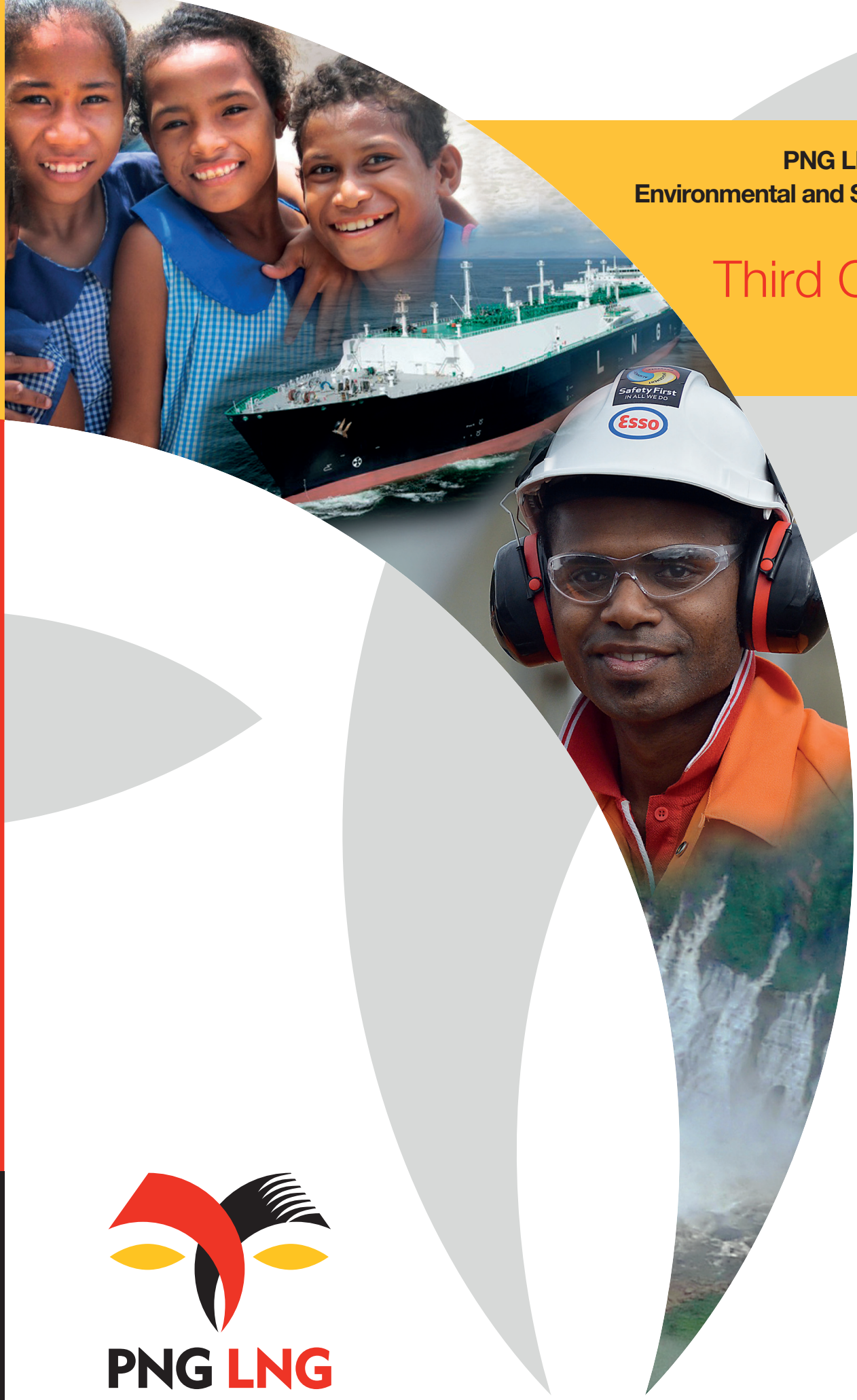

PNG LNG Quarterly Environmental and Social Report

Third Quarter 2011

PNG LNG

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

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For the purposes of this Report, the currency conversion rate used, between Papua New Guinea Kina (Kina) and United States Dollars (US$) is 0.4465 [1 Kina = US$0.4465]. This rate is as published by the Bank of Papua New Guinea at September 30, 2011.

PNG LNG

About This Report

The Papua New Guinea Liquefied Natural Gas Quarterly Environmental and Social Report – Third 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

Empowering women's participation in Papua New Guinea's economic development

"Helping Papua New Guineans to derive benefits from the development must be part of the Project's legacy."

Decie Autin, Project Executive, Esso Highlands Limited

"There are many opportunities available for [Papua New Guinean] women and girls to help each other to make a good and honest life."

Florence Bunari, Business Owner

The Papua New Guinea Liquefied Natural Gas (PNG LNG) Project (Project) is creating a legacy that will benefit communities in the years to come by making a concerted effort to provide opportunities to the women of Papua New Guinea. In addition to employing more than 900 women, who make up over eight percent of the Project's workforce, women are engaged in establishing a broad range of community development initiatives in areas such as education, community health and safety, and infrastructure. Through the Enterprise Centre, the Project is also facilitating dedicated business training and mentoring, and promoting opportunities for women's businesses to provide goods and service to the Project and its contractors.

This is the seventh 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.

Pre-construction activities

Pre-construction surveys conducted to date cover 87 percent of the 292-kilometre main pipeline route, while surveys on the 10-kilometre Gobe Spurline and the 2-kilometre Kutubu Spurline are complete. No new cultural heritage sites were identified during the third quarter.

87% of the 292-kilometre main pipeline route surveyed

"I don't just wear the uniform. I really believe. This Project is like an egg on my palm. I feel very responsible; I just want to keep working until it's done."

Christine Yango, Stakeholder Engagement Team Lead

Construction

With all major contractors now active in Papua New Guinea, construction is advancing at the Liquefied Natural Gas (LNG) plant site, along the pipeline route and in the Highlands region. Good progress is being made towards the 2014 start-up window. A major milestone achieved this quarter was the delivery of the final line pipe sections to Kopi Shore Base, with 40,000 sections of pipe for the 292-kilometre main onshore pipeline successfully transported and offloaded without a single safety incident.

Aerial view of the LNG plant site

During this quarter, commissioning testing was completed for the first of two drilling rigs. This rig has since been disassembled for transport and is being mobilized to Papua New Guinea, while the second rig is under construction in the United States.

Table 1 – Contracts and construction highlights

Contract	Contractor	Major activities during the third quarter 2011
Upstream Infrastructure (C1)	Clough Curtain Brothers Joint Venture	Earthworks on the Hides landfill cells completed, and installation of the impermeable liner nearing completion. Completion of the Hides Gas Conditioning Plant (HGCP) medical clinic.
LNG Plant Early Works (C2)	Curtain Brothers Papua New Guinea Limited	Excavations for Train 2 foundations commenced.
Offshore Pipeline (EPC2)	Saipem	Completion and delivery of all offshore line pipe from the production facility in Japan to the pipe coating facility and load out area in Malaysia. Completion of the onshore pipeline trench at Caution Bay.
LNG Plant and Marine Facilities (EPC3)	Chiyoda and JGC Corporation	First concrete foundation poured for the LNG tanks. A quarter of the concrete piles for the marine jetty completed.
Hides Gas Conditioning Plant and Hides Wellpads (EPC4)	CBI Clough Joint Venture	First HGCP foundation piles received on-site and welding activity started. Installation of a waste management area.
Onshore Pipeline (EPC5A)	SpieCapag	Final line pipe shipment for the 292-kilometre onshore pipeline received at Kopi Shore Base. More than 30 kilometres of pipeline stringing and welding achieved.
Komo Airfield (EPC5B)	McConnell Dowell and Consolidated Contractor Group Offshore	Progressed earthworks with more than 600,000 cubic metres of earth moved in August.
Associated Gas Development	Various	Commissioning gas unit arrived in Lae and construction of the unit foundations commenced at the Kutubu Central Processing Facility. Accommodation buildings in Gobe completed.
Drilling (new wells and workovers)	Nabors Drilling International Limited	The first of two drilling rigs mobilized from the United States to Papua New Guinea.

Despite heavy rainfall throughout the quarter, construction of the onshore pipeline progressed, with almost all of the onshore pipeline route surveyed and 103 kilometres prepared for pipe stringing and welding activities. Over 30 kilometres of pipeline stringing and welding was completed during the quarter.

At the LNG plant site, the contractor achieved seven million hours worked without a Lost Time Incident and concluded piling for the LNG offloading platform, while jetty piling continued. Onshore trench works in Caution Bay were also completed for the offshore pipeline. In addition, the Project has relocated the temporary stockpile area for excavated material from the offshore trench to reduce the spread of sediment and minimize the impact of material storage on reef and sea grass beds in Caution Bay.

Meanwhile, the Upstream Infrastructure contractor achieved more than eight million hours worked without a Lost Time Incident. The Upstream Infrastructure contractor also trained 164 Papua New Guinean workers, while the Komo Airfield contractor trained Timalia River Borrow Pit workers, in the Chance Finds Protocol.

Workforce development

In accordance with ExxonMobil's global workplace and labor policy, the Project is committed to providing positive, productive and supportive work environments. Key to this is developing and retaining a highly talented workforce that is representative of Papua New Guinea.

The Project's workforce continues growing in alignment with the needs of increasing construction activity. By the end of September, the Project workforce exceeded 11,000, with Papua New Guineans representing 65 percent of the Project workforce.

More than 7,200 Papua New Guinean citizens employed representing 65% of the Project workforce

The expertise of Papua New Guinean workers is being developed through dedicated facilities such as the Port Moresby Construction Training Facility. To date, the Project and its contractors have trained more than 6,000 Papua New Guinean citizens primarily for construction and support activities and some for future production roles. This equates to more than 700,000 hours of training delivered, with around 200,000 hours completed this quarter alone.

Refresher training courses are being offered to update worker skills for those who have been engaged on the Project for more than 12 months.

Safety, health and security

Partnering with the community remains the foundation of the Project's security strategy. The Project continues encouraging landowners and communities to use the well-established process in place to address and resolve any Project-related concerns.

The difficult operating environment in parts of the Project's area of operations was highlighted this quarter by an assault on an expatriate worker, which resulted in a serious injury. The Project is continuing to work with contractors on enhanced security measures at worksites.

Meanwhile, improved health program reporting and conformance is benefiting the programs implementation. With a clearer picture of health indicators, resources are being allocated to the areas of greatest need. For example, key areas addressed in the quarter were clinical services, malaria and tuberculosis diagnosis procedures, and camp accommodation services.

A Project-funded Safety Champions initiative commenced in September. This initiative provides selected Papua New Guinean workers with additional training and experience so they may positively influence safety in the workplace. Almost 200 candidates were nominated based on their ability to positively influence peers and model good behavior from within the workforce. Initiatives such as this reinforce core safety processes and ensure safety is a central component of the workplace culture.

Toolbox talks communicate job hazards and required safe practices

Social development

Judging of the *Kastom Stori/Sene Gori* competition, launched in the first quarter 2011, was a particular highlight of this quarter. The competition invited students from schools across the Project area to submit stories and artwork that reflect Papua New Guinea's cultural heritage. A total of 3,700 stories and pictures were submitted.

***Kastom Stori* 'Top 5' entrants from Grade 3 at Lea Lea Primary School**

A *Kastom Stori* artwork entry

Meanwhile, the third series of Toea books, called Toea's Hiri Adventure, was completed, along with the second Toea Project Interface children's book focused on health and hygiene. The health and hygiene activity book contains songs, educational games, coloring-in and key health messages for children.

Second book in the Toea Project Interface series – Toea's Health and Hygiene Megapad

The Project continues actively targeting economic opportunities for women. During this quarter, the Project was involved in the first Country Gender Assessment workshop to develop an informed understanding of gender-related barriers to poverty reduction and sustainable, inclusive economic growth. The Assessment is a collaboration of public and private partners with civil society and will ultimately support policy development by the Papua New Guinean Government for women's engagement in economic development.

In July, the Project sponsored two Papua New Guinean women leaders, Sarah Kuriva Kaipu, of Gulf Christian Services in Kikori and Turiza Tandago of Papua New Guinea's Angore Women and Youth Development Foundation, to attend a month long Global Women in Management Training Program in Washington, DC. The Project also funded an additional two Papua New Guinean biomedical technicians, from Kundiawa Hospital and Mount Hagen Hospital, to attend the six-month Medisend International Biomedical Equipment Repair Training program in Dallas, Texas.

A number of economic development initiatives created at the beginning of the year also came to fruition this quarter. For instance, through partnering with Cashew International Limited, 15,000 trees were distributed to individuals in the four LNG plant site villages (Boera, Papa, Lea Lea and Porebada). Practical training on how to plant and manage the trees was also provided. Monitoring interest in this project from local communities indicates requests are likely to be received for another 60,000 trees.

Materials also arrived in Kikori for the construction of the Delta Green Field Marketing Women's Group nursery in the Omati area. This nursery will provide local women with knowledge and practical experience in new varieties of fruit and vegetables for supply to construction camps in Kikori.

Developing Papua New Guinean businesses

Support for developing Landowner Companies (Lancos) continues, with the assistance of business development officers in the field, the Institute of Banking and Business Management Enterprise Centre and Project contractors. The Project-related spend with Lancos by the end of September exceeded 500 million Kina (US$223 million). Papua New Guinean businesses other than Lancos are also providing goods and services to the Project.

The Project's total in-country spend-to-date exceeds 3.3 billion Kina (US$1.5 billion).

28 business opportunities with Project contractors posted on the PNG Supplier Database

In the meantime, the Enterprise Centre has supported 9,900 Papua New Guinean businesses and achieved more than 2,750 days of training. This quarter, the Centre's new business mentoring program welcomed its first participants and launched a new Fundamentals of Business Management course and Director Training Level 2 course.

Environmental performance

In addition to regular Project and Lender Group's Independent Environmental and Social Consultants (IESC) inspections and verifications, contractors are conducting independent assessments of their activities. For example, the Upstream Infrastructure contractor is auditing spills and corrective action responses.

