilities area.
Onshore Pipeline (EPC5A)	SpieCapag	Pre-construction surveys for the 292-kilometre pipeline and the southern section of the pipeline completed. Completion of the first of four major river crossings.
Komo Airfield (EPC5B)	McConnell Dowell and Consolidated Contractor Group	Installation of the first foundations for the terminal building. Almost 50 percent of earthworks completed.
Associated Gas Development	Various	Control room construction and internal fit out, including power to the building, completed.
Drilling (new wells and workovers)	Nabors Drilling International Limited	The first of two drilling rigs successfully delivered from Texas, US to the Port of Lae, Papua New Guinea.

Construction

Working together, the Project's contractors and subcontractors achieved many milestones this quarter, including: completion of the offshore pipeline LNG Plant (Caution Bay) landfall site clearing, trenching, shore pull and trench backfilling; completion of the LNG tank concrete foundations and the start of construction for the outer LNG tank shells, as well as completion of the first major river crossing for the onshore pipeline.

The Upstream Infrastructure contractor continued their impressive safety performance with more than 11 million work hours achieved without a Lost Time Incident.



Aerial view of the LNG plant site

Workforce development

By the end of the quarter, a team of more than 14,300 people were employed on Project activities, of which 60 percent were Papua New Guinean citizens. The Project also continues building a diverse and talented workforce through education and mentoring.

More than **8,500** Papua New Guinean citizens employed representing **60%** of the Project workforce

For example, 73 Production Operations and Maintenance trainee technicians completed their 18-month program at the Production Operations Training Centre in Port Moresby. This course is part of their preparation for commissioning and start-up activities at the Hides Gas Conditioning Plant (HGCP) and LNG Plant. An additional 76 technicians will begin training in January 2012.

The Project also selected nine Papua New Guinean graduate engineers to commence employment with Esso Highlands Limited in February 2012.

In December, two biomedical repair technicians graduated after six months of intensive training in Texas, through the MediSend International Biomedical Equipment Repair Training program. Both technicians will now take their newly learned skills back to Kundiawa and Mount Hagen hospitals in Papua New Guinea.



Biomedical repair technicians during training

Partnering with Papua New Guinean businesses

Lancos and other Papua New Guinean businesses continue being contracted across all areas of the Project. This quarter, boat hire, heavy equipment rental and trucking services were among the many goods and services provided by Lancos, resulting in a Project-related spend with Lancos of around 170 million Kina (US\$79 million). This brings the Project spend with Lancos to 685 million Kina (US\$320 million) to date, of which approximately 490 million Kina (US\$229 million) was spent in 2011 alone.

The total Project-related in-country spend as at the end of 2011 was just over 3.6 billion Kina (almost US\$1.7 billion). For the full year 2011, Project in-country spend exceeded 2.1 billion Kina (almost US\$1 billion), which is a 40 percent increase compared with 2010.

Helping build the skills of Papua New Guinean companies so they can contribute to the country's future growth and success, the Enterprise Centre has provided services to more than 10,600 business people. These services include training, business assessments, and advisory and mentoring services, in addition to serving as an information centre. The number of businesses assisted by the Centre increased by 50 percent in 2011 compared with 2010. Business opportunities presented to local companies also increased this quarter to 101, compared with 30 for the third quarter 2011.

550 work days of advisory services provided in 2011

Safety, health and security

Excellence in safety, security, and health in the workplace is a core value for Esso Highlands Limited, which translates into a proactive approach to safety management across all Project worksites. The Project engages in extensive, ongoing safety programs to improve safety performance and pursue the Project's goal – *Nobody Gets Hurt*.

