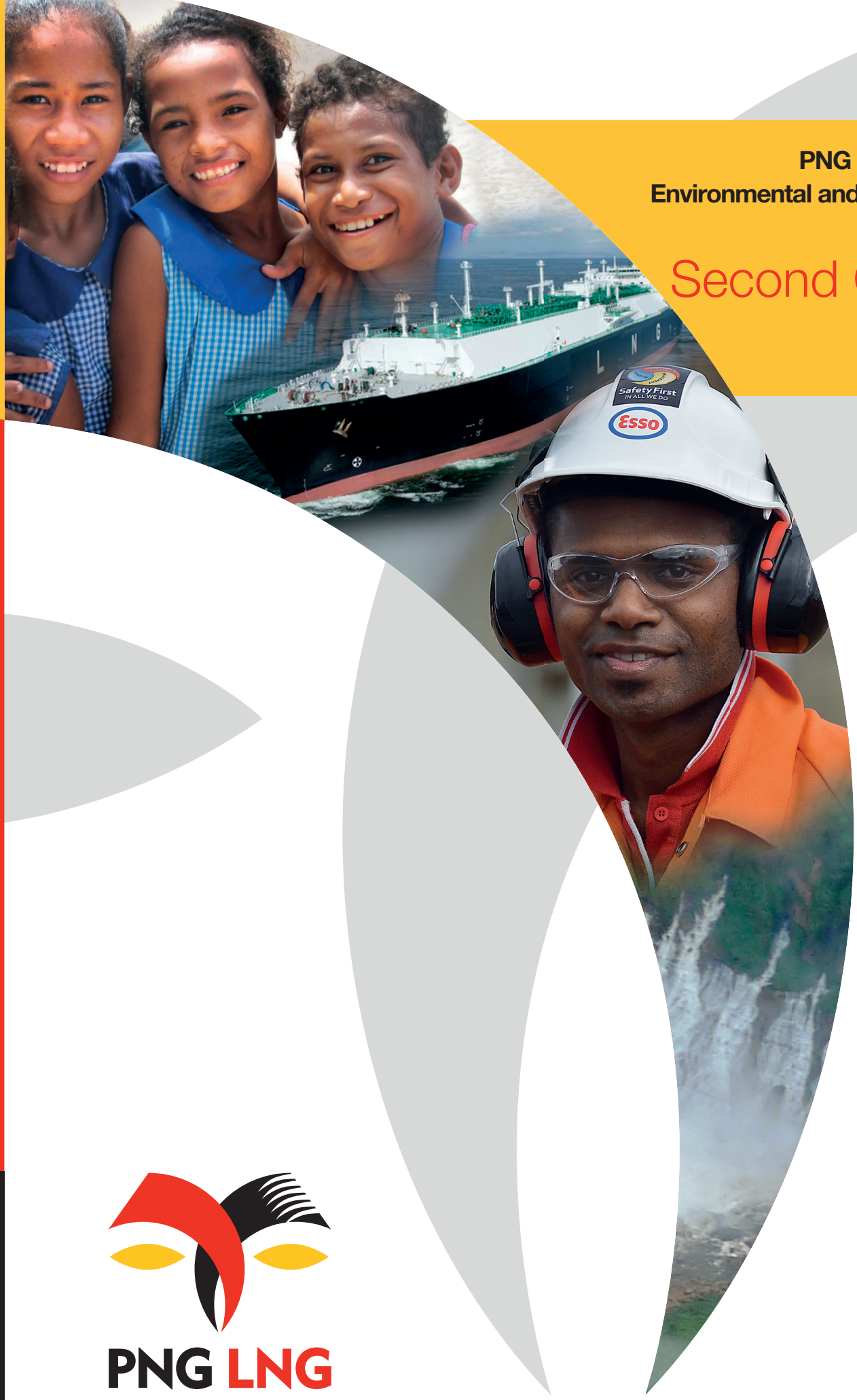

PNG LNG Quarterly Environmental and Social Report

Second Quarter 2011

PNG LNG

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

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PNG LNG

About This Report

The Papua New Guinea Liquefied Natural Gas Quarterly Environmental and Social Report – Second Quarter 2011, reports on the Project's recent construction, safety, health, environment and social management activities.

This Report demonstrates the progress made each quarter and is a commitment by the Project to ensure the citizens of Papua New Guinea, interested non-government organizations and other stakeholders are kept well informed.

This Report is published on the Project website, www.pnglng.com. Printed copies are also available.

Contents

Growing our Papua New Guinean workforce – exceeding expectations

"As a Company, we have long recognized that making the most of energy resources is about more than oil and gas production – it's also about developing people and capacity, and creating and delivering long-term benefits to local communities."

Peter Graham, Managing Director, Esso Highlands Limited

The successful construction of the Papua New Guinea Liquefied Natural Gas (PNG LNG) Project (Project) relies on developing a workforce with the right balance of skills and experience. The Project's commitment to local skills development is demonstrated through creating local jobs; educating and training national employees, contractors and suppliers; transferring knowledge and skills; buying local goods and services; and assisting communities through strategic investments. This quarter, the Project made significant progress in all of these areas.

This is the sixth PNG LNG Quarterly Environmental and Social Report, which demonstrates how Esso Highlands Limited, as operator of the Project, is delivering 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 on behalf of 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.

Workforce development

Building the skills of Papua New Guinean workers through training is part of the Project's National Content Plan, and an opportunity to leave a lasting, positive legacy for Papua New Guinea.

Across the Project, there is a wide scope of training offered, including formal classroom training and on-the-job training, to enhance the skills and knowledge of the Papua New Guinean workforce for both their current roles and future employment opportunities either with the Project or elsewhere. In addition to developing the workforce through direct and contracted employment, the Project offers a graduate program, the Operations and Maintenance Training Program and internships.

Project contractors also provide extensive training programs. For example, this quarter the LNG Plant and Marine Facilities contractor selected nine Papua New Guinean engineering trainees for a one-year program at their engineering center in Yokohama, Japan. They will receive on-the-job training in mechanical, electrical, instrumentation and project controls to prepare them for engineering work at the LNG Plant.

Meanwhile, the Offshore Pipeline contractor is sponsoring a 16-month training program for 40 young adults from Kido Village and the Omati River area. The students will learn basic trade skills in air-conditioning and refrigeration, metal fabrication, carpentry and joinery, and plumbing. This will allow them to help their communities in the future, and provide ongoing employment opportunities beyond the Project.

As driver and operator safety is a priority for the Onshore Pipeline, this contractor is delivering a three-phase training program tailored to the requirements of heavy equipment operators and heavy and light vehicle drivers.

Project training opportunities are preparing Papua New Guinean workers for the rapidly increasing construction activity at the LNG Plant and the Hides Gas Conditioning Plant. In line with increasing activity, the Project workforce grew to 9,300 by the end of June, up 30 percent since the previous quarter. More than 6,600 workers are Papua New Guinean citizens, representing 71 percent of the total Project workforce. This number significantly exceeds Papua New Guinean national workforce forecasts developed prior to Project financial close. Landowner Companies (also referred to as Lancos) continue to be the primary source of Papua New Guinean labor, accounting for more than 73 percent of recruits.

More than 6,600 Papua New Guinean citizens employed representing 71% of the Project workforce

Women are also receiving more training and employment opportunities. At the end of June, the Project employed approximately 840 females including 700 Papua New Guineans.

"I am very, very interested in this Project because new things are happening. For example, young ones are working. And the biggest thing is the living standards of people are changing."

Based on: *Landowners on LNG project impact* (2011). Radio Australia. July 1, 2011.

Rausi Doko, Village Recruitment Officer, Lea Lea

Pre-construction activities

Building on previous progress, the main pre-construction survey effort in this period concentrated on the Onshore Pipeline, with approximately 80 percent of the 292-kilometre main pipeline route surveyed to date. Cultural heritage sites continue to be identified during pre-construction surveys and are avoided or impacts mitigated in accordance with the Cultural Heritage Management Plan. For example, five sites identified in previous quarters were monitored throughout the second quarter to minimize risk of disturbance.

80% of the 292-kilometre main pipeline route was surveyed

As part of the Project's Chance Finds Protocol, trained local archaeological spotters monitor earthworks and land disturbance activities, identifying any artifacts, bone remains and fossilized materials that are uncovered. Other sites or areas with cultural significance such as oral tradition sites, burial grounds, historical warfare grounds, and women's or men's houses are managed in compliance with the Project's Cultural Heritage Management Plan.

Construction

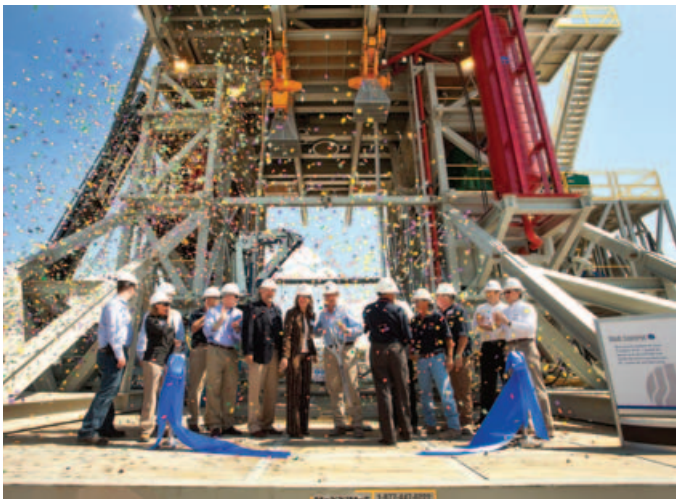
The Project is making good progress towards the 2014 start-up window with a number of construction milestones achieved this quarter. This included the first pipeline weld on the 292-kilometre onshore pipeline, which together with the offshore pipeline will reach more than 700 kilometres, completion of the first drilling rig, the start of piling at the LNG Plant marine jetty and completion of work at the Juni Construction Training Facility.

First pipe weld for the onshore pipeline

In addition, offshore pipeline works started with construction on the Caution Bay pipeline shore approach support site including the installation of a small construction yard and fencing.

With offshore pipeline works starting this quarter, the contractor is mobilizing into Papua New Guinea in anticipation of pipe laying activities commencing late in the year. Meanwhile, infrastructure works in the Kikori and Gobe areas are nearing completion, so equipment and personnel are relocating to the Hides area to work on the Hides Gas Conditioning Plant site.

The Upstream Infrastructure contractor continues their noteworthy safety performance with over seven million work hours achieved without a Lost Time Incident. The Komo Airfield contractor also celebrated four million hours worked without a Lost Time Incident.



Decie Autin, Project Executive, Esso Highlands Limited at the ribbon-cutting ceremony for the first complete drilling rig

Table 1 – Contracts and construction highlights

Contract	Contractor	Major activities during the second quarter 2011
Upstream Infrastructure (C1)	Clough Curtain Brothers Joint Venture	Mubi River Bridge completed and opened. Southern Logistics Route scope completed.
LNG Plant Early Works (C2)	Curtain Brothers Papua New Guinea Limited	Completion of site preparation works on the flare area.
Offshore Pipeline (EPC2)	Saipem	Construction of the Caution Bay pipeline shore approach site commenced. Award of subcontract for the Omati River landfall preparation.
LNG Plant and Marine Facilities (EPC3)	Chiyoda and JGC Corporation	Underground piping in the common LNG process area commenced. Piling for the marine jetty commenced.
Hides Gas Conditioning Plant and Hides Wellpads (EPC4)	CBI Clough Joint Venture	Pioneer Camp construction completed. Foundations for the first waste incinerator completed. Commissioning for a temporary power generation system completed.
Onshore Pipeline (EPC5A)	SpieCapag	Pipeline trenching, welding and lowering-in activities commenced. First occupancy of Kaiam Camp 2 completed. Start of Right of Way work north of the Kikori River.
Komo Airfield (EPC5B)	McConnell Dowell and Consolidated Contractor Group Offshore	Construction of temporary fuel storage facility completed. Bulk earthworks progressed. Construction of the Komo Airfield fence neared completion.
Associated Gas Development	Various	Fabrication of the replacement offloading buoy neared completion. The first isolation valve in Kutubu Central Processing Facility installed.
Drilling (new wells and workovers)	Nabors Drilling International Limited	First of two drill rigs completed. First shipment of drilling supplies delivered to Papua New Guinea.

Safety, health and security

With construction activity and worker numbers increasing, the Project is implementing numerous initiatives to protect the health and safety of workers at Project sites.

For example, the Project is planning a workshop with both Project and contractor executives in the third quarter 2011 to review safety lessons learned and develop plans to enhance safety performance. This follows an incident in the second quarter when an Onshore Pipeline subcontractor was fatally injured while surveying the pipeline Right of Way near Gobe. We are greatly saddened by this event and express deepest sympathies to the family and friends of this worker. In addition to notifying the relevant authorities, the Project conducted an investigation into the cause of this incident and specific preventative measures were subsequently identified.

With regard to worker health, there were no food or water-borne illnesses or foot hygiene-related incidences recorded this quarter, demonstrating that health program surveillance, health risk monitoring and new camp pre-commission health inspections are proving successful. The Project also reviewed its malaria and tuberculosis programs, introducing a monthly tuberculosis self-assessment checklist for contractors, which enables Project-wide monitoring of results. In addition, the Project conducted awareness raising activities and assisted with resources to combat malaria as part of the fourth World Malaria Day held on April 25.

At Boera Village, one of the LNG plant site villages, the Project has committed to upgrading the existing health clinic and building a new house for the clinic's resident health worker.

The Project will also build three new units for health workers at the Salvation Army health clinic at Papa Village, enabling clinic staff to increase from three to seven.

The Security team is also working closely with other Project teams to facilitate a safe and secure environment for Project workers and operations. Security challenges can be complex, and regular engagement with the Socioeconomic team is providing a greater understanding of local communities' expectations in Project areas. This is allowing security programs to be adjusted as needed to ensure they remain fit-for-purpose.

Social development

Teaching children how to stay safe in and around construction sites, as well as on the road, remains important for community and Project safety. Following the successful launch of the Toea children's book series, the first Toea Project Interface Road and Site Safety book was launched during the quarter, containing a range of children's activities to reinforce safety messages. Local actors were also used to breathe life into the book's central character, Toea (representative of an urban child eager to learn more about the myriad of cultures within his own country), who visited schools in the LNG plant site villages and talked with children about road and construction site safety.

The advancement of women continues to attract Project support. This quarter, two women were sponsored to attend the Washington DC Global Women in Management training program. In addition, the Project supported the convening of over 50 women leaders from Government, civil society, private sector and donor organizations for the Pacific Women's Empowerment Policy Dialogue.

During the second quarter, two biomedical technicians from Mendi Hospital in Papua New Guinea returned from a six-month Medisend International Biomedical Equipment Repair Training Program in Dallas, Texas made possible through the support of the Project. Medisend International provides students from developing countries with the education, training and skills to improve community healthcare conditions. This exclusive, performance-based curriculum combines theory and practical training, using state-of-the-art equipment, to enhance skills in installing, repairing and maintaining life-saving biomedical equipment.

Turiza Tandago with Ambassador Melanne Verveer, U.S. Ambassador-at-Large for Global Women's Issues at the Global Women in Management reception

As part of ExxonMobil's commitment to honest and ethical behavior, the Project actively participates in and supports transparency and anti-corruption programs. The Project also recognizes that transparency initiatives can only be sustainable when national governments take ownership and responsibility. The Papua New Guinean Government achieved a milestone this quarter with the announcement of a Sovereign Wealth Fund to manage Project revenues. The Project welcomes this decision as an important step in ensuring that the value unlocked from gas resources in the Southern Highlands and Western Provinces results in economic growth, increased opportunities and a better standard of living for Papua New Guinean citizens.

An important challenge concerns the continuing influx of people seeking business and employment opportunities near Project areas. The Project is supporting communities in these regions with developing in-migration strategies. Significant progress was made during this quarter with in-migration action plans developed in three of the LNG plant site villages. Action plans for these villages (Lea Lea, Papa and Porebada) include land use strategies and the identification of stakeholders who could assist with addressing the impacts of in-migration.

The Socioeconomic team continues meeting with local communities to remind them about land access procedures and appropriate eligibility for resettlement and compensation, as well as the cut-off dates for the census and survey of structures and gardens.

Toea with the children of Papa Primary School

Developing Papua New Guinean businesses

The Enterprise Centre, an initiative of Esso Highlands Limited, which is supported by the Institute of Banking and Business Management, is an integral part of the Project's National Content Plan. It aims to develop Papua New Guinean businesses so they can support the Project through commercial opportunities.

The Centre celebrated its first anniversary by officially opening its new purpose-built building and launching a new website, www.enterprisecentre.com.pg, providing easier access to the Centre's services.

More than 2,000 days of training provided by the Enterprise Centre in one year

In the past year, the Enterprise Centre provided more than 2,000 days of training and assisted more than 8,500 entrepreneurs. The Centre has over 1,250 companies registered on its PNG Supplier Database. Demand for training continues to rise, with 665 training days recorded this quarter, up from just over 600 days in the first quarter 2011.

The Enterprise Centre has expanded its business advisory services to cover the four impacted villages of Boera, Papa, Lea Lea and Porebada. For example, this quarter, Business Basics training and Directors' training courses were provided to the all-women company Papa Magia Limited from Papa Village.

As the Project gains momentum, the use of Papua New Guinean suppliers continues to grow. In total for the Project-to-date, more than three billion Kina (US$1.3 billion) was spent in Papua New Guinea. This is largely a result of the increase in activity at the LNG plant site, continuing infrastructure and pipeline work, and the mobilization of work for the Hides Gas Conditioning Plant.

The Enterprise Centre team outside the new premises

Environmental performance

Contractors are finding innovative ways to minimize waste and reuse excess construction materials. For example, the Onshore Pipeline contractor is using plastic pipes to safely store fluorescent tubes and wooden boxes for storing non-combustible wastes, while drums are reused by welding crews to store metal shavings on the Right of Way. At the LNG plant site, plans were developed this quarter to donate wood, from construction material packaging, to local villages. A medical waste incinerator was also installed at the LNG plant site to burn wastes from the on-site medical clinic.

The Project aims to minimize both the number and volume of spills by providing ongoing spill prevention training sessions to keep workers abreast of industry practice. Project-wide, 109 environmental incidents were reported during this quarter, which was 26 less than the first quarter. These were primarily spills of hydrocarbon, wastewater products or chemicals. To prevent such incidents reoccurring, numerous contractors conducted additional spill response drills and training, along with increased spill mitigation measures.

Black-mantled Goshawk *Accipiter melanochlamys* found in the Project Impact Area

The Project continued consultation with key stakeholders on the Biodiversity Strategy and retained Conservation International as an advisor during the development of the Biodiversity Offset Delivery Plan. Conservation International's scope of work includes: a review of the Project Biodiversity Strategy and related documents; development of a technical rationale for offset selection; scoping of potential offset areas, activities and partners; and an assessment of offset feasibility. Conservation International's recommendations will serve as the basis for the Biodiversity Offset Delivery Plan.

Stakeholder and community engagement

As the Project advances, stakeholder engagement activities involve creating dialogue and encouraging questions and comments from communities. This is providing opportunities to address any misconceptions about the Project and improve the communities' understanding of Project activities and potential impacts, including benefits such as employment and business development opportunities.

As part of this process, the Socioeconomic team continues to actively address community concerns early. Therefore, the team has increased its already close coordination with Project contractors to rapidly close grievances.

This quarter, community drama activities were incorporated in engagement activities. Drama is proving to be a successful consultation technique because it draws upon local knowledge, culture and tradition and is an entertaining way of providing information. To give more meaning and invite community participation, local community members were recruited to give performances in public areas.

In addition to community engagement, the Project continues engaging with the Papua New Guinean Government to help realize the economic and social benefits that will be derived from the Project. This quarter, Project management, Government Ministers and senior Agency staff held a Project/Government Planning Workshop at the LNG plant site. It was an opportunity to meet and address issues that cross respective areas of responsibility.

More than 500 Government representatives also attended six Provincial and nine National advocacy workshops and meetings during this quarter. The workshops covered Project progress, with specific attention to national content, land and community affairs, and business development.

Through working closely with the people of Papua New Guinea and by encouraging growth in the country's energy sector, the Project can leave a lasting legacy that benefits future generations through improvements in the health, education, skills and livelihoods of communities. The Project and its contractors look forward to continuing to deliver our development plans as construction activities build rapidly toward the end of the year.

1 Introduction

This Quarterly Environmental and Social Report demonstrates the PNG LNG Project's commitment to transparency by keeping Papua New Guinean citizens, interested non-government organizations and other stakeholders well informed about the Project as it progresses.

This is the sixth in a series of quarterly reports that provide updates on the construction activities and safety, health, environment and social management aspects of the Project.

The Project involves the development of gas production and processing facilities in the Southern Highlands and Western Provinces of Papua New Guinea. It incorporates liquefaction and storage facilities, located northwest of Port Moresby on the Gulf of Papua, with a capacity of 6.6 million tonnes per year. More than 700 kilometres of pipelines will connect the facilities. The Project will progress in development phases with the first Liquefied Natural Gas (LNG) deliveries scheduled to begin in 2014.

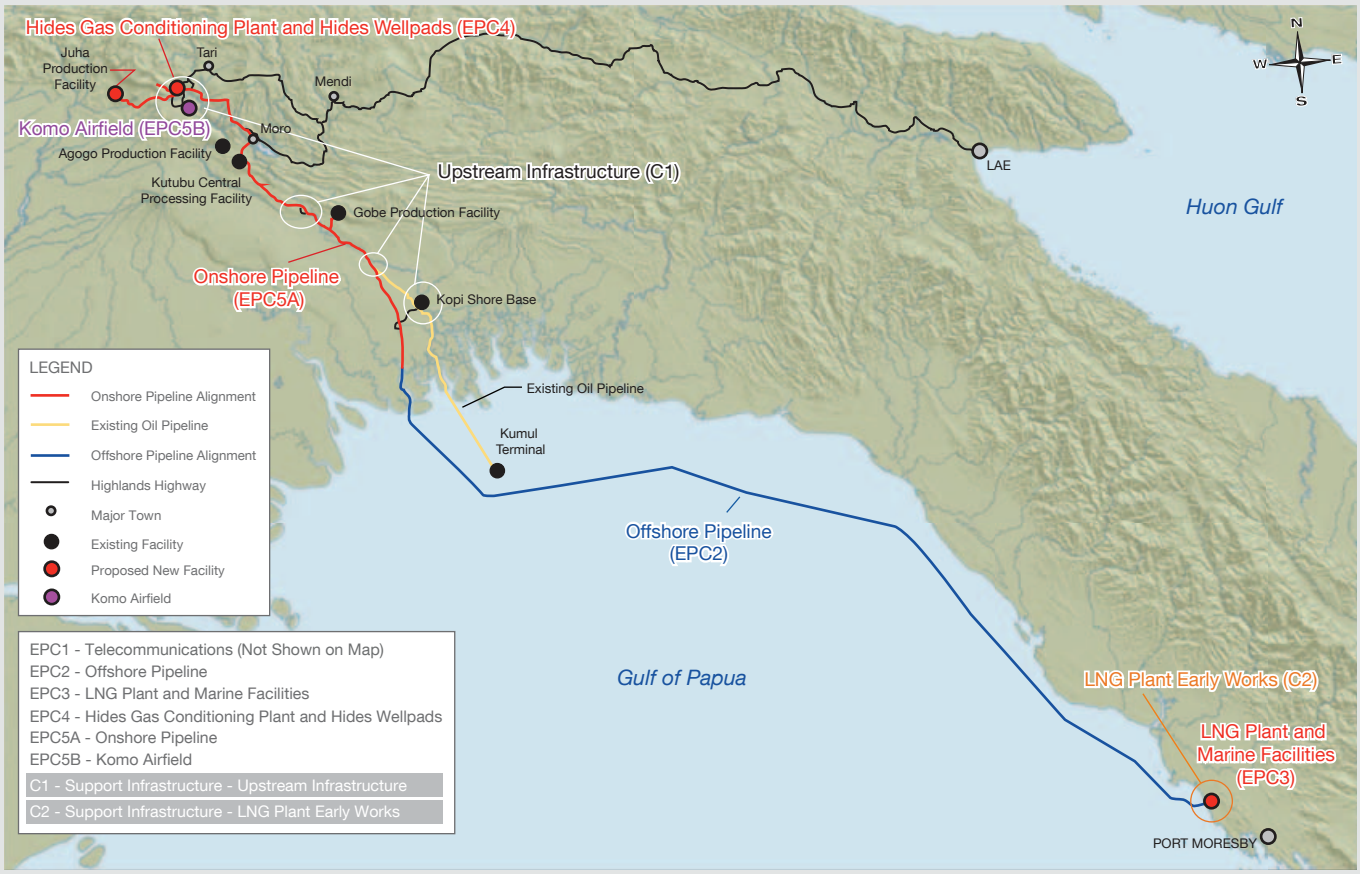
The investment for the initial phase of the Project, excluding shipping costs, is estimated at US$15 billion. Over the life of the Project, it is expected that over 250 billion cubic metres of gas will be produced and sold.

This will provide a long-term supply of LNG to customers in the Asia region including: Chinese Petroleum Corporation, Taiwan; Osaka Gas Company Limited; The Tokyo Electric Power Company Inc.; and China Petroleum and Chemical Corporation (Sinopec). The location and elements of the Project are illustrated in Figure 1.1. Contracts for Phase I of the Project are summarized in *Appendix 1*.

This Quarterly Environmental and Social Report is available on the Project's website at www.pnglng.com. Printed copies and translated summaries are also distributed, where applicable, to make information available to Papua New Guinean citizens who may have limited access to the internet.