Ground Orchid *Spathoglottis parviflora*

These continuous efforts of the Project and its contractors to prevent incidents, and a particular focus on spill prevention, resulted in a decline in the number of environmental incidents Project-wide during the quarter, compared with the previous two quarters.

Advances were also made following a Project-wide waste management review completed in the first quarter 2011. Construction of the Hides Waste Management Facility is progressing well with the installation of the lined landfill, a wetland filter for the leachate treatment facility and facility roads completed.

Hides Waste Management Facility construction progress

Maintaining erosion and sediment control devices remains a challenge across the Project, particularly in areas where rainfall is high and earthworks are extensive. Contractors are conducting ongoing inspection and maintenance of existing devices, and installing new erosion and sediment control devices in areas of recent work, as part of their mitigation measures.

Stakeholder and community engagement

The Papua New Guinean Government is working to place Government officers in the field. These officers will liaise with relevant Government departments to provide early attention to issues raised by the community that require Government support.

In August, a LNG plant site tour was conducted for the Minister for Environment and Conservation and the Environmental Council, to demonstrate the scope of the LNG plant site and of the environmental standards maintained by the Project. The Project also hosted delegates from the Ministry of Education at the Port Moresby Construction Training facility to showcase Project-sponsored training activities.

At this stage, communities impacted by Project activities have a general awareness of the Project, so engagement activities focus on providing information about specific construction activities and encouraging two-way dialogue. Discussing future Project activities with communities helps develop positive relationships and identifies potential concerns while activities are still in the planning phase.

For example, as may be expected with a project of this scale and complexity, and in a country with customary land rights, many community concerns relate to compensation for land access. The Project's resettlement program is helping affected people benefit from livelihood restoration, which is recorded through ongoing monitoring and evaluation in consultation with the communities.

The Project recognizes the importance of reinforcing construction safety messages and exclusion zones with communities. This quarter, to help ensure the safety of fishers and other marine users, the Project's Socioeconomic team published 'no-go' zone onshore and offshore access timetables that will apply during construction of the LNG plant site jetty. These colorful pocket-sized cards are printed on waterproof paper and published in Tok Pisin as an easy-to-use reference for marine users.

The use of drama as a culturally powerful way to communicate safety and other messages with communities is proving so successful that this scope has been expanded to include national contractor and Lanco employees as a way of drawing attention to worker safety.

22 drama performances held in 25 communities with more than 3,000 viewers

Communicating safety and other messages through the play *Laif Bilong Ba'amo, Ges Paiplain* (The Life of Ba'amo, the Gas Pipeline)

Approaching the 24-month point since the final investment decision is an important milestone. However, it is the relationships developed with the people of Papua New Guinea, the privilege of living and working in this extraordinary country and the firsthand experience of diverse cultures that will be the enduring highlights for many in the Project's team.

1 Introduction

This is the seventh in a series of Quarterly Environmental and Social Reports that provide updates on both construction activity and the safety, health, environment and social management aspects of the PNG LNG Project.

This Report is intended to keep Papua New Guinean citizens, interested non-government organizations and other stakeholders well informed about the Project as it progresses.

The Project involves the construction of gas production and processing facilities in the Southern Highlands and Western Provinces of Papua New Guinea. It incorporates liquefaction and storage facilities (located north-west 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 LNG deliveries scheduled to begin in 2014.

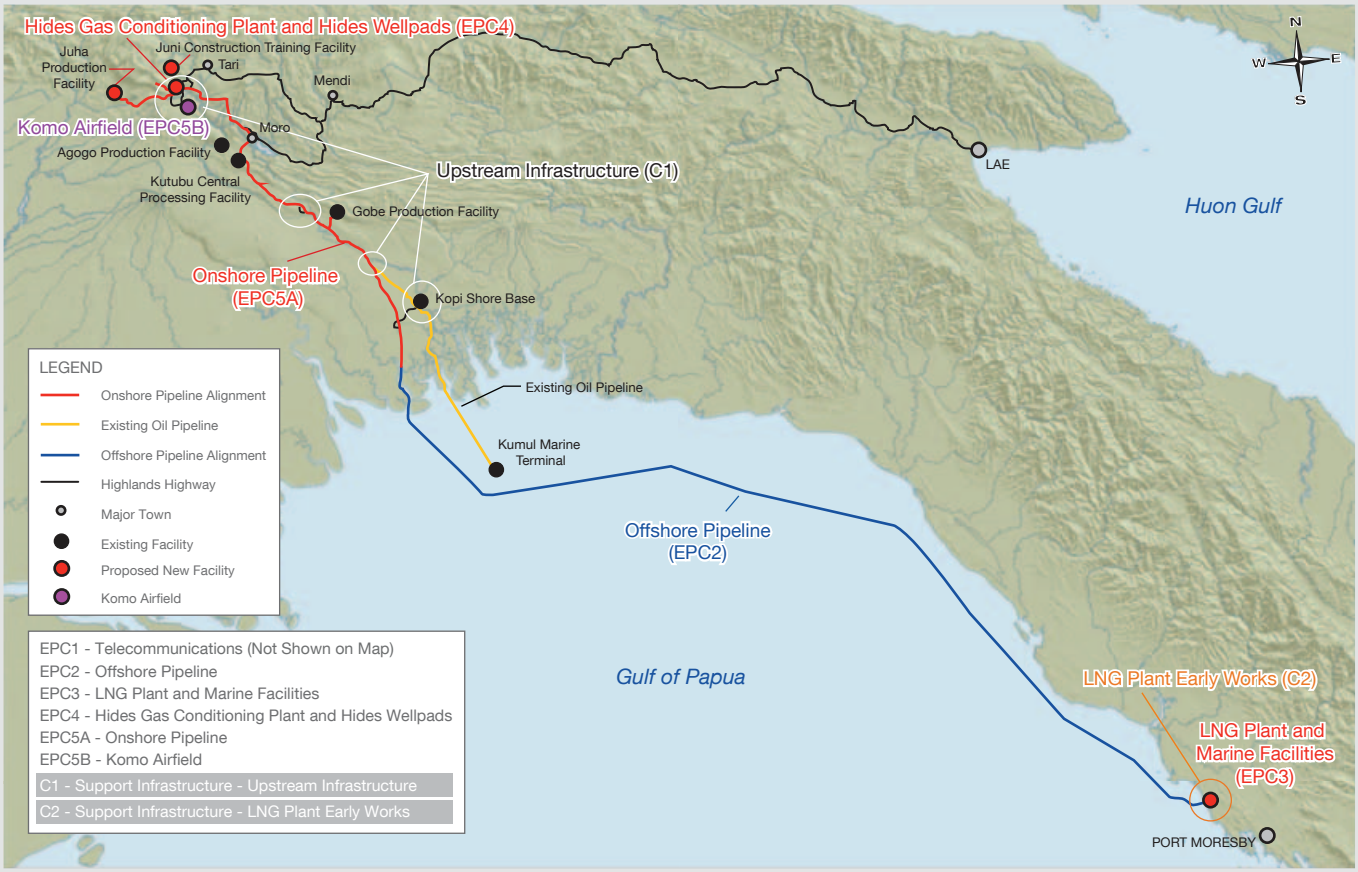
The initial phase of the Project, excluding shipping costs, is estimated to cost US$15 billion. Over the life of the Project, it is expected that over 250 billion cubic metres of gas will be produced and sold.

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. *Appendix 1* shows how the contracts for Phase I of the Project are divided.

The complete Quarterly Environmental and Social Report series is available on the Project's website at www.pnglng.com. Printed copies of each quarterly report 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.

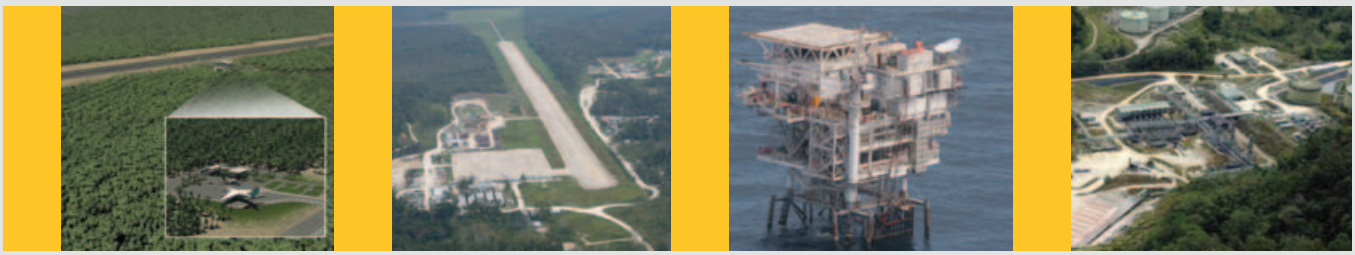
Plate 1.1 – Construction continues to progress at the LNG plant site

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 Marine Terminal | Kutubu Central Processing Facility

2 Construction Overview

With all major Project contractors active in country, construction advanced considerably at the LNG plant site, along the pipeline route and in the Highlands area during the third quarter 2011.

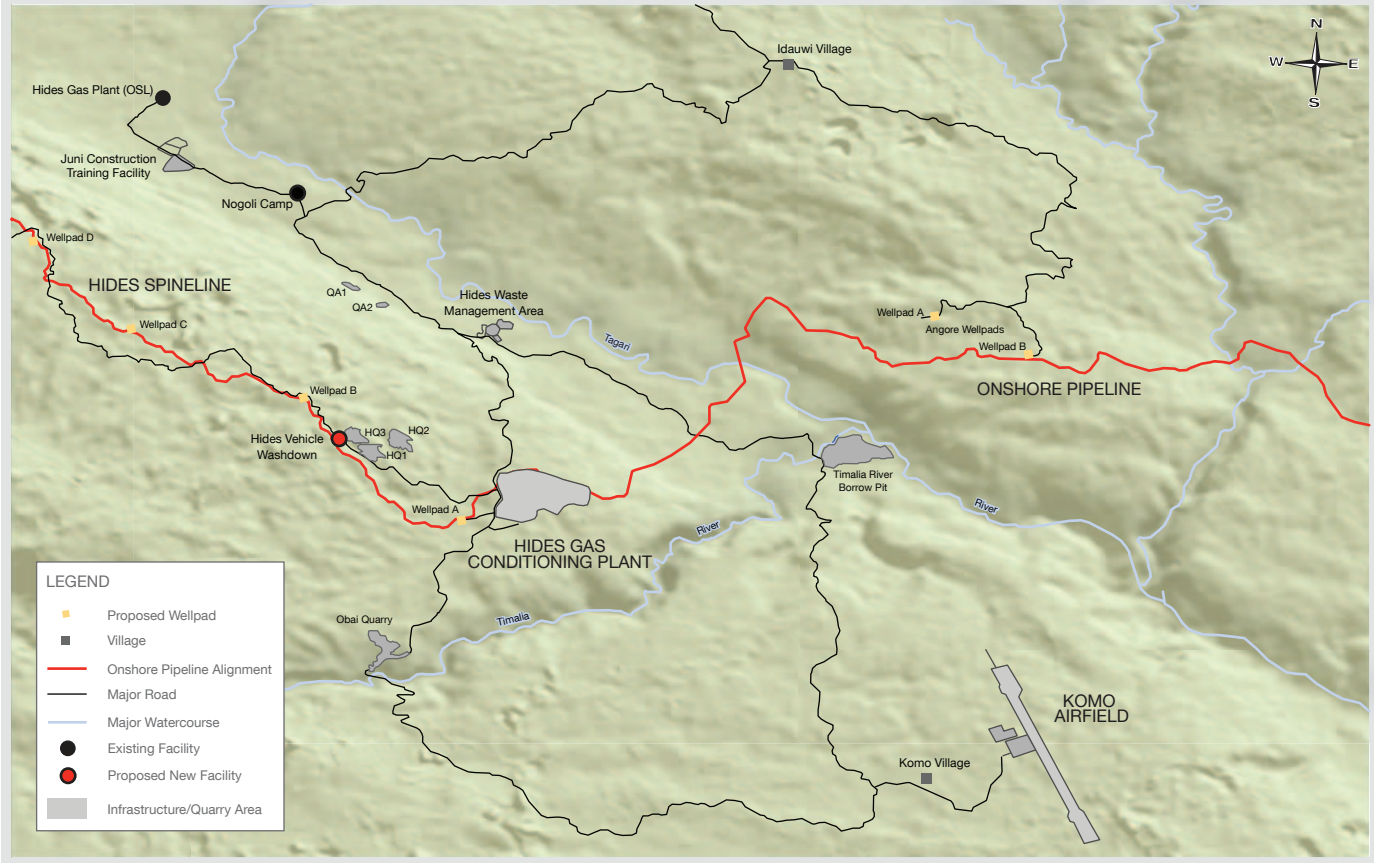
At the LNG plant site, piling for the LNG offloading platform concluded, and jetty piling continued. Onshore trench works in Caution Bay were completed for the offshore pipeline and the installation of shore pull equipment commenced.

A major milestone achieved this quarter was the delivery of the final line pipe sections to the Kopi Shore Base. Forty thousand sections of pipe for the 292-kilometre pipeline were successfully transported and offloaded without a single safety incident.

Overall, the Project is on track to meet the scheduled 2014 start-up window.

2.1 Highlands area

Figure 2.1 – Highlands area Project activities



2.1.1 Upstream Infrastructure

The Upstream Infrastructure contractor's commendable safety performance continued with more than eight million work hours achieved without a Lost Time Incident.

Activities during the quarter included:

- Completion of the HGCP medical clinic. The center will provide general medical support for on-site workers for the duration of construction.
- Construction along the Hides Wellpad Access Road. More than 8.5 kilometres of road surveyed and earthworks completed on Wellpad B, which will be the Project's first drilling location.
- Earthworks were also completed on the Hides landfill cells, and installation of the impermeable liner was nearing completion at the end of the quarter.

2.1.2 Hides Gas Conditioning Plant and Hides Wellpads

The 90 percent design review of the HGCP is complete. Construction at the HGCP site progressed with the installation of a waste management area that includes waste segregation bays and a hazardous material storage area. Also, a high-temperature waste incinerator was installed and is ready for commissioning.

Phase one of the Pioneer Camp was completed in the second quarter 2011, and the camp is now partially occupied. Phase two construction, involving security and administration buildings, is underway.