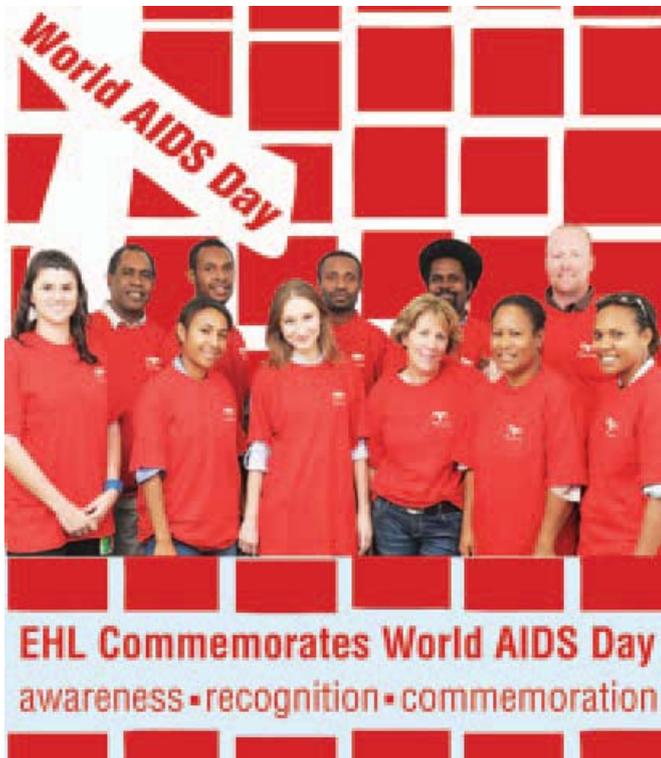
Despite this, the Project suffered a fatality in the fourth quarter when a worker for the Komo Airfield contractor died from injuries sustained in a trench collapse. The Project and Esso Highlands Limited express deepest sympathies to the family, friends, and fellow workers of this team member. Appropriate authorities were notified and an investigation into the incident was completed, resulting in specific measures implemented to address the identified causes.

Meanwhile, the Project advanced the Safety Champions initiative, which was launched in the third quarter 2011. The process used to increase awareness of events with a higher potential to result in an incident was improved. Senior Project executives also visited worksites to conduct 'fireside safety chats' with the Project workforce.

Within the Project workforce this quarter, one serious malaria case and one tuberculosis case were confirmed, continuing a downward trend in case numbers recorded, which suggests the Project's management of both malaria and tuberculosis is proving effective. The Project recorded its first illness outbreak for the year, related to chicken pox, which was isolated to a small group of workers. The Project Health team and construction contractor set up an Incident Response team to implement measures to contain the spread of the virus, and to establish a vaccination program for at-risk workers.

In partnership with the Papua New Guinea Institute of Medical Research (IMR), Population Services International, other non-profit partners and clinics, the Project's Community Health Program is building national capabilities in research and diagnostics.

The Project is also reaching out to communities and enhancing their understanding of diseases like malaria, tuberculosis and Sexually Transmitted Infections such as Human Immunodeficiency Virus (HIV)/Acquired Immune Deficiency Syndrome (AIDS). One way the Project has achieved this is through their support and participation in World AIDS Day activities.



World AIDS Day poster

A highlight during this quarter was the opening of a research center and patient examination facility at the Salvation Army run Papa Health Clinic near the LNG plant site. The research center is part of the Integrated Health and Demographic Surveillance System (iHDSS), supported by the 'Partnership for Health' agreement between the Project and the IMR. The center will monitor the health of LNG plant site communities, Hides area villages and two respective comparison sites. It will also be used for activities such as a Sexually Transmitted Infections study at the LNG plant site villages.

In addition, a site assessment and scoping exercise at Kikori Hospital was finalized this quarter in readiness for a tuberculosis prevention, diagnosis and control program through the IMR.

Meanwhile, health care providers from the Komo Airfield and HGCP areas benefited from a Project-supported emergency care training program conducted in November. The program was led by a physician specializing in obstetric and newborn emergencies, one of the most common causes for emergency evacuations in these areas.

The Project's Security team continues to proactively review the security incident reporting process and enhancing the skills of Papua New Guinean security personnel.

Landslide on January 24, 2012 near Hides

On January 24, 2012, a landslide occurred in the Southern Highlands approximately 5 kilometres from where the Project is constructing the HGCP. All Project personnel have been accounted for, and there was no damage to Project-owned facilities. However, local communities suffered a number of fatalities and considerable damage, and our hearts go out to all who have been affected by this tragedy.

It remains unclear what caused the landslide and it is too early to speculate in the absence of a full Government investigation. We understand that the Government has started its initial assessment.

The Project's immediate concern is for the wellbeing of our workforce and the community in the area, and we have offered our support to the Government, the National Disaster and Emergency Relief Office, which is in charge of managing this incident, and the local community. At the time of writing, this has included:

- Supporting Government representatives to be transported to the area to assess the extent of the landslide.
- Arranging civil experts to be prepared to respond to assess the safety of the site.
- Providing support for the 'haus kra' with rations, tarpaulins, generators, fuel and lights.
- Offering immediate deployment of equipment to the community to assist with recovery efforts.
- Being ready to assist the Government to reopen the road so the community can regain access.
- Supporting the Government by assessing community water, ration and temporary housing needs.
- Offering support to the community regarding assistance with victim recovery.