Plate 1.1 – Pipe laydown yard at Kopi

Figure 1.1 – Project elements



Kopi Shore Base | LNG Plant | Juha Production Facility | Gobe Production Facility

Juni Construction Training Facility | Offshore Pipeline Install | HGCP Site | Agogo Production Facility

Komo Airfield | Moro Airfield | Kumul Terminal | Kutubu Processing Facility

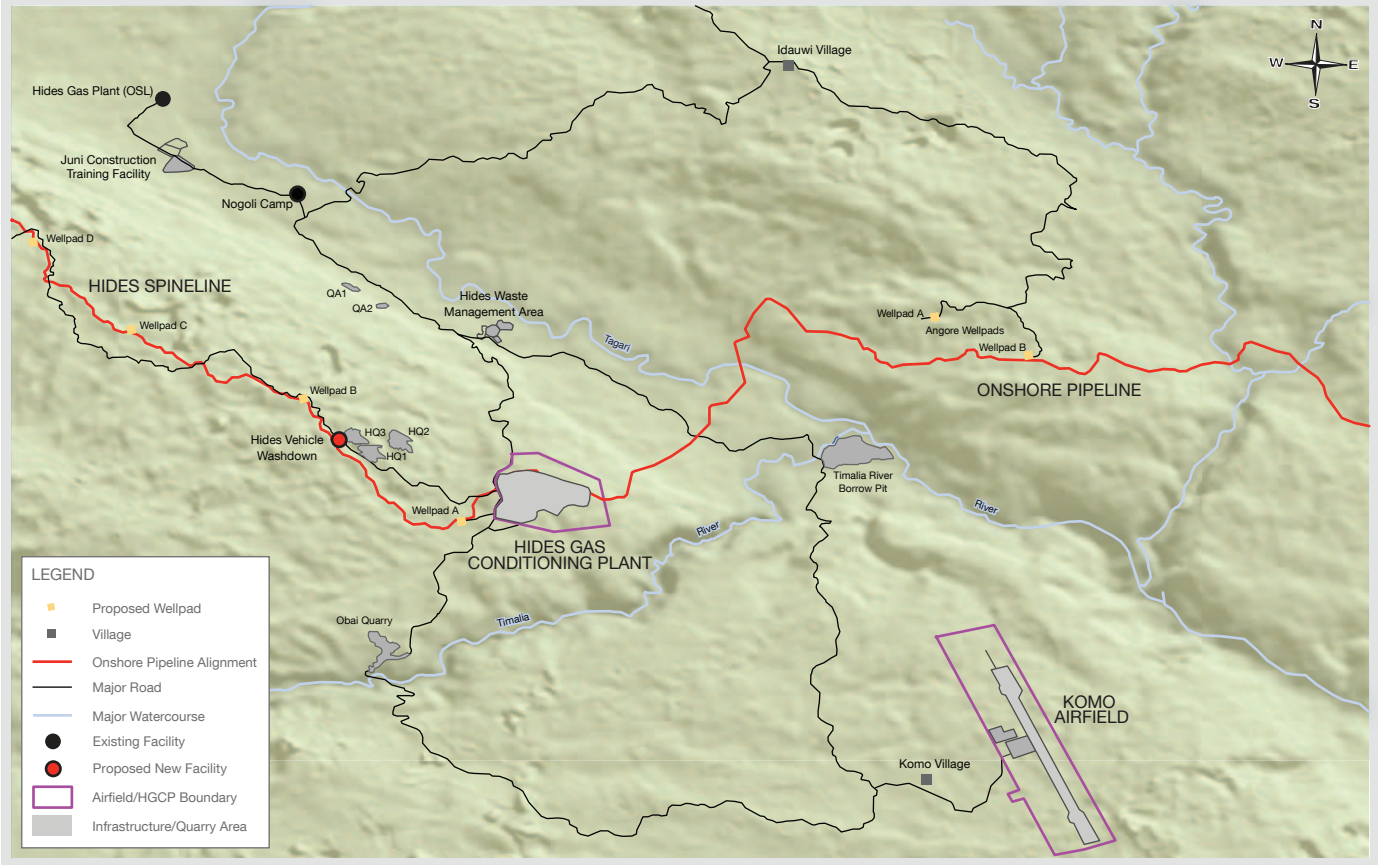
2 Construction Overview

The Project is making good progress towards the 2014 start-up window with a number of construction milestones achieved this quarter including the first pipeline weld on the 292-kilometre onshore pipeline and the start of construction for the offshore pipeline. When both pipelines are complete, they will cover more than 700 kilometres.

In addition, the Upstream Infrastructure contractor completed the Southern Logistic Route scope, construction of the first drilling rig was completed, piling began on the LNG Plant marine jetty, procurement was finalized for all LNG Plant equipment, and work was finished on the Juni Construction Training Facility.

2.1 Highlands area

Figure 2.1 – Highlands area Project activities (all phases)



2.1.1 Upstream Infrastructure

The Upstream Infrastructure contractor's noteworthy safety performance continued with over seven million work hours without a Lost Time Incident while progressing key activities at the following sites:

- Northern Logistics Route:
  - Road repair work continued along the Highlands Highway. The Highway is a major logistics route for construction activity supplies in the Komo and Hides areas.
- Hides area/Hides Gas Conditioning Plant (HGCP):
  - Despite heavy rainfall, active earthworks continued on the HGCP industrial park, flyway laydown, fuel facility, medical center, waste management area and groundwater wells.
  - Clearing and earthworks at Wellpad B.
- Southern Logistics Route:
  - The Mubi River Bridge was completed and opened to traffic.
  - As works on the Southern Logistics Route have been completed, equipment and personnel were relocated to the north for activities at the HGCP and Hides Ridge Road.

Plate 2.1 – Mubi River Bridge

2.1.2 Hides Gas Conditioning Plant and Hides Wellpads

Key contractor activities during the quarter included:

- Completion of the Pioneer Camp, foundations for the first waste incinerator and commissioning activities for a temporary power generation system.
- Commencing installation of the 35 square metre cement batch plant.

Plate 2.2 – Pioneer Camp during construction

2.1.3 Komo Airfield

Construction of a temporary fuel storage facility was completed, significantly increasing fuel storage capacity. Bulk earthworks also progressed despite heavy rainfall, while site works for the Komo Airfield runway, Main Camp and Timalia Quarry continued.

In addition, design work for the Timalia River Bridge advanced and construction of the Komo Airfield fence neared completion.

The Komo Airfield contractor celebrated a significant achievement of four million hours worked without a Lost Time Incident.

2.1.4 Drilling

Completion of the first of two drilling rigs marked a key achievement this quarter. Rig 702 was completed in June after a 10-month construction period in Houston, Texas. The rig will undergo a series of commissioning tests prior to shipping to Papua New Guinea. This quarter also marked the first shipment of drilling supplies to Papua New Guinea in preparation for the start of drilling in late 2011.

2.2 Onshore Pipeline

An important milestone was achieved in April, with the completion of the first onshore pipeline weld. Over 25 kilometres of pipe was welded during the quarter.

Plate 2.3 – Decie Autin, Project Executive, Esso Highlands Limited at the ribbon-cutting ceremony for the first complete drilling rig

This quarter also marked the beginning of pipeline trenching and lowering-in of the pipe, with 10 kilometres completed by the end of June. Right of Way (ROW) preparation continues to make good progress with over 50 kilometres of ROW prepared for the stringing, trenching, welding and lowering-in activities. ROW preparation extends from the Omati River landfall site to the north of the Kikori River.

Construction also included the first occupancy of the Kaiam Camp 2 along the pipeline ROW located near the Kikori River.

Plate 2.4 – Pipe welding

Plate 2.5 – Pipe lowering-in activities

2.3 Offshore Pipeline

The start of construction near the LNG plant site marked a major milestone this quarter. Construction began on the Caution Bay pipeline shore approach site and included installation of an access road, within worksite boundaries, as well as a small construction yard and fencing. Other activities included:

- Award of the subcontract for the Omati River landfall preparation.
- The Socioeconomic team initiated the Omati River baseline fisheries survey.

2.4 LNG Plant and Marine Facilities

Design of the LNG Plant continues to make good progress with the completion of the process and utilities areas three dimensional model review. The model review denotes the final quality check of the detailed design to ensure plant operability and maintainability.

Procurement and construction also progressed considerably this quarter. All equipment for the LNG Plant was ordered and all subcontractors started work on-site. In addition, piling for the marine jetty began.

Plate 2.6 – Marine jetty piling

Plate 2.7 – Construction of LNG Plant process pipe rack

Other notable achievements included:

- Commencement of underground piping in the common LNG process area.
- Ongoing foundation works for the LNG tank areas.
- Completion of site preparation works on the flare area.

2.5 Associated Gas Development

Detailed engineering, equipment procurement and execution planning progressed for the Kutubu Central Processing Facility, Gobe Production Facility, crude export system and Kumul platform upgrades.

Plate 2.8 – Footings for the Kutubu Central Processing Facility dehydration unit

Construction activities included:

- Fabrication of the replacement offloading buoy, which is nearing completion at the fabrication subcontractor's yard in China.
- Outfitting the Kutubu Central Processing Facility control room.
- Installing the first isolation valve in Kutubu Central Processing Facility.
- Welding of the gas export pipeline at the Kutubu Central Processing Facility commenced.

2.6 Development support execution, logistics and aviation

The upgrade of the Napa Napa and Papa Lea Lea roads, which connect Motukea Island and the LNG plant site, neared completion. Meanwhile, construction commenced for the replacement of Lea Lea footbridge.

The first of two Project-owned helicopters was also put in service. The helicopter will be based in Moro and support Project activities in the Upstream areas.

Works at the Moro aviation base also neared completion with the installation of buildings, generators, tanks and services.

Plate 2.9 – First Project-owned helicopter at Moro aviation base

2.7 Pre-construction surveys

Pre-construction surveys assess potential archaeology and cultural heritage, ecology, weeds and, where necessary, water quality (such as in campsites). Sensitivities identified during the surveys are subject to management and mitigation measures outlined in the Environmental and Social Management Plan (ESMP) or, as necessary, newly defined measures. Potential impacts are carefully mitigated to ensure the Project remains compliant with the Project Environment Permit issued by the Papua New Guinean Department of Environment and Conservation.

This quarter, building on previous success, the primary pre-construction survey effort concentrated on the onshore pipeline with approximately 80 percent of the 292-kilometre main pipeline route surveyed as shown in Figure 2.2.

Pre-construction surveys in progress during this quarter are illustrated in Figure 2.3.

Figure 2.2 – Pre-construction survey progress along the onshore pipeline

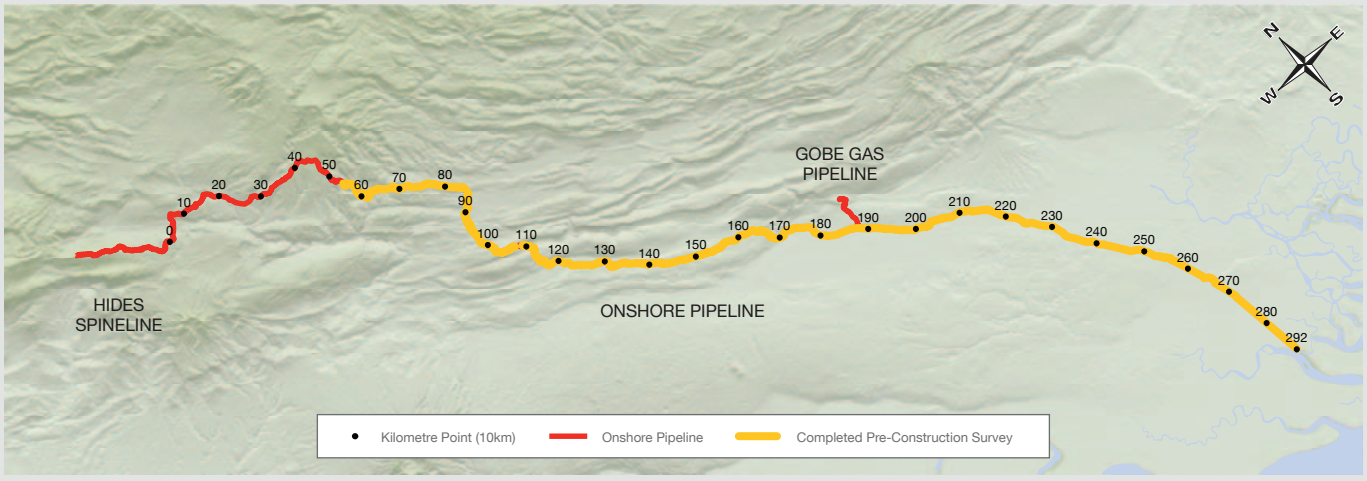


Figure 2.3 – Pre-construction survey progress

1	Protected Areas	4	Sites or Habitats of Ecological Significance
2	Protected Species	5	Cultural Heritage Sensitivity
3	High-Conservation Value Habitat	6	Social Sensitivity
✎	Report in Preparation	☑	Approved by Project
➔	Issued to DEC	➲	DEC Permission to Construct (as required)
		*	Submission/Approval Month/Quarter (Q) (2011)

Survey Site	Sensitivities Surveyed						Status	
	1	2	3	4	5	6		*
ONSHORE PIPELINE FACILITIES								
Tamadagi Camp and Laydown Area		✓		✓	✓		☑	Q2
Daware Camp and Laydown Area, Access Road and Associated Quarry	✓	✓		✓			➔	Q2
Auni Guest House				✓			☑	Q2
Omati River Push-Pull Platform and Tie-in Point		✓		✓	✓		✎	Q2
Helicopter Approach and Take Off, Camp 1, Scraper Station		✓		✓			☑	Q2
Onshore Pipeline Right of Way: Kilometre Point 0 - 10.5							✎	Q2
Onshore Pipeline Right of Way: Kilometre Point 50.5 - 65.5		✓		✓	✓		✎	Q2
Onshore Pipeline Right of Way: Kilometre Point 65.5 - 85.4		✓		✓	✓		✎	Q2
Onshore Pipeline Right of Way: Kilometre Point 85.4 - 120.2	✓	✓		✓	✓		☑	Q2
Onshore Pipeline Right of Way: Kilometre Point 120.2 - 153		✓		✓	✓		☑	Q2
Onshore Pipeline Right of Way: Kilometre Point 153 - 173		✓		✓	✓		☑	Q2
Onshore Pipeline Right of Way: Kilometre Point 174 - 190		✓		✓			☑	Q2
Onshore Pipeline Right of Way: Re-alignment Kilometre Point 196.4 - 198		✓		✓	✓		✎	Q2
Onshore Pipeline Right of Way: Re-alignment Kilometre Point 243 - 245		✓		✓	✓		✎	Q2
Onshore Pipeline Right of Way: Kilometre Point 278 - 292 (ground truthing results)		✓		✓	✓		☑	Q1
Gobe Spurline Kilometre Point 2.4 - 2.8 (Wah Fault Crossing)		✓		✓	✓		✎	Q2
Homa Paua Laydown and Quarry		✓		✓	✓		✎	Q2
Quarry QA42		✓		✓			✎	Q2
Tagari Campsite							✎	Q2
KOMO AIRFIELD								
Heavy Haul Road, Section 1B - Ancilliary Works Locations					✓		☑	Q2
Tamalia Boulder Quarry Extension Area							✎	Q2

Environment Permit sensitivity definitions:

1 - Protected Areas

Recognised or pending protected areas which include but are not limited to wildlife management areas, conservation areas, Ramsar sites, provincial reserves, national reserves, sanctuaries and protected areas, and national parks.

2 - Protected Species

Any species protected under Papua New Guinea legislation or listed in Convention on the International Trade in Endangered Species appendices, or in the International Conservation Union (IUCN) Red Data Book as Critically Endangered, Endangered Vulnerable or Data Deficient.

3 - High-Conservation Value Habitat

Any habitat identified within the high-conservation value Forest Toolkit as being within categories high-conservation value 1-5.

4 - Sites or Habitats of Ecological Significance

Sites or habitats of ecological significance such as:

a) Caves with a large entrance which may be used by bat colonies.

b) Pinnacles containing bat colonies.

c) Birds of paradise or bower bird display trees or display grounds.

d) *Pandanus* swamp forest.

e) Antarctic Beech *Nothofagus spp.* forest.

f) Areas of Antarctic Beech *Nothofagus spp.* dieback.

g) *Pharotis imogene* (New Guinea big-eared bat) colonies.

h) Sandalwood *Santalum macgregorii* trees.

i) High-value conservation swamps containing juvenile fish nursery habitat.

j) Swamps in sink holes < 50 m deep on Hides Ridge.

k) Areas of infestations of priority weeds or pests.

m) Mangrove stands and forest.

n) Seagrass beds.

o) Coral reefs.

5 - Cultural Heritage Sensitivity

Any site in which any cultural property as described in s. 20(1) of the National Cultural Property (Preservation) Act has been located.

6 - Social Sensitivity

Issues include, but are not limited to:

a) Impact on previously undisturbed sites of cultural heritage.

b) Significant and unpredicted loss of resources that affects livelihoods.

3 Safety, Security, Health, Environment and Social Management

The Project aims to promote Papua New Guinea's economic growth and social development, while protecting the environment and the safety and health of Project workers and communities within which, Project-related activities occur.

3.1 Approach

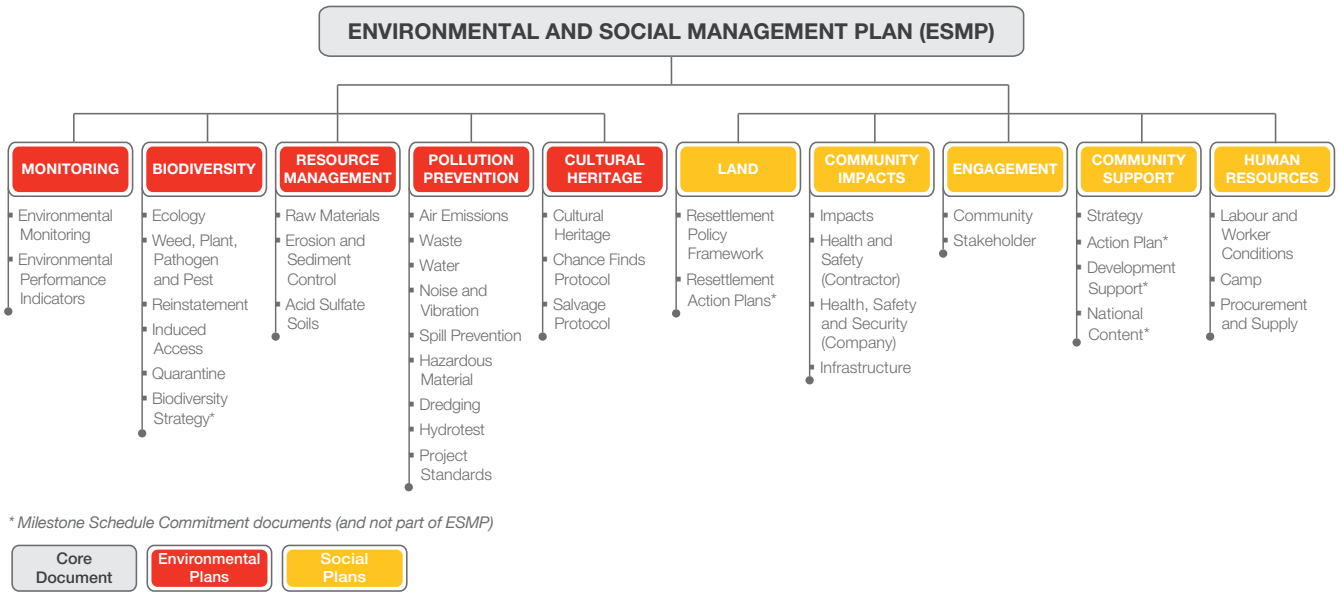
The Project's Environmental and Social Management Plan, also referred to as the ESMP, articulates the Project's commitment and approach to environmental and social management activities in Papua New Guinea. The ESMP is supported by discipline-specific plans, which are outlined in Figure 3.1.

All of these plans were developed from the Project Environmental Impact Statement and are publicly available on the Project website at www.pnglng.com/commitment.

The Project also has a Safety Management Plan, a Health Management Plan, a Regulatory Compliance Plan and a Security Management Plan.

Collectively, these documents enable a best practice culture across the Project and demonstrate the priority that ExxonMobil has set on sustainable economic growth in Papua New Guinea.

Figure 3.1 – Environmental and Social Management Plans



3.2 Security

The Security team is working closely with a number of other Project teams to manage complex security challenges and facilitate a safe and secure environment for Project operations. For example, regular engagement with the Socioeconomic team is providing a greater understanding of the local communities' expectations in Project areas.

As part of this approach, the Security team is conducting an ongoing review of security measures at Project facilities and adjusting programs as necessary to ensure they remain fit-for-purpose.

The Security team is developing a standardized program for training security guards for work on Project sites. As part of their contractual requirements, security service providers must deliver Voluntary Principles of Security and Human Rights training to all security personnel operating at Project facilities. This initiative is aligned with the Royal Papua New Guinea Constabulary's efforts to train its officers deployed in support of the Project.

3.3 Revenue management

Good governance, accountability and revenue transparency are critical to ensuring that the value unlocked from gas resources in the Southern Highlands and Western Provinces results in economic growth, increased opportunities and a better standard of living for Papua New Guinean citizens.

As part of ExxonMobil's commitment to honest and ethical behavior, the Project actively participates in and supports transparency and anti-corruption programs. This includes transparency initiatives such as the Extractive Industries Transparency Initiative, the Group of Eight Transparency Initiative, and the United Nations Convention Against Corruption.

The Project recognizes that transparency initiatives can only be sustainable when national governments take ownership and responsibility. This is why the Project welcomes the Papua New Guinean Government's announcement of a Sovereign Wealth Fund. This Fund will manage all revenues for the Project to support long-term economic growth and stability for the Nation's future.

The Project also supports the Papua New Guinean Cabinet decision to amend the constitution so this Fund is safeguarded and regulated by law. The Fund will have three segments including an infrastructure fund, a future childrens' fund and a stabilization fund.

3.4 Management of Change

A Management of Change Procedure is used to review and endorse changes to the Project's scope prior to implementation. Project requirements covering safety, security, health, environment and social management, as well as operability and maintenance, regulatory and cost, and scheduling requirements, are considered with any proposed change. Changes are then classified according to the level at which they need to be managed. For example, Class I changes require Lender Group review prior to implementation, while Class II changes are of moderate significance and require Lender Group notification in the PNG LNG Quarterly Environmental and Social Report.

During this quarter, two potential Class II changes were initiated, both relating to a reduction in worker space requirements within temporary construction accommodation. As part of these changes, additional measures to control the transmission of infectious diseases and ensure the health of individuals occupying the accommodation is not compromised have been recommended. These include worker vaccinations, encouraging high levels of personal hygiene and ensuring adequate ventilation. The Project has provided information on how these changes and their potential impacts will be mitigated to the Lender Group's Independent Environmental and Social Consultant (IESC).

3.5 Environmental and Social Milestone Schedule

The Project's Environmental and Social Milestone Schedule remains on track. Achievements this quarter included:

- Development of the Biodiversity Offset Delivery Plan progressed as contracts were signed with international technical experts. The first draft of the Plan is targeted for the end of 2011.
- Development of a draft Lake Kutubu conservation management proposal (to be included with the overall Biodiversity Offset Delivery Plan) to enhance specific conservation values in Lake Kutubu. This proposal is under review by the Project and is due in the fourth quarter 2011.

4 Procurement and Supply

As the Project's construction activities continue gaining momentum, the use of Papua New Guinean suppliers is growing as well. Developing Landowner Companies (Lancos) remains a priority and the ongoing effort to build these businesses is supported by the Enterprise Centre's capacity building programs as well as the work of the Project's Business Development team. In addition to Lancos, the Project continues engaging other Papua New Guinean businesses to meet the growing needs of the Project construction.

4.1 Supplier development

Lancos continue supplying a broad range of services to the Project in areas including catering, linen services, equipment hire, camp management, security, highway trucking and the recruitment and hiring of construction labor. To date, the Project-related spend with Lancos exceeds 390 million Kina (US $170 million).

Lancos and other Papua New Guinean businesses are also providing motor vehicles, stationery, amenities, office furniture, cleaning services, pest control, airfreight, air travel and accommodation.

In the second quarter alone, more than 1.1 billion Kina (US $478.5 million) was spent in-country with Papua New Guinean registered companies. In total for the Project-to-date, the in-country spend is more than three billion Kina (US$1.3 billion). This is largely the result of increased activity at the LNG plant site, the continuing infrastructure and pipeline work, the Komo Airfield works, and mobilization for work for the HGCP, which commenced this quarter.

Papua New Guinean businesses are also benefitting indirectly from the Project's presence, through meeting the day-to-day needs of its workforce. Supermarkets, internet providers, electricity providers, builders and vehicle maintenance workshops are just some of the local businesses that are well positioned to take advantage of increased demand for their goods and services.

4.2 Enterprise Centre

The Enterprise Centre achieved a key milestone this quarter, celebrating its first anniversary and opening a new purpose-built building (refer to *Case Study One – Enterprise Centre celebrates first anniversary*).

The Enterprise Centre also launched an external website, www.enterprisecentre.com.pg to facilitate access to the Centre's services. In addition, a mentoring program was introduced, pairing Papua New Guinean landowners with mentors who can provide ongoing and informal advice.

4.2.1 Business training

During this quarter, villagers from the Upstream areas completed business training through the Enterprise Centre. Fifty-two participants obtained a certificate of attainment in Business Basics training and 40 participants successfully completed two and a half days of Directors' training.

Plate 4.1 – Directors training at the Enterprise Centre

The Centre's training days have increased, with 665 training days recorded this quarter as shown in Figure 4.1. The Enterprise Centre has also expanded its business advisory services to cover the four impacted villages of Boera, Papa, Lea Lea and Porebada. For example, this quarter, Business Basics training and Directors' training courses were provided to the all-women company Papa Magia Limited from Papa Village.

Figure 4.1 – Capacity building in training

NOTE: The Papua New Guinea Institute of Banking and Business Management provided training prior to the Enterprise Centre's opening in April, 2010.

4.2.2 Business assessments

In accordance with the Project's commitment to support the development of Papua New Guinean companies, the Enterprise Centre continues to conduct business assessments of local companies. Business assessments provide an independent evaluation of companies in areas covering: Organization and Governance, Financial Management Inventory Control, Quality Control, Operations Management, Personnel Management, Safety, Health and Environment and Citizenship and Reputation. This quarter, 24 Papua New Guinean companies were evaluated against criterion in these areas. In the last 12 months, the Center has assessed 98 companies registered on the Project PNG Supplier Database.

Plate 4.2 – Conducting business assessments

The Enterprise Centre has just published a listing of all Papua New Guinean companies assessed by the Centre to the end of 2010. The publication is the first of its kind in Papua New Guinea and provides valuable information and guidance for Papua New Guinean companies to help them excel in all of the business assessment criteria.

Plate 4.3 – Enterprise Centre business assessment brochure

4.2.3 Supporting the growth of Lancos

Another key role for the Enterprise Centre is assessing companies and providing feedback to help them meet the requirements of client companies. This quarter, the Centre re-assessed 11 representative Lancos that were previously assessed in June 2010. Since the first assessment, the Enterprise Centre has supported these organizations through capacity building activities. The re-assessment process is significant because it helps the Lancos and the Enterprise Centre identify improvements made since the initial assessment and the logical next steps for capacity building.

Case Study One

ENTERPRISE CENTRE CELEBRATES FIRST ANNIVERSARY

With more than 2,000 days of training, more than 1,250 companies registered on its PNG Supplier Database and over 8,500 entrepreneurs assisted in the past year, the Enterprise Centre celebrated its first birthday with the opening of a new purpose-built building on June 30, 2011.