A milestone was achieved with the first HGCP foundation piles received on site and the start of welding activity. A piling rig was mobilized from Lae to install the facility's first foundations in the fourth quarter 2011.

2.1.3 Komo Airfield

More than 600,000 cubic metres of earth was moved in August – a significant increase over previous months and a notable performance. Lower rainfall in the month contributed to the improvement.

Lighter earth moving equipment, which is better suited to the wet conditions at Komo, also arrived on site during the quarter.

2.1.4 Drilling

After a ten-month construction period, drilling Rig 702 underwent a series of successful commissioning tests. Following this testing, the rig was disassembled for transport and is mobilizing to Papua New Guinea.

The second of the two drilling rigs is under construction in Houston, Texas.

2.2 Onshore Pipeline

The final line pipe shipment for the 292-kilometre onshore pipeline was received at Kopi Shore Base. All 40,000 sections of pipe were offloaded without a Lost Time Incident.

Plate 2.1 – Final line pipe delivery being offloaded from the pipe barge at Kopi Shore Base

Plate 2.2 – Final line pipe received: 40,000 sections of pipe offloaded without a Lost Time Incident

Despite record rainfall in the area surrounding the Kopi Shore Base, construction of the onshore pipeline continued with almost all of the onshore pipeline route surveyed and 103 kilometres prepared for pipe stringing and welding activities. Over 30 kilometres of pipeline stringing and welding were completed in the quarter.

Plate 2.3 – Pipe lowering-in activities at Kilometre Point 253

The Onshore Pipeline contractor also began the first major river pipeline crossing at Kikori River. The pipeline will be placed below the river using horizontal directional drilling techniques – a trenchless method of installing pipelines which achieves minimal surface and river disruption. It involves drilling a large diameter borehole beneath the river and pulling the pipeline through.

Other key construction activities included the start of civil works for the Kopi Scraper Station; the completion of the Omati Landfall Access Road; and the start of pipe string activities to the Omati landfall.

2.3 Offshore Pipeline

Offshore pipeline construction activities during the quarter included completion of the onshore pipeline trench at the Caution Bay landfall site. Near-shore trenching also began in Caution Bay, using an elevated backhoe dredger in shallow waters and a trailer suction hopper dredger in the deeper waters. The deeper portion of the trench was completed late in the quarter. Installation of the pipeline shore pull equipment also began.

Mobilization of the trailer suction hopper dredger from Caution Bay to the Omati River marked the start of works in the Omati River where limited dredging is required to allow access for the offshore pipe lay barge.

A major milestone was the completion and delivery of all offshore line pipe from the production facility in Japan to the pipe coating facility and load out area in Malaysia. This offshore line pipe supply consists of 212,000 tonnes of line pipe, measuring 414 kilometres in total.

2.4 LNG Plant and Marine Facilities

Significant progress was achieved with construction activities at the LNG plant site this quarter. The first concrete foundation was poured for the LNG tanks, while excavations for Train 2 foundations also commenced. Meanwhile, more than 100 tonnes of structural steel was erected on the Train 1 pipe racks.

Piling for the marine jetty also advanced significantly, with 25 of 100 concrete piles completed. Piling of the LNG loading platform was completed and a temporary tower crane installed at the platform.

This quarter, LNG plant site workers achieved seven million hours worked without a Lost Time Incident.

2.5 Associated Gas Development

Engineering and procurement highlights were the completion of factory acceptance testing on the Kumul Marine Terminal generators and the triethylene glycol package for the Kutubu Central Processing Facility. The triethylene glycol package is designed to remove liquids entrained in the natural gas before the gas is transported to the LNG Plant.

Plate 2.4 a-b – Triethylene glycol package installation at the Kutubu Central Processing Facility

Meanwhile, the commissioning gas unit arrived in Lae, construction of the unit foundations commenced at the Kutubu Central Processing Facility, and the Upstream Infrastructure contractors' camp in Gobe was completed.

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, continues. Meanwhile, works at the Moro aviation base were completed and air operations from the new facilities commenced.

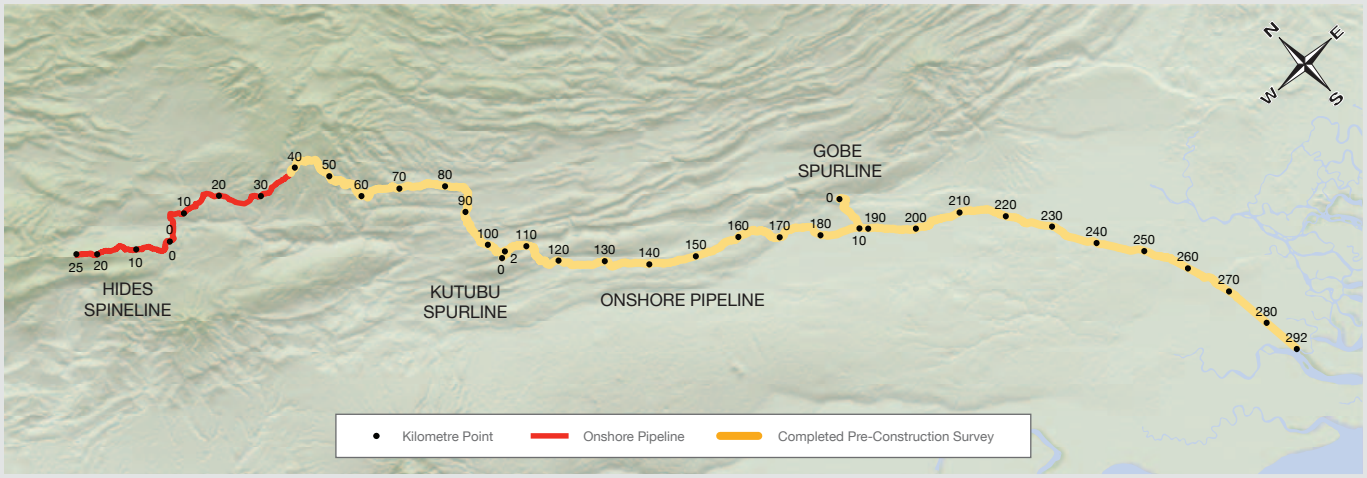
Additional accommodation units were completed at Moro B Camp, providing much needed capacity.

2.7 Pre-construction surveys

Pre-construction surveys are undertaken on all worksites to assess areas of ecological interest, weeds and water quality where necessary (such as in campsites), while identifying potential archaeology and cultural heritage sites. Management and mitigation measures outlined in the Environmental and Social Management Plan (ESMP) or, as necessary, newly defined site-specific measures are applied to areas where sensitivities are identified. This enables compliance with the Project Environment Permit issued by the Papua New Guinean Department of Environment and Conservation.

During the quarter, the Project's pre-construction surveys for onshore pipeline worksites were focused mainly on route re-alignments. Pre-construction surveys conducted to date cover 87 percent of the 292-kilometre main pipeline route, as shown in Figure 2.2. The pre-construction surveys on the 10-kilometre Gobe Spurline and the 2-kilometre Kutubu Spurline are complete. At the Komo Airfield, the contractor's surveys focused on quarry sites.

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



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

Figure 2.3 – Pre-construction survey progress

1	Protected Areas	✎	Report in Preparation
2	Protected Species	➔	Issued to DEC
3	High-Conservation Value Habitat	✖	No longer going to be used
4	Sites or Habitats of Ecological Significance	☑	Approved by Project
5	Cultural Heritage Sensitivity	➲	DEC Permission to Construct (as required)
6	Social Sensitivity	*	Submission/Approval Month/Quarter (Q) (2011)

Survey Site	Sensitivities Surveyed						Status	
	1	2	3	4	5	6		*
ONSHORE PIPELINE FACILITIES								
Daware Camp and Laydown Area, Access Road and Associated Quarry	✓	✓		✓			➲	Q3
Omati River Push-Pull Platform and Tie-in Point (Push-Pull Platform replaced by traditional construction methods)		✓		✓	✓		✖	Q3
Onshore Pipeline Right of Way: Kilometre Point 0 - 10.5					✓		✎	Q3
Onshore Pipeline Right of Way: Kilometre Point 50.5 - 65.5		✓		✓	✓		✎	Q3
Onshore Pipeline Right of Way: Kilometre Point 65.5 - 85.4		✓		✓	✓		✎	Q3
Onshore Pipeline Right of Way: Re-alignment Kilometre Point 196.4 - 198		✓		✓	✓		✎	Q3
Onshore Pipeline Right of Way: Re-alignment Kilometre Point 243 - 245		✓		✓	✓		☑	Q3
Gobe Spurline Kilometre Point 2.4 - 2.8 (Wah Fault Crossing)		✓		✓	✓		✎	Q3
Homa/Paua Laydown and Quarry		✓		✓	✓		✎	Q3
Quarry QA42		✓		✓			☑	Q3
Tagari Campsite		✓		✓	✓		✎	Q3
KP 97.5 Laydown Area		✓		✓			✎	Q3
Wah River Horizontal Directional Drilling Platform		✓		✓			✎	Q3
Mubi River Horizontal Directional Drilling Platform		✓		✓	✓		✎	Q3
KOMO AIRFIELD								
Tamalia Boulder Quarry Extension Area							☑	Q3
Tigali River Quarries					✓		✎	Q3

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

Protecting the environment and the safety and health of Project workers and communities within which Project-related activities occur, in balance with promoting Papua New Guinea's economic development, is a priority for the Project.

3.1 Approach

The Project's commitment to environmental and social management activities in Papua New Guinea is articulated through the ESMP and supported by discipline-specific plans. These discipline-specific plans are outlined in Figure 3.1.

All of these plans are based on the Project's Environmental Impact Statement and are publicly available on the Project's website at www.pnglng.com/commitment.

A Safety Management Plan, Health Management Plan, Regulatory Compliance Plan and Security Management Plan complement the ESMP. Together, these documents promote a best practice culture across the Project. They also demonstrate ExxonMobil's commitment to sustainable economic growth for Papua New Guinea.

3.2 Security

Partnering with the community remains the foundation of the Project's security strategy. The Project continues encouraging landowners and communities to use the well-established process in place to address and resolve any Project-related concerns. Any use of violence is unacceptable.

In accordance with the commitment to ensure a safe and secure operating environment for both Project personnel and for communities within which the Project operates, security measures are being enhanced at Project facilities.

The difficult operating environment in parts of the Project's area of operations was highlighted in the third quarter by an assault on an expatriate worker, which resulted in a serious injury. To manage this situation and prevent the risk of injury to other workers, the Security team is working with the Komo Airfield contractor on enhanced security measures at the worksite.

The Project's Security team is also building the skills and capabilities of its Papua New Guinean security personnel, who manage security in a complex and dynamic environment. As part of this skills development, four Papua New Guinean Project Security team members attended the Site Security Contact Conference in Melbourne, Australia in early October 2011.

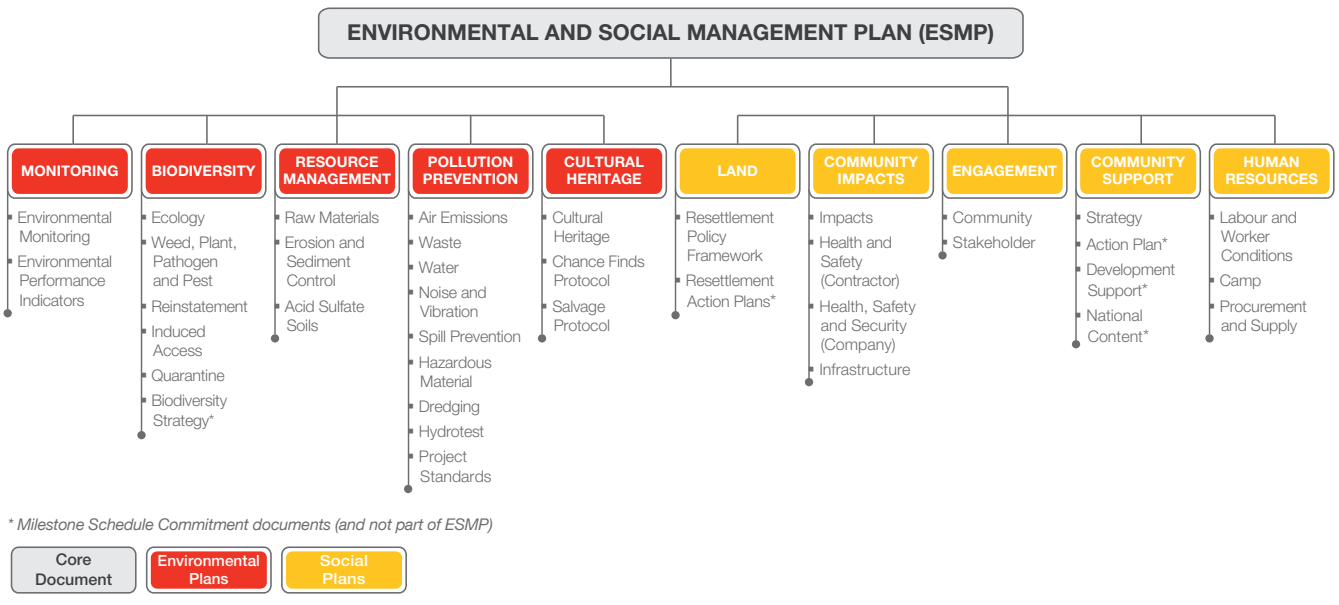
3.3 Revenue management

Once the Project reaches production, it will pay royalties and development levies in accordance with the Papua New Guinean *Oil and Gas Act 1998*. Benefits sharing agreements between the landowners, local level governments, provincial governments and the Independent State of Papua New Guinea, address how benefits, including those received by the State under the *Oil and Gas Act 1998*, are distributed to the various governments and landowners.

The Project continues supporting the principles and framework of the Extractive Industries Transparency Initiative and its adoption in countries where governments choose to implement it.

Earlier in the year, the Papua New Guinean Government established a committee to examine the Extractive Industries Transparency Initiative in Papua New Guinea.