Two outcomes achieved during the quarter were a revised system for analyzing security reports to more effectively manage resources, and the participation of four Papua New Guinean Project Security team members in a specialized maritime safety and rescue training course in Brisbane, Australia.

In Lae during early November, there was an escalation of communal unrest, which lasted for several days. While there was no direct threat to Project personnel, the Security team quickly deployed additional resources to secure Project personnel and facilities until Papua New Guinean authorities contained the situation.

Environmental performance

Greenhouse gas emissions rose this quarter in line with increasing construction activity, in particular, as fuel use in offshore marine works increased. The Project's onshore and aviation fuel use equated to a greenhouse gas emissions value of approximately 45,000 tonnes of carbon dioxide equivalent. This quarter also marked the second inclusion of emission totals from marine operations, which were calculated to contribute approximately 24,560 tonnes of carbon dioxide equivalent.

Marine operations occurred during this quarter and are planned for the first quarter 2012, so it is expected that emissions will trend upwards accordingly.

The Project continues to focus on effectively managing water quality and wastewater treatment. In response to grievances relating to water this quarter, the Project formed a water taskforce to address community concerns and review items such as water implementation plans, catchment proposals, community water system progress and water quality. The taskforce will initially focus on the Northern Highlands area and will report its findings to the Project and its contractors.

This quarter, the Project maintained all water extraction volumes within the annual limit set in the Project Environmental Permit. The Project obtained additional water extraction permits for two water wells at the HGCP site and six water wells to be established along Hides Ridge.

The LNG plant site received over 300 millimetres of rainfall during December, causing substantial damage to the surface water drainage system within the site. A drainage and erosion control action plan was developed and will be implemented in early 2012. Meanwhile, the LNG plant site did not extract any water from surface water sources this quarter. This was achieved through successful rainwater harvesting from stormwater run-off and recycling treated wastewater.

By the end of the quarter, the Project had 26 wastewater treatment plants in operation, with an in-depth systematic review of measures underway to assist and support contractors with further improving wastewater operation.

The Hides landfill cells were also completed during the quarter, providing a central waste disposal facility for construction teams in the Hides area.



Hides landfill cells

A two-day multi-stakeholder workshop for the Project's Biodiversity Offset Delivery Plan was held in Port Moresby during October. Another multi-stakeholder meeting is planned for 2012 to discuss implementation of the finalized plan.

Stakeholder and community engagement

The Project continued engagement with all levels of Government through 31 workshops with national Government departments and 21 workshops with provincial governments, involving 650 Government officials throughout 2011. Topics covered included national content, land and community affairs, business development, and Government initiatives which the Project supports, such as the Highlands Highway rehabilitation work between Mendi and Hides.

In addition to the Project's ongoing safety messages during community engagements, a broader range of informative and educational topics were also introduced this quarter, including methods for drilling gas wells, constructing a pipeline across a river, and installing a pipeline on the sea bed.

More than 26,000 people participated in over 1,000 engagements in 2011

With the rapid increase in Project-related activity, timely management of community grievances also becomes increasingly important. During the quarter, the Project registered 107 grievances and closed 105 grievances which were registered during this and previous quarters.

A key achievement this quarter was the payment of compensation to 14 clan agents from the Kerewo tribe in remote locations along the Omati River following more than six months of working in partnership with them and Papua New Guinea's Department of Petroleum and Energy to obtain access to the Omati waterway for installation of the offshore pipeline. Compensation was also paid for land impacted by the LNG Plant landfall, completing all statutory compensation payments required for construction access for the offshore pipeline.

In many Project areas, the construction of speculative structures by local community members in the hope of gaining resettlement compensation remains a challenge. The Resettlement team continues holding disclosure meetings with impacted communities as soon as land requirements are known, to communicate cut-off dates for the census and survey of structures and eligibility requirements for compensation.

Building on the partnerships created with communities, Governments, non-government organizations, Lanco and other key stakeholders, the Project remains committed to developing long-term successful partnerships that will drive sustainable economic and social benefits for Papua New Guinea.





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Santos
We have the energy.