Government representatives, business leaders and many of the suppliers and businesses supported by the Enterprise Centre over the past year attended a celebratory breakfast to showcase the Centre's new offices.

The Enterprise Centre, an initiative of Esso Highlands Limited and supported by the Institute of Banking and Business Management, is an integral part of the Project's National Content Plan, which aims to develop Papua New Guinean businesses so they can support the Project through commercial opportunities. The National Content Plan also aims to help establish sustainable local businesses for future developments in Papua New Guinea.

The Enterprise Centre leads a range of activities designed to support the Project such as identifying and matching business opportunities, conducting capacity building programs to strengthen local Lanco companies, providing business assessment programs and developing and maintaining a PNG Supplier Database. The Centre also offers a business advisory service and mentoring program.

Peter Graham, Managing Director, Esso Highlands Limited and Vishnu Mohan, Chairman, Institute of Banking and Business Management cutting the ribbon at the opening ceremony for the Enterprise Centre's new premises

Praise for the Enterprise Centre

"The Enterprise Centre has assisted the Hides Gas and Development Company (HGDC) through Business basics and Directors Training programs. The role of the Enterprise Centre is crucial to HGDC, its progress and development."

Liebe Parindali, Chairman, HGDC

The Enterprise Centre team outside the new premises

The Enterprise Centre's new premises

5 Communities

The Project is working closely with Papua New Guinean communities to understand their perspectives, regarding potential impacts of construction activities and to create opportunities for positive programs that promote community health, safety and investment.

5.1 Structure and relations

The Project follows a set of management plans, outlined in Table 5.1, to help manage community interactions and potential impacts from construction activities.

Table 5.1 – Scope of ESMP community impact management plans

Plan	Scope of Plan
Community Engagement Management Plan	Covers community relations, grievances and disruption.
Community Impacts Management Plan	Addresses impacts that may affect the structure of, and relations within, communities.
Community Infrastructure Management Plan	Aims to avoid or minimize the impact of construction activities on existing community infrastructure and services.
Community Health and Safety Management Plan	Focuses on avoiding or minimizing risks to, and impacts on, the health, safety and security of the local community during construction.

5.1.1 Community grievance management

The Project uses an electronic Information Management System to record and track community grievances so they are addressed and closed in a timely matter. Input to this system is standardized and easy to use forms (grievance cards) to help communities register grievances.

A review of grievance subject categorization was undertaken in the second quarter to better align grievance categories with other modules of the Information Management System, such as issues identified during community engagements.

The issue management process uses the same method and protocols as those outlined in the Community Grievance Procedure.

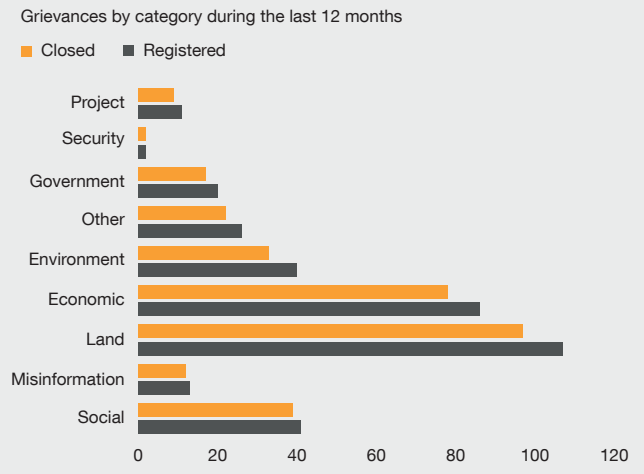
Grievances arising directly from Project impacts can be managed within existing procedures. However, many work stoppages are the result of community or individual frustration due to a perceived failure of Government to meet infrastructure and services commitments.

Grievances such as these, which are outside the Project's control, are now recorded as 'cases' and they are tracked and managed separately. For example, during this quarter, 50 previously registered grievances were identified as being beyond the Project's control, as they were generally Government-related concerns. The Project's Grievance Coordinator assesses these as 'cases' and works with other Project teams, such as the Government Interface team, to enable each 'case' to be addressed by the appropriate Government Agency.

The approach also includes feedback to the 'case' originator. Separating the 'cases' from grievances allows for a trend analysis to be conducted of potential external influences on the Project.

During this quarter, 99 grievances were registered. Grievances registered over the last 12 months, using the revised categorization method, are shown in Figure 5.1.

Figure 5.1 – Grievances registered by category during the last 12 months



The two most common categories of grievances, registered both during the quarter and over the last 12 months, relate to economics and land categories:

- Landowner expectations and perception of a lack of access to business development and employment continued to be the source of economic-related grievances. This is particularly the case where Project activities involve new land areas.
- Grievances related to land compensation and land ownership continued with regard to access to customary land and claims for increased compensation.

In this quarter, 163 grievances were closed. The Socioeconomic team has strengthened its already close coordination with Project contractors to rapidly close grievances as Project activities expand.

5.1.2 Project Induced In-Migration Study

During this quarter significant progress was made with developing in-migration action plans in three of the LNG plant site villages. Action plans for these villages, Lea Lea, Papa and Porebada, include land use strategies and the identification of stakeholders that could assist with addressing the impacts of in-migration.

Meanwhile, the Upstream area is developing the appropriate resource base needed to implement Upstream in-migration plans, particularly in the Kikori and Hides/Komo areas.

Plate 5.1 – In-Migration Committee meeting in Lea Lea

5.1.3 Fisheries surveys

During this quarter, the Fisheries team conducted fish catch landing surveys in the four LNG plant site villages, along with mangrove monitoring near the jetty construction area.

To conduct the fish catch landing surveys, the Fisheries team spent five days in each village. A total of 188 interviews were conducted, with 1,867 kilograms of fish and mud crab catches recorded.

Following baseline studies, mangrove monitoring was undertaken to determine the number of people entering the mangroves and their activities in them. A total of 68 people were interviewed and the results showed that mud crabs, cone shells, mullet and reef fish were harvested from the mangrove areas close to the jetty area. Mangrove wood is also used for firewood and house materials.

5.1.4 Social considerations for logistics activities

During the quarter, three proposals were submitted to the Project's Community Investment and Contributions Committee and approved for implementation. These include a scholarship program, which will provide funding for students from the Omati Delta communities to attend tertiary institutions; leadership training for the 24 members of the Barging Route Waterways Memorandum of Understanding Committee; and administrative support for the Committee.

5.2 Infrastructure, services and resources

With upgrades to the Baruni Road complete, the Project is improving road safety through traffic control devices placed on both sides of Baruni Village. Upgrades to the Papa Lea Lea Road connecting Konebada to the LNG plant site are also nearing completion.

In the Upstream North area, construction of nine *'haus wins'* (seven in Hides and two in Komo) continued throughout this quarter.

Local communities are embracing these *'haus wins'* for their use both as a community meeting place and as a source of fresh water, due to the rainwater tanks installed at each. Twenty *'haus wins'* are completed to date.

In June, the Project contributed food and materials for the *'haus krai'* ceremony commemorating the late Chief Himuni Homoko, who was one of eight traditional chieftains of the Hides area. Out of respect for this Papua New Guinean leader, the Project participated in mourning ceremonies even though it resulted with some impact to operations at the HGCP site and Hides Wellpad Access Road.

Meanwhile, local women were employed during this quarter to restore vetiver grass around the Hides Waste Management Area. Vetiver grass serves as a natural filter to capture sediments in clean surface water drainage from the waste management area. The area for planting was cordoned off to provide a buffer from the machinery operating area and the women were fitted with personal protective equipment and provided with the necessary safety and task training before planting the 36,000 plants. The women completed the work within three weeks. Infill planting will replace weak or non-surviving plants as required.

Plate 5.2 – Vetiver grass planting at the Hides Waste Management Area

Ongoing road maintenance continues between the Juni Construction Training Facility and the HGCP. Inclement weather, combined with heavy vehicle use, has resulted in roads requiring constant maintenance by Project road crews. The work is being conducted so that it minimizes disruption to non-Project-related vehicles.

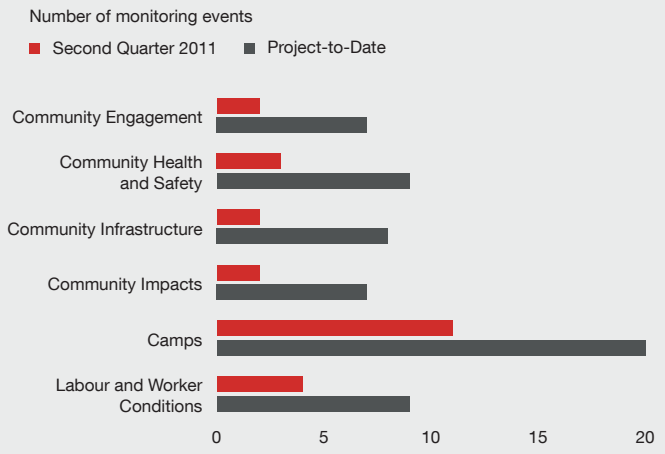
5.3 Verification, monitoring, assessment and audit

At its peak, the Project will have as many as 15,000 construction workers, a large number of whom will live in Project camps. To ensure healthy working conditions and minimize risks associated with employing and accommodating such a large workforce, the Project has developed two management plans – the Camp Management Plan and the Labour and Worker Conditions Management Plan.

As the Project is spread over a large geographical area hosting many communities, another four social management plans exist to promote positive community relations. These management plans cover Community Engagement, Community Health and Safety, Community Impacts and Community Infrastructure.

The Socioeconomic team conducted 24 monitoring exercises against these plans during the quarter, as shown in Figure 5.2. A total of 60 monitoring events have been conducted across the Project-to-date.

Figure 5.2 – Summary of monitoring events against relevant social management plans



Conformance with the various social management plans is tracked using three reporting tools: non-conformances, field observations, and positive field observations.

Non-conformances are situations that are not consistent with social management plan requirements. Field observations are potential non-conformances, where a situation could eventually become inconsistent with social management plan requirements if not corrected in a timely manner. In these instances, corrective actions are implemented to prevent a field observation escalating to a non-conformance.

Positive field observations are observations of innovative or excellent performance against social management plan requirements and are used as a tool to promote continued improvements across the Project. The most notable positive field observation made this quarter related to the Camp Grievance Committee and National Workforce Committee, which was established at the LNG plant site to deal with grievances and industrial relations.

Figure 5.3 outlines the non-conformances and field observations reported in the second quarter.

Non-conformances reported this quarter were mainly: managing key camp standards (Camp Management Plan), induction or training content (Camp Management Plan), pay processes (Labour and Worker Conditions Management Plan) and baseline surveys (Community Infrastructure Management Plan). The Socioeconomic team is working with Project and contractor management to resolve and close non-conformances and field observations. The closure status of non-conformances and field observations from this quarter is shown in Figure 5.4.

At the end of the first quarter 2011, the IESC identified several areas of best practice in social management including highlighting the Onshore Pipeline contractor's grievance mechanism as a model to be emulated by all. Work to maintain this standard continued during this quarter.

5.4 Community health

Potential health impacts that may arise from contractor and community interaction are addressed through the Project's integrated Community Health Program. The Program covers health-related initiatives based on the environmental health areas framework developed by the International Petroleum Industry Environmental Conservation Association and expanded by the International Finance Corporation in the Guidance Notes to Performance Standards that include community health, safety and security. The Project works closely with Papua New Guinean health professionals and a number of non-government organizations as part of the Program.

Figure 5.3 – Non-conformance and field observation summary

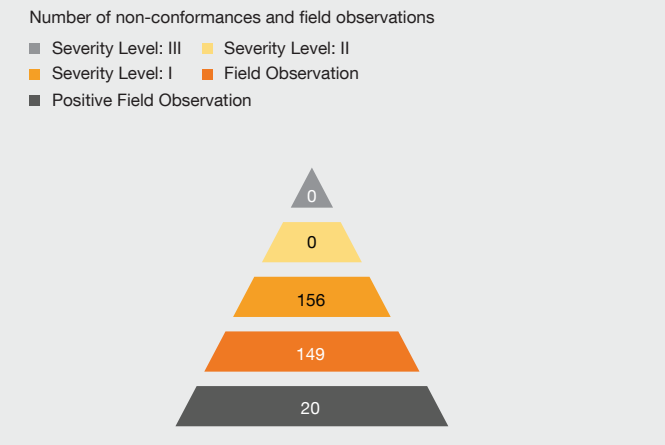


Figure 5.4 – Non-conformance and field observation closure status

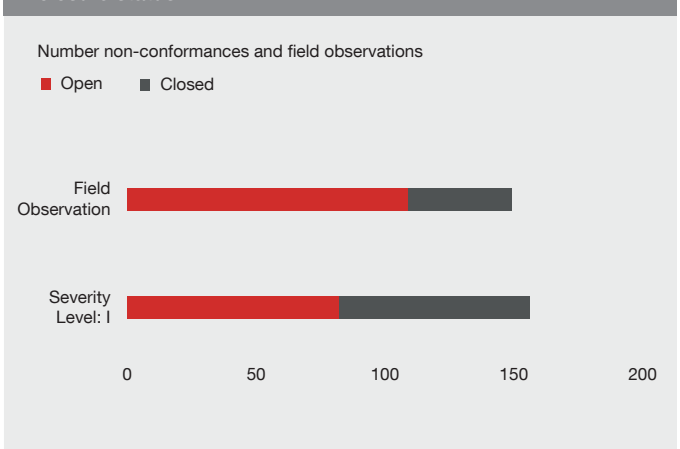


Plate 5.3 a-b – Women from the Hides area at a local health center

5.4.1 Integrated Health and Demographic Surveillance System

The Partnership for Health, a formalized agreement between the Project and the Papua New Guinea Institute of Medical Research (IMR), supports the development of a formal Integrated Health and Demographic Surveillance System to monitor LNG plant site communities, Hides area villages and two matched comparison sites.

As part of the demographic surveillance program, the Partnership for Health project has completed the first baseline census of over 10,000 people in Papua New Guinea's Hiri District (four villages near the LNG plant site) and is mid-way through the census in the Asaro Valley (control site). This effort is necessary in order to accurately monitor the health and well-being of the LNG plant site communities. Furthermore, the IMR team in Hides is setting up its base and preparing to begin monitoring fieldwork.

Passive health surveillance in the Hiri District is already established with one medical doctor leading a team of two nurses and three community health workers at the Papa Health Clinic, along with mobile outreach at Boera and Porebada health centers. More nurses will be recruited in the future.

Fieldwork for this project provides employment opportunities for the local population. For example, at the sites in the Central Province, the program employs 12 recorders from Porebada, six from Boera, six in Papa and eight in Lea Lea. Further recruiting will be done by the IMR at later stages.

5.4.2 Health services infrastructure and capacity

The Project's Community Health team is providing the Papua New Guinean National Department of Health with educational materials for health centers in the Hides area to promote the use of bed nets and immunization for children. During this quarter, brief site assessments were jointly conducted with the Strategic Community Investment coordinator to assess health center infrastructure needs.

Plate 5.4 – IMR health research staff assisting a Porebada Village health volunteer with patient diagnosis and care

Plate 5.5 – Health education posters provided by the Project in the Boera health center

Plate 5.6 – Immunization and bed net/malaria prevention promotion posters provided to health centers in the Hides area

5.4.3 Infectious Diseases Diagnostic Laboratory

Engineering and design work is complete for the Infectious Diseases Diagnostic Laboratory to be located at the University of Papua New Guinea, School of Medicine and Health Sciences in Port Moresby. The laboratory is among the Project's strategic community investments and will provide advanced training for the next generation of Papua New Guinean scientists along with rapid and timely diagnosis of emerging infectious disease epidemics such as cholera and pneumonia. The IMR will manage the laboratory supported by the School of Medicine and Health Sciences.

5.4.4 Tuberculosis

The Project is actively supporting training and improved laboratory capabilities for the Kikori Hospital to address the high burden of tuberculosis in the Gulf Province. The active tuberculosis burden in the Gulf Province may approach 1 percent, a level hundreds of times higher than seen in developed countries. The Kikori Hospital is the primary health facility in the Gulf Province with facilities and personnel that can diagnose and treat tuberculosis. As these facilities are limited and there is Project-related work activity and personnel in this area, the Project is supporting the IMR to improve diagnostic capability and develop accurate disease information for this area. It is hoped this information will have a significant, direct and positive effect on Provincial and National policy decisions regarding tuberculosis.

5.4.5 Support to non-government organizations

The Project, in partnership with the Global Fund, Asian Development Bank and the National Department of Health, and relevant non-government organizations are working with Papua New Guinean health staff to educate residents about family planning and sexual and reproductive health. Population Services International and Marie Stopes Papua New Guinea also continued expanding their collaboration with local health services to conduct both 'Fit Meri (women)' and 'Fit Man' clinics.

Sexually Transmitted Infections prevention

Marie Stopes Papua New Guinea conducted five mobile wellness clinics for men, women and teens in Porebada, Papa and Boera during this quarter. These mobile clinics focus on sexually transmitted infection prevention and education, voluntary counseling and testing for Human Immunodeficiency Virus, as well as information, education and communication for respiratory, diarrheal and non-communicable diseases.

Population Services International also conducted couple's relationship workshops with 59 participants in Porebada and 60 in Lea Lea. Despite the small size of these villages, these sessions attracted large numbers of attendees who showed a strong interest in the topics discussed. In particular, participants appreciated the opportunity to improve communication between spouses. Thirteen participants indicated they were interested in supporting condom sales, which will help generate income. This is a significant achievement, given that before the training, Population Services International was only able to open one trade store outlet in Porebada.

Plate 5.7 – Trade store in Tari selling Population Services International's Seif Raida condoms

Meanwhile, the Papua New Guinean Medical Research Advisory Board has given ethical approval to the IMR for a large epidemiological surveillance study at the Integrated Health and Demographic Surveillance System sites covering all of the major sexually transmitted infections. This study will provide a comprehensive data set on sexually transmitted infections including the human papilloma virus, the major cause of cervical cancer. This will be the first study in Papua New Guinea to document the true prevalence of human papilloma virus in the country. Cervical cancer is one of the most prevalent cancers for women in Papua New Guinea.

Plate 5.8 a-b – The Project will improve latrine and drinking water sources in Hides

Water sanitation hygiene outreach

During this quarter, basic field assessments were made of local community and household water sources so that specific programs to help communities develop safe water sources and improved sanitation can be developed.

Health training grants

Population Services International and the Project's Community Health Manager met with Kumin Community Health Worker Training School directors in Mendi and with Evangelical Church of Papua New Guinea managers in Tari about establishing health worker and health educator training grants. These grants would enable health workers to improve their skills for work within the Project Impact Area.

Plate 5.9 – Directors and staff at Kumin Community Health Worker Training School in Mendi

5.4.6 Contractor conformance

On-site Community Health team assessments were conducted this quarter, tracking contractor performance against health commitments aimed at reducing the potential for disease transmission from the Project workforce to the community.

One area requiring general improvement across all contractors was the provision of materials to workers during health education sessions. In response, the Community Health team has compiled a set of health education materials and provided them to contractors for use and distribution during toolbox sessions.

5.5 Community safety

At the LNG plant site, the Socioeconomic team is working with contractors to develop an exclusion zone for construction activities in Caution Bay aimed at keeping individuals safe and livelihoods stable. Meetings were held with the Hiri Local Level Government Councillors to discuss the exclusion zone, followed by disclosure engagements with all LNG plant site communities. Maps, photos and videos were used to explain the exclusion zone and the associated construction activities. The exclusion zone was also highlighted in the June edition of the PNG LNG Plant Site Newsletter, refer to Figure 5.5.

The Project's Safety Awareness Program initiated in the first quarter 2011 continues to communicate traffic and road safety as well as construction site safety messages to local villages. Community engagements were held at the LNG plant site villages during this quarter to inform communities of upcoming near-shore as well as offshore construction activities for the pipeline and jetty. Messages focused on advising the community, particularly fishermen, about the exclusion zone and about avoiding areas with construction activity for their own safety.

Safety awareness engagements were also conducted with villages in Kikori and the Omati River Delta regarding waterway safety. Messages focused on upcoming construction activities and the importance of staying away from construction vessels and activity, particularly at night when visibility is poor.

Meanwhile, to protect the safety of communities in Hides and minimize the risk of people entering construction zones, the Upstream Infrastructure contractor is constructing an additional perimeter fence around the safety buffer zone of the HGCP.

Figure 5.5 – PNG LNG Plant Site Newsletter discussing the exclusion zone

ENERGY FOR THE WORLD, OPPORTUNITY FOR PAPUA NEW GUINEA

PNG LNG PLANT SITE NEWSLETTER

ISSUE NO 4
JUNE 2011

PNG LNG

INSIDE THIS ISSUE:

'NO-GO ZONE' DETERMINED FOR PLANT SITE

There are two main construction activities taking place in Caution Bay – construction of the jetty and the laying of the underwater pipeline. These are two very important stages of the Project and there is going to be a lot of activity in Caution Bay while this is being done – there will be constant movement of boats, machines and equipment to complete the work, and also to supply the construction teams with the materials they need. The marine area will become very busy in the upcoming months. Work will take place day and night, 7 days a week, while the underwater pipeline is being constructed.

The 'no-go zone' that will be implemented to ensure the safety of the community and Project workers

The safety **of communities and workers is the highest priority of the PNG LNG Project**. To help protect people, there will be a **full 'no-go zone' in the marine area for the entire period of construction**. This means that there will be a 'no-go zone' around the whole construction area that members of the public will not be allowed to enter. The corners of the zone will be marked by bright reflective-yellow floating buoys so that the 'no-go zone' zone will be clearly visible. It is very important that you do not fish in or travel through the 'no-go zone' as it will be very dangerous. While you will be able to see the boats working, they will not be able to see you – especially at night.

There are a few things that are important to remember:

- The support vessels for construction are very large and sit higher on the water than local fishing boats, making local boats more difficult to see.
- While the Project vessels will not be travelling very fast, their size and weight will prevent them from stopping quickly if they were to come across a local fishing boat. For some of the vessels, it will take them 1km to stop because they are so big.
- The Project vessels have long anchor lines (such as the 750m mooring line of the Semac 1). These lines may not be visible under the water and could be dangerous if they tighten suddenly.

The 'no-go zone' will limit community activities, such as fishing, collecting mud crabs and travelling through the construction area, but has only been established to make sure that community members and workers stay safe during this period.

To help you understand the construction that will take place, we have provided information in this newsletter about the jetty construction and the laying of the underwater pipeline. This information will help you to understand why the exclusion zone is necessary. The Project is looking for your cooperation and support of this safety initiative.

PAGE 2 — ISSUE NO 4, JUNE 2011 — PAGE 3

HOOKED ON FISH SURVEYS

Understanding the importance of fishing at the LNG Plant Site villages

Fishing is one of the most important forms of livelihoods within the Plant Site villages. Whether it is fishing along the reefs, far out at sea, in fresh water swamps, or collecting mud crabs from the mangroves, fishing is one of the main activities for both men and women.

In September 2010, the Fisheries team from Exxo Highlands Limited (EHL) started to conduct 'fish catch landing surveys'. These surveys were aimed at two things:

- Creating a profile of fishers: understanding who the fishers are, where they fish and what types of fishing techniques they use.
- Understand the types of fish being caught.

Conducting the fish catch landing survey – engaging with fishers to weigh and record fish catches

This information is important to establish what is known as 'baseline data'. Both EHL and the communities can use this information to understand the condition of fish stock and fishing activities taking place within the communities. The term "fish" includes crabs, prawns, shellfish, octopus and squid. To gather this information, members of the Fisheries team have engaged with willing fishers from all the villages returning from their fishing activities and asked them to complete a questionnaire. The questionnaire focused on some key questions, including the types and amount of fish being caught, location of fishing grounds, fishing methods and times of fishing. Since September 2010, over 350 catch landing surveys have been conducted throughout the villages.

EHL also held a raffle draw for fishers who shared their fishing information. There were three prizes: First Place was a 100l esky, Second Place was a dive torch to use for night spear fishing, and Third Place was a water cooler. The raffle was held on 5 June 2011 in Lealea and Papa, and again on 9 June 2011 in Pombada and Boera, where the lucky winners received their prizes.

The EHL Fisheries team will continue to conduct surveys throughout the villages to build on the baseline data that they have collected so far and to increase the understanding of fishing within the area. The surveys will be conducted every 2-3 months with the next event scheduled for August 2011.

EHL thanks and appreciates the participation of fishers and looks forward to engaging with them in the future.

INTERESTING FISH FACTS

did you know? Here are some interesting facts gathered from the Fisheries team:

- In February 2011, 2.7 tonnes of fish were caught in 9 days at the Plant Site villages.
- Reef fish are the most commonly caught fish. Men do most of the reef fishing.
- Mud crabs and shell fish are generally caught by women.
- Lobsters walk on the sea floor all the way from Daru to Yule Island. It takes them 2-3 weeks!
- Female mud crabs in the mangroves carry over 1 million eggs on their flaps.

JETTY CONSTRUCTION

Understanding how the jetty will be built

One of the main construction activities happening in Caution Bay is the construction of the jetty. During the production phase of the Project, LNG tankers will dock at the end of the jetty to collect the LNG. The jetty is an important piece of the Project's infrastructure and will mark the end of the LNG process.

The jetty will reach 2.4km into the ocean and will take approximately 2 years to build. Some activities have already begun but there are more still to come. Here is an overview of the different stages that are required to construct the jetty.

Stage 1: Preparation

The preparation for jetty construction has been completed. Since April 2011, mangroves have been cleared, the temporary desalination pipeline has been laid and the Cantilever Bridge to support construction has been built. Large equipment for the jetty was brought onto site, carried by the big trucks that travelled from Motukea to the LNG Plant Site.

The first pile driving of the Cantilever Bridge

Stage 2: Constructing the jetty

Jetty construction has begun. There are three main pieces to building a jetty: piles, beams and girders. The piles are the external frame and the jetty's main support. Beams go across the width of the jetty for additional support, and will hold the LNG pipe that will eventually travel from the Plant to the tankers. Girders are 24m columns of steel that run on top of the beams. The Cantilever Bridge acts as the base point for construction. A large crane lifts the piles and secures them into the sea bed through a process called 'pile-driving'. The crane sits on rollers so that it can travel up the jetty as it is constructed and a trolley carries the beams and girders to the crane. Once the piles are firmly in the ground, the crane lifts the beams across and secures them in place, followed by the girders. The jetty is built 24m at a time and slowly progresses each day.