Figure 3.1 – Environmental and Social Management Plans



The Project is supportive of dialogue between the Papua New Guinean Chamber of Mines and Petroleum, the Government of Papua New Guinea and other stakeholders. Exxon Mobil Corporation is a long-standing proponent of this initiative, along with the Group of Eight Transparency Initiative and the United Nations Convention Against Corruption.

As part of the Project's commitment to good governance, accountability and revenue transparency, the Project is also engaged in dialogue with Jubilee Australia in relation to their research on the Papua New Guinean Government's transparency initiatives. Transparency initiatives can only be sustainable when national governments take ownership and responsibility. The Project welcomes the Papua New Guinean Government's decision to establish a Sovereign Wealth Fund to manage revenues from the Project to support long-term economic growth and stability for Papua New Guinea. The Project also supports Australia's decision to provide placements for Papua New Guinean Sovereign Wealth Fund Secretariat officials in the Australian Future Fund and relevant Australian Government departments. The first placements are expected to occur in the second half of 2012. Australia is providing assistance, including economic modeling and policy advice, under the 'Joint Understanding on Further Cooperation on the PNG LNG Project'.

3.4 Management of Change

Changes to the Project's scope are reviewed and endorsed through a Management of Change procedure prior to implementation. With any proposed change, the Project's requirements comprising health, safety, security, environmental and social management, as well as operability and maintenance, regulatory and cost, and scheduling requirements, are considered. Changes are classified in accordance with 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, one potential Class II change was initiated, relating to a newly proposed safety zone around the drilling wellpads. The determination of this safety zone was based on radiant heat, gas plume and noise modeling. Perimeter fencing will be placed around the 220-metre safety zone surrounding each drilling wellpad to prevent non-Project personnel from entering the construction area. The Project has provided information on how the potential impacts of this change will be mitigated to the IESC.

3.5 Environmental and Social Milestone Schedule

The Project's Environmental and Social Milestone Schedule continues to progress. Achievements this quarter included completion and disclosure of the Community Support Strategy Action Plan.

4 Procurement and Supply

The Project continues to meet the growing needs of construction activities while supporting Papua New Guinean suppliers and developing Lancos. The Project also supports resources such as the Enterprise Centre.

4.1 Supplier development

The Project is supporting Lancos through business development officers in the field, the Enterprise Centre and business opportunities from Project contractors. As detailed in the Project's National Content Plan, there are five key procurement areas identified for Lancos: camp maintenance; catering; security; labor recruitment and hire; and vehicles and drivers. Lancos also provide goods and services such as road building and resurfacing, and fence repairs. By the end of September, the Project-related spend with Lancos exceeded 500 million Kina (US$223 million). In addition to Lancos, other Papua New Guinean businesses are providing goods and services to the Project.

Plate 4.1 – Drivers provided by a Lanco

The Project's total in-country spend-to-date exceeds 3.3 billion Kina (US$1.5 billion). The LNG plant site, ongoing pipeline construction, infrastructure works and the increased activity of the Hides Gas Conditioning Plant and Hides Wellpads contractor will continue to drive demand for Papua New Guinea-based goods and services during the construction phase of the Project.

Plate 4.2 – Enterprise Centre staff member reviewing the PNG Supplier Database

For example, in the third quarter, 28 business opportunities with Project contractors were posted on the PNG Supplier Database for construction-related materials, crane inspection services, container rentals and concrete suppliers.

4.2 Enterprise Centre

The Enterprise Centre has served 9,900 Papua New Guinea businesses and achieved more than 2,750 days of training to date. This quarter, a new Fundamentals of Business Management course and Director Training Level 2 course were launched, and the Centre facilitated security, safety and cultural awareness workshops.

4.2.1 Business mentoring

In September, the Enterprise Centre conducted its first business mentoring session, following the launch of a new business mentoring program last quarter. To date, the Centre has two registered mentors and anticipates registering more based on their previous experience. The program involves mentors providing guidance to Papua New Guinean businesses through 18 one-hour mentoring sessions over six months.

4.2.2 Business training

This quarter, the Enterprise Centre was kept busy with a large number of enrolments for business training from landowners, especially in the Upstream area. The training involved 311 people and delivered over 800 training days, an increase of over 21 percent from the second quarter 2011 and 30 percent from first quarter 2011, as shown in Figure 4.1. Training was conducted at the Centre, as well as in Hides and in the Omati region.

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.

Fundamentals of Business Management

In September, the first session of a new Fundamentals of Business Management course was held and 13 participants from Lancos attended. Of those attendees, nine progressed into the Lanco Directors course offered by the Centre. Two additional Fundamentals of Business Management sessions are scheduled for the fourth quarter 2011.

Business Basics training

Business Basics training continued, with 40 participants from two Lancos based in the Nogoli area attending sessions at the Enterprise Centre.

Directors' training

Thirteen women from the all-women company Papa Magia Limited attended Directors' training at the Enterprise Centre this quarter. They were among 77 participants from the Hides, Omati and Central Province areas to attend the training.

The Centre also introduced Director Training Level 2, which involves specific aspects of the company constitution, the *Companies Act of 1997*, corporate governance, and the elaboration of Directors' roles and responsibilities. An initial two-day session attracted 12 Directors from a local Lanco.

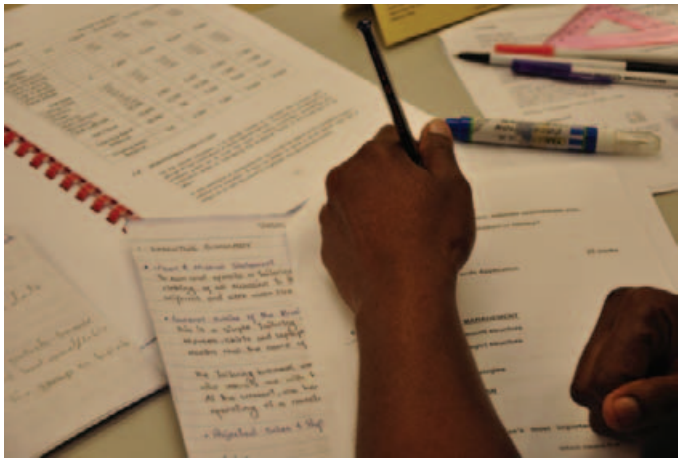


Plate 4.3 a-b – Lanco representatives participating in Business Basics and Directors' training

Shareholders Awareness training

In July, the Juni Construction Training Facility worked with the Enterprise Centre to host shareholders awareness training for Lancos in Hides. Forty-seven participants attended. Further sessions are scheduled for late 2011.

4.2.3 Business assessments

Most of the Centre's business advisory services activities this quarter involved business plan reviews to understand the business goals of Lancos and provide support on business ideas.

In addition, the Enterprise Centre conducted 19 business assessments of local companies as part of the Project's commitment to support the development of Papua New Guinean companies. These assessments provide a valuable, independent evaluation of companies based on areas such as: Financial Management; Fixed Asset Management and Inventory Control; Governance and Organization; Quality Control; Human Resource Management; Business Management; Safety, Health and Environment, and Reputation and Image. Each of these elements is examined in considerable detail. For example, some of the 24 areas included under Human Resource Management are: remuneration structure, adequacy of staff amenities, qualifications of managers, employment contracts, workplace regulations and training plans.

As a result of these assessments, eight Lancos were offered the opportunity to work on improving opportunities identified during their business assessment through participation in the Capacity Building Program. This Program supports businesses with mentoring, educational workshops and training to help them achieve their business goals. In addition to assessed companies, others in the business community can access the Program. This quarter, another 15 companies were invited to join after expressing an interest.

5 Communities

By working closely with Papua New Guinean communities, the Project is able to understand community perspectives regarding the potential impacts of construction activities, and create programs that support community health, safety and investment.

5.1 Structure and relations

The Project manages community interactions and potential impacts from construction activities through a set of four management plans, shown in Table 5.1.

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.

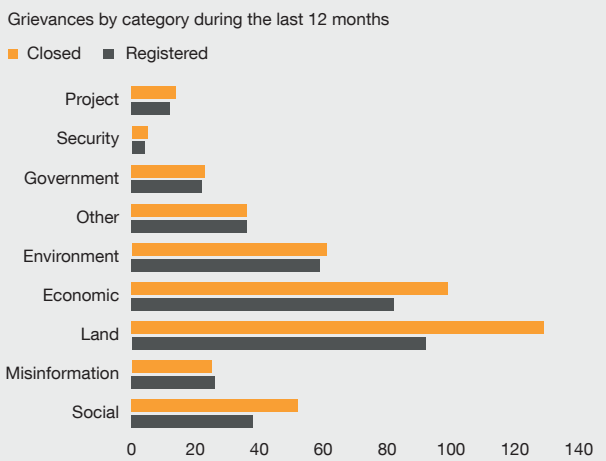
5.1.1 Community grievance management

The Project uses an electronic Information Management System (IMS) to collate data inputs from multiple sources throughout the construction footprint, and track the close-out status of grievances. A dedicated support group within the Socioeconomic team works with personnel assigned to remote locations, managing grievances recorded in the IMS and helping close them in a timely manner.

In the third quarter, grievance subject categorization was improved and aligned with other modules of the IMS.

Also during this quarter, 92 grievances were registered and categorized and an additional 28 grievances were registered, awaiting categorization, while 139 grievances were closed from both this quarter and previous quarters. The grievance profile for the past 12 months is shown in Figure 5.1.

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



The Socioeconomic team continues to coordinate closely with Project contractors, taking ownership and maintaining a tight focus on closing grievances as quickly as possible. As may be expected with a Project of this scale and complexity, and in a country with customary land rights, many grievances relate to land compensation and ownership. In those parts of the Project, where significant resettlement is underway, many grievances relate to compensation. In the majority of cases these are relatively straightforward and quickly resolved.

Access to business development and employment opportunities continued to be the main source of economic-related grievances. This is particularly the case where onshore pipelines are being installed. Due to the short-lived and transient nature of the pipeline installation process as well as the need for specialized equipment operators and expertise, it can be difficult for local communities to understand and accept the limited employment opportunities. However, opportunities such as the traineeship program implemented by the Offshore Pipeline contractor, and Project community development projects, are helping to address community concerns.

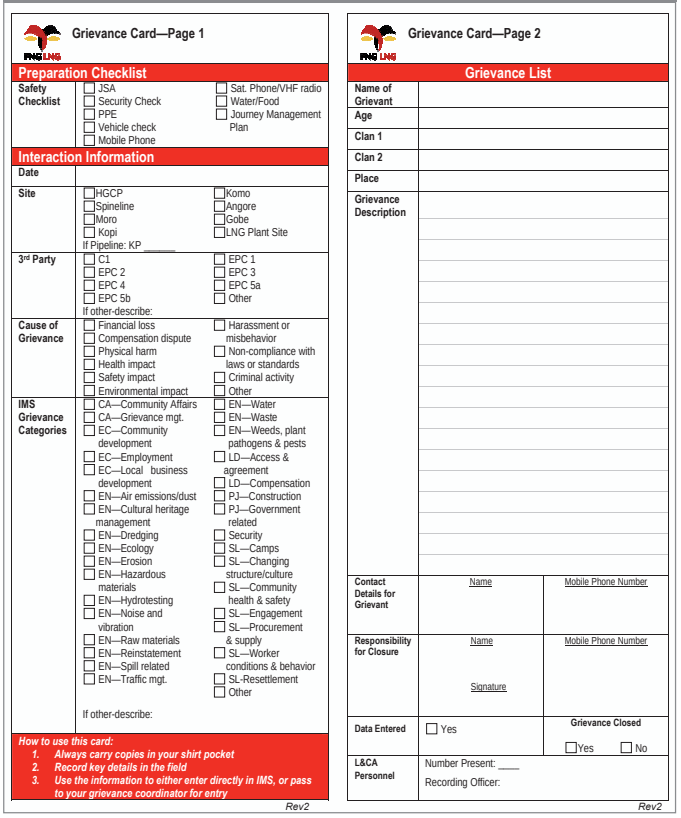
Many of the grievances recorded result from claims by communities related to the impact of contractor activities. In the Hides and Komo areas, four contractors are at work simultaneously in the same geographical area, soon to be joined by a fifth when drilling activities start. Managing the grievance process related to contractor impacts in commonly utilized areas can be challenging. This quarter, the Project initiated a weekly coordination meeting involving key Socioeconomic team members and representatives from all of the construction contractors. This improved grievance management by providing a forum to discuss grievances, as well as the opportunity to align and integrate stakeholder engagement activities as a group.

Personnel working in field locations are often deployed in remote areas and this creates a challenge for information capture. To improve the capture of key information recorded in the field and more effectively manage a grievance to closure, a simple card was developed and field-tested during this quarter. The format follows the sequence of IMS data input so it can be easily entered directly into the System. In locations where internet access is limited, completed Grievance Cards can be scanned by administration staff and sent to Project headquarters in Port Moresby for entry into the IMS. The Grievance Card is shown in Figure 5.2.

Grievances that cannot be resolved by the Project, such as grievances related to third parties including Government agencies, are termed ‘non-stewardable grievances’. This reflects their non-Project status while recognizing their potential to impact the Project. The Papua New Guinean Government is working to place Government officers in the field to assist with concerns that need Government support.

During this quarter, the number of non-stewardable grievances rose from 50 to 62, and many were Government-related concerns.