Pile driving for jetty construction

Stage 3: Services on the jetty

Once the jetty is built, a number of services will be connected to the jetty. These services will be used by the LNG tankers when they are docked – because the tankers will travel long distances, when they arrive they will need fresh water supplies and electricity. All of these services will come through the jetty.

Constructing the jetty is a big operation and this is one of the reasons that the exclusion zone has been created—**to make sure that community members and workers stay safe** while this large equipment is being operated.

LAYING THE UNDERWATER PIPELINE

Understanding the different activities of laying an underwater pipeline

While the jetty is being built, the underwater pipeline will also be layed in Caution Bay – these two activities will happen at the same time. This pipeline runs underwater 407 km's along the sea floor from the Omati River, through to Caution Bay and into the Plant Site. There will be a lot of activity happening in the Bay and here is an overview of the different activities that you can expect. There are four main stages of laying the underwater pipeline.

Stage 1: Land preparation and trench digging

In July 2011, the contractor will section off a corridor of land from the Plant Site to the sea. This is done to make sure community members stay safe during the construction period, especially as work will be happening 24 hours/day, 7 days a week. In this corridor, land must be cleared from the mudflats, mangroves and up to the tidal flats so that a trench can be dug where the pipeline will lie.

The shipping channel in relation to the Plant Site

The trench will be approximately 2m below the surface of the ground. Digging such a big trench will require two large excavators to remove the soil. They will operate and move along both sides of the trench, in a 13m wide trench area. As the soil is dug from the trench, it is placed on the side of the travel area in a 'spoil' that will be about 30 m wide. It will take 3 months to complete this work.

Stage 2: Digging the near shore trench

At the end of the jetty, there is a shipping channel and turning area where the tankers will come in to collect LNG from the jetty. 'Near shore' is the area from the beach up to the shipping channel, where they will dig a trench for the underwater pipeline. Two different excavators will be used to dig the trench. A **Back Hoe Dredger** will be used along the shallow sections of water. It is a very large excavator with an arm 25m long that can dig up to 10m deep. In deeper water the soil is a softer and a different kind of excavator is needed – the **Trailing Suction Hopper Dredger**. This vessel is like a giant vacuum cleaner that sucks up soil from the bottom of the sea to form a trench. As the soil is lifted, it is temporarily stored on the vessel and then deposited in the 'spoil area' further out to sea. The spoil area will have no impact on people. It will take approximately 1 month to dig the near shore trench and will be finished at the same time as the activities in stage 1.

Back Hoe Dredger

Trailing Suction Hopper Dredger

Stage 3: Laying the Pipeline

It is then time to lay the pipeline onto the seafloor; this will take place in mid-October 2011. A very large vessel called **Seamac 1** will enter the bay. Pipe sections, each 12m long, coated with concrete and weighing between 8 – 12 tonnes, will be stored on a large bulk carrier moored in Caution Bay. Pipe supply boats, called cargo barges, will carry the pipe sections from the bulk carrier to the Semac 1. The pipes will be laid on the deck of the Semac 1, where the pipe ends will be welded and coated. Once a section of pipeline has been connected, it will be lowered into the water at the back of the Semac 1. A winch, with the capacity to pull 500 tonnes, will pull the pipeline all the way from the boat to the shore and place it safely in the trench. While the Semac 1 is moored in Caution Bay, it will be kept in place by 12 large anchor chains, some as long as 750m. Once this is complete, the Semac 1 will sail out past the shipping channel, and slowly lower the joined pipeline onto the seabed. During this time, there will be a lot of activity in the bay. There will be cargo barges, personnel boats, security boats and many others to ensure the pipeline is laid safely and to support all the operations.

Semac 1 with a cargo barge delivering pipes

Stage 4: Backfilling the trench and reinstatement

Once the pipeline has been laid, the trench will be 'backfilled' meaning that the pipeline will be covered up with soil to make sure it stays protected. The two excavators will collect the spoil to cover the pipeline. The **Back Hoe Dredger** will be used in shallow waters and the **Trailing Suction Hopper Dredger** will be used in deeper water. In the shipping channel, special armor rocks will be placed over the pipeline for added protection because the LNG tankers will be frequently entering the area to collect the LNG. This work will be finished in January 2012.

Once these stages are complete, one activity that will happen is re-vegetation programme in the mangrove area. Where mangroves were removed, new mangroves will be planted. The mangroves will take several years to grow until they are restored to their original size.

5.6 Community investment

The Project is consolidating community investment projects begun during the first quarter 2011 to promote economic growth and create a positive sustainable impact through its community investments.

5.6.1 Community Investment and Contributions Committee

During this quarter, the Project's Community Investment and Contributions Committee and Working Group approved four new concepts and eight new proposals for Project-funded community support activities. The approvals were based on criteria of: impact, sustainability, strategic value, design and management, value for money, and risk. The four concepts are being developed into fully scoped, budgeted and scheduled formal proposals for consideration.

Plate 5.10 – Trainee laying a new concrete floor at the Boera Elementary School

Meanwhile, work began toward implementing the eight approved proposals in communities.

Rapid Implementation Projects

Rapid Implementation Projects are small community projects each valued up to 14,600 Kina. They provide small grants for materials; small community works projects; or payments to villagers for community works performed by them, such as grass cutting and minor road maintenance.

During this quarter, 12 Rapid Implementation Projects were approved, bringing the total to 34 projects approved out of 58 proposed by the Socioeconomic team. Of the 34 proposals approved-to-date, 17 are located in the Upstream North area, ten in the Upstream South area and seven in the LNG plant site area.

Rapid Implementation Projects completed-to-date include community road clearing and repair, upgrade of a sporting field, resurfacing of a bridge, provision of a generator to a boarding school to improve nighttime security, and the provision of school desks. One of the projects completed this quarter involved community members clearing the Kulu to Pongoli Road in the Hides area.

Another project involved Operations and Maintenance, and Port Moresby Construction Training Facility trainees laying a new concrete floor in the Boera Elementary School using concrete donated by one of the Project's contractors.

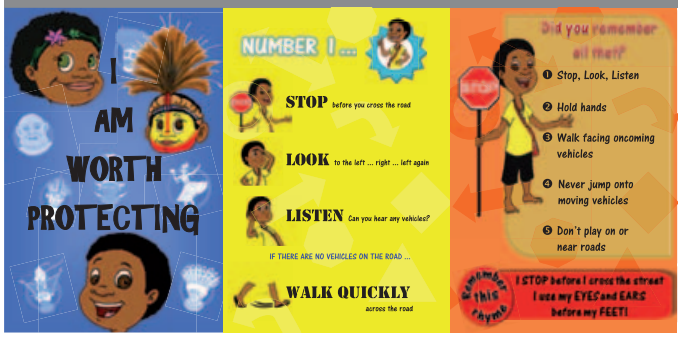
5.6.2 Community Development Support Plan

Strengthening Social Resilience, Local Economic Development, and Community Capacity Building and Partnerships are the focus of the Community Development Support Plan.

Strengthening Social Resilience

During this quarter, the first Toea Project Interface book on Road and Site Safety was completed. The book contains activities such as: snap cards, snakes and ladders, coloring-in and many other activities for children, which focus on the safety of children in and around construction sites and on the road, refer to Figure 5.6. The Toea books and activities are intended to help Papua New Guinean students learn English, so they are only provided in the English language.

Figure 5.6 – Pages from the Road and Site Safety Toea Project Interface book



Road safety messages were delivered to schools at the LNG plant site villages by Toea himself, who also encouraged reading among the children. These messages will be delivered to schools throughout the Project Impact Area.

Also, the Secretariat for Village Courts and Land Mediation completed their audit of village courts in the Project Impact Area. The audit was well received by the community and provided the Secretariat with focus areas to support law and order in the Project Impact Area. The Project will continue to provide logistical support, where possible, to enable the Secretariat to implement its initiatives.

Local Economic Development

The Barging Route Waterways Memorandum of Understanding between the Project and eight tribes in the Omati Delta involves an undertaking of community projects for the tribes potentially impacted by barging of pipeline and other materials through their waterways. To date, approximately 50 possible projects have been identified by the tribes and a workshop was held during the quarter to give communities a framework for presenting proposals and evaluating proposed initiatives. The workshop identified the need for a scholarship program to provide tertiary education opportunities for students. The Project will fund 16 scholarships commencing in the third quarter 2011 with a requirement that they return to support their communities for an agreed period at the end of their training. Two people per tribe will benefit.

The workshop also identified the need to develop infrastructure and services to facilitate getting fish to market (value chain). A feasibility study for this is scheduled for the third quarter 2011.

The Project has also agreed to provide office space in Kikori for tribal representatives and training for business directors and managers.

Supporting the work of City Mission

City Mission, which provides physical, emotional and spiritual support to young men in Port Moresby, received a 165,000 Kina (US$72,000) donation from the Project in June, as part of the Strategic Community Investment program. The funds will be used for much needed improvements to dormitory accommodation, bathrooms, lighting and roofing.

Pastor John Reesink, City Mission with Peter Graham, Managing Director and Rhys Puddicombe, National Content Advisor, Esso Highlands Limited, signing the donation agreement

City Mission supports 85 young men, but with a bed capacity of only 40, some sleep on mattresses on the floor while others rotate their beds so that everyone has a space.

According to Pastor John Reesink who manages City Mission: "About 40 percent of the young men that come here are illiterate and we provide them with literacy, numeracy and life skills training. Most of them come from abusive backgrounds and have been forced into criminal activities because they have simply had no other means to survive."

The young men who come to City Mission are first sent to Mirigida Farm where they spend up to one year engaged in programs including counseling and personal growth, while also learning agricultural and animal husbandry skills. They then return to Port Moresby where they continue with skills development programs to improve their future job opportunities. The Mission also runs the Malolo Screen Printing shop, providing a practical yet creative balance for young men to test out their skills.

One young man who has benefitted from City Mission's help is seventeen-year-old Ezekial Loma from Morobe: "I came here with no opportunity in life and no hope. But now City Mission has changed my life. One day I dream that I will be able to help other people live a good life as well, just as the Mission has helped me."

Young men from City Mission

Through regular engagement with the Barging Route Waterways Memorandum of Understanding Committee, the Socioeconomic team is building positive community relationships that reduce the possibility of work stoppages in the waterways.

Community Capacity Building and Partnerships

Leadership and Planning training workshops were held with community leaders from the LNG plant site during this quarter, as part of the Project's Community Capacity Building program. The training aims to strengthen leadership in the communities to better enable the implementation of community development projects, with a key outcome being the development of strategic community-based plans. More than 130 leaders participated in the four training workshops.

Following on from Ward identification in the Kutubu and Kikori areas, the Socioeconomic team is working with Ward councilors to help establish Ward committees to develop community development plans through a participatory approach.

Meetings were held with the Ward councilors and their committees to develop Ward plans. These plans will outline the service delivery activities and development projects proposed by the community to be undertaken by the Government. Building the capacity of Ward councilors and their committees helps identify community development projects and enables the Project to build stronger relationships with the community and the Government.

5.6.3 Strategic community investments

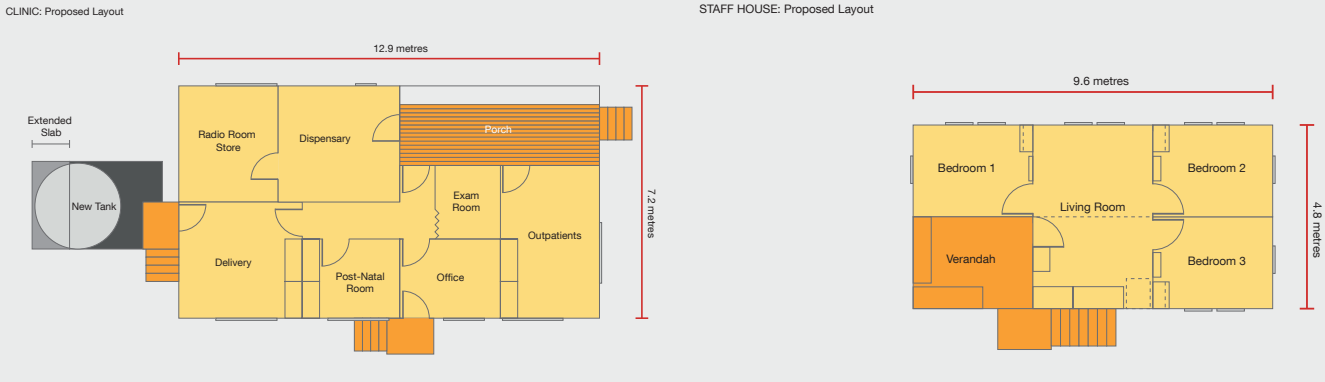
The Project will upgrade the existing health clinic at Boera Village, one of the LNG plant site villages, and construct a new house for the health worker at that clinic who lives in very basic conditions, refer to Figure 5.7. In addition, the Project will build three high-set units, which will allow the number of health workers employed at the clinic in Papa Village to expand from three to seven. Operated by the Salvation Army at Papa Village, the clinic serves as a referral center for other clinics in the area, which is critical to improving health services for communities near the LNG plant site.

Plate 5.11 – Existing home for the Boera Clinic health worker

In June, the Project sent two Papua New Guinean women to the Washington DC Global Women in Management training program, which builds leadership, entrepreneurial and advocacy skills of women leading non-profit organizations and associations. Turiza Tandago of the Angore Women and Youth Development Foundation and Sarah Kaipu of Gulf Christian Services have joined the growing alumni of Papua New Guinean Global Women in Management graduates. These women are creating change for the women of Papua New Guinea through civil society organizations focused on livelihood creation, service to women with Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome and advocacy for women's rights.

In addition, a team of 30 Project staff walked in Transparency International's Walk Against Corruption in June. They also sponsored the participation of a local school in the walk. Project walkers included a team from the newly formed Women in Energy Network, an internal Project group supporting the professional and personal development of women working for the Project.

Figure 5.7 – Preliminary plans for the refurbished Boera Clinic and worker house



A Pacific Women's Empowerment Policy Dialogue, hosted by the United States of America State Department, Government of Papua New Guinea and World Bank took place at the end of May. The Project supported the convening of over 50 women leaders from Government, civil society, private sector and donor organizations throughout the Pacific region who shared strategies to strengthen women's health and economic empowerment. The Project's own experience was also shared at this event.

Fostering economic opportunities for women

Papua New Guinea's Country Gender Assessment aims to develop an informed understanding of gender-related barriers to poverty reduction and sustainable and inclusive economic growth, which aids policy development by the Government.

The Country Gender Assessment exemplifies a public-private partnership and is a collaborative effort by the Government of Papua New Guinea, the World Bank, the United Nations, the National Council of Women, Oxfam, Esso Highlands Limited and others.

The Project was invited to participate in the working group in early 2011. By sharing ExxonMobil's global efforts to foster women's economic opportunities through community investments, programs, and employment, the Project has provided significant content to the assessment report.

The Country Gender Assessment will include a chapter on gender in the extractives industries and the Project has been asked to draft two sections within it – one on the ExxonMobil's global approach to investing in women's economic opportunities, with examples from Papua New Guinea, and a second on the role of women in the Project's workforce.

Formal workshops on the Country Gender Assessment will continue with a goal of presenting the final report by the end of 2011.

During this quarter, two Papua New Guinean trainees Sam and Tobias returned from a six-month Medisend International Biomedical Equipment Repair training program in Dallas, Texas. Sam and Tobias, armed with new skills, will be repairing life-saving biomedical equipment at Mendi hospital as well as at regional aid posts and clinics. Medisend International provides students from developing countries with the education, training and skills to improve community healthcare conditions. Sam and Tobias are among only a handful of biomedical technicians in Papua New Guinea who are responsible for repairing and maintaining hospital equipment, ranging from small suction equipment to X-ray machines.

Plate 5.12 – Biomedical technicians undertaking six-month training in Dallas, Texas

5.6.4 Volunteer programs

As part of the Project's volunteer program, broken desks and bare desk frames were collected from Redscar High School in Porebada and sent to the Port Moresby Construction Training Facility where trainees volunteered their newly learned carpentry skills to rebuild the desks.

The Project is investigating the opportunity to support other schools under a similar program.

Plate 5.13 – Project trainees refurbishing school desks

6 Compensation and Resettlement

The Project avoids physical or economic resettlement of Papua New Guinean communities wherever possible. Where resettlement is deemed necessary, the Project engages with communities in accordance with international best practice, as defined by International Finance Corporation performance standards on social and environmental sustainability and the laws of Papua New Guinea.

6.1 Compensation

The Socioeconomic team has transitioned from negotiating and implementing In-Principle Compensation Agreements with landowners to implementing Clan Agency Agreements. These agreements involve paying compensation to clans for Project land access. Under the *Oil and Gas Act 1998* and as outlined in the In-Principle Compensation Agreements, statutory compensation for initial impacts (for example, trees and bushes), surface impacts for leveling the ground, and payments for loss of access are paid to clans as land ownership is by clan, not individuals.

During this quarter, the Socioeconomic team signed Clan Agency Agreements for the Komo Airfield and for the onshore pipeline in the Kopi area. Four of 11 Clan Agency Agreements were signed for clans from the Komo Airfield area. Numerous meetings were held with the other seven clans but progress was hindered by issues within the clans regarding clan land boundaries and funds distribution. Payments to the four clans are scheduled to occur early in the third quarter 2011 through clan agents who will distribute the funds to clan members in accordance with customary land principles.

In the Kopi area, approximately 15 Clan Agency Agreements were signed during this quarter. Statutory compensation payments were delayed by excessive rains and flooding, which prevented the transportation of money to the Kopi area. These payments are scheduled for early in the third quarter 2011 and will be distributed through clan agents.

The Project is working collaboratively with the community to support clans with a process for selecting their clan agents. Clan agent selection involves a formal public signing ceremony where the clan agents and the clan members sign a Clan Agency Agreement to appoint their agents. This process ensures the clans are fully in control of choosing their representatives, who then takes responsibility for distributing the statutory compensation payments. The Environmental Law Center acts as a neutral observer and witnesses the signing of the Clan Agency Agreements.

Clan compensation payments are made to the clan agents at a secure location in front of witnesses to ensure clan members know the agents have been paid. As a standard practice, increased security is provided for the protection of the funds, of Project personnel, and of the clan agents during the transfer and distribution of funds.

In line with commitments made to the Department of Petroleum and Energy for access and use of the Omati River Estuary for pipe laying, a final compensation package was agreed with clans in the Omati area. The *Oil and Gas Act 1998* does not define compensation rates for the use of waterways; however, the Project is committed to paying fair compensation for known and unknown consequential damages. An In-Principle Compensation Agreement and Clan Agency Agreement will be executed in July 2011. Payment is scheduled to coincide with the start of construction in the third quarter 2011.

6.2 Resettlement

The Project avoids physical or economic resettlement wherever possible. Where resettlement is necessary, the Project works closely with communities in accordance with international best practice and in compliance with the laws of Papua New Guinea.

The Project aims to give physically and economically displaced people the opportunity to, at a minimum, restore their livelihoods and standards of living. The Project Resettlement team works with affected people to prepare Resettlement Action Plans for areas where physical and economic displacement occurs, and to prepare Communal Resource Plans where only economic impacts occur.

A particular challenge facing the Resettlement team in many Project areas during this quarter has been the construction of speculative structures by people who are attracted to areas that are in the process of compensation negotiations for resettlement. Speculative structures are defined as any structure that has been built within the Project Impact Area after disclosure to the communities of the census and survey information that the Project has collected as part of the first stages of the resettlement process. While the Project develops a strategy and process for addressing speculative houses, the Socioeconomic team has been reminding communities about the eligibility for resettlement and compensation and the cut-off dates for the census and survey of structures.

Plate 6.1 – Planks being prepared at the Hides timber yard by local laborer for resettlement houses

6.2.1 Milestones and progress

Resettlement activities continued during the quarter, with particular emphasis on the access roads, Kopeanda Landfill site, Wellpad Access Road to Wellpad B, Komo Airfield, HGCP, Tumbi Quarry and Tamalia River Borrow Pit.

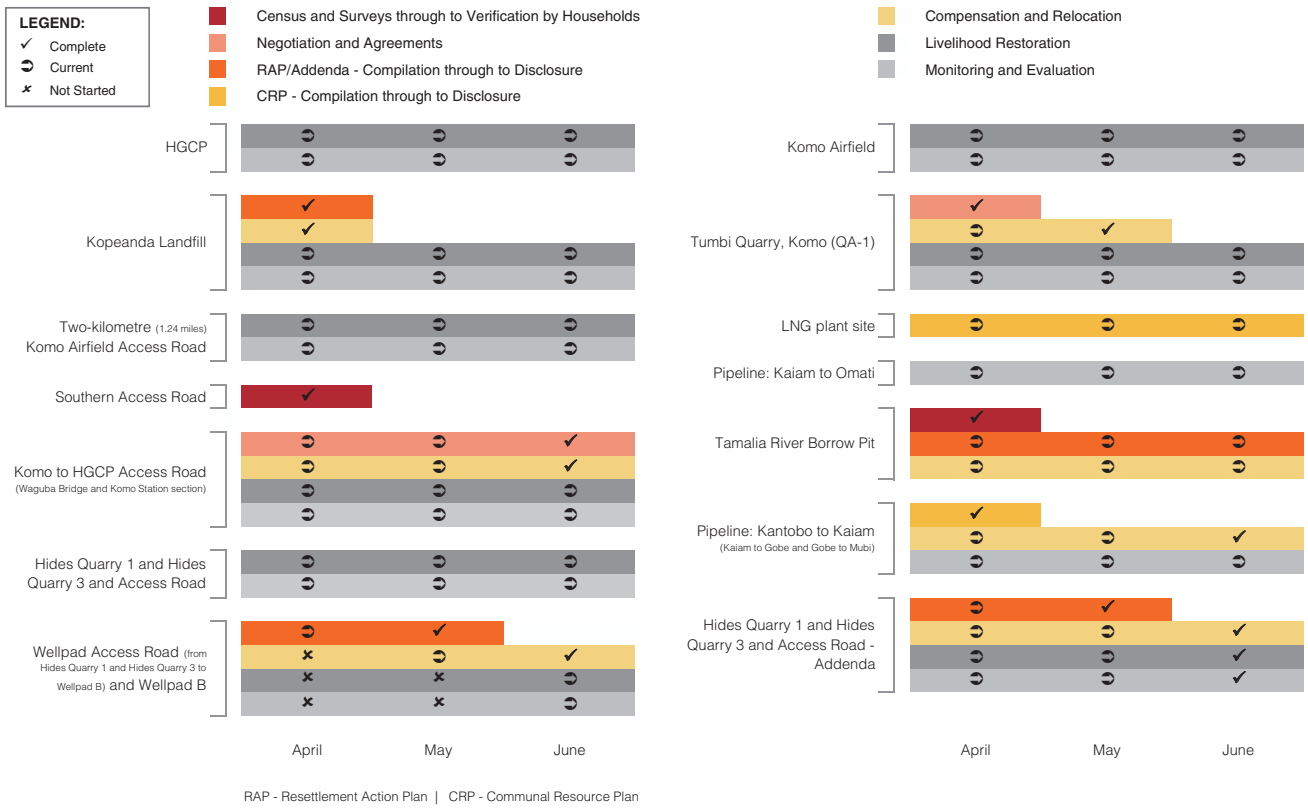
An overview of the status of key resettlement activities is provided in Figure 6.1. 'LNG plant site' and 'Southern Access Road' are both new categories that have been added to the summary table (Figure 6.1) as there were differentiated levels of resettlement activity occurring in those areas during this quarter.

The following milestones were achieved in the second quarter:

- Completion of Communal Resource Plan for the Kantobo to Kutubu portion of the southern pipeline (Kilometre Point 80 to Kilometre Point 153).
- Finalization of land access for the Waguba Bridge area and the first portion of the access road along the Hides spineline up to and including Wellpad B.
- Completion of seven additional replacement water sites (*haus wins*) for Hides resettlers.
- Completion of a Resettlement Action Plan and commencement of resettlement for the Tamalia River Borrow Pit.
- Completion of surveys along the Southern Access Road.
- Completion of access to Wellpad B.
- Preparation of Communal Resource Plan and access to Hides Quarry 4 (amendment to Hides Quarry 1 and Hides Quarry 3).
- The Resettlement team brings Bank South Pacific representatives to resettled communities to educate households in the use of bank products and services. Additional education was provided by the Project's Socioeconomic team.
- A farmer 'field day' exhibition to inform and motivate local people about agriculture and post-resettlement livelihood developments was held in Komo. *Case Study Two – Building livelihoods in Papua New Guinea* describes this activity.

Plate 6.2 – Resettled communities being provided with banking services information

Figure 6.1 – Status of key resettlement activities



6.2.2 Highlights, achievements and lessons learned

The following activities took place during this quarter.

Komo Airfield: Activities focused on monitoring resettlement impacts and livelihood restoration activities including the Komo Nursery and demonstration garden plots.

HGCP: Ongoing activities at the HGCP focused on livelihood restoration, monitoring and construction of resettlement houses as well as replacement water sites.

The first round of post-resettlement household surveys was completed with all HGCP households during this quarter. Following the completion of two resettlement houses during the first quarter 2011, construction commenced on a further seven houses, sites were identified for an additional two, and another 15 have been flagged. In addition to the five replacement water sites in the Hides area that were completed during the first quarter 2011, a further seven were completed during this quarter. The time period for rations delivery was extended to nine months for the HGCP area and continued throughout this quarter. In addition, a number of speculative houses and structures were identified at the HGCP site.

Komo to HGCP Access Roads: Negotiations with affected households continued through this quarter, particularly focused on the Waguba Bridge area and the Southern Access Road into the HGCP site. Speculative structures continued to be established along the access roads.

Kopeanda Landfill: Community planning for construction of an access track and Huli trench around the Kopeanda Landfill site continued. In addition, locations for three communal water sites were identified in the area through community participation. The issue of speculative housing continues to raise concerns with a number of speculative houses and structures identified.

Hides Quarries: Community planning efforts to identify suitable replacement water sites accessible for households along the quarry access road remain underway. Monitoring replacement gardens provided the focus for livelihood restoration activities. The rations delivery period was extended and continued through this quarter.

Tumbi Quarry, Komo (QA1): Following provision of partial land access to the site at the end of the first quarter 2011, physical resettlement activities were completed and land access granted to contractors during this quarter. Activities focused on rations delivery and monitoring replacement gardens.

Plate 6.3 – Self-built new house at Tumbi Quarry

Pipeline camps and components: The Communal Resource Plan was completed for the Kantobo to Kutubu portion of the pipeline, which includes Kaiam to Gobe and Gobe to Mubi River (Kilometre Point 80 to Kilometre Point 153), and was submitted to the IESC and feedback was received. The final report, incorporating this feedback, was being completed at the end of the quarter. Payments for gardens situated along the Kaiam to Kantobo portion (Kilometre Point 153 to Kilometre Point 190), for which a Communal Resource Plan was finalized in the first quarter 2011, were completed.