Figure 5.2 – Grievance Card



Grievance Card—Page 1

Preparation Checklist

Safety Checklist	☐ JSA ☐ Security Check ☐ PPE ☐ Vehicle check ☐ Mobile Phone	☐ Sat. Phone/VHF radio ☐ Water/Food ☐ Journey Management Plan

Interaction Information

Date		
Site	☐HGCP ☐Spineline ☐Moro ☐Kopi If Pipeline: KP _____	☐Komo ☐Angore ☐Gobe ☐LNG Plant Site
3rd Party	☐ C1 ☐ EPC 2 ☐ EPC 4 ☐ EPC 5b If other-describe:	☐ EPC 1 ☐ EPC 3 ☐ EPC 5a ☐ Other
Cause of Grievance	☐ Financial loss ☐ Compensation dispute ☐ Physical harm ☐ Health impact ☐ Safety impact ☐ Environmental impact	☐ Harassment or misbehavior ☐ Non-compliance with laws or standards ☐ Criminal activity ☐ Other
IMS Grievance Categories	☐ CA—Community Affairs ☐ CA—Grievance mgt. ☐ EC—Community development ☐ EC—Employment ☐ EC—Local business development ☐ EN—Air emissions/dust ☐ EN—Cultural heritage management ☐ EN—Dredging ☐ EN—Ecology ☐ EN—Erosion ☐ EN—Hazardous materials ☐ EN—Hydrotesting ☐ EN—Noise and vibration ☐ EN—Raw materials ☐ EN—Reinstatement ☐ EN—Spill related ☐ EN—Traffic mgt. If other-describe:	☐ EN—Water ☐ EN—Waste ☐ EN—Weeds, plant pathogens & pests ☐ LD—Access & agreement ☐ LD—Compensation ☐ PJ—Construction ☐ PJ—Government related ☐ Security ☐ SL—Camps ☐ SL—Changing structure/culture ☐ SL—Community health & safety ☐ SL—Engagement ☐ SL—Procurement & supply ☐ SL—Worker conditions & behavior ☐ SL-Resettlement ☐ Other

How to use this card:
1. *Always carry copies in your shirt pocket*
2. *Record key details in the field*
3. *Use the information to either enter directly in IMS, or pass to your grievance coordinator for entry*

Rev2

Grievance Card—Page 2

Grievance List

Name of Grievant		
Age		
Clan 1		
Clan 2		
Place		
Grievance Description		
Contact Details for Grievant	Name	Mobile Phone Number
Responsibility for Closure	Name Signature	Mobile Phone Number
Data Entered	☐ Yes	**Grievance Closed** ☐Yes ☐ No
L&CA Personnel	Number Present: ____ Recording Officer:	

Rev2

5.1.2 Project Induced In-Migration Study

This quarter, the Socioeconomic team completed a report summarizing Project Induced In-Migration work conducted at the LNG plant site villages. Progress was also made with regard to capacity building of In-Migration Committees in Lea Lea, Papa and Porebada. The aim of these committees is to produce community-based plans that are aligned with provincial and district government's rural-urban planning.

In the Hides-Komo area, a Project Induced In-Migration assessment was commissioned and will begin in October 2011. This assessment will collate both quantitative and qualitative data through a survey questionnaire and a series of focus group interviews. The questionnaire will be conducted with a sample of newcomers and speculative household populations, while interviews will be held with health workers, police, community leaders from different demographics of the community (women, men and youth), landowners, Government agencies and the Project's Socioeconomic team, as well as contractors working in the area.

In the Kikori region, migration is a way of life in the coastal villages. With improved infrastructure providing road access from the Hides to Kikori area, strategic locations were identified this quarter for monitoring. These areas include the Kopi Scraper Station, Kaiam Bridge and the existing Kekea settlement located on the fringe of the Kikori District station. The Socioeconomic team will monitor these locations and work closely with the district and provincial governments on induced in-migration challenges around these areas.

5.1.3 Fisheries surveys

During this quarter, the Project conducted fisheries surveys in the Caution Bay and Omati areas. In Caution Bay, 185 fishers were interviewed, with a total of 3,911 kilograms of fish and mud crabs weighed. In the Omati area, 362 kilograms of fish catch and 10 kilograms of mud crabs were recorded.

To date, the Fisheries team has trained and engaged 24 community members to conduct fish catch landing surveys (15 males and 9 females).

With construction work beginning to create 'no-go' zones in these coastal communities, further monitoring activities will be carried out to assess any implications this may have on the people and the environment.

Female entrepreneurs open fish market in Lea Lea

In September, the people in Lea Lea Village launched the Lea Lea Fish Market, thanks to a group of entrepreneurial women in their community.

Situated at the base of the Lea Lea footbridge, the market is serving as a communal point where fishers can sell their catch, generating income for the community at large.

Twenty women were involved in establishing the market, of which eight are employed at the LNG plant site.

This is one of many initiatives the Project's Community Development Support team is involved in, which helps empower Papua New Guinean women and provides support for women's groups.

Other activities supported by the Community Development Support team during the past year include establishing a women's forum that meets regularly and launching a series of training sessions for women's groups. These sessions help them identify projects that would serve a need in their communities.

The Fish Market was one project identified in this forum and has now become a reality.

The newly established Lea Lea Fish Market

Plate 5.1 – Conducting a fisheries survey in the Omati area

5.1.4 Social considerations for logistics activities

During this quarter, the proposals submitted to the Project's Community Investment and Contributions Committee in the second quarter 2011 were approved and implemented. This included launching the Barging Route Waterways Memorandum of Understanding Scholarship Program, which will assist 16 students from the Barging Route Waterways communities to attend tertiary institutions within Papua New Guinea. The Scholarship recipients will be announced in November 2011 and sponsored by their respective institutions in 2012.

The Enterprise Centre also facilitated training for 17 Barging Route Waterways Memorandum of Understanding Committee members on good governance, effective business management and leadership, with further programs planned for the final quarter of this year. This training will equip Committee members to participate in advancing economic development initiatives within their respective villages. For example, one opportunity being developed, in close consultation with Committee members, is a fisheries project that will increase income to Barging Route families.

Plate 5.2 – Presentation of certificates to Barging Route Waterways Memorandum of Understanding Committee members who completed Enterprise Centre training

5.2 Infrastructure, services and resources

During this quarter, the Project monitored traffic on Baruni Road, the road leading to the LNG plant site. Despite traffic control measures being installed in the second quarter 2011, the monitoring identified vehicle speed remains an issue. In response, four additional traffic control devices were installed, as well as a pedestrian crossing. Meanwhile, upgrades to the Papa Lea Lea Road connecting Konebada to the LNG plant site were completed.

Around the perimeter of the Hides Waste Management Facility and HGCP, pedestrian footpaths were constructed by local landowners, with Project support. By providing a readily accessible means for the local community to go around these worksites, the risk of unauthorized personnel coming into contact with construction activities is reduced.

In Komo, a local Lanco is constructing vehicle access tracks around the northern and southern ends of the Komo Airfield site. Project personnel assigned as business development officers interacted with the Lanco's management team to help build the Lanco's capacity and assist with providing improved public access as quickly as possible.

Along the onshore pipeline route, work commenced in August on upgrading the Kaiam Village Road. Completion of this activity is due in the fourth quarter 2011. This upgrade will provide the local community with a road capable of meeting the needs of vehicle and pedestrian access between the Kaiam Village and Gobe Road.

In the Upstream North area, the construction of four *'haus wins'* was completed in Hides, bringing the total number to 17 for the Hides region. A further five were built in Komo. These *'haus wins'* are proving beneficial as a meeting place for communities and rainwater tanks installed at each are providing a source of fresh water.

In the Upstream South area, the Project and the Offshore Pipeline contractor attended a ceremony at Goare Village in the Omati River Delta to pay respect to the Kerewo clan's sacred sites in the Omati River. The ceremony formally marked the community's support for the Project and construction work commencing.

5.3 Verification, monitoring, assessment and audit

The Project has a Camp Management Plan and a Labour and Worker Conditions Management Plan in place to ensure healthy worker conditions and minimize the risks associated with employing and accommodating a large construction workforce. An additional four social management plans exist to promote positive community relations, which cover: Community Engagement, Community Health and Safety, Community Impacts and Community Infrastructure.

During this quarter, the Project's Socioeconomic team conducted ten monitoring events against these plans, as shown in Figure 5.3. To date, the Project has conducted 70 monitoring events.

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

Situations that are not consistent with social management plan requirements and require corrective actions are classified as non-conformances. Potential situations, which could eventually result in a non-conformance, if not corrected in a timely manner, are classed as field observations. Corrective actions are implemented in these situations to prevent a field observation escalating to a non-conformance.

Meanwhile, innovative or excellent performance against social management plan requirements is recognized as a positive field observation. Positive field observations are often used to help promote continued improvement across the Project. This quarter, the Offshore Pipeline contractor received a positive field observation for visibly demarcating their onshore and offshore construction sites to help keep the community and fishers safe.

Figure 5.4 outlines the non-conformances and field observations reported in this quarter.

Non-conformances this quarter mainly related to communication, pay processes and grievance management (under the Labour and Worker Conditions Management Plan). The Project and its contractors are working to resolve non-conformances and field observations. The closure status of these is shown in Figure 5.5.

5.4 Community health

The Project works closely with Papua New Guinean health professionals and various non-government organizations to mitigate potential health impacts that may arise from contractor and community interaction. This is addressed through the Project's integrated Community Health Impact Management Program. This Program covers initiatives related to the environmental health areas framework developed by the International Petroleum Industry Environmental Conservation Association, also known as IPIECA. This framework is expanded by the International Finance Corporation in its guidance notes to performance standards, which include community health, safety and security.

5.4.1 Integrated Health and Demographic Surveillance System

Construction of a research center and patient examination facility is nearing completion at the Papa Health Clinic. The research center is part of the Integrated Health and Demographic Surveillance System (iHDSS), supported by the 'Partnership for Health' – an agreement between the Project and the Papua New Guinea Institute of Medical Research (IMR). The iHDSS is playing an important role in monitoring the health and well-being of LNG plant site communities, Hides area villages and two matched comparison sites. The new research center will also be used for activities such as a Sexually Transmitted Infections study in the LNG plant site villages.

Figure 5.3 – Summary of monitoring events against relevant social management plans

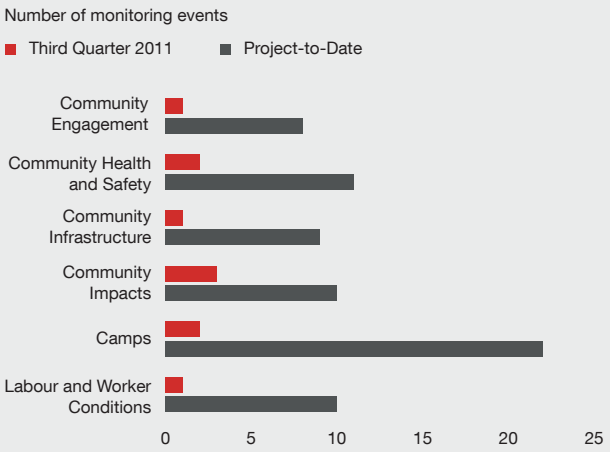


Figure 5.4 – Non-conformance and field observation summary

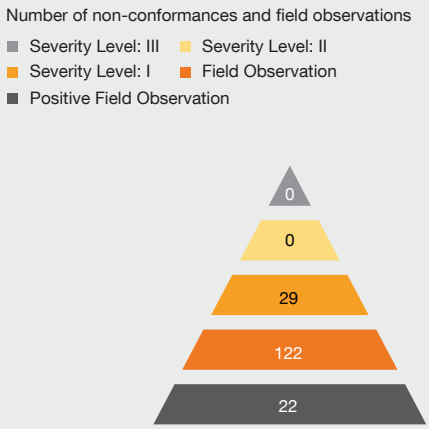
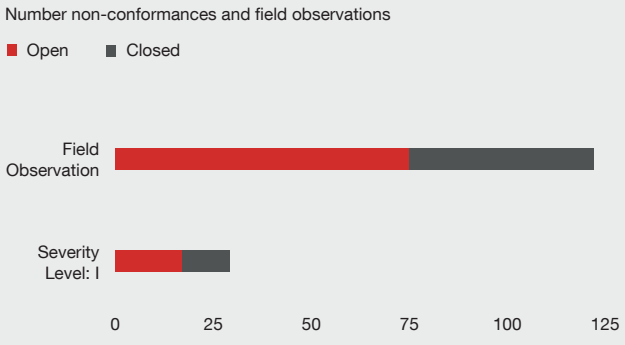


Figure 5.5 – Non-conformance and field observation closure status



As part of the iHDSS, and following completion of a baseline census of over 10,000 people from the LNG plant site villages in the second quarter 2011, ongoing mortality assessments began in this quarter at local health centers. One doctor and eight nurses were assigned to assist local health care staff in patient diagnostic activities.

Meanwhile, the IMR team is establishing its base in Hides, with training for village demographic surveillance recorders and the recruitment of a physician and a nurse commencing this quarter.

5.4.2 International Science Advisory Board

The International Science Advisory Board, a team of independent international health experts led by Professor Marcel Tanner, Director of the Swiss Tropical and Public Health Institute, completed an assessment of the Project's Community Health Impact Management Program in July.

The Board determined that the Program was well designed, appropriate and on track. Recommendations from the Board included: developing a community health transition plan with the IMR and Papua New Guinea's Department of Health; focusing on tuberculosis and Project-related impacts, particularly in the Kikori area; and continuing partnership activities to build the Program's administrative, financial, information technology and management capacity.

The Project has incorporated all of the Board's recommendations into the Community Health Impact Management Program.

5.4.3 Infectious Diseases Diagnostic Laboratory

The selection process is underway for contractors to construct an Infectious Diseases Diagnostic Laboratory at the University of Papua New Guinea, School of Medicine and Health Sciences in Port Moresby. The IMR will manage the laboratory with support from the School of Medicine and Health Sciences and provide rapid diagnosis of emerging infectious disease epidemics such as cholera and pneumonia. It will also offer advanced training for Papua New Guinean scientists.

5.4.4 Tuberculosis

Kikori Hospital is the primary health facility in the Gulf Province of Papua New Guinea with medical equipment and personnel that can diagnose and treat tuberculosis. The active tuberculosis burden on the Gulf Province may approach one percent, a level hundreds of times higher than seen in developed countries.

As there is Project-related work activity and personnel in this area, the Project continues supporting the IMR to improve diagnostic capability and develop accurate disease information for this area. This quarter, the Project donated a microscope and other diagnostic materials and supplies to the Kikori Hospital to assist with both malaria and tuberculosis diagnosis.

5.4.5 Support to non-government organizations

The Project also continues working with the Global Fund, Asian Development Bank and the National Department of Health, along with other relevant non-government organizations, to educate Papua New Guinean residents in the Project areas about family planning and sexual and reproductive health.