Tamalia River Borrow Pit: Following the completion of census and survey activities during the first quarter 2011, this quarter commenced with data processing and analysis and completion of a Resettlement Action Plan. This was followed by negotiations and signing of agreements, initial payments, and commencement of physical resettlement. Six housing agreements, as well as 35 'newcomers agreements', were signed with the relevant households. A further seven 'newcomers agreements' are still to be signed. Of the 48 households who signed agreements, 35 (71 percent) have dismantled their structures.

Case Study Two

BUILDING LIVELIHOODS IN PAPUA NEW GUINEA

The term 'Northern Star' does not automatically conjure up images of subsistence farming, but among the Project communities in the Southern Highlands of Papua New Guinea, this sweet potato variety is quickly becoming the food crop of choice for resettled communities. The Northern Star variety is popular because it is high yielding and takes less than five months from planting the cuttings to harvesting the tubers, giving farmers a good result for their efforts.

Sweet potato is a staple food throughout the Highlands region. Northern Star is only one of 15 improved pathogen-tested varieties of sweet potato being propagated to give farmers higher productivity per unit of labor expended. Northern Star is early maturing with yields two to three times higher than varieties currently planted by farmers.

To encourage greater self-sufficiency and sustainability in resettled communities, the Project's Livelihood Restoration team is working with communities to assess general gardening practices, monitor the planting of new gardens and report on the food security situations of local families.

The Project's Livelihood Restoration Program covers a wide range of farming methods including a plant propagation nursery, advice and training on animal production and health and animal genetic improvement, and an agro-food processing advisory service. The team has also re-opened a former Papua New Guinean Government research station in Komo to demonstrate successful farming methods for a range of crops, such as cereals and legumes. This work is followed up with one-on-one farmer skills training and advice on production techniques.

Northern Star *kaukau* harvested from the Komo demonstration garden

The Northern Star takes seven to eight weeks for tubers to form

Komo field day participants behind plano convex *kaukau mounds**

"All of this work is aimed at transferring skills to resettled communities. We cover areas including crop production and nursery development, small-scale broiler production, egg and meat production from local chickens and ducks, pig breeding programs and flour-based food processing." Senior Livelihood Specialist, Matthew Kanua said.

"We also help resettled communities by identifying rural business opportunities. For example, the Hides Women's Association, Hipire Women's Association and Komo Catholic Grass Root Mama Group have been trained in baking skills, food processing and marita lard processing. We supplement training courses with field days promoting local market opportunities." he said.

* *Kaukau* is the Pidgin word for sweet potato.

Case Study Two

BUILDING LIVELIHOODS IN PAPUA NEW GUINEA

The Project held its first field day at Komo in April to introduce Northern Star sweet potatoes to resettled families and demonstrate locally processed food products.

"The field day was highly successful and in fact, many people requested that the Livelihood Restoration Program conducts more field days." Mr. Kanua said.

Sampling cakes and scones, along with cooked Northern Star *kaukau* at the Komo field day

Komo field day gives families a taste of farm life

A total of 84 people attended the Project's first field day to demonstrate farming practices to resettled communities in the Hides and Komo regions.

Organized as part of the Project's Livelihood Restoration Program, the field day enabled resettled families to learn about and taste the Northern Star sweet potato variety and see some potential alternatives for plant and livestock farming and food processing within their own communities.

At the field day, Komo Local Level Government Acting President, Peter Pureni, praised the work of the Project's Livelihood Restoration team in supporting local farming practices.

"I intend to share this with all the other 24 council wards that make up the Komo Local Level Government to support this food crop and the livelihoods restoration work." he told field day attendees.

Matthew Kanua, Senior Livelihood Specialist explains some of the finer points about planting sweet potato

7 Workforce

The Project is developing its workforce to coordinate with construction activities in accordance with the Project National Content Plan. This includes providing employment and training opportunities to Papua New Guinean nationals.

7.1 Development

With preparations for the start of work at the HGCP and construction activity ramping up at the LNG Plant in the second quarter, the Project's workforce exceeded 9,300 by the end of June. Of those employed, more than 6,600 were Papua New Guinean citizens, representing 71 percent of the total Project workforce, as shown in Figure 7.1. Current workforce numbers exceed forecasts developed prior to Project financial close. Workforce for the purposes of this Report refers to jobs created through Project expenditure. Lancos continue to be the primary source of Papua New Guinean workers for construction contractors, with more than 73 percent of these workers obtained through Lancos.

Plate 7.1 – Seventy-one percent of Project workers are Papua New Guinean citizens

The Project's employment statistics show an increase of 30 percent in employment since the first quarter 2011. At the end of June there were approximately 840 females employed by the Project including 700 Papua New Guineans.

The Papua New Guinean workforce is performing numerous roles for the Project, for example, from senior advisors to the Project management team, managers, supervisors and administration assistants to cost engineers, trainers, logistics advisors, construction workers, business development advisors, drivers, guards and hospitality workers.

To keep pace with the rapidly increasing construction activity, the Project is sourcing skilled workers from other countries in the Asia Pacific region to supplement the existing Papua New Guinean workforce.

Project impressions

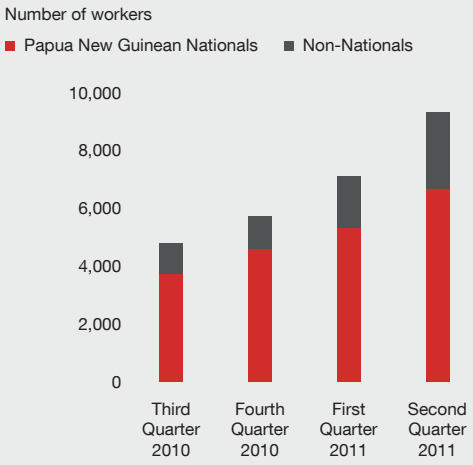
When asked about why she was interested in Project work, Isabelle Mogia replied:

"Probably because the LNG Project is a really big issue in our country right now. So everyone wanted to be part of the Project so then when we saw the advertisement in the newspaper, we were thinking 'Oh, you know, this is an opportunity to be a part of this really big Project'. Yeah!"

Source: *Landowners on LNG project impact* (2011). Radio Australia. July 1, 2011.

Isabelle Mogia, Trainee, Production Operations Training Centre

Figure 7.1 – Project workforce



During this quarter, the Upstream Infrastructure contractor completed both the Northern and Southern Logistic Route scopes and demobilized from Mendi and Gobe. There was a staged approach to the demobilizations, with substantial notice provided to each employee of their pending contract completion. Each employee also received a letter of recommendation and final pay package including a safety bonus applicable to each employee.

Across the Project there is a wide scope of training offered, including both formal classroom training and on-the-job training, to enhance the skills and knowledge of the Papua New Guinean workforce for their current roles and future employment opportunities either with the Project or elsewhere.

In addition to developing the workforce through direct and contracted employment, the Project offers a graduate program, an Operations and Maintenance Training program and internships.

Of the 769 people employed by Esso Highlands Limited, there are 31 graduates within the workforce from disciplines such as engineering, accounting, business services and human resources. Meanwhile, 46 interns are receiving on-the-job training within Esso Highlands Limited in a number of areas such as Development Support, Government Interface and Mobilizations.

7.2 Workforce training

Work is complete on the Juni Construction Training Facility with formal training scheduled to commence later this year. The Facility's curriculum will provide training aligned to the construction needs of the Hides Gas Conditioning Plant and Hides Wellpads contractor.

7.2.1 Construction training

To date, the Project and its contractors have trained more than 6,000 Papua New Guinean citizens for construction, support and future production roles. This is equivalent to more than 520,000 completed hours of training with 200,000 hours completed this quarter. With over 1,000 courses delivered, the training provided covers a wide range of skills including heavy equipment operation, bus driving, Job Safety Analysis, team leadership, crane operations, coating processes, scaffolding training and supervisor training.

Project provided training

The Project is providing a wide array of workforce training covering modules such as: the Management and Protection of Information, Delegation of Authority, Requisition to Pay, Inductions, Tuberculosis Awareness for Field Managers and Supervisors, Effective Communication in the Workplace, Telephone Techniques, Time Management Prioritizing and Teamwork, Communicating Key Information Through Reading and Writing, Ergonomic training, and Food Safety.

An important element of this training is Acceptable Business Conduct. This is covered in courses such as: Business Conduct, Anti-corruption training, Foreign Corrupt Practices Act Awareness and Business Practices Review.

Safety Induction training remains a core component of the Project's workplace education.

Contractor provided training

Contractors are conducting training programs aimed at complementing the required construction within their scope of work. This includes both on-the-job and formal training. The training covers over 130 modules ranging from worksite systems training and safety training to operational training and environmental and cultural awareness studies (refer to *Case Study Three – Building the skills of the future* for a non-exhaustive list of courses conducted this quarter).

The Offshore Pipeline contractor has identified that there is limited scope to train Papua New Guineans in its specific area of construction with the skills being highly specialized and not easily transferable. However, this contractor has demonstrated a desire to train Papua New Guineans in skills that would be transferable and useful in Papua New Guinea. The Offshore Pipeline contractor is providing a 16-month scholarship program for 40 Papua New Guinean citizens, which will be delivered by the Papua New Guinean Department of Works and commenced in June.

Plate 7.2 a-b – Completed Juni Construction Training Facility

Case Study Three

BUILDING THE SKILLS OF THE FUTURE

Building the skills of Papua New Guinean workers through training is part of the Project's National Content Plan, and a genuine opportunity to leave a lasting and positive legacy.

In combination, the Project and its contractors deliver extensive work-specific, health and safety and cultural training every quarter across all worksites and in Esso Highlands Limited offices. This is supplemented by a broad range of community support programs, which have the potential to benefit not only the participants, but their families and communities as well.

Urban Youth Employment Project

The Project has joined various other sponsors, including the World Bank, committing US$ 900,000 to support a City of Port Moresby initiative for an Urban Youth Employment Project. This initiative provides apprenticeships, pre-employment training and, in some cases, on-the-job training for young people in Papua New Guinea.

Launch of the Urban Youth Employment Project

Building personal effectiveness in the office

To build the competence and confidence required to operate effectively in a business environment, the Project has introduced six-week work-based programs to address areas such as: developing confidence in communicating; first impressions and professionalism; telephone techniques; communicating key information through reading and writing; and time management, prioritizing and teamwork.

In the second quarter, a team of administrative assistants attended a graduation program with their managers to showcase some of what they had learned in these programs.

An Accounts Payable team also completed the modules and provided positive feedback about the relevance of the program to their daily work needs. The Project's Dispatch team is scheduled to undertake the program in the third quarter 2011.

Staff in the main Port Moresby Project office

Two-way cultural training

In addition to conducting training for Papua New Guinean nationals and non-nationals about ExxonMobil's culture and corporate values, each month the Project conducts a one day Papua New Guinea Cultural Awareness Program. This Program helps people who are new to Papua New Guinea learn about the diversity and richness of cultures in this country. In addition to presentations and small group activities, the participants are able to get a first-hand glimpse of Papua New Guinean artifacts, food, lifestyle and unique life events. They particularly enjoy the opportunity to have Papua New Guinean nationals, including a Huli Wigman and Central region women, describe their cultures and the intrinsic detail of their traditional dress.

Two-way cultural training session

Case Study Three

BUILDING THE SKILLS OF THE FUTURE

Onshore Pipeline driver and operator training

Driver and operator safety is an important priority for the Onshore Pipeline contractor. Once they have completed an initial pre-employment assessment, heavy equipment operators and heavy and light vehicle drivers, along the onshore pipeline, participate in a comprehensive three-phase program. Phase one focuses on machine pre-start checks, operating functions and basic operating skills, followed by two phases of on-the-job training to progressively develop each operator's skill level.

Heavy vehicle drivers undergo a similar training program but also use a Driver Training Simulator. Light vehicle drivers complete training such as defensive driving techniques.

Driver training in progress

LNG Plant and Marine Facilities contractor awards engineering traineeships to nine Papua New Guineans in Japan

The LNG Plant and Marine Facilities contractor has selected nine Papua New Guinean engineering graduates to be trained for one year at their engineering center in Yokohama, Japan. Having been employed by the contractor, trainees will receive on-the-job training in mechanical, electrical, instrumentation and project control works to support engineering activities. This training will prepare candidates to undertake engineering work for the Project, at the LNG Plant, after completing their training in Japan.

Meet and greet for the Papua New Guinean engineering trainees upon arrival in Yokohama

Nine Papua New Guinean engineering trainees undertaking classroom lessons

Engineering trainees with their LNG Plant and Marine Facilities contractor supervisors at the LNG Plant

Case Study Three

BUILDING THE SKILLS OF THE FUTURE

Contractor training courses

Project contractors are providing literally hundreds of on-the-job and formal training courses each quarter, which complement the required construction skills within their scope of work. Examples of the contractor training delivered during this quarter are listed below.

Advanced First Aid
Articulated Dump Truck Operations
Back Hoe Operations/Operator
Basic First Aid
Bulldozer Operations/Operator
Bus Driving
Camp Operation Induction
Camp Operations On-the-job Training
Catering and Housekeeping
Chainsaw Operations/Operator
Cholera Awareness
Civil and Building
Clearing and Leveling of a new Worksite
Coating Processes
Color Coding
Compactor Operator
Company Controls Courses
Confined Space
Container Handling
Crane – Slewing/Non-Slewing
Crane Operations
Cultural Heritage
Cultural Heritage – Training for Trainer
Defense Driving and Light Vehicles
Drill Training
Driver Training
Dump Truck Operations/Operator
Early Works Induction
Electrical and Instrumentation
Electrical Safety
Emergency Response Drill
Emergency Response Plan for Supervisors
Environment
Environment and Cultural Awareness
Environmental Awareness for Supervisors
Equipment Training
Excavator Operations/Operator
Fire Fighting
Flagman Training
Food Safety
Food Safety for Supervisors
Forklift Operations/Operator
Front End Loader
Grader Operations/Operator
Ground Transport On-the-job Training
Hazard Observation
Hazardous Materials
Health and Hygiene
Heavy Duty Vehicle Assessment
Heavy Equipment Assessment
Heavy Vehicle Driver
Height Safety
Hot Work
Housekeeping and Hygiene Alliance
Incident Investigation Root Cause Analysis
Incident Reporting/Response
Induction – Site Safety
Job Hazard Analysis
Job Safety Analysis
Left Hand Driving
Lifting Gears Inspection
Light Duty Driving
Line Pipe Cold Bending
Line Pipe Receipt and Storage
Lock-Out/Tag-Out
Malaria Control/Prevention
Manual Handling
Marooka Operator/Operation
Mechanical and Piping
Medium Vehicle
New Trainee Operators
Noise Embarkation
Observation and Intervention Awareness
Office Administration
Office Clerical and Arts
Painting and Insulation
Permit To Work Training
Pipe Stringing
Pipeline Induction
Polaris/Kawasaki Familiarization
Pollution Prevention
Port Moresby Office Induction
Power Tools
Quality Management System
Refueling Procedure
Regulatory Compliance
Rigger
Rigging and Slinging
Roller
Rotating Pipe Layer Practical
ROW Preparation
Safe Use of Bush Knife
Safe Work Practices
Safety Alert
Safety Leadership Coaching
Safety Leadership Workshop
Safety Observation
Safety Surveillance
Safety Training
Scaffold Erection
Scaffold Inspection
Scaffolding Training
Security
Side Boom Operator
Site Induction
Skid Steer
Spill Response
Spotter/Spotter Duties
Supervisor Training
Sustainable Development and Social Responsibility
Take 5
Team Leadership
Telehandler
Toolbox Talks
Travel On-the-job Training
Tree Felling Techniques
Trenching
Truck Driving
Truck Training
Use of Fogging Machine
Visitors Induction
Waste Management
Welding and Gas Cutting Safety
Welding Operations and Hazards
Welding Production Processes
Wheel Loader Operations/Operator
Working at Heights
Workplace Hygiene

Some of the training provided by Project contractors in the second quarter

Case Study Three

BUILDING THE SKILLS OF THE FUTURE

A life-changing opportunity

The lives of 40 young people are about to change. The Offshore Pipeline contractor has sponsored a 16-month training program for selected youth from the offshore pipeline Project Impact Area. Thirty men and ten women, from Kido Village and the Omati River area, started their training in mid-June.

The training program, which is being run in Port Moresby by the Department of Works, is aimed at providing the students with basic trade skills in air-conditioning and refrigeration, metal fabrication, carpentry and joinery, and plumbing. These skills will enable the students to help their communities in the future, and provide opportunities for employment after the Offshore Pipeline contractor and the Project have left the area.

The program is intense. Students reside permanently at the Department of Works campus, studying every day, with 30 percent theory and 70 percent on-campus practical learning. Once they have completed this first phase, the students will seek apprenticeships in local companies, where they will learn additional practical skills and work in a formal environment.

"This program is a huge opportunity for the youth, one that will change their lives forever," comments Ken Yai, the Community Affairs lead for the Offshore Pipeline contractor in the Omati, "And they have already worked hard to get here." With the Offshore Pipeline contractor only looking for top candidates from both areas, the students underwent competency assessments, including written and medical examinations, before being selected. Of the hundreds of youth who applied, 40 were selected.

The students will continue their studies until September 2012.

Students from the Offshore Pipeline contractor training program

Students undertaking lessons as part of the 16-month training program

Max Kila

It is clear that the students are taking their studies seriously, recognizing the benefit it will have in their lives. As 25 year old Max Kila from Kido explains, "After I finished high school, I just stayed in the village – there were no jobs and no finances to help me study further. Now I have received this opportunity, I will study hard so that I can use these skills to benefit my family and my community. I am most interested in carpentry and one day I would like to be an architect. This is my dream and here, I can achieve it."

Angela Owamu

For most of the students, this is not just an academic challenge; this is also the first time they have left their home villages and engaged with people from other parts of the country. As 20-year-old Angela Owamu from the Omati comments, "I was so happy and grateful when I was selected for this training. I am the eldest of four children. After my father passed away in 2005, I often had to stay at home and look after the little ones while my mother worked. This is the first time that I've left my home. My mother is always worried about me and keeps phoning to make sure I am ok! And I am ok. I'm learning a lot of new things, not just from my studies, but also about different people and cultures too. After I finish my training here, I want to go back to the Omati and help my community. This opportunity will give me the skills to do that. I want to look after my brothers and sisters, and support my mother. She has worked hard all her life, and now I have the chance to help her."

7.2.2 Contractor workforce training

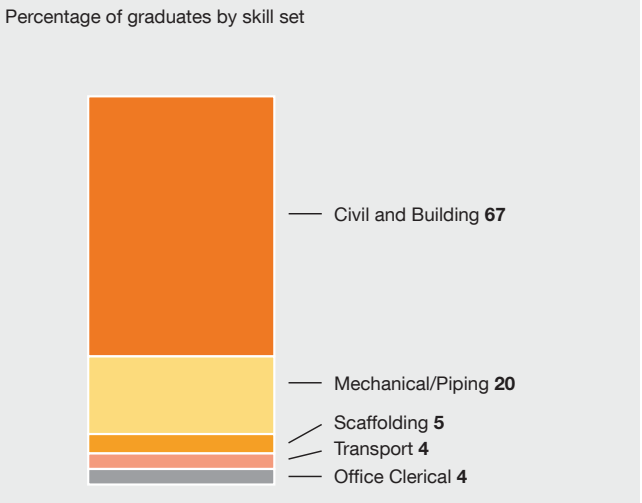
The Port Moresby Construction Training Facility officially opened in November 2010 with more than 1,000 graduates to date, of whom 31 percent are female. Training curriculums are evolving to meet the construction requirements of the LNG Plant.

A key achievement for Port Moresby Construction Training Facility trainees is that they are all entered into the Technical and Further Education (TAFE) Australian award system at Certificate I level for the topics in which they are training. The award depends on successful completion of their studies, then gaining appropriate work experience with contractors or subcontractors at Project worksites. Several of these trainees have been in place for up to one year and their experience has been measured and verified towards a TAFE certification.

Plate 7.3 – Classroom lessons at the Port Moresby Construction Training Facility

Trainees who gained their Port Moresby Construction Training Facility qualification are already being employed at the LNG plant site. The Port Moresby Construction Training Facility is also helping one Lanco with their recruiting and selection process for workers. Figure 7.2 lists graduate skill areas.

Figure 7.2 – Graduate skill areas



7.2.3 Graduate programs

The Project has a range of programs aimed at identifying and developing young professionals:

- Six Papua New Guinean full time employee graduate engineers who commenced their 18-month development program in ExxonMobil's Melbourne office in the first quarter 2011 continue to gain experience in a range of engineering disciplines. With opportunities at the various production operations facilities, the graduates are gaining first-hand experience, which will prove invaluable when they return to Papua New Guinea prior to commissioning activities for the LNG Plant.
- Two Papua New Guinean contract drilling engineers continue working alongside experienced engineers in ExxonMobil's Melbourne office, gaining valuable experience within a multi-national work group in preparation for the role they will play in the Project's drilling program.
- The Project has also recruited two intakes of graduates on a contract basis, deploying them across a number of business functions in Papua New Guinea and overseas. Of the 22 Project graduates who joined the Project in 2010, four were offered permanent employment with ExxonMobil while 16 continue to work in other parts of the Project. In 2011, a total 15 graduates will be contracted to the Project. Nine started this quarter and another six will start in the third quarter 2011.

7.2.4 Operations and Maintenance training

During this quarter, the Operations and Maintenance trainee technicians completed a 12-month Foundation Skills Program, which included Mathematics, Computing, Physics and Chemistry at the Production Operations Training Centre in Port Moresby.

The trainees continued to perform well academically, achieving over a 90 percent average across the subjects studied in the second half of the Program.

Plate 7.4 – Operations and Maintenance trainees working a problem under the instruction of Physics teacher, Willie Kunsei

In early 2012, all who meet the academic and behavioral expectations of this Program will be given the opportunity to spend one year in Canada completing Advanced Skills Training. This will enable them to return to Papua New Guinea to be part of the start-up and commissioning activities at either the HGCP or the LNG Plant facilities, which marks the beginning of their facility-specific training.

The campaign to recruit the second intake of Operations and Maintenance trainees commenced towards the end of the quarter and the second intake of up to 76 trainees will commence training in January 2012. Applicants must meet the eligibility criteria of a B grade or above for English, Maths A, Physics and Chemistry. To bolster the number of eligible applicants from the Project License Areas, the Project has paid for 24 Papua New Guineans to return to school for six months in an effort to improve their Year 12 results and meet the eligibility criteria.

In addition, the Project's Internship Program is growing to ultimately support up to 50 promising applicants who just missed qualifying for last year's Operations and Maintenance trainee intake. These interns will have an opportunity to be considered for the second intake in 2012. In the meantime, they continue to gain experience in areas such as dispatch/logistics, medicine and occupational health, local business development, land and community affairs and human resources.

7.3 Health management

Health program surveillance and health risk monitoring, including new camp pre-commission health inspections, have increased as Project worker numbers and camp infrastructure expands. In addition, improved contractor reporting of leading and lagging indicators is enabling early identification of emerging health trends and better alignment of awareness programs, health training and program reviews to the areas of most need.

7.3.1 Pre-mobilization health support

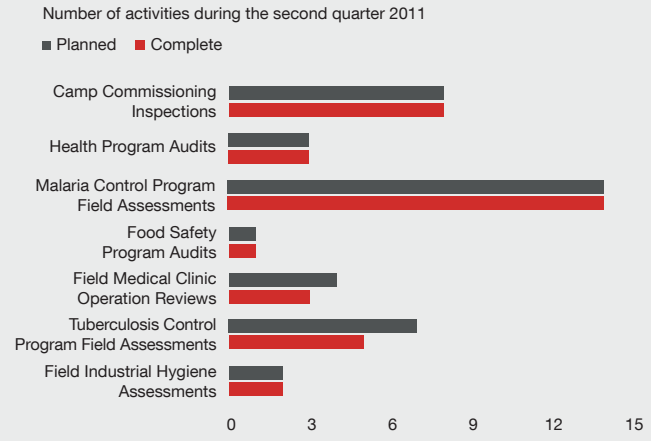
The Health team aims to ensure that contractor health plans are complete and aligned with the Project's health standards as contractors mobilize to worksites. In support of this, the Health team is working with two contractors to update their health plans for endorsement.

During this quarter, the Health team also supported a contractor that was completing a site-specific Medical Emergency Response Plan and Vector Borne Disease Management Plan. This direct support enabled the contractor to meet mobilization schedule requirements with minimum delays.

7.3.2 Post-mobilization health support

Camp commissioning inspections, health program audits, malaria program field assessments and tuberculosis control assessments were the key post-mobilization activities conducted during this quarter, as shown in Figure 7.3.

Figure 7.3 –Key planned versus completed post-mobilization health activities



Two tuberculosis control program assessments and one clinical operation review in the Upstream area have been rescheduled for the third quarter 2011 due to weather and resource limitations.

Health audits are routinely conducted to identify opportunities for health management improvements. As a result of three health audits conducted this quarter, the Health team is targeting fitness-for-duty assessments, public health hazards (such as malaria and tuberculosis), industrial hygiene programs and health management systems implementation. One strategic initiative in response to these findings involves developing self-assessment checklists for all health areas to help Project contractors review contractor programs. Emphasis will be placed on the Project's malaria and tuberculosis program reviews. An industrial hygiene specialist and health data analyst have also been recruited to the Health team.

7.3.3 Camp inspections

In addition to camp relocations, new camps were opened at the LNG plant site, along the onshore pipeline route, Komo Airfield and Hides. Detailed pre-commission health inspections were conducted for each camp, with reports issued to contractors prior to mobilization. The mobilization of one contractor was delayed by a week to enable them to comply with the water quality and medical emergency communications standards specified as part of the Project's minimum health standards.

Some contractors have conducted a health risk assessment in planning for a potential change in floor space per person in multi-share, temporary construction, and accommodation quarters. They have considered a range of health measures including increased ventilation, improved cleaning and hygiene programs, pre-employment medical screening compliance, worker vaccinations and bed curtains. Such measures reduce the risk of communicable disease such as tuberculosis, influenza, vector borne illness and other upper respiratory disease being transmitted in sleeping accommodation.

Two new health program areas, Clinical Operations and Industrial Hygiene, were included in camp health inspections this quarter. Results of the camp health inspections indicated an opportunity for improvement in both these areas. The need for improvement was also identified in the areas of food safety, general sanitation and vector control, as shown in Figure 7.4. Additional Health team resources recruited this quarter will help contractors improve standards for the next quarter.

7.3.4 Lagging indicators

Lagging indicators are direct measures of adverse health outcomes (such as reportable disease), informing the Project about the effectiveness of various health programs. Examples of lagging indicators include foot and skin conditions, work-related medevacs and medical transfers, food/water borne illness and outbreaks as well as malaria and tuberculosis. Work continued in all areas throughout the quarter; with particular emphasis on malaria and tuberculosis control programs. A trend analysis of malaria and tuberculosis incidents for the year-to-date is shown in Figure 7.5.

Specific progress against lagging indicators is outlined in the following sections.

Foot and skin conditions

Increased contractor surveillance and awareness training reduced foot hygiene-related incidents to zero this quarter. Foot hygiene inspections and awareness training are also included in contractor monthly health metrics.

Work-related medevacs and medical transfers

The Health team is working with all Project contractors to achieve full alignment with the Project's Medical Emergency Response Plan.

Total medevac activity has increased this quarter, while medical transfers remained steady. During the quarter, there were 13 Project-related medevacs and eight medical transfers. Most of this activity was located in the Upstream areas, comprising seven medevacs (including one community medevac) together with six medical transfers. In the Port Moresby and the LNG plant site there were six reported medevacs and two medical transfers.

Food and water borne illness and outbreaks

No food or water-borne illnesses were recorded during this quarter, possibly due to improved contractor implementation of food and water safety plans and regular monitoring of food and water standards by Project health advisors.

Contractors are also seeing the benefits of conducting regular awareness training for hand washing and personal hygiene at their worksites, with no viral gastroenteritis outbreaks recorded.

Malaria

As part of Project efforts to combat malaria in Papua New Guinea, the Project conducted awareness raising activities and provided malaria prevention resources as part of World Malaria Day activities on April 25. This year's theme was: Achieving Progress and Impact, reflecting the international community's efforts toward achieving zero malaria deaths by 2015.

Figure 7.4 – Camps adherence to Project specifications by public health category

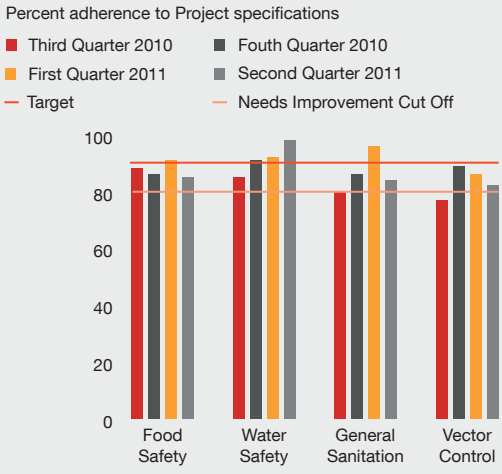


Figure 7.5 – Malaria and tuberculosis incident rates per 200,000 work hours

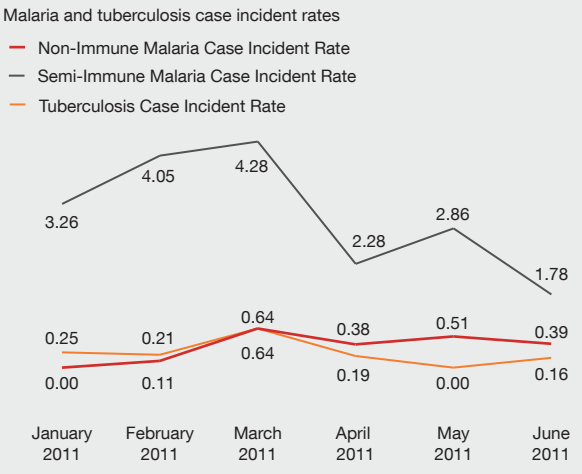


Plate 7.5 a-b – World Malaria Day was observed in April by workers in Port Moresby and at camps across the Project

Within the Project, serious malaria cases for non-immune[1] personnel increased this quarter, with 15 cases recorded. An additional ten serious malaria cases were recorded in dependents of Project workers. Meanwhile, non-serious malaria [2] cases for semi-immune[3] personnel decreased from 104 in the first quarter 2011 to 81 this quarter.

In response, the Project engaged external experts in April as part of a review of the malaria program. The review showed key factors contributing to the malaria cases included a low perception of the risks of contracting malaria; poor bite prevention behaviors between dusk and dawn (the times when malaria-carrying mosquitoes are most active) and reliance solely on anti-malarial chemoprophylaxis.

As a result, the Project is increasing awareness raising activities and malaria procedures, including reviewing the Papua New Guinean arrival verification process and tracking clinically diagnosed semi-immune cases.

Plate 7.6 – Materials presented as part of World Malaria Day activities

Malaria Control Program and Malaria Chemoprophylaxis Compliance Program

The Project is also improving the Malaria Control Program assessment tool to include a 'show me' verification process which will enable the Health team to more accurately monitor contractor compliance. This new assessment tool will evolve into a monthly contractor self-assessment tool, with results submitted to the Project.

The Project continues to bolster its testing activities for anti-malarial chemoprophylaxis use under the Malaria Chemoprophylaxis Compliance Program. During this quarter the Project's collective chemoprophylaxis non-detect[4] rate dropped from 1.2 percent reported in the first quarter 2011 to 0.78 percent.

Tuberculosis control programs

There were four confirmed active tuberculosis cases in the second quarter, down from ten cases (including two cases confirmed after the reporting period) recorded in the first quarter 2011.

To mitigate the risk of tuberculosis, the Health team conducted a tuberculosis control program assessment of most contractors. Results indicated the need for more tuberculosis awareness and training, pre-employment medical screening, and the need to update and monitor latent tuberculosis registers and suspected tuberculosis referral cases.

The Project has introduced a monthly tuberculosis self-assessment checklist for contractors, with results provided to the Project as well.

1 A non-immune individual is where a person was not born and raised (at least to the age of five years) in a location that has malaria exposure.
2 A non-serious malaria case includes a malaria case in a semi-immune person.
3 A semi-immune is an individual where a person was born and raised (at least to the age of five years) in a location that has malaria exposure.
4 A non-detect means a person who fails a urine sample for chemoprophylaxis detection.

Other strategic initiatives

The Project is trialing an integrated health care model in the Hides area to allow access for all Project personnel referred from surrounding clinics in the area for higher level medical care and services. The higher level medical care and service includes X-ray, laboratory diagnostics and emergency overnight care or other emergency response requirements as needed. This model is intended to be rolled out to the rest of the Project before the end of the year.

In addition, the Health team is drafting a new Project Infectious Disease Outbreak Management Guideline to clarify infectious disease outbreak definitions and response procedures.

7.4 Safety management

A fatality occurred in the second quarter when an Onshore Pipeline subcontractor died from injuries sustained while surveying the pipeline ROW near Gobe. We are greatly saddened by this tragic event and express deepest sympathies to the family and friends of this worker.

The relevant authorities were notified immediately and the Project conducted an investigation into the cause of this incident. As a result of the investigation, specific preventative measures were identified. In addition, the Project is planning a workshop with both Project and contractor executives in the third quarter 2011 to review lessons learned and plans to enhance safety performance.

With rising worker numbers and increasing construction activity, the Project's safety management activities during this quarter included:

- A comprehensive Operations Integrity Management System assessment in which the Project's safety management systems were evaluated by subject matter experts to ensure the systems were effective, working as intended, and continually improving. The Project is addressing identified improvement opportunities to promote continuous performance improvement.
- Over 2,300 Project team members contributed to an organizational culture survey to assess the Project's organizational climate regarding world class safety performance. Focus groups will evaluate the survey results in the third quarter 2011 and support the development of action plans for identified areas for improvement.
- A Safety Champions initiative is providing selected Papua New Guinean workers with additional training and experience so they may positively influence safety in the workplace. Over 30 candidates have been identified, with initial training scheduled to begin in the third quarter 2011. The Project aims to train 100 candidates.

Embracing the Project's Safety and Environmental Culture

Jascintha RuMark, Civil Quality Inspector for the Komo Airfield, is among many workers who have embraced the Project's safety and environmental culture as part of their everyday lives.

"The culture is second to none. For me it's quite simple – we are here to be keeper of our brothers and the land. So that means Nobody Gets Hurt and we protect our environment," Jascintha said. "There was a time in my life when it was all about me. Now I am truly my brother's keeper – we all look out for each other."

Jascintha said that the close team culture is reflected in the work ethic at Komo.

"Out at Komo where I work, we are like one big family. The team we have up here is very professional. Working on this Project has been character building for me. It's come at just the right time in my life."

Jascintha believes the safety and environmental culture is instilled into the lives of everyone on the Project.

"I've seen the workers, plus people outside the Project camp area with help from VLOs (Village Liaison Officers) and the environment team, picking up rubbish along the road to help clean up their environment," she said.

"I was going to the dentist the other day and I pointed out that their front step was not safe. Then I stopped and remembered I wasn't at work, I was in Port Moresby. The Project's safety culture lives in us."

Jascintha RuMark, Civil Quality Inspector for the Komo Airfield

- First Line Supervisor Safety, Security, Health and Environment (SSHE) training continued for field-based line management and SSHE workers. This training aims to ensure that participants are familiar with the Project's SSHE management system, and understand their role in its implementation. More than 250 personnel have been trained to date.

Figure 7.6 – Job Safety Analysis trends

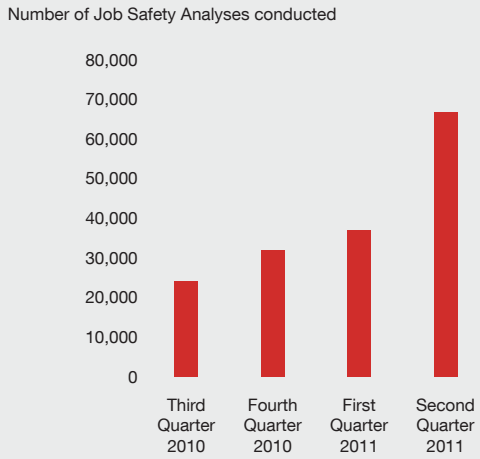
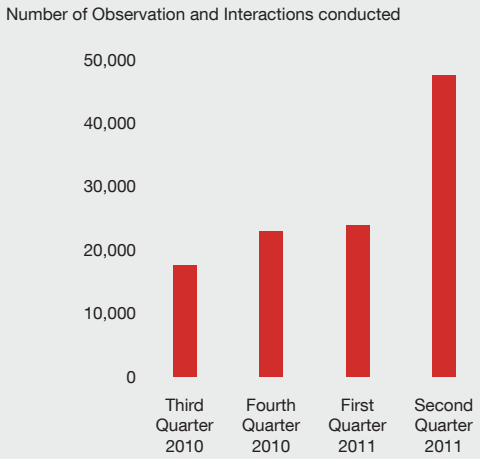


Figure 7.7 – Observation and Interaction trends



- Field Safety in Uncontrolled Environments training continues for small teams performing work in remote environments. This training helps supervisors plan work, prepare their teams to perform work safely, and respond to emergencies that could be encountered. More than 100 personnel have been trained to date.

- A SSHE Leadership workshop is planned for the third quarter 2011 to progress the safety culture of key Papua New Guinean contractors supporting the Project. The workshop's objectives are to reinforce the Project's safety expectations, build safety leadership capacity, and enhance the understanding and application of safety fundamentals. Over 25 contractor companies will be represented at the workshop.

- Cultural awareness programs continue for both Papua New Guinean workers and expatriates to enable them to more effectively implement the Project's safety management system.

7.4.1 Leading indicators

The Project uses core safety processes (such as Job Safety Analyses and Observation and Interactions) to increase safety awareness and actively engage workers in hazard management on a daily basis. Figures 7.6 and 7.7 reflect the positive trends experienced in the past 12 months.

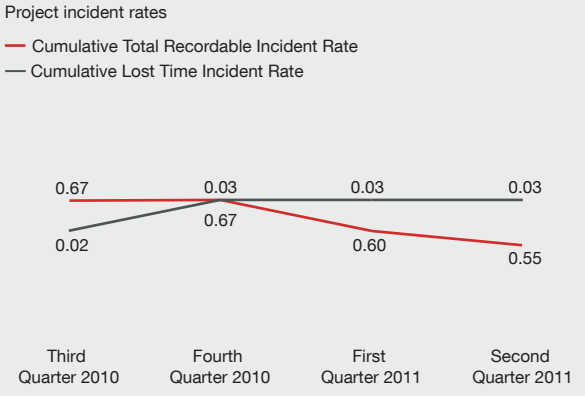
7.4.2 Lagging indicators

As depicted in Figure 7.8, the Project's Total Recordable Incident Rate trend is improving, while the Lost Time Incident Rate trend remains consistent with previous reporting periods. By comparison, Figure 7.9 shows the significant increase in Project work hours as construction activities ramp up.

7.5 Worker welfare and conditions

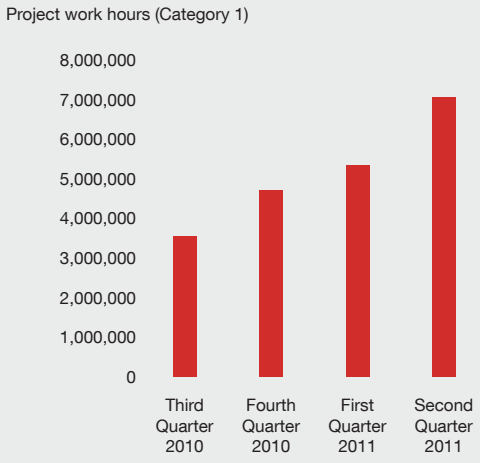
The Project's Labour and Worker Conditions Management Plan and Camp Management Plan play a crucial role in ensuring that worker welfare conditions, including a high standard of accommodation and on-site working conditions, are met.

Figure 7.8 – Trend analysis



NOTE: Work hour adjustments may be reported by contractors after the Report has been released, and as such incident rates and Project work hours may be refined between one report and the next.

Figure 7.9 – Project work hours



NOTE: Project-to-date work hours totalled 26,709,870.

7.5.1 Camps

A review of 11 camps during this quarter revealed that improvement is needed around room spacing, camp residency arrangements (specifically around nationals living at home), camp induction and grievance procedures (refer to Figure 7.10). One contractor was issued with a non-conformance for breaching the minimum space requirements by exceeding the number of people allowed to occupy dormitory accommodation. The contractor promptly addressed this situation after notification.

The Socioeconomic team is also working with contractors to close-out other non-conformances.

Toward the end of the quarter, the Upstream Infrastructure contractor camp at HGCP was completed, alleviating pressure from the Wellpad A, Nogoli and Kobalu Camps. The HGCP Camp will ultimately accommodate approximately 700 personnel, supporting earthworks on the HGCP site and Hides Wellpad Access Road.

In addition to the operational camp located at Kopi, the Onshore Pipeline contractor's new camp at Kaiam, is nearing completion. The first workers were mobilized to the camp at the end of the quarter.

Both Kopi and Kaiam are managed as 'closed' camps. These camps are closed to the public and workers must stay and sleep within the camp area at the end of work shifts.

7.5.2 Labor and worker conditions

With most Papua New Guinean national workers employed through three primary Lancos, the Socioeconomic team is conducting presentations to them about their obligations around the Project's Labour and Worker Conditions Management Plan.

Monitoring of one Lanco was completed during the quarter, with a number of areas identified for improvement.

Plate 7.7 – Kaiam Camp 2 nearing completion

Figure 7.11 shows the main areas of non-conformances across all labor and working conditions.

While both Project and contractor management are working to close all non-conformances, good progress was made with contractors during this quarter on implementing the grievance management, disciplinary and demobilization procedures required by the Labour and Worker Conditions Management Plan.

In addition, the Socioeconomic team started demobilization risk assessments, conducting an assessment with the LNG Plant and Marine Facilities contractor this quarter. It is anticipated that more than 2,000 workers at the LNG plant site will come from the local villages and, following the end of the construction phase, demand for long-term employment will rapidly decline. Demobilization needs to be fair, transparent and sensitive to employees' situations. As a result, the Project has started to identify options for reducing community impacts associated with demobilization.

Figure 7.10 – Main areas of Camp Management Plan non-conformances

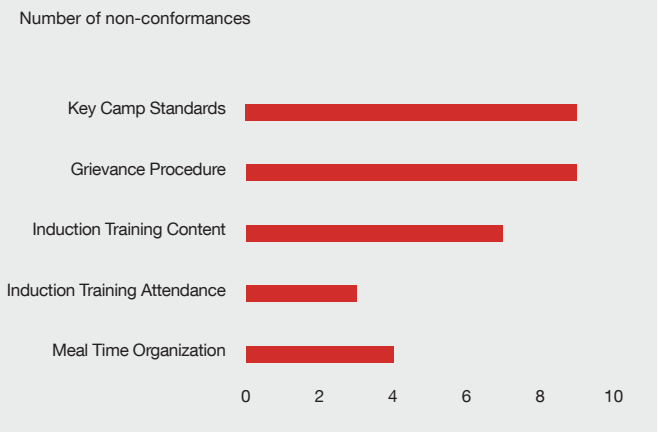
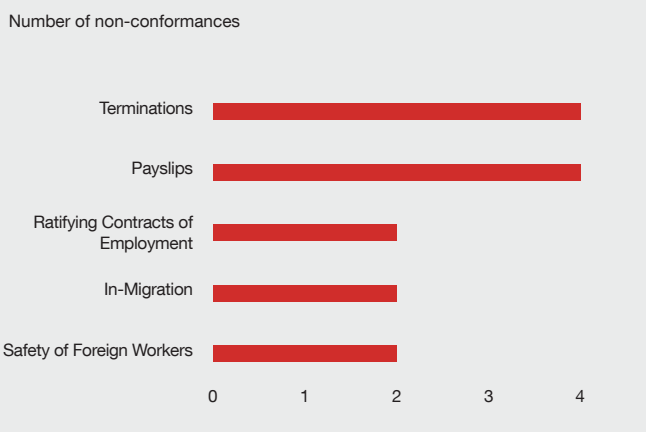


Figure 7.11 – Main areas of Labour and Worker Conditions Management Plan non-conformances



8 Conformance

Conformance with environmental commitments is managed throughout the Project by a system of verification, monitoring, assessment and audit. By recording incidents and non-conformances, issues can be effectively managed, and lessons shared throughout the Project. Management system requirements are outlined in the ESMP, which can be found at www.pnglng.com/commitment.

8.1 Verification

The Project has a full-time verification presence across all worksites. This team identifies and communicates field observations and/or non-conformances to each contractor on a daily or weekly basis, usually giving 30 days to respond with appropriate corrective actions. This is supported by weekly combined Project and contractor meetings which establish expectations between contractors and the Project, engage lead staff from construction contractors, and obtain support from construction teams.

The Project's Field Environmental team expanded again during the second quarter. The addition of two field environmental advisors has boosted verification efforts as construction begins to peak.

8.2 Monitoring

By the end of this quarter, the requirements of the ESMP and Environmental Monitoring Plan had largely been incorporated into contractors' individual environmental management systems. The Project's Environmental Verification and Monitoring Manual was also finalized. This Manual provides detailed procedures to ensure consistent and technically sound monitoring methods are applied across the Project.

Monitoring programs were underway throughout this quarter with results outlined in the following sections.

8.3 Assessments and audits

During the first quarter 2011, the IESC conducted a third site audit, spending 17 days visiting most active worksites and meeting with Project workers and members of affected communities to monitor conformance with the Project's environmental and social commitments. The final report of the IESC's findings will be published on the Project website, www.pnglng.com, when completed.

Contractors also undertook independent audits of their activities. For example, the Onshore Pipeline contractor completed an internal quality, health, safety, and environment audit. In addition, an external audit was conducted by an internationally recognized standardization and compliance organization against ISO 14001:2004 Environmental management systems. No major or minor non-conformances were found.

The LNG Plant and Marine Facilities contractor also conducted an internal environmental management system audit and an internal safety, health, environment and security audit.

8.4 Incidents, non-conformances and corrective action

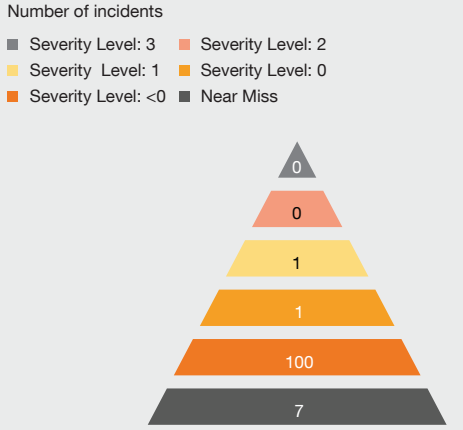
8.4.1 Incident summary

Project-wide, 109 environmental incidents were reported in the second quarter, which was 26 less than the first quarter 2011. This decrease can be attributed to the continuous efforts of the Project and its contractors to take proactive measures to prevent incidents. These incidents were primarily spills of hydrocarbon, wastewater products or chemicals. To prevent such incidents reoccurring, numerous contractors conducted additional spill response drills and training, along with increased spill mitigation measures.

These incidents are classified by severity level as shown in Figure 8.1.

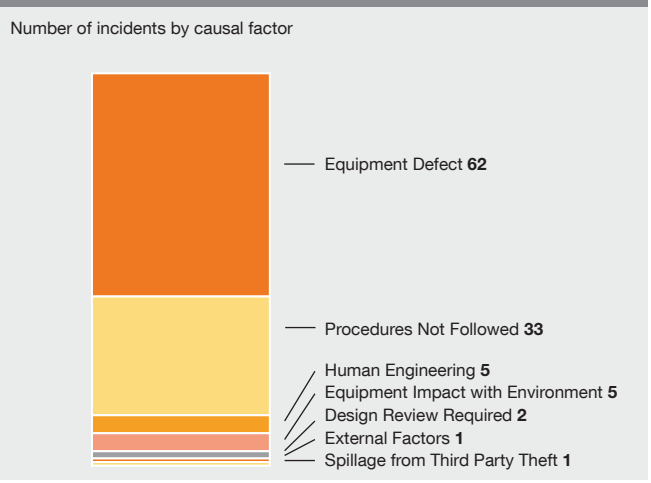
Corrective actions were assigned to all reported incidents.

Figure 8.1 – Environmental incident summary



An important component of effective environmental management is ascertaining the causal factors for incidents. Figure 8.2 illustrates the factors causing incidents for this quarter.

Figure 8.2 – Environmental incident and near miss causal factors



The Level 1 and 0 incidents (as shown in Figure 8.1) concerned a chemical spill and a waste oil spill respectively. The chemical spill occurred at the Komo Airfield site when two large containers of sodium hypochlorite (bleach) tipped off the back of a truck during pre-start checks and 1,000 litres spilled to ground. The spill was absorbed into the soil and cleaned following the requirements of the Materials Safety Data Sheet for the chemical. The soil was tested for residual chlorine and pH (as the chemical is alkaline) and the stormwater drain was also tested. Both were found to have normal levels.

The waste oil spill occurred at the HGCP site when the forks of a front-end loader punctured a large portable container holding waste oil, resulting in 800 litres being spilled to ground. The spill was cleaned up with immediate containment and use of absorption pads, vacuum truck and excavator. To prevent such incidents reoccurring, learnings were highlighted and shared with all Project worksites.

8.4.2 Non-conformance and field observation performance

Field observations are an integral part of ongoing verification efforts to ensure contractors comply with environmental requirements and commitments at each worksite. Non-conformances are raised for environmental excursions that are deliberate or repeated offences that increase the level of risk or pose immediate harm to the environment.

For this quarter, 73 site visit reports were registered covering a total of 305 field observations and 12 non-conformances across the Project. Erosion and sediment control and spill prevention and response made up the bulk of the field observations and non-conformances. This was a general increase in field observations and non-conformances when compared to the previous quarter, which coincides with the increase in construction activities across the entire Project.

During this quarter, 44 positive field observations were made. Generally, positive field observations related to the proactive implementation of waste management and weed management as well as continued work in erosion and sediment control.

A summary of all non-conformances and field observations reported during this quarter is outlined in Figure 8.3.

The Project Field Environmental team worked closely with each construction contractor to address areas identified as priorities and ensured lessons learned were shared throughout the Project.

Closure status for non-conformances and field observations reported this quarter are shown in Figure 8.4.

Figure 8.3 – Environmental non-conformance and field observation summary

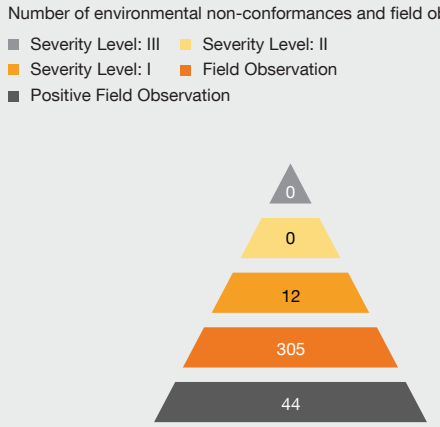
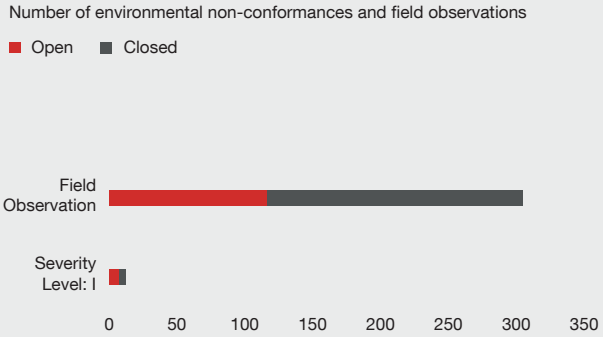


Figure 8.4 – Environmental non-conformance and field observation closure status



The Project is required to provide a summary in this Report of Level II non-conformances and above. No Level II or Level III non-conformances were recorded during this quarter.

The only Level II non-conformance on the Project-to-date was the Akara Creek mudslide at the HGCP, reported in the fourth quarter 2010. Since then, the recovery of water quality and vegetation regeneration has been measured through a monitoring program including in field water testing, water sampling for laboratory testing, and visual and photographic recording.

Since the incident, visual inspections found water clarity is improving, and turbidity results have quantified this. While the stream is recovering, the water quality data does not yet meet all of the monitoring targets and vegetation has not yet become established on the impacted stream bed. The monitoring will continue until such time that the data does meet targets and the stream bed shows signs of recovery, subject to safe access to monitoring sites.

9 Pollution Prevention and Abatement

The Project manages its activities to minimize the creation of pollution. During the second quarter, the Project and its contractors identified several opportunities for the reuse of construction waste materials.