Plate 5.3 – Marci Balge, Community Health Manager, Esso Highlands Limited presenting a microscope to Larry and Sarah Kaipu, Kikori Hospital, Gulf Christian Services

During this quarter, the Project was one of the organizations supporting Population Services International (PSI) with a nation-wide *Malolo Liklik* Healthy Baby Campaign to promote condom use and emphasize its benefits for birth spacing. The campaign involved radio and print media, a series of events, and partnering with churches and enclave companies.

Water sanitation hygiene outreach

During the quarter, the Project supported and participated in a number of programs to help communities develop safe water sources and improved sanitation.

For example, in September, the Project helped PSI select a Water and Sanitation Hygiene coordinator for the Hides area, and participated in a community led total sanitation train the facilitator program provided by European Unions' Rural Water Supply Sanitation Program in Mendi. The Project also provided support for PSI and Hides/Komo health area representatives to attend the training.

As part of the training, the team traveled to Pakule Village in the Ialibu area of the Highlands Highway between Mendi and Hagen, to facilitate a sanitation session with approximately 200 community members. Sessions were also held in Taite Village and Wakwak Village with around 70 participants at each session. The results were positive, contributing towards collective community decisions to improve sanitation and hygiene leading towards improved health in all villages.

Marital Relationship Training

In August, the Project supported a four-day marital relationship workshop conducted by PSI in Boera with 27 female and 32 male attendees.

Most of the women said the training helped them to identify issues in their relationships such as family planning, financial management, helping relatives, and customary resources in the village. They also said it gave them the confidence to make decisions in their family that would benefit both partners. Male participants reported an improved understanding of how birth spacing reduces the family burden and of the role of both partners in family planning.

The participants felt that the knowledge gained from the marital relationship training would help reduce social problems such as domestic violence and child abuse in the community as a whole.

Health training grants

PSI and the Project progressed the establishment of health worker and health education training grants. During the quarter, health training candidates submitted their applications to Papua New Guinean nursing schools and information about the cost of the training was gathered.

For the 2012 school year, an application form is being provided for training applicants. The new approach expands the scope of learning institutions to include Divine Word University-affiliated nursing schools, as well as students in the microscopy discipline, for scholarship consideration.

5.4.6 Contractor conformance

From this quarter, contractor conformance with community health-related requirements was integrated within the Project Health team's occupational health assessments. Results of these assessments are covered in *Section 7.3 Health management*.

5.5 Community safety

With the Offshore Pipeline contractor starting construction work on trenching through the near-shore environment and offshore around the LNG plant site area, community safety provisions were put in place this quarter. The worksite is demarcated with fencing, barriers, and security guards posted at key points to alert communities and fishers about the construction activity and minimize the risks to public safety through unauthorized/untrained personnel accessing worksites. At the same time, construction at the jetty continued.

Throughout construction activity, the Socioeconomic team is engaging with LNG plant site villages, advising communities about upcoming offshore construction activities for the pipeline, and near-shore activities surrounding jetty construction. Messages are focused on advising the community, and particularly fishers, about the 'no-go' zone and the importance of avoiding areas with construction activity.

These messages are reflected in the PNG LNG Plant Site Newsletter, which was re-designed this quarter in response to feedback received from community members about what would be most useful to them.

Promoting dental health and hand hygiene in schools

More than 1,200 children across the four LNG plant site villages are benefiting from a free Colgate-Palmolive dental health and hand hygiene program, introduced into the school system during this quarter. The Project supported Population Services International, in collaboration with the Hiri District Maternal Child Health unit, to launch the *Bright Smile, Bright Futures* Program, which is intended to help educate communities about dental health and hand hygiene.

As part of the Program, Colgate-Palmolive used their popular mascot Roger the Rabbit to engage the school children and deliver dental health messages.

Colgate-Palmolive's Roger the Rabbit presenting toothbrushes and toothpaste as part of the dental health and hand hygiene program

Colgate-Palmolive also provided 1,350 toothbrushes, 1,350 toothpaste sachets and 100 educational posters to children and adults in LNG plant site village schools for the program.

Distribution of toothbrushes and toothpaste to school children

Feedback is received through a form included with the Newsletter and via e-mail. The Newsletter is also distributed through e-mail subscription, with the first deliveries made during this quarter.

The Project's Safety Awareness Program continues promoting traffic and road safety awareness to local villagers. This quarter, road safety engagements were conducted with Baruni and Hagara primary schools, in addition to follow-up engagements with schools from the LNG plant site villages.

Plate 5.4 – The newly designed PNG LNG Plant Site Newsletter

The Socioeconomic team is liaising with teachers from all schools around the LNG plant site about developing and distributing road safety materials.

This quarter, ongoing waterways safety awareness engagements were also conducted with villages in Kikori and the Omati River Delta. Messages focused on upcoming construction activities and the importance of staying away from construction vessels and activity. This was reinforced through a theatre program in September, with the Project's own drama group performing plays at villages in the Omati River Delta, Kikori, Kaiam and Gobe about safety awareness and community safety. In addition, the Project's Socioeconomic team was engaged by the Offshore Pipeline contractor to help keep non-Project personnel from entering offshore worksites.

Meanwhile, villages along the onshore pipeline were involved in sessions about safety near construction activities and the dangers associated with the heavy equipment used along the onshore pipeline Right of Way (ROW).

In Komo, unauthorized access into the Komo Airfield site is a potential risk for community members, so this quarter the Project undertook measures to minimize this risk. For example, vehicle access tracks built around the southern and northern ends of the site encourage travel around the perimeter rather than through the worksite. In addition, local residents are being employed to patrol the Airfield perimeter fence and repair holes as part of a community-based initiative to discourage trespassing. The Socioeconomic team also assisted the Komo community with re-establishing a leadership forum to better deal with community concerns. Known locally as the Community Issues Committee, one of the foremost tasks of the forum is minimizing the risk of clan members cutting the fence and gaining access to the construction site.

5.6 Community investment

The Project's investment in community initiatives is intended to promote economic growth and create positive and sustainable outcomes for communities in the Project Impact Area.

5.6.1 Community Investment and Contributions Committee

During the quarter, the Community Investment and Contributions Committee approved two new concepts and one new proposal for Project-funded community support activities. The Committee also considered two additional concepts that required further assessment be undertaken by the proponent before re-submitting the concepts for consideration. The two approved concepts are being developed into fully scoped, budgeted and scheduled formal proposals for final consideration by the Community Investment and Contributions Committee. Meanwhile, an approved proposal for a women's training center at Lake Mabuli, near the HGCP, is undergoing final design work before materials are sourced and construction undertaken.

Rapid Implementation Projects

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

Classroom upgrades and the provision of desks, toilets, sports gear and a safety fence for schools were some of the Rapid Implementation Projects completed this quarter along with sponsorship of a cultural festival and the provision of sports equipment to communities to help them celebrate Independence Day. Payments were also made to communities to help clear and repair roads.

A total of 48 new Rapid Implementation Projects were approved in the quarter, resulting in 83 projects approved out of the 115 projects proposed by the Socioeconomic team to date. Of the newly approved Rapid Implementation Projects, 40 are located in the Upstream North area, seven in the Upstream South area and one in the LNG plant site area. Fifteen of the approved Rapid Implementation Projects for the Upstream North area target communities along the Highlands Highway, particularly through support for schools.

A lesson on how to save lives

Redscar High School students and teachers throughout the LNG plant site villages now have the skills to help save lives in emergency situations thanks to Project-sponsored Basic First Aid training.

A group of 18 students from Redscar High School in Porebada and 20 teachers from ten schools in the LNG plant site villages participated in St John Ambulance Basic First Aid certification courses, learning skills in areas such as Cardiopulmonary Resuscitation (CPR), applying bandages and administering treatment for snakebites.

Seventeen-year-old Gari Kokoro said: "Learning how to treat a snakebite was my favorite part. There are many people that get bitten by snakes in the community. Before, we didn't know how to treat them but now we do. One day I want to have a good garden of my own. There can always be snakes in the garden, or other accidents can happen, but now I will be prepared for anything! This training has been great."

St John Ambulance trainer Jack Arua said: "I've been a trainer for six years and I really enjoy teaching children like this – they have been excellent students and by giving them this knowledge, they will know how to make the right safety decisions in the future. Learning these skills will become part of their lives. They will be able to use them in the home and at school. This is how you build a community."

Redscar High School science teacher, Genevieve Arere, said the combined first aid training course held for teachers from all LNG plant site villages was also beneficial and gave the teachers a rare chance to engage with each other.

Students practicing first aid techniques

Many Rapid Implementation Projects are targeting the provision of locally made school desks for Papua New Guinean schools. This type of project underlines the importance of education, getting children off the often damp, earthen school floors and enabling them to sit and learn comfortably. It also benefits local companies commissioned to build and deliver the desks to schools.

5.6.2 Community Development Support Plan

Community development support activities contribute to the three key components of the Community Development Support Plan. These are: Strengthening Social Resilience, Local Economic Development and Community Capacity Building.

Strengthening Social Resilience

Education was the focus of community support activities during the quarter. A highlight was the judging of the *Kastom Stori/Sene Gori* competition, which invited school students to submit stories and artwork that reflected Papua New Guinea's national culture. Launched in the first quarter 2011, 26 schools across the Project area participated in the competition, submitting a total of 3,700 stories and pictures.

An external panel of judges from both the public and private sectors in Papua New Guinea was engaged over two days determining the competition's winners. They were: Nora Vagi Brash, a well-known Papua New Guinean playwright; Fegsley Risapi from the Papua New Guinean National Department of Education; and Michelle Smith, author of the Toea series of books; Peter Leo Ella from the University of Papua New Guinea press; and Natalie Pidik, a creative arts specialist.

Prize categories for the competition included: Winning schools, Top 5 entries, and Top entrant.

The winning schools were: Lea Lea Primary School, Kikori Primary School, Don Mosely Primary, Kutubu High School, Waro Primary, Idawi Primary and Tari Primary School. They will each receive a commemorative plaque and 10,000 Kina (US$4,465) of school supplies.

Plate 5.5 – Henry Mano, Socioeconomic team, with children and desks at Tengo Primary School in the Upstream South area

Plate 5.6 – Peter Graham, Managing Director, Esso Highlands Limited awarding Greg Koaba, Headmaster, Lea Lea Primary School, a plaque for being one of the winning schools

Every student who entered the competition will receive a certificate of participation to recognize their effort.

This quarter, the third series of Toea books, called Toea's Hiri Adventure, was completed, along with the second Toea Project Interface children's book focused on health and hygiene. The health and hygiene activity book contains songs, educational games, coloring in and key health messages for children.

Plate 5.7 – Third book in the Toea series – Toea's Hiri Adventure

Building on initiatives with schools in the Project Impact Area, the Project is strengthening its support of the Papua New Guinean education sector.

For example, at the LNG plant site, the Project supported the Central Province Education Board and Hiri District Education Office by organizing Board and Financial Management roles and responsibilities training, and a Teacher In-service session for the professional development of teachers.

In the Hides and Komo areas, the Project helped facilitate a meeting for the Tari Pori, Koroba Kopiago and Komo Magarima district head teachers from 17 primary schools. The outcome of this meeting was a plan for implementation of the region's School Learning Improvement Plans.

Local Economic Development

Economic development initiatives created at the beginning of the year progressed this quarter. For instance, through partnering with Cashew International Limited, 15,000 trees were distributed in the four LNG plant site villages (Boera, Papa, Lea Lea and Porebada) to individuals who received practical training on how to plant and manage the trees. Monitoring of the interest in this project from local communities indicates requests are likely to be received for another 60,000 trees.

Meanwhile, the Project continues targeting economic opportunities for women (refer to *Case Study One – Driving the Papua New Guinean economy by empowering women*).

Connecting generations

"The children really like this *Kastom Stori* idea. As Headmaster, I like it because it does more than preserve our culture for future generations. We use the stories as a tool for literacy to improve spelling and grammar." — Alex Aka, Headmaster, Boera Primary School

Preserving community culture in a time of change

Storytelling plays a vital role in the community life of Papua New Guinea. Many of the 800 languages of Papua New Guinea have no written form, so oral tradition passes the culture of the people from generation to generation.

The Project's *Kastom Stori* contest was designed to help preserve local culture by encouraging children to interview their elders so they could learn traditional stories and write or draw pictures about the stories they heard.

The story of the first *lagatoi*

Artist Kohu Muri (left), showing his granddaughter Heni Litau (right) and wife Auda Aua (center) the story of the *lagatoi* using pencil drawings he has created: "This story is important because people were starving here, fishing was bad and they were eating bush yams and mangrove fruit and nuts."

One story captured is that of the first *lagatoi*. "The fisherman Edai Siabo went out but was not catching anything. A storm came, with lightning, and he was going to drown. But a good spirit eel saved him in an underwater cave. Siabo's spirit came back here with the vision he received and shared the way to make our first sailboat. This sailboat helped our village to survive by making it possible to trade pots and other things with villages around the gulf."

Granddaughter Heni Litau (right) said: "I like to hear the stories, especially about the *lagatoi*. Everybody does. It is the history of our Motu clan. By writing down the story and having my grandfather's drawings, I can share the story with my own children."

During the quarter, this included involvement in the first Country Gender Assessment workshop with the Papua New Guinean Government, development partners (including the World Bank, United Nations and AusAID – the Australian Agency for International Development), civil society and other private sector organizations. The Assessment aims to develop an informed understanding of gender-related barriers to poverty reduction and sustainable, inclusive economic growth to aid Government policy development.

At the same time, materials for the construction of the Delta Green Field Marketing Women's Group nursery in the Omati area arrived in Kikori. The nursery will enable local women to obtain knowledge and practical experience with new varieties of fruit and vegetables for supply to Oil Search Limited and Project construction camps in Kikori. In the Gobe-Samberigi area, support was provided to the Samberigi Polapa Women's group to help them develop a vegetable nursery and training program for women living at the Samberigi Mission station.

Plate 5.8 – Socioeconomic team member distributing cashew seedlings at Porebada Village

Ongoing discussion with the Barging Route Waterways Memorandum of Understanding Committee resulted in each of the eight clans identifying their top priority infrastructure project. Five clans nominated a portable sawmill which would enable them to produce their own sawn timber, and construct and repair their own schools, community facilities and houses. Two of the clans identified rainwater collection and storage systems for existing buildings, to help ensure safe and clean water supplies for their communities. One clan requested a community meeting hall. A formal proposal for this support was prepared and submitted for consideration by the Community Investment and Contributions Committee.