9.1 Air emissions

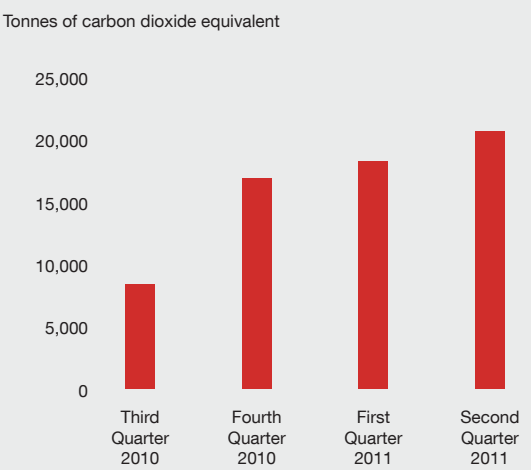
Emissions from construction and aviation equipment, incineration of waste, and dust from construction sites and roads are the primary sources of Project-related air emissions.

During the quarter, heavy and persistent rain throughout the Project area resulted in little requirement for contractors to apply dust control measures at worksites. Regardless, impact management plans are in place. For example, the Hides Gas Conditioning Plant and Hides Wellpads contractor took delivery of dust monitoring equipment on-site and are developing monitoring procedures to be implemented in subsequent quarters.

Incineration emissions are monitored by tracking the average incinerator combustion temperature to confirm whether incinerators are operating within their design specifications. This quarter, contractor incinerators maintained their correct temperatures.

Overall, greenhouse gas emissions increased this quarter due to increased emissions from construction and aviation equipment fuel use. Greenhouse gas emissions are calculated based on direct fuel use for both stationary, such as generators and incinerators, and mobile equipment, such as heavy earth moving equipment and transport vehicles. The Project's diesel use was 7,073 kilolitres, equating to a greenhouse gas emissions value of 19,003 tonnes of carbon dioxide equivalent. Petrol was used for chainsaws and boat engines, contributing 42 tonnes of carbon dioxide equivalent. Aviation fuel used specifically for Project purposes contributed 1,580 tonnes of carbon dioxide equivalent.

Figure 9.1 – Greenhouse gas emissions per quarter



NOTE: Emissions calculations are based on the Australian Government Department of Climate Change and Energy Efficiency, National Greenhouse Accounts Factors, July, 2011.

Figure 9.1 shows the increase of Project-related greenhouse gas emissions, which correlates with the increase in construction activity.

Atmospheric air monitoring continues at the LNG plant site, with three designated areas monitored for sulfur dioxide and nitrogen dioxide in June. All sites were well below the air monitoring criteria levels adopted for the Project.

9.2 Noise and vibration

This quarter there were no community grievances regarding noise or vibration.

Noise and vibration from Project activities are managed to achieve acceptable levels, giving consideration to the surrounding communities and sensitive fauna.

A detailed Noise Monitoring Procedure was deployed to Project Verification teams in late June, specifying how Project noise monitoring will be conducted.

Contractors also conduct their own noise monitoring. For example, the LNG Plant and Marine Facilities contractor monitored noise created by quarry blasting during June and all results were within the Project's noise monitoring criteria.

9.3 Waste management

The Project is continuing to implement the activities identified in a Project-wide waste review, which was completed in the first quarter 2011. For example, incinerators from demobilized Upstream Infrastructure contractor sites are being transferred to Hides, increasing the temporary construction incinerator count to five.

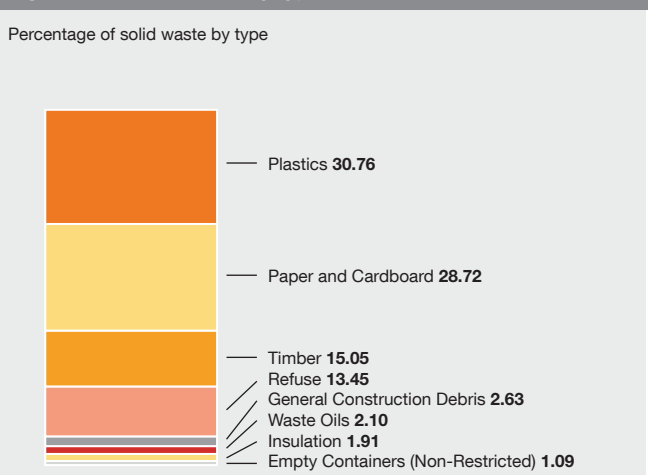
Waste materials generated this quarter were predominantly paper and cardboard, plastics and general camp refuse, as illustrated in Figure 9.2.

Figure 9.3 illustrates disposal methods for solid wastes during the quarter.

The Upstream Infrastructure contractor has also launched a waste segregation education campaign, with information pamphlets on canteen tables and banners at the site promoting waste segregation, litter avoidance and spill prevention.

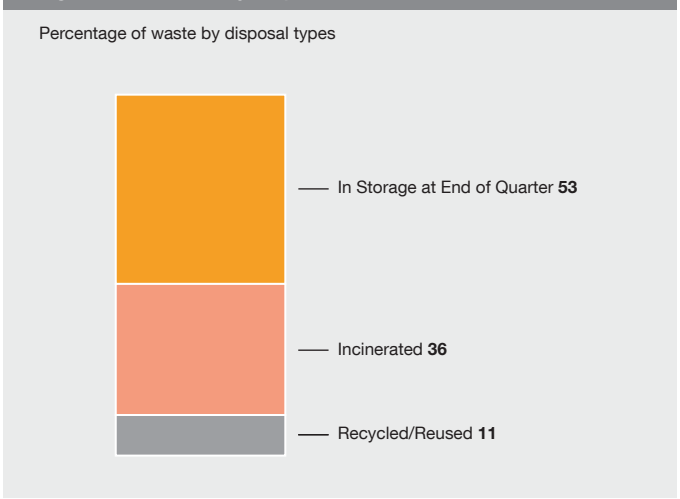
The Onshore Pipeline contractor waste management area at Kopi Camp 1 is operational and the area at Kaiam Camp 2 is under construction, with two incinerators installed. These were awaiting commissioning at the end of the quarter. A dedicated waste management crew is in place at the Kaiam Camp 2 waste management area.

Figure 9.2 – Solid waste by type



NOTE: The following waste types have a value of less than 1%: Metal Scrap [0.95%], Empty Containers (Restricted) [0.93%], Oily Rags and Used Clean-up Materials [0.67%], Tyres (Crumbed) [0.35%], Ash (Non-Restricted) [0.29%], Glass [0.21%], Filters (Restricted) [0.20%], Medical Waste [0.15%], Paint Waste [0.15%], Filters (Non-Restricted) [0.14%], Oil and Chemical Contaminated Soil [0.096%], Batteries [0.067%], PPE and Clothing [0.061%], Electrical Goods [0.017%], Printer Cartridges and Toner [0.009%], Fluroscent Tubes [0.0001%].

Figure 9.3 – Waste by disposal method



The Onshore Pipeline contractor has also assigned dedicated crews to manage waste generated on the ROW such as metal shavings, plastic caps used to cover the ends of pipes and pipe plastic wrapping. Improved labeling and segregation of waste bins at the source, using color-coding is ensuring food waste is not double-handled once it arrives at the waste management area, minimizing disease and pest risks. Biodegrading waste vegetables and fruits within topsoil stockpiles is also being trialed with the potential to not only improve the efficiency of the incinerators but also enrich topsoil piles.

In addition, the Onshore Pipeline contractor has identified opportunities to reuse construction material, for example, plastic pipes are being used for the safe storage of fluorescent tubes; wooden boxes are reused for the storage of non-combustible wastes; and drums are reused by the welding crews to store metal shavings on the ROW.

At the LNG plant site, plans were developed this quarter to donate wood, from construction material packaging, to community villages.

A medical waste incinerator was also installed at the LNG plant site to burn wastes from the on-site medical clinic.

9.3.1 Wastewater

This quarter, the Onshore Pipeline contractor installed four wastewater units at Kaiam Camp 2, while units at the Kopi Scraper Station Bush Camp and Kantobo Camp were decommissioned.

All in-situ effluent quality analyses across Project worksites were within wastewater monitoring criteria this quarter, with the exception of Kantobo and Gobe where repairs were required on units.

Meanwhile, a newly constructed laboratory in the Upstream area is testing water samples from the vector control program at Hides.

9.4 Hazardous materials

The Project aims to avoid hazardous chemicals and materials, particularly those that are subject to international bans or phase-outs. The Project also has procedures in place, which aim to prevent the uncontrolled release of hazardous materials during transportation, handling, storage or use.

Plate 9.1 – Metal shavings collection on the ROW

Plate 9.2 – Temporary storage of metal shavings at Kopi

Plate 9.3 – Wastewater effluent samples prepared for coliform testing

Plate 9.4 – Preparation of sludge drying machine to treat sludge from demobilized Kopi Scraper Station Bush Camp wastewater treatment plant

This quarter, the Upstream Infrastructure contractor conducted a site-wide review of Material Safety Data Sheets at Hides to check all required sheets were appropriately accessible.

Meanwhile, small spills of paint and thinner inside a shipping container at Gobe prompted a review of correct packing procedures and the inspection of containers prior to leaving Port Moresby.

No materials subject to bans or phase-outs were reported to be on any Project site during the quarter.

9.5 Spill prevention and response

Minimizing both the number and volume of spills remains a priority for the Project and its contractors. In the case of a spill, it must be effectively contained, cleaned up and any impacts remediated.

This quarter, the Project undertook an initiative to develop a Spill Prevention Toolkit for use by contractors at worksites. The Toolkit contains a presentation for contractors to discuss the methodology and importance of conducting daily pre-shift equipment inspections with their workers. The Toolkit also includes a series of posters that reinforce the message of the toolbox talk. These posters are translated into Pidgin and Huli languages.

The Upstream Infrastructure contractor conducted two spill response drills and undertook a number of additional spill prevention measures during the quarter, including the use of purpose-built bunds for portable lighting generators, placing 'safe fill' stickers on plant and equipment fuel tanks, and issuing mini spill kits to all light vehicles. This contractor is also investigating the use of a biologically active absorbent material for treating hydrocarbon contaminated soil.

Meanwhile, the Onshore Pipeline contractor set up a dedicated maintenance crew to service fuel storage areas and wastewater treatment plants.

Plate 9.5 – Spill Prevention Toolkit posters

At the LNG plant site, external specialists ran a three-day oil spill response training course. The training involved drills on both an onshore and offshore response situation. An oil spill response awareness training module was distributed to subcontractors who also undertook in-house drills.

9.6 Dredging and trenching

Further detailed engineering was undertaken for dredging in the Omati River, along with additional modeling of trenching in Caution Bay in the second quarter. The Caution Bay trench modeling results will be published in the third quarter 2011.

Omati River dredging will create a shallow access channel to permit offshore pipeline construction. To bury and protect the pipeline from shipping traffic, trenching is also needed at Caution Bay. The resultant spoil from dredging and trenching operations will be carefully managed to minimize environmental impacts.

10 Biodiversity

The Project implements a variety of measures to ensure that any effects of construction activities on Papua New Guinea's valuable biodiversity resources are minimized.

10.1 Ecological management

Pre-construction surveys identified a range of fauna between Kilometre Point 85 and Kilometre Point 120 such as the following species: Doria's Tree Kangaroo *Dendrolagus dorianus*, Giant Bandicoot *Peroryctes broadbenti*, Short Beaked Echidna *Tachyglossus aculeatus*, Trumpet Manucode *Manucodia keraudrenii*, Josephine's Lorikeet *Charmosyna josefinae*, Eclectus Parrot *Eclectus roratus*, Vulturine Parrot *Psittrichas fulgidus*, Palm Cockatoo *Probosciger aterrimus*, Black-capped Lory *Lorius lory*, Southern Cassowary *Casuarius casuarius* and Dwarf Cassowary *C. bennetti*, Sulphur-crested Cockatoo *Cacatua galerita*, Blyth's Hornbill *Rhyticeros plicatus*, Magnificent Bird-of-Paradise *Cicinnurus magnificus* and Raggiana Bird-of-Paradise *Paradisaea raggiana*.

Pandanus swamp and *Nothofagus* forest were also noted in the same stretch of the pipeline route. Existing mitigation measures were deemed adequate for all species identified.

Plate 10.1 – *Nothofagus* forest

Plate 10.2 – *Pandanus* swamp

Prior to starting site work, the Offshore Pipeline contractor conducted a Health, Safety and Environment induction for all site personnel which, among other topics, included ecological management and weed, plant pathogen and pest management.

One important way of managing biodiversity impacts is minimizing the size of worksites; another is ensuring that agreed work areas are not exceeded during construction. The Onshore Pipeline contractor undertook a detailed assessment of the planned construction footprint versus the actual footprint from Kilometre Point 226 to Kilometre Point 278.

The Onshore Pipeline contractor also monitored opened sections of the ROW to rescue any entrapped fauna, even where no activities were occurring. A large python was saved and aided across the road by one of the pipeline lowering crew following flood conditions after heavy rainfall around Kilometre Point 278. A juvenile New Guinea Spotted Turtle *Elseya novaeguineae* was also rescued from a small shallow pool within the ROW and relocated to a larger nearby stream.

A lone freshwater crocodile was observed in a flooded section of the Kopi to Kaiam Road and another in a flooded section of the Kopi Shore Base to Kopi Camp 1 Road.

During the quarter, there were also several sightings of cassowaries *Casuarius* sp., juvenile Monitor Lizards *Varanus salvadorii* and snakes on Shoo-fly Road and on the ROW, indicating continued use of these habitats.

The population of fish and crustaceans in a stream across the ROW between Kilometre Point 260 and Kilometre Point 280 was found to increase following rainfall. The local workforce was reminded through toolbox talks, of the Project's no fishing and no hunting policies.

Bats were once again the subject of attention in the quarter. A large number of unknown species of fruit bat were observed roosting in trees by the Onshore Pipeline contractor at Kilometre Point 283 with a smaller number present the next day. This was attributed to natural variation. Subsequent blasting of limestone outcrops in this area uncovered several underground tunnels and caves, but none showed evidence of inhabitation by bats or other fauna.

A Bat Cave Management Plan was developed for bats found in a cave near Kilometre Point 260. Blasting was controlled within 100 metres of the cave and no blasting or standing of heavy vehicles was permitted within six metres of the ROW. Monitoring showed that neither the roof of the cave nor the roosting bats were disturbed. Blasting of the trench line stopped on either side of an area where a bat cave extends underneath the ROW and ripping techniques will be used to excavate the trench.

In accordance with the Project Ecological Management Plan, a cave supporting bats in the vicinity of Hides Quarries 4 and Hides Quarries 5 is excluded from quarrying activities.

An access prohibition zone of approximately 100 metres will be established around the cave entrance to control access entry by personnel. Blasting control zones will also be implemented. The Komo Airfield contractor also undertook a survey for potential bat habitats within a 100 metre zone around a Tumbi Quarry, Komo (QA1) where blasting is being considered.

Monitoring of two Sandalwood *Santalum macgregorii* trees outside the border of the LNG plant site continued with no detrimental effects from Project activities observed.

10.2 Quarantine management

The Project continues providing reports detailing projected cargo movements to Papua New Guinea's National Agriculture Quarantine and Inspection Authority ahead of the 90-day notice period. This enables the identification of any higher risk shipments, effective deployment of agency resources and sufficient lead-time to undertake any specific National Agriculture Quarantine and Inspection Authority direction prior to departure from the port of origin, where possible.

During the quarter, the Offshore Pipeline contractor cooperated with the National Agriculture Quarantine and Inspection Authority to:

- Arrange an inspection of marine spread in Singapore prior to the dispatch of vessels.
- Arrange inspection of the pipe coating facility and load out area in Malaysia.
- Clear coated line pipe at sea in Papua New Guinean waters (in collaboration with the Onshore Pipeline contractor).

Across the Project, continued efforts to enforce the Quarantine Management Program and associated Procedure reporting requirements have achieved significant improvements in the amount and quality of information supplied by Project contractors and subcontractors.

Data is also being collated to identify any trends or inconsistencies with the objectives of the Program, while 'Contractor Self-Assessment for Compliance' forms are distributed to contractors for completion as an extra method of control and measurement.

In addition, regular stakeholder meetings continue to successfully engage all stakeholders and act as a forum for the National Agriculture Quarantine and Inspection Authority and others to raise any concerns.

10.3 Weed, plant pathogen and pest management

Weed monitoring continued this quarter. Colonization by the priority weeds, including Bitter Vine *Mikania micrantha*, Big Lip Rope *Merremia peltata* and Bamboo Piper *Piper aduncum*, was noted along the recently completed Kikori River Bridge Bypass Road even though the bridge had not yet opened. The infestation presents the risk of spread to other worksites (for example, Kaiam Camp 2 and the ROW in the vicinity of Kilometre Point 266) from these disturbed roadside areas. The construction contractor who worked at the bridge site will treat and monitor the weeds and other contractors will continue monitoring for weeds in their areas. The occurrence of weeds was also noted at the newly built Kaiam Bridge, which will similarly be treated. Big Lip Rope *Merremia peltata* and Ludwigia *Ludwigia hyssopifolia* were noted at a number of locations along the ROW, including at ephemeral stream banks and on the Kopi Access Road, and these will be controlled. No outbreaks of priority weeds were sited along the section of the ROW from Kilometre Point 266 to Kilometre Point 278 where weed control has been underway over the last four months. The Onshore Pipeline contractor has identified weed management areas where control of weeds is a particular priority.

At sites the Project is reusing, such as abandoned quarries, the previously disturbed areas are demarcated prior to re-opening so the extent of any pre-existing weeds can be defined and monitored. Such sites include Borrow Pit 276, the access road between Kilometre Point 271 and Kilometre Point 275, and the pipe laydown areas at Kilometre Points 277 and 278.

The Onshore Pipeline contractor recruited additional staff to manage weed control in their work areas. Herbicide is being used to control weeds within and along the perimeter security fence of the LNG plant site and within the Pioneer Camp, and at various locations at the Komo Airfield worksites. The Komo Airfield contractor undertook herbicide preparation, use and disposal training. At the Port Moresby Construction Training Facility, weeds were cleared by hand and motorized grass cutters, and bi-monthly fumigation was conducted for pest control.

Measures to control weeds, plant pathogens and pests at Hides Ridge continue. This area is considered to be a sensitive area from a plant pathogen and weeds perspective. The Upstream Infrastructure contractor developed a staff identification card to control personnel access to Hides Ridge. Workers must complete an environmental induction specific to Hides Ridge before they are issued with an identification card allowing access. The induction was initially given to 44 Papua New Guinean nationals and 101 non-national workers covering the following topics:

- Why Hides Ridge is so important from an environmental perspective.
- Weed control.
- Dieback control.
- Limiting impacts from sidecasting.
- Induced access and associated impacts.

A temporary washdown facility is operating, along with associated washdown certificates. The permanent facility will be located on the Hides Spineline Road, near the entrance to the Hides Quarry 4, to allow gated controlled access for washing of vehicles moving into the 'clean area' on the Hides Spineline Road. Fabrication for the washdown facility, to be operated by the Onshore Pipeline contractor north of the Mubi River, began this quarter. Meanwhile, pre-start inductions emphasize the need for drivers to continuously wash their vehicles, especially tires.

A member of the Upstream Infrastructure contractor was trained in soil sampling and analysis for the fungal pathogen Cinnamon fungus *Phytophthora cinnamomi*, which results in canopy defoliation and death in trees. An existing potential dieback area was identified just outside the HGCP site along the southern perimeter fence. The Project will monitor this location. During the quarter, a temporary in-house laboratory was set up at the Moro B Camp to analyze samples for signs of the fungus while the permanent laboratory is being set up.

Plate 10.3 – Collection of soil samples for Cinnamon fungus *Phytophthora cinnamomi* analysis

Plate 10.4 – Analysis of samples for Cinnamon fungus *Phytophthora cinnamomi*

Weed management areas

The Onshore Pipeline contractor has identified the following weed management objectives for the Mubi to Omati area, covering all works from the Mubi River at Kilometre Point 173 to Kilometre Point 292:

- Controlling and preventing the spread of the highest priority weed species, Bitter Vine *Mikania micrantha*, Pond Apple *Annona glabra* and Bamboo Piper *Piper aduncum*, from existing recorded and/or documented sites and into adjacent weed management areas.
- Monitoring and controlling populations of highest priority weed species at worksites and Project areas within the weed management areas, ensuring construction activities do not increase in their populations.

Actions taken during the quarter to meet these objectives covered:

- Routine daily monitoring inspections of sensitive/key locations to ensure no weeds had settled. Sensitive/key locations include access roads and their junctions with public roads, ROW crossings, pipe lay down areas, designated parking areas, campsites, banks of rivers and large stream crossings.
- Controlling measures:
  - Delineation of worksites.
  - Sensitivity awareness training for Project workers.
  - Ensuring Project personnel are aware of the importance of adhering to designated access and worksites through formal and informal training sessions.
  - Induction and training programs about the presence of priority weeds and the management measures needed to avoid the spread of these species beyond the area of infestation. Using signage at weed control sites to raise awareness of the weed control and management initiatives.
  - Daily environmental team monitoring and inspections for compliance and enforcement of requirements and regulations.
  - Applying an integrated pest management approach, where chemical (herbicides) and physical/manual strategies (hand pulling, grubbing and slashing) control existing and emerging priority weed populations.

10.4 Induced access

The Project continues to consider induced access in its activities, aiming to control access to new Project roads and reduce the occurrence of potentially damaging non-Project activities. Wherever possible, the Project tries to use existing roads and no new access roads outside of worksite boundaries were opened in the quarter.

The requirements for access to the onshore pipeline ROW are evaluated on an ongoing basis. Work is underway to standardize how proposed access roads and mitigation measures are considered in pre-construction surveys.

For existing access roads, security checkpoints are being maintained at main junctions linking onshore pipeline access roads to existing community roads. Monitoring of Project roads has shown that they are used exclusively by Project-related traffic. Control of access to the Hides Ridge, by the Upstream Infrastructure contractor, through worker inductions and the use of identification cards is described in *Section 10.3 Weed, plant pathogen and pest management*. The LNG Plant and Marine Facilities contractor successfully controlled use of the quarry access road, which is supplying material for construction.

The Project continues discussions on the longer-term strategy for controlling access post-construction with a view to developing an operations phase access management plan.

10.5 Reinstatement

All contractors manage topsoil to maximize the potential for successful reinstatement.

The Upstream Infrastructure contractor reinstated a number of locations in the north of the Project area where they have completed works. Sites cover the Gobe to Mubi River Road, Kikori River Bridge and Laydown, Kantobo to Mubi River Road, including Kwil Creek Bridge and Kilometre Point 67, and Kantobo Camp. Reinstatement of laydown and hard standing areas involved ripping the limestone surface and then placing topsoil followed by ground cover such as fallen trees, branches and sticks to help stabilize the surface. In cases where there was no topsoil, the limestone layer was removed and the resulting surface ripped to aerate it and then the surface stabilized as outlined. Banks at watercourse crossings were restored to the original contours.

All sites are monitored for regeneration. Along the Gobi to Mubi River Road pockets of bare subsurface were noted and topsoil was laid on these areas. At some locations vehicle tracks were observed on areas spread with topsoil, which could inhibit revegetation and provide drainage lines for water leading to soil erosion. Such areas were barricaded and workers reminded of the need to keep topsoil areas undisturbed.

10.6 Biodiversity Strategy

Development of the Project's Biodiversity Strategy is progressing well, with meetings held with key stakeholders including the Papua New Guinean Department of Environment and Conservation, national non-government organizations such as the Environmental Law Center, Ecoforestry Forum, New Guinea Binatang Research Center and the Papua New Guinean arm of the international non-government organization, The Nature Conservancy. Preliminary discussions were also held with the World Wide Fund for Nature (WWF) Western Melanesia Programme and the Project anticipates further engagement with the WWF. Dialogue was constructive and the Project received positive feedback on the Biodiversity Strategy and valuable information about offsets and conservation in Papua New Guinea.

In recognition that biodiversity offsets will likely involve conservation programs implemented by landholding communities, a series of internal meetings were held during the quarter to identify synergies, opportunities, and constraints between the Project's activities in the areas of community investment and biodiversity. This internal engagement will accelerate during the remainder of 2011 to enable a common approach as the Project works to develop the Biodiversity Offset Delivery Plan.

During this quarter, the Project retained Conservation International as an advisor during the development of the Biodiversity Offset Delivery Plan. Conservation International's scope of work includes: a review of the Project's Biodiversity Strategy and related documents; development of a technical rationale for offset selection; scoping of potential offset areas, activities and partners; and an assessment of offset feasibility. Conservation International's recommendations will serve as the basis for the Biodiversity Offset Delivery Plan.

Good progress has been made on the long-term Biodiversity Monitoring Program outlined in the Biodiversity Strategy. Programmed Monitoring Activity 1 involves remote sensing of indirect impacts. A thorough analysis, completed in 2010, demonstrated that the secondary disturbances Programmed Monitoring Activity 1 is designed to capture, are readily quantifiable using a range of remote sensing analytical techniques. The proposed methodology has been proven and the Project is acquiring baseline imagery over the Project Impact Area. Fieldwork to verify the baseline imagery will be undertaken during the third quarter 2011. Programmed Monitoring Activity 3 involved regeneration surveys and fieldwork conducted during this quarter to validate the benchmarking methodology. Sampling plot design and benchmarking were carried out for mature forest sites and benchmark sites for regenerating forest will be identified during the next quarter.

11 Resource Management

The Project takes care to sustainably manage Papua New Guinea's natural resources such as water, timber, quarry materials and soils in recognition of their ongoing social, economic and cultural value.

11.1 Water management

11.1.1 Usage

In the second quarter, the Project used approximately 110,814 kilolitres of water for drinking, domestic camp needs, dust suppression and construction-related activities. This compares with just over 59,000 kilolitres for the first quarter 2011 and reflects the increase in construction activity, in particular at the LNG plant site where water use increased three-fold. Water extraction volumes were within the annual limits set by the Project Environment Permit.

A new groundwater bore was commissioned at Wellpad A during the quarter to supplement existing surface water, groundwater, purchased water and desalinated water sources. This bore will reduce the volume of water extracted from the spring at Nogoli Quarry. A new bore was also completed at the Komo Main Camp.

The Onshore Pipeline contractor began extracting water at Kaiam on the Kikori River for treatment and use as potable water for Kaiam Camp 2. The water at Kaiam Camp 2 is stored in raw water bladders, pending commissioning of a potable water plant.

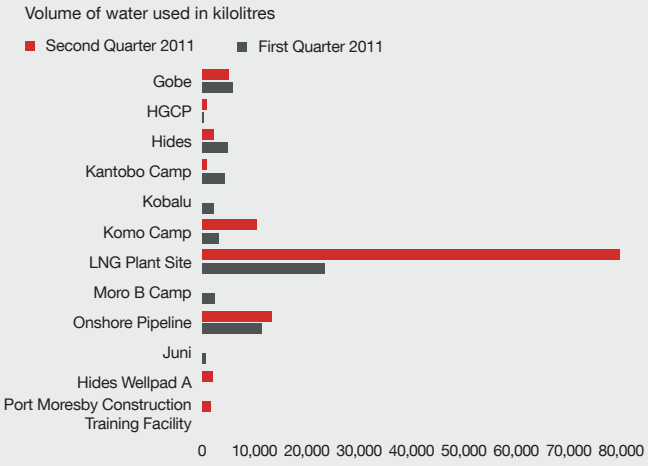
Plate 11.1 – Installation of water storage bladders at Kaiam Camp 2

A new desalination plant now augments the existing LNG plant site water supplies. The desalination plant processes seawater to generate freshwater and brine, with design changes eliminating the need to discharge concentrated brine directly into Caution Bay. Instead, a single, treated wastewater discharge is filtered through a sedimentation pond before going out to sea.

This discharge consists of brine, stormwater runoff and treated wastewater, therefore minimizing environmental impact. Discharges from the treated streams are designed to meet the Project's seawater discharge criteria.

The volume of water use by location is shown in Figure 11.1.

Figure 11.1 – Water use in the first and second quarters 2011



NOTE: Volumes under 50 kiloliters are not presented in this figure. Water usage adjustments may be reported by contractors after the Report has been released, and as such volumes may be refined between one report and the next.

11.1.2 Quality

Water quality monitoring is undertaken to detect any impacts on water bodies surrounding Project activities. Monitoring includes sampling of surface and groundwater to record baseline data, ongoing background monitoring up and downstream of Project construction areas, testing of potable water and monitoring of wastewater treatment plant outflows. Results of wastewater treatment monitoring are detailed in *Section 9.3.1 Wastewater*.

The Upstream Infrastructure contractor undertook on-site upstream and downstream water testing during this quarter. All field measurements were within Project criteria limits and samples were sent to laboratories for confirmation. Additional water sampling was undertaken near the HGCP site in response to a community concern regarding potential water contamination. The area was inspected and the catchment assessed for potential contaminates but there was no visual evidence of contamination. Samples of the area were taken for laboratory analysis. Results were pending at the time of writing.

The Upstream Infrastructure contractor also continues to monitor a pond located near Wellpad A as higher levels of Total Coliform Bacteria and the bacteria *Escherichia coli* have been recorded. Monitoring shows no correlation between Project water quality and the pond contamination.

During this quarter, the Onshore Pipeline contractor completed baseline water quality sampling along the pipeline ROW up to the Kikori River. Additional sampling was undertaken of two streams along Shoo-fly Road, to address landowner concerns of the potential for pollution from explosives. All samples were within the Project's water quality criteria.

The LNG Plant and Marine Facilities contractor undertook monthly surface water quality monitoring this quarter at Roku River, located to the north east of the site. The monitoring values were well within the Project discharge criteria for pH, change in turbidity and temperature.

Stormwater monitoring of sheet runoff was also undertaken at the LNG plant site following heavy rainfall. All points were within the stipulated limits with the exception of one sample with slightly elevated turbidity thought to be due to disturbed soil from recent drainage upgrade works.

The LNG Plant and Marine Facilities contractor also undertook baseline sampling from six newly installed groundwater monitoring wells located around the construction waste management area. These samples will provide baseline data and laboratory results are expected in the third quarter 2011.

11.2 Raw materials

The Project mainly sources quarry materials for construction activity from existing third party (operating or previously abandoned) quarries. At the end of this quarter, 11 quarries were in use as outlined in Table 11.1.

Table 11.1 – Quarries in use and extracted volumes during the second quarter 2011

Area/quarry name	Volumes extracted (m^3)
Gobe (1 quarry)	336
Hides (4 quarries)	6,457,892
Komo (1 quarry)	17,203
Onshore Pipeline (4 quarries)	132,873
Offshore Pipeline (1 quarry)	1,200

The Upstream Infrastructure contractor continues to require only small volumes of timber, principally for camp maintenance or renovation. At the end of the quarter, the total volume purchased was 107 cubic metres.

Most of the timber required by the Onshore Pipeline contractor is sourced from trees being cleared from worksites. Small amounts of additional timber are sourced from areas that are cleared to establish gardens and market places. By the end of June, 53 cubic metres of timber were purchased from local Lanco suppliers.

Topsoil resources are actively managed and preserved for future reinstatement. Refer to *Section 10.5 Reinstatement* for further details.

11.3 Erosion and sediment control

Erosion and sediment control devices were installed in areas of new work during the quarter. Meanwhile, the inspection and maintenance of existing devices continues to ensure they function effectively, particularly following heavy rains.

In the Upstream area, jute matting was laid to stabilize slopes at the HGCP and along the Hides Quarry Road worksites, especially where drainage lines led into surface waters.

As the construction activities of the Upstream Infrastructure contractor are completed, temporary erosion and sediment controls are removed. During the quarter, inspections were undertaken on the Mubi to Kantobo Road to verify site stabilization so that erosion and sediment control measures could be removed. Temporary controls were progressively removed and, where required, replaced with permanent measures such as 'rock checks', which are rock aggregates placed for scour protection and silt filtering.

Plate 11.2 – LNG plant site sedimentation pond

Heavy rainfall during the quarter caused some streams to flood, requiring maintenance of erosion and sediment control devices, and in some cases, modification. Monitoring of devices has also allowed contractors to respond when there has been damage or unauthorized removal.

Additionally, checks were made to ensure that devices removed for construction activities, such as blasting, were reinstalled correctly.

11.4 Acid sulfate soils

Acid sulfate soils are formed when seawater or sulfate-rich water mixes with land sediments containing iron oxides and organic matter in a waterlogged situation, causing an absence of oxygen. When exposed to air this soil becomes acidic and can adversely impact ecological communities, agricultural practices and engineering structures.

The Project has specific management plans detailing sampling programs, monitoring and management of potential acid sulfate soils.

The Onshore Pipeline contractor undertook a series of trial bore samples, open ditch analysis and water sampling for potential acid sulfate soils during this quarter. While samples showed a decrease in water pH levels, no acid sulfate soils were detected.

At the LNG tank area, deep excavations exposed potential acid sulfate soils. During these works, acid levels were monitored with no significant findings recorded.

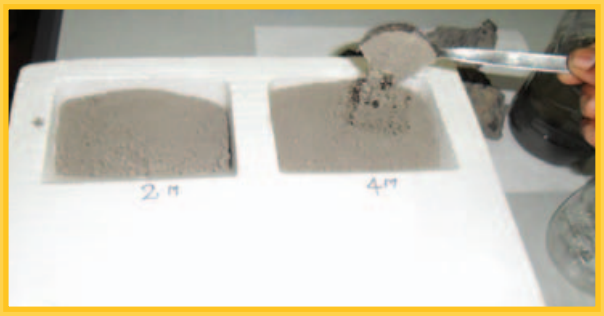
Testing for acid sulfate soils

Step 1 – Excavate a trial pit

Step 2 – Collect samples for testing

Step 3 – Air-dry the soil samples

Step 4 – Crush the air dried soil samples to a powder and dilute



Step 5 – Perform the acidity analysis

12 Cultural Heritage

The Project operating environment contains a wealth of cultural heritage, which the Project is committed to protecting and preserving. The Project's diverse activities across a wide geographic area are all implemented with reference to an established Cultural Heritage Management Plan, which was developed in accordance with the relevant Government of Papua New Guinea regulations, including the *National Cultural Property (Preservation) Act 1965* and the *National Museum and Art Gallery Act 1992*.

Plate 12.1 – Review of archaeological find

The Project's contractors and consultants are bound by the Cultural Heritage Management Plan for all activities which potentially impact local culture by disturbing cultural heritage resources. These resources include archaeological artifacts such as stone tools, implements or pots, bones, construction material or other items. Other cultural heritage resources include sites or areas with cultural significance such as oral tradition sites, burial grounds, historical warfare grounds, women's or men's houses, for example. The procedures for pre-construction surveys and the protocol for managing chance finds of heritage value were closely followed this quarter.

Training on the Cultural Heritage Management Plan, and on the Chance Finds Protocol in particular, is continuing and included awareness raising activities for the onshore pipeline ROW blasting crew members during this quarter. Cultural heritage staffing levels also increased, with the Komo Airfield contractor employing a new national archeologist at the site.

12.1 Pre-construction surveys

Cultural heritage sites continue to be identified during pre-construction surveys. For those sites within the boundaries of work areas, agreements are reached with landowners for disturbance (subject to compensation) and following adequate cultural heritage recording. For example, compensation was paid for the disturbance of eight oral tradition sites on the onshore pipeline ROW.

On the Heavy Haul Road northern section, two cultural heritage sites – a men's house site (*'balamanda'*) and a guardhouse site (*'pambeanda'*) – were identified within the proposed worksite during the pre-construction survey and interviews. In accordance with the Cultural Heritage Management Plan, both are classified as settlement sites of low significance with no mitigation measures required. One burial site in the proposed work area, also identified during earlier surveys, will be relocated prior to site activities commencing.

In the same area, another two culturally significant sites were identified outside the survey area, but in a location that will be disturbed by Heavy Haul Road construction activities. Both these sites were sacred spirit lakes, one being located within the Heavy Haul Road itself and the other in a proposed spoil storage area. Discussion with landowners indicated that a spirit moving ceremony is required and this will be undertaken by locals prior to works commencing at the site.

During the quarter, other sites not directly on Project work areas were demarcated for protection. No further action was taken for those sites at low risk of disturbance by Project activities or personnel, while others at a higher risk were actively monitored to minimize the risk of disturbance. Five sites identified in previous quarters were monitored. These are listed in Table 12.1.

Table 12.1 – Cultural heritage sites monitored during the second quarter 2011

Location	Site description
Kilometre Point 203	A *'korpu'* rock shelter.
Kilometre Point 223	*'Kupute'* site, a former burial site located just off the ROW.
Kilometre Point 242	An oral tradition site called *'yowame'*.
Kilometre Point 281	An oral tradition site that is the home/sleeping place of the snake spirit *'Gouobo'*.
Site TA010	*'Tumbuna'* oral tradition site, located outside the ROW area.

Plate 12.2 – Signage posted to indicate the *'tumbuna'* cultural heritage site outside the onshore pipeline ROW

12.2 Salvage excavations

During this quarter, salvage works commenced at two sites affected by the onshore pipeline ROW. One is an ancient settlement near Moro that pre-dates local knowledge and the second site, near Tamadagi Bridge, is a stone head located on a watercourse bank.

12.3 Incidents of disturbance to known cultural heritage sites

No incidents of disturbance to known cultural heritage sites occurred during the second quarter.

12.4 Chance finds

As part of the Project's Chance Finds Protocol, trained local archaeological spotters remain at various locations, monitoring all earthworks and land disturbance activities and identifying artifacts, bone remains and fossilized materials that may have been left behind by their ancestors. For example, during this quarter, clearing and grading for the onshore pipeline ROW and blasting activities for the Heavy Haul Road and Komo Airfield sites required continuous monitoring and revealed several chance finds. Chance finds recorded in this quarter are shown in Table 12.2.

Table 12.2 – Chance finds during the second quarter 2011

Location	Site description
HGCP	Polished stone pestle (1)
	Polished stone blade (1)
	Tang blade (1)
Komo Airfield	Stone pestle (1)
	Waisted blades (10)
	Stone axes (3)
	Stone axe-adze (1)
	Sacred stone (1)
	Burial site (1)
Onshore pipeline ROW	Oral tradition site named the *'Kovalan'* site at Kilometre Point 236

Waisted blades were the most common chance finds this quarter. This stone implement, referred to as *'are'* in the Huli language, was used primarily for splitting *Pandanus* nuts for cooking and eating, for sharpening small sticks and for clearing bush. While such blades have been in use since early times, the Project's finds are considered to be recent (between the 1930s and 1940s) at the cusp of transition from stone to steel axes and knives.

Two other interesting chance finds this quarter were an axe-adze and a sacred stone, referred to in Huli language as *'Liru-Kui'*. Axe-adzes come in different forms. Small adzes were usually used during dancing festivals. Dancers would put a handle on the adze and use it as a decorative feature. Bigger adzes were used for chopping trees and sometimes, as weapons of war.

Plate 12.3 – A weathered waisted blade

Sacred stones were believed to represent and embody an invisible spirit and were kept in designated sacred areas. They were mainly used for ritual supplications to spirits and frequently decorated with ochre and oil. It is considered that use of such sacred stones was discontinued approximately three decades ago.

Plate 12.4 – An axe-adze found at Komo Airfield

13 Stakeholder Engagement

The Project and its contractors aim to develop lasting positive relationships with Papua New Guinean communities based on trust, mutual understanding and collaboration.

13.1 Government

The Project communicates with all levels of Government to keep Ministers and Government agencies well informed about the Project's status.

13.1.1 People processes

Following a successful Visa Hub Processing Centre trial completed in Manila in May, Papua New Guinea's Immigration and Citizenship Services has announced that its Visa Hub Processing System is fully operational. The System will enable faster work visa approvals using the Papua New Guinea's Authority to Travel process. Immigration and Citizenship Services has opened Visa Hubs in Brisbane, Sydney, Kuala Lumpur and Beijing. To date, more than 500 Authority to Travel documents have been approved through visa hubs and contractor feedback indicates that the system is working effectively.

To simplify the registration process for Project technicians, the Institute of Engineers Papua New Guinea has provided Project contractors with a list of engineering occupations that require registration with them prior to submitting a work permit application.

In May, a refresher workshop was held with Government agencies, Project contractors and subcontractors regarding new work permit and visa processes.

Papua New Guinea's National Training Council has also agreed to assist contractors in meeting training requirements and is supporting the Project with regard to labor conditions for national and expatriate workers.

13.1.2 Materials and tax

Early this quarter, the Department of Treasury confirmed its support of the Papua New Guinean Customs Service and the Internal Revenue Commission position to not pursue legislative amendments that would affect the Goods and Services Tax exemption of the Gas Agreement for Project contractors and subcontractors.

To mitigate delays in Goods and Services Tax refunds and to meet the Government-committed 30-day refund target, the Project is conducting a series of joint workshops and training sessions with the Internal Revenue Commission.

13.1.3 Infrastructure and Government support

This quarter, Project and Papua New Guinean Department of Works representatives conducted a joint survey of the Highlands Highway between Mt. Hagen and Hides to identify critical areas that need immediate rehabilitation by the Department of Works. The scope for works includes regular clearing and maintenance of roads, the reinforcement of bridges and emergency road repairs.

Weekly meetings continue with Project representatives, Project contractors, Customs, Immigration and Quarantine Department representatives, National Airports Corporation representatives and airline operators to effectively manage the movement of labor in the lead-up to the Project's peak construction phase.

13.1.4 Advocacy

During this quarter, Project management, Government Ministers and senior Agency staff met in a Project/ Government Planning Workshop held at the LNG plant site. This was an opportunity for Government and Project leaders to meet and address issues that cross their respective areas of responsibility.

Plate 13.1 a-b – New bridge on the Nembi River in the Southern Highlands Province

In addition, more than 500 Government representatives attended six Provincial and nine National advocacy workshops and meetings in the second quarter. The workshops covered Project progress, with focus on national content, land and community affairs and business development.

Engagement continued with the Hela Province Transitional Authority on progress toward declaration of Provincial status for the Papua New Guinea 2012 National Election. The Hela Province will contain the HGCP, Hides wellpads and a portion of the pipeline.

13.1.5 Benefits assurance delivery

The Government Interface team is working with Papua New Guinean Government agencies, including the Department of Petroleum and Energy and Department of Commerce and Industry, to promote a transparent approach to delivering benefits, managing stakeholder expectations and mitigating risks to the Project's schedule.

During this quarter, the Government temporarily deployed field officers to engage with local landowners.

Business Development Grants (seed capital) commitments for two Project License Areas were under negotiation in the quarter, while the Memorandum of Agreement commitment of 100 million Kina (US$43,500,000) was transferred to the Mineral Resources Development Company to be administered by Oil Search for Lanco projects.

The Government is formulating a policy and legal framework to implement the Infrastructure Development Grants, an indirect benefit under the Benefits Sharing Agreement intended for infrastructure projects in the Project Impact Area.

13.2 Communities

The Project and its contractors are increasing their level of engagement with communities in an effort to encourage two-way communication. Stakeholder and community engagement activities are led through the Project's Socioeconomic team.

13.2.1 Engagement activities

The Socioeconomic team's approach to stakeholder and community engagement has shifted from raising awareness about Project activities to a more consultative approach with communities. This approach encourages stakeholders to ask questions and raise any concerns directly with the Project's field team. It is proving beneficial in addressing misconceptions about the Project and increasing the communities' understanding of Project activities and potential impacts including benefits such as employment and business development opportunities. This form of dialogue continues across the Project Impact Area almost every day. Communities in remote villages continue expressing appreciation to Project teams who visit and work with them toward community development objectives.

This quarter, community drama was also used to share information and increase awareness about Project activities. Drama is proving to be a successful consultation technique because it draws upon local knowledge, culture and tradition. In particular, community drama is an entertaining way of providing information to manage stakeholder expectations.

Plate 13.2 – Community drama raising awareness of Project activities

Table 13.1 provides a summary of engagement activities conducted during the second quarter.

Table 13.1 – Stakeholder engagement activities

Area	Planned engagements	Number of participants
Hides	11	365
Komo	5	119
Moro	13	889
Kopi	2	75
Gobe	4	256
LNG plant site	8	517
Total	**43**	**2,221**

Hides and Komo

As construction activities ramp up in the Hides and Komo areas, the Socioeconomic team is actively responding to community concerns in these areas. Concerns are generally raised regarding construction activities, the environment and community safety. To address these issues, the Socioeconomic team conducted information sessions about construction hazards, increased traffic movements and community safety.

This included role-play, puzzles and games with safety messages at local schools, and numerous informal engagements, which were conducted by walking along public and Project roads and communicating with road users.

Speculative house and garden developments in the Hides and Komo area are a significant hindrance to land access and construction activities, requiring sensitive handling.

The Socioeconomic team conducted a series of consultation meetings with local communities to assist in their understanding of the *Oil and Gas Act 1998* and the Project's response to speculative housing and gardens. Cut-off dates for the census and survey of structures and gardens were communicated at various Project sites. Reminders of land access procedures and appropriate eligibility for resettlement and compensation were also provided.

A key achievement this quarter was establishing a new Community Leadership Committee in the Hides area. Comprising respected clan leaders from the Project License Area where the gas resource is located, this Committee provides a consultative mechanism for the Project to liaise with communities, build greater understanding and disseminate important information to help build and maintain harmonious relationships. The Socioeconomic team aims to make this group fully representative of all clans and sub-clans within the Project area. Another committee will also be established in the HGCP area with a particular focus on the Spineline Access Road and the Heavy Haul Road.

Pipeline (North and South)

The Socioeconomic team has established a presence at Gobe, complementing the existing teams at Kopi and Moro to enhance community engagement along the pipeline ROW. In the second quarter, engagement activities were conducted along the pipeline route from Goare at the southern tip of the Delta to Homa towards the Hides area, covering more than 230 kilometres of the eventual 292-kilometre ROW.

In addition to providing communities with general Project information and construction updates, the engagements covered traffic and construction safety, discussion and information sharing intended to prevent speculative housing and gardens along the pipeline ROW, information about construction equipment that will be used to construct the pipeline within the Omati River, as well as training and employment opportunities.

The Socioeconomic team also accompanied Kaiam landowners to help identify land boundaries within the pipeline ROW and provided information to help the landowners better understand compensation decisions.

Seven drama performances of the play *'Laif Bilong Ba'amo, ges paiplain'* (The Life of Ba'amo, the gas pipeline) in the Kopi/Kikori area were conducted this quarter to highlight community safety and clarify pipeline ROW restrictions, as well as provide general Project information. The play was developed using culturally appropriate communication tools, providing a form of interaction that resonates with the timeless oral traditions of these communities. To give more meaning and drive greater community involvement, local community members were recruited to give performances in public areas. The plays were well received by the community members.

LNG plant site

This quarter, engagements took place with the four LNG plant site villages (Papa, Lea Lea, Porebada and Boera), and an outlying, but Project-related community at Kido. The engagements focused on the potential social impacts of construction and pipeline installation activities on these communities.

As part of this work, the Project participated in an Oxfam commissioned 'Listening Project', which aims to develop an understanding of the experiences and views of Project impacts on the four villages surrounding the LNG plant site. The Listening Project involved a team of partner organizations, including the Project's Socioeconomic team and Oxfam representatives, meeting with villagers from Papa, Lea Lea, Porebada and Boera over three days. With a particular focus on women and youth, the Listening Project included community visits, interviews with district level officials, as well as interviews with Project officials. Oxfam is expected to release a report about the results of this project later in 2011.

In addition to the Oxfam project, to date the Project has held five meetings with the Hiri Local Level Government Councillors of each of the five villages; conducted nine school engagements, completed eight fish catch surveys (see *Section 5.1.3 Fisheries surveys*) and held two consultations with women's groups across the LNG plant site villages.

Plate 13.3 – Lea Lea Village, one of the LNG plant site villages

Plate 13.4 – Distribution of the PNG LNG Plant Site Newsletter

Notice boards and newsletters are also being used to provide these communities with information and updates about construction activities.

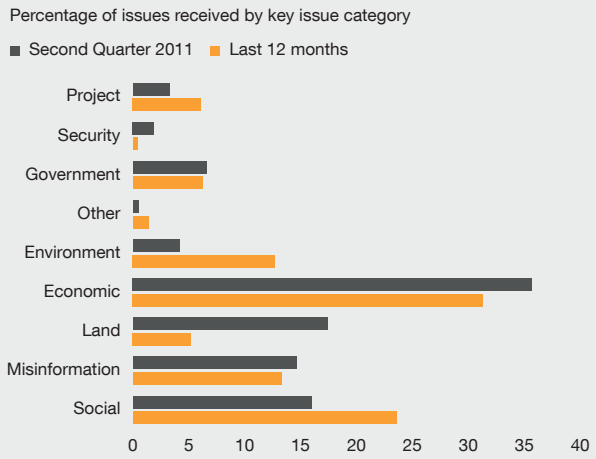
For example, the PNG LNG Plant Site Newsletter, which was launched in February 2011, has more than 2,500 copies being issued every month. It provides timely information on construction updates such as new work about to start, community development initiatives, concerns raised by communities and also provides fun learning activities for children.

Issues identification

During this quarter, a review of key issue categories was undertaken within the Project's Information Management System to streamline the process for categorizing issues and to align issues with categories used for other types of concerns raised by Project stakeholders, such as grievances (refer to Figure 5.1).

Using the revised categorizations, Figure 13.1 shows the most recent issues raised by Project stakeholders.

Figure 13.1 – Comparison of issues received by key issue



Issues raised during community engagements continue to fall into three main categories: economic, social and land. Economic issues largely relate to employment or business opportunities, while social issues cover concerns such as community safety and labor and worker conditions of community members employed by Lanco companies. Many land concerns relate to resettlement and are generally quickly addressed by Socioeconomic teams in the field.

To drive better understanding of the Project and minimize the level of concern in communities, the Socioeconomic team is providing information to communities that have not been previously engaged or have requested more details about the Project. Many of these engagements are through focus groups with community and clan leaders. Topics discussed include local business development opportunities, training and recruitment, construction updates and land access and compensation. These focus groups have proven valuable, helping to clarify misconceptions about land clearing and compensation.

They have also helped to reduce frustration among community members during the Project's surveying and land clearing activities.

The Project continues monitoring community concerns every week and field teams work closely with local communities to quickly address high priority concerns.

13.2.2 Media

The Project's fifth PNG LNG Quarterly Environmental and Social Report covering activity during January to March 2011 was published on the Project website, www.pnglng.com, as well as in hard copy for distribution to a wide network of stakeholders. Additionally, the Executive Summary was distributed in Tok Pisin and English through a suite of national papers including the *Post Courier*, *The National*, *Pacific Business Review*, and *The Sunday Chronicle*.

14 Acronyms

ESMP	Environmental and Social Management Plan
HGCP	Hides Gas Conditioning Plant
IESC	Lender Group's Independent Environmental and Social Consultants
IMR	Papua New Guinea Institute of Medical Research
Lanco(s)	Landowner Company(Companies)
LNG	Liquefied Natural Gas
PNG	Papua New Guinea
ROW	Right of Way
SSHE	Safety, Security, Health and Environment
TAFE	Technical and Further Education
WWF	World Wide Fund for Nature

APPENDIX 1 – Project Contractors and Work Scopes

Table A1.1 – Summary of contractors and work scopes

Contract	Description of work scope
Upstream Infrastructure Clough Curtain Brothers Joint Venture	• Infrastructure upgrades in support of main construction activities in the Gulf Province and Southern Highlands Province. • Camps for Esso Highlands Limited and to support construction activities. • Construction of a landfill site at Hides. • Bulk earthworks for the HGCP and wellpads.
LNG Plant Early Works Curtain Brothers Papua New Guinea Limited	• Upgrade of existing road from Motukea Island to LNG plant site. • New Bypass Road (re-routing of existing public road, which transects with the LNG plant site).
Telecommunications TransTel Engineering	• Installation of a telecommunications system to support construction and operations.
Offshore Pipeline Saipem	• Construction and installation of the offshore pipeline from Omati River landfall to LNG plant landfall site. • Pipeline tie-in at Omati River landfall and shore crossing at the LNG plant landfall site.
LNG Plant and Marine Facilities Chiyoda and JGC Corporation	• LNG facility engineering and construction, including LNG process trains, condensate storage tanks, LNG storage tanks, utilities, permanent accommodations, heliport, and telecommunications. • Marine facilities including the jetty and LNG/condensate export berths.
Hides Gas Conditioning Plant and Hides Wellpads CBI Clough Joint Venture	• Engineering and construction of the HGCP processing facilities and associated wellpads, including permanent accommodations and maintenance facilities.
Onshore Pipeline SpieCapag	• Installation of the onshore gas and condensate pipelines, and associated valve and metering stations. • Installation of the pipelines for the Hides gathering system including flowlines, spineline, utility lines, and associated power and telecommunications cables.
Komo Airfield McConnell Dowell and Consolidated Contractor Group Offshore	• Airfield and supporting infrastructure.
Associated Gas Development	• Upgrades and modifications to Kutubu Central Processing Facility and Gobe Production Facility including gas dehydration, metering, and condensate handling.
Nabors Drilling International Limited	• Drill and complete 12 new wells and execute two workovers.
Permanent Office and Housing Company (to be determined)	• Construction of office accommodation and housing to support the operation of the facilities.

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