Community Capacity Building and Partnerships

In July, the Project sponsored two Papua New Guinean women leaders at the Global Women in Management Training Program, facilitated by the Centre for Development and Population Activities in Washington, DC. The month-long program is part of ExxonMobil's Women's Economic Opportunity Initiative and is designed to prepare women leaders to assume increased responsibilities in their personal, institutional and community lives. The workshop includes training intended to bolster skills in program and financial management, leadership, fundraising and proposal development, strategic communication, supervision and advocacy.

Both Papua New Guinean delegates received special recognition at the global training program. Sarah Kuriva Kaipu, of Gulf Christian Services in Kikori, was awarded a small grant by the Centre for Development and Population Activities to bolster her work in building livelihoods and providing support services to women living with Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome. Turiza Tandago of Papua New Guinea's Angore Women and Youth Development Foundation was selected as the 2011 participant speaker at a reception that included senior United States Department of State and ExxonMobil officials.

Also in July, Papua New Guinean biomedical technicians, Phillip Kandaki and Onda Kupri, left for a six-month Medisend International Biomedical Equipment Repair Training Program in Dallas, Texas. The Project is funding these two technicians, from Kundiawa Hospital and Mount Hagen Hospital respectively, to participate in the Program. This training will build on the combined 30 years of experience that Philip and Onda have as biomedical technicians, and expand their knowledge of maintaining and repairing complex medical equipment.

Partnerships were also established during the quarter with AusAID's *Strongim Pipol Strongim Nation* program and the Entrepreneurial Development Training Centre to support the Project's community capacity building programs.

5.6.3 Strategic community investments

Several Strategic Community Investment projects are underway. During the quarter, the first payment was made to enable City Mission to begin refurbishing its headquarters, which houses around 40 youths and gives them a second chance at a productive life. Meanwhile, specialist materials were delivered to Port Moresby so that work replacing the Lea Lea footbridge can commence. The materials included stainless steel fastenings from Australia and long-life treated timber bridge support poles from Bulolo in Papua New Guinea.

Materials were also delivered to the Salvation Army's clinic at Papa for construction of housing for three health workers. In addition, materials were delivered to Kopi to enable work to begin on refurbishment of the Kikori Police Station and replacement of Kikori Hospital's existing rainwater collection and storage system. These two projects will be delayed because of heavy rainfall that has extensively damaged the road between Kopi and Kikori. Once the road is repaired, the materials will be moved to these sites so that work can begin.

Plate 5.9 – Road between Kopi and Kikori following heavy rainfall

5.6.4 Volunteer programs

This quarter, trainees at the Port Moresby Construction Training Facility finished building 50 desks for donation to schools in the LNG plant site villages.

Case Study One

DRIVING THE PAPUA NEW GUINEAN ECONOMY BY EMPOWERING WOMEN

From leading one of the world's large LNG projects to building a thriving jewelry and handcrafts business, women are playing a pivotal role in building Papua New Guinea's economy. Here are just a few examples of some of the women who are helping to change the face of Papua New Guinea.

Decie Autin

With more than 30 years of experience in engineering and project management, Decie Autin has worked on some of the world's most significant oil and gas projects. As Project Executive for the US$15 billion PNG LNG Project, Decie is also actively involved in programs designed to help empower women in Papua New Guinea.

Decie Autin, Project Executive, Esso Highlands Limited

Five minutes with the Project Executive

Question: What attracted you to a career in engineering and project management?

When I graduated in 1980 there was a big push for women to go into engineering from our industry, so there were many opportunities available that were attractive to women. In terms of project management, I was a facilities engineer working on the Lena Guide Tower Project in the Gulf of Mexico, which sparked my interest in this field and I really enjoyed the feeling of accomplishment after a project was completed. When ExxonMobil established a specialized business unit to focus on developing projects (ExxonMobil Development Company), I became a founding member of it.

Question: You have worked in locations around the world. What do you find different about working in Papua New Guinea?

Papua New Guinea is one of the most unique places I have worked. Having the opportunity to work in a country with such a wonderfully diverse biodiversity and strong national culture as Papua New Guinea is a fantastic experience. Sometimes the differences bring challenges, but they also bring opportunities. It is exciting to be leading a project that provides so much opportunity to PNG communities and to the nation as a whole. This Project is also very important to ExxonMobil and our Project participants as we work together to bring natural gas from the Highlands to our customers in Asia Pacific.

Question: What is your view regarding building the professional and economic development of Papua New Guinean women?

This is very valuable, inside and outside our organization. Women bring a different perspective, approach and background, all of which are important for the Project and for the country. If you exclude women, you exclude half the population. Developing women means giving our teams a bigger range of opportunities to set a course and find success. For the long-term development of Papua New Guinea, empowering women has to be part of our legacy.

Question: What advice would you like to share with Papua New Guinean women?

The best advice I have received is that you can do anything you want. Decide what your priorities are and pursue them. You'll have challenges – that's part of it – but you work around them and remember that you can do anything you set your mind to. All the answers aren't always clear at the beginning but keep pushing and don't let anything stand in the way of your goal.

Decie at a Project worksite

Decie at the launch of the Women in Energy Network

Case Study One

DRIVING THE PAPUA NEW GUINEAN ECONOMY BY EMPOWERING WOMEN

Sweta Sud

Sweta Sud, Executive Director, Enterprise Centre

As Executive Director of the Enterprise Centre, Sweta Sud enjoys helping Papua New Guinean nationals grow successful businesses.

Sweta particularly enjoys the opportunity to help Papua New Guinean women who share her passion for business.

"Through my prior research on the socioeconomic impact of businesses on the population of Papua New Guinea, I always felt that inherent in Papua New Guinean businesses is the need for capacity and nation building," Sweta said.

"The PNG LNG Project's initiative to establish an Institute of Banking and Business Management Enterprise Centre caught my attention and is something of which I desired to be a part."

A seasoned executive with more than 14 years of senior management experience in oil and gas, engineering, manufacturing, logistics and the Information, Communication Technology sector, Sweta has played a pivotal role with the world's leading organizations in India, Singapore, United Arab Emirates (Dubai), Malaysia and Australia before moving to Papua New Guinea. She is using her own experience to help build business opportunities for women in Papua New Guinea.

"Several niche business opportunities for women entrepreneurs, women business owners and work-at-home moms exist in the import-driven market place of Papua New Guinea," Sweta said.

She said this included limitless opportunities for home based produce such as bakery items, tailored clothing and fashion accessories, trained nanny services and arts and craft skills.

"The Enterprise Centre was formed in 2010, and since then we have provided relevant training, information, tools, networking opportunities and advice that has helped hundreds of Papua New Guinean women. Going ahead, "We must be seen and found to survive.". This statement is especially true for women-run businesses in Papua New Guinea today," Sweta said.

Sweta considers the Enterprise Centre's long-term role as a resource for information and networking for businesswomen to help them build successful businesses and happy families.

Florence Bunari

Florence Bunari, small business owner and scholar for the Global Women in Management Training Program

Florence Bunari, from Uiaku Village in the Northern Province of Papua New Guinea, is a success story. She started making jewelry and handcrafts as gifts for her family and friends in 1998. Following advice from a Sepik lady and her aunty, Florence began to sell her handcrafts and built a street vendoring business with her family. In recognition of her efforts, Florence was awarded a scholarship by the Project to attend the Global Women in Management Training Program conducted by the Centre for Environment and Population Activities (CEDPA) in Jakarta.

Florence said it was at the Management Training Program where she learned about business and financial management.

"My training by CEDPA was a huge encouragement that I needed," she said.

"There was a particular session we had on Appreciative Planning and Action. I've used this approach to venture into areas I was not brave enough to take before. As a result I feel empowered to make my small business grow. Currently I'm on my third trial of this approach and it has definitely made my small business become strong."

Florence said that while she is focused on refining her marketing strategy, she is looking forward to the future for her growing jewelry and handcrafts business.

"I would like to improve my production in quantity, variety and quality to satisfy my clients and hopefully make enough money to enable me to leave work and make it a full-time business," she said.

When she's not building her family's small business, Florence spends time doing charity work as a volunteer with Soroptimist International. This work includes: providing mentoring on life skills; leadership training; raising awareness of issues such as violence against women and children, human trafficking and Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome; and visiting hospitals to provide basic baby packs to mothers of new babies.

Case Study One

DRIVING THE PAPUA NEW GUINEAN ECONOMY BY EMPOWERING WOMEN

Christine Yango

Christine Yango, Stakeholder Engagement Team Lead, PNG LNG Project

Christine Yango never imagined that her teaching career would lead her to a senior Stakeholder Engagement Team Lead role with a US$15 billion oil and gas project.

But as one of 20 children of a tribal chief in the Southern Highlands region, Christine had a great start in learning how to stand out. After excelling in school and then completing university studies, she spent 17 years building her teaching career across many Papua New Guinean secondary schools.

Recognized for her talent mentoring staff and students, and her potential leadership abilities, Christine was appointed as a Senior Training Officer with Papua New Guinea's National Department of Education. This led to roles as an Overseas Courses Liaison Officer and then as a Teacher Professional Development Officer with the Department.

In 2010, Christine's experience led her to a Stakeholder Engagement Officer role with the PNG LNG Project where she liaised with communities in Project Impact Areas. Within a year, Christine was promoted to her current Team Lead role with the Stakeholder Engagement team.

"As a Stakeholder Engagement Team Lead – I provide a training and induction and mentoring role for the new officers that come on board," Christine said.

As part of her role, Christine provides leadership to the team by drawing up a weekly plan of activities and monitoring her team's progress with meeting targets, while ensuring activities are conducted in accordance with the Project's safety standards.

"I think I have the most important job here," Christine said. "In simple terms, I have to hold the hand of the Project and I have to hold the hand of the landholders, I have them both and we have to cross this critical bridge and get them both to the other side – and that's my job."

"I don't just wear the uniform. I really believe," she said. "This Project is like an egg on my palm what if it breaks before it hatches? I feel very responsible; I just want to keep working until it's done."

When Christine is not working on the PNG LNG Project, she likes to spend her time reading books, meeting new friends, watching rugby, helping people who are in need, and going to church.

6 Compensation and Resettlement

While the Project aims to avoid the physical or economic resettlement of Papua New Guinean communities, where resettlement is deemed necessary, international best practice is applied when engaging with affected communities. This is achieved in accordance with practices defined by International Finance Corporation performance standards on environmental and social sustainability, in conjunction with the laws of Papua New Guinea.

6.1 Compensation

The Socioeconomic team continues negotiating with customary landowners to obtain access to land required by the Project. Working with clan members, ten new In-Principle Compensation Agreements were entered into.

However, the primary emphasis in the third quarter was signing Clan Agency Agreements and making statutory compensation payments. Thirty additional Clan Agency Agreements were signed with 20 clans receiving compensation totaling approximately 1.7 million Kina (US$0.76 million).

Plate 6.1 – Female clan member signing Clan Agency Agreement

In the Upstream North area, 5 of the 11 major clans on the Komo Airfield received their statutory compensation payments, and an additional two clans signed the Clan Agency Agreement with payments anticipated in the fourth quarter 2011. In the Hides area, meetings were held with six sub-clans who are the landowner groups for half of the HGCP site. Clan agents were identified and it is expected that Clan Agency Agreements will be signed in the fourth quarter 2011 and payments commenced. Signing of Clan Agency Agreements for the clan with rights to the second half of the HGCP site is contingent on them resolving internal issues over sub-clan land boundaries.

In the meantime, the Project has access to the entire HGCP site, and no issues are expected. In the Upstream South area, the Socioeconomic team signed 23 Clan Agency Agreements with the clans along more than 100 kilometres of the onshore pipeline. Fifteen clans between Kaiam and Omati received statutory compensation. Payments will be processed for the remaining clans once construction reaches the respective areas and impacts can be assessed.

The statutory compensation process – collaborating with the community

The Project is committed to safe, fair and transparent distribution of statutory compensation, with a number of processes to facilitate open communication and fair distribution:

Clan meetings

Meetings are held with clan members in their communities to discuss Project land requirements, compensation rates and clan agent selection. Once agreement is reached with clan members, agreements such as the In-Principle Compensation Agreement and Clan Agency Agreements are signed.

Clan agents

Under the Papua New Guinean *Oil and Gas Act 1998*, the Project is required to pay clan representatives the compensation owed to the clan. The Socioeconomic team works with clan members, over several months, to identify and agree on clan agents. These clan agents are then appointed at a formal public meeting where the Clan Agency Agreement is signed. Clan members understand that the clan agents are responsible for distributing the statutory compensation payments.

Independent observer

Lawyers from the Environmental Law Centre represent the interest of the clan, providing advice to clan members throughout the statutory compensation process. The Environmental Law Centre lawyers attend clan meetings where they explain the rights of the clan and answer any legal questions. Additionally, they witness the execution of Clan Agency Agreements where clan agents are appointed and statutory compensation amounts acknowledged as well as act to ensure all clan members knowingly and freely enter into all agreements.

Payment of compensation

Once a clan signs an agreement to receive their statutory compensation, clan agents work with clan members, sometimes over several months, to determine how the funds will be distributed under customary land principles. Although the Project cannot dictate how funds are distributed to clan members, clan agents are required to submit a cash distribution plan to the Socioeconomic team. This is used to pre-package the funds into individual envelopes, which helps facilitate distribution to clan members by clan agents.

In the village

Clan meetings are held and clan payments are made in the relevant village whenever possible, ensuring clan member awareness and participation. If payments cannot be made in the village, they are made in a secure location in front of witnesses so clan members are aware their clan agents were paid.

Although the Project is not required to provide compensation related to surface water, it has opted to engage with the Kerewo people regarding potential impact to waterways and to pay compensation to ensure a consistent and fair approach for impacted areas.

In July, a major In-Principle Compensation Agreement and Clan Agency Agreement was signed for the Omati waterways by members of the Kerewo clan. These agreements document the Project's commitment to compensating clans along the Omati River for any loss of access and enjoyment during offshore dredging and pipe laying. Construction started in late September and compensation payments are scheduled for early October 2011.

Plate 6.2 – Lawyer from the Environmental Law Centre witnessing Clan Agency Agreement signing

6.2 Resettlement

The Project's resettlement program is successfully implemented at many worksites with affected people from these locations now benefiting from the livelihood restoration phase and included in the monitoring and evaluation process. The monitoring and evaluation process will confirm that Project goals related to restoration and improvement in the welfare of affected people are achieved and indicate the need for any course corrections.

One of the challenges faced by the Resettlement team in many Project areas is the construction of speculative structures in an attempt to illegally profit from the program. In accordance with guidance under Papua New Guinean law, speculative structures are defined by the Project as any structures that were built within the Project Impact Area after the disclosure of the cut-off date.

6.2.1 Milestones and progress

Resettlement activities continued during the quarter, with particular emphasis on access roads, Timalia River Borrow Pit, spoil dumpsites along the Hides Quarry Road, the Hides Vehicle Staging Area and the onshore pipeline in the Moro area.

Milestones achieved in this quarter included:

- Completion of Communal Resource Plans for Caution Bay, the Omati River offshore pipeline ROW, Daware Camp and the Wellpad Spineline and Wellpad Access Road.
- Completion of a Resettlement Action Plan for the Hides Vehicle Staging Area and addendum for the spoil dump sites at Hides.
- Full land access provided to contractors at the Timalia River Borrow Pit.
- Land access provided to Hides Quarry 4 (addenda to Hides Quarry 1/Hides Quarry 3 and Access Road).
- Resettlement survey and planning activities commenced on a number of new sites including access roads and onshore pipeline sections such as Kilometre Point 0 to Kilometre Point 10.5, Kilometre Point 65 to Kilometre Point 80 and the Homa/Paua area.
- Post-resettlement monitoring activities included analysis of the first round of socioeconomic surveys at Hides and Komo.

Figure 6.1 provides an overview of the status of key resettlement activities during the quarter.

6.2.2 Highlights, achievements and lessons learned

The following activities took place during this quarter.

Komo Airfield and HGCP: The last remaining house at HGCP was dismantled and livelihood restoration and monitoring continued in the area. The Komo Nursery expanded propagation of sweet potato varieties and began livestock demonstration programs with chickens and ducks. Satellite demonstration gardens for vegetable production were established in the Komo and Hides areas. Planning of the east-west road along the southern boundary of HGCP continued.

Kopeanda Landfill: Construction of three communal water sites was completed with two more planned once landowners decide on final locations.

Hides Quarries: An additional four communal water sites were constructed near the Hides Quarries and rations delivery was completed.

Pipeline camps and components: The Communal Resource Plan was completed for Daware Camp (near Lake Kutubu). Garden surveys commenced in advance of a Communal Resource Plan for the onshore pipeline from Kilometre Point 65 to 80. Garden and household surveys also began in the Homa/Paua area (Kilometre Point 50 to 65) and in preparation for the onshore pipeline from Kilometre Point 0 to 10.5 prior to a Resettlement Action Plan being developed. Payments for gardens situated along the Kutubu to Kantobo section (Kilometre Point 80 to 153) were completed.

Timalia River Borrow Pit: With all housing and newcomer agreements signed, structures were voluntarily dismantled by the owners and quarry operations commenced on a phased basis. Ration deliveries, livelihood and monitoring programs are underway.

Livelihood Restoration: Following on from the successful event held in Komo last quarter, two farmer 'field day' exhibitions were held at Hides and Kopeanda Landfill, informing local communities about new technology, for example, techniques related to vegetable production. Sweet potato cuttings, orange and mandarin seedlings, pineapple suckers and other seeds including cucumber, pumpkin, corn and other vegetables were also distributed.

To date, nearly 19,000 cuttings of sweet potato have been provided across 11 resettlement areas.

Training was also conducted with over 500 women from ten women's groups in the Hides and Komo areas, focused on baking and food preservation. In addition, 13 drum ovens were given to the groups and another nine will be distributed next quarter.

Figure 6.1 – Status of key resettlement activities

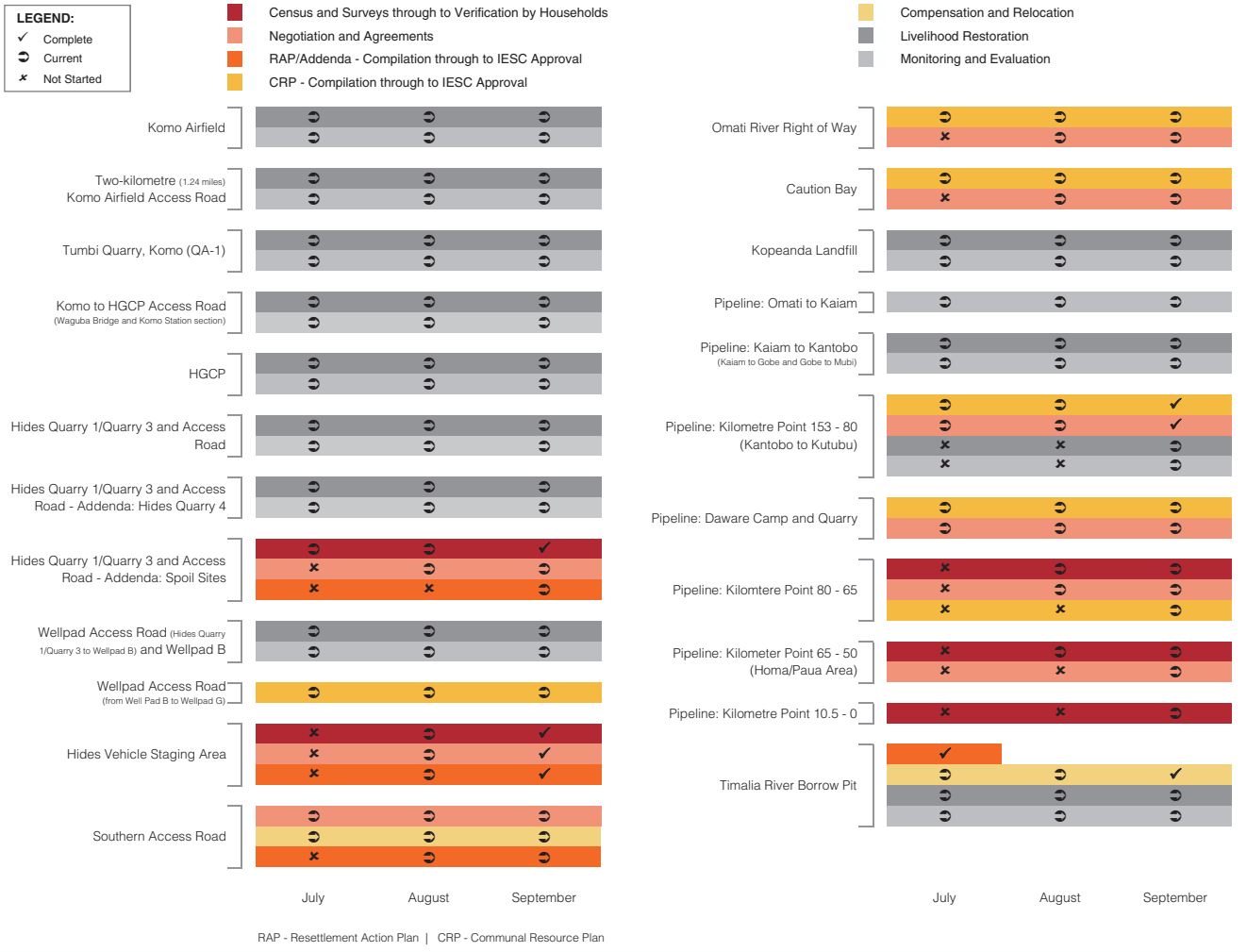


Plate 6.3 a-b – Women displaying their new baking products (left), cooked in the drum ovens (right) delivered as part of the livelihood restoration program

7 Workforce

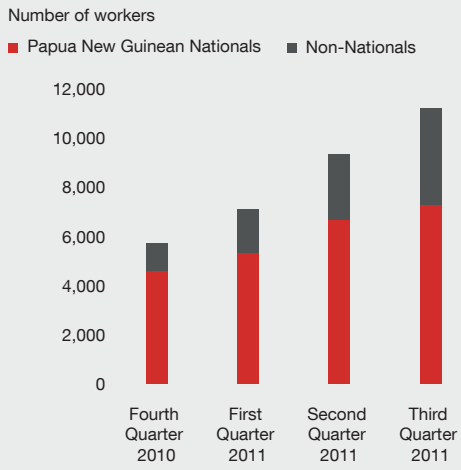
In accordance with the Project's National Content Plan, the Project is providing employment and training opportunities to Papua New Guinean nationals, and developing the skills of its workforce to meet the demands of construction activities.

7.1 Development

The Project's workforce continues growing as construction activity increases. By the end of September, the Project workforce exceeded 11,000, with Papua New Guineans representing 65 percent of the workforce as shown in Figure 7.1. A total of 851 Papua New Guinean women are employed, representing 92 percent of all women working on the Project. For the purpose of this Report, workforce refers to jobs created through Project expenditure. For example, while the number of Papua New Guineans employed at the end of this quarter is greater than 7,200, the Project has engaged many more Papua New Guineans for various periods of time in line with construction needs. Approximately 48 percent of Papua New Guinean workers are sourced through Lancos.

With most major construction contractors now on location, the workforce growth rate is steadying, showing an increase of 20 percent this quarter compared to the second quarter 2011. A shortage of skilled Papua New Guinean workers required the Project to source some skilled workers from other countries to meet construction demands, and these generally have come from the Asia Pacific region.

Figure 7.1 – Project workforce



7.2 Workforce training

The Project is actively working to develop the skills of Papua New Guinean workers through centers such as the Port Moresby Construction Training Facility and the Juni Construction Training Facility.

7.2.1 Construction training

Through continued focus on developing the Papua New Guinean workforce, the Project and its contractors have trained more than 6,000 Papua New Guinean citizens primarily for construction and support activities and some for future production roles. This equates to more than 700,000 hours of training delivered, with around 200,000 hours completed in the third quarter alone.

Project provided training

With many employees engaged on the Project for more than 12 months, the Project is offering refresher training to update skills. This quarter, training covered areas such as first aid, safety in uncontrolled environments and Job Safety Analysis training.

Ongoing training is also provided in areas that include: leadership skills, controls and business practices, as well as anti-corruption training. Safety Induction training remains a core component of the Project's workplace education.

Contractor provided training

Contractor provided training usually reflects the construction need of a particular contractor within their scope of work. It includes both on-the-job and formal training, ranging from safety induction training to leadership training. To date, Project contractors have conducted approximately 140 different types of training across all worksites. Courses cover topics such as: observation and interaction awareness, emergency response drills and planning, fire fighting, food safety for supervisors, painting and insulation, regulatory compliance and welding production processes, driver and operator, and waste management.

Forty Papua New Guinean nationals are participating in a 16-month scholarship program offered by the Offshore Pipeline contractor and facilitated by the Papua New Guinean Department of Works. This training is tailored to provide practical and transferrable skills that the trainees can use in the workplace or in their community.

Another nine Papua New Guinean Engineering graduates are receiving formal and on-the-job training with the LNG Plant and Marine Facilities contractor in Yokohama, Japan to prepare them for Project and LNG Plant roles upon their return to Papua New Guinea.

The Onshore Pipeline contractor's subcontractor has also established a training program focused on hotel services for managing a large construction camp. Personnel who successfully complete each section of the hotel services training program are awarded certificates, which detail the training modules completed.

7.2.2 Contractor workforce training

To date, the Port Moresby Construction Training Facility has trained more than 1,300 graduates, of which 31 percent are female.

The Port Moresby Construction Training Facility continues to train people from the four impacted LNG plant site villages of Boera, Papa, Lea Lea and Porebada, in basic skills and safety to assist in the construction of the LNG Plant. As the work progresses, training topics are changed to provide participants with the appropriate skills and knowledge. For example, this quarter, training focused on scaffolding and driving skills, as well as the civil construction and mechanical piping programs, to align with construction activities underway at the site. The Project's safety culture of *Nobody Gets Hurt* is core to all training programs.

The 11 Port Moresby Construction Training Facility trainers, all accredited by the Australian Quality Training Framework as instructors, are delivering training on demand for up to 80 trainees at any one time. In addition to this, they are visiting the LNG plant site to monitor and record the on-the-job training component to enable students to achieve Australian Technical and Further Education certification.

The Port Moresby Construction Training Facility has extended its scope to enable a catering services Lanco to train new employees in catering skills, food handling and hygiene. This training is completed prior to workers commencing work at the LNG plant site.

Almost all trainees who have achieved their Port Moresby Construction Training Facility qualification are already being employed at the LNG plant site. The training facility is also helping one Lanco with their recruiting and selection process for workers. Figure 7.2 illustrates the skills that graduates achieve through the Port Moresby Construction Training Facility.

Figure 7.2 – Graduate skill areas

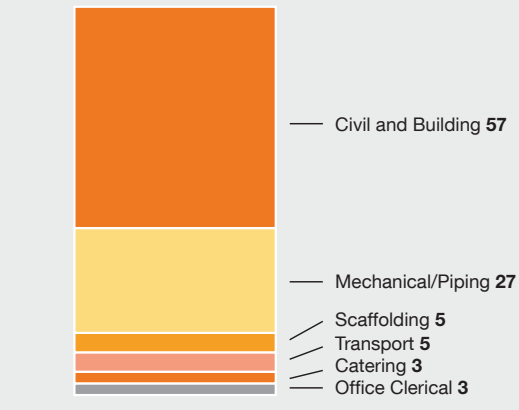


Plate 7.1 – Presentation of certificates of completion in driver training at the Port Moresby Construction Training Facility

7.2.3 Graduate programs

This quarter, the Project conducted employment advertising and interviews aimed at Papua New Guinean graduate engineers.

Successful applicants will be placed into ExxonMobil's graduate programs in Melbourne, Singapore and Port Moresby. They follow six Papua New Guinean employee graduate engineers who are one-third the way into their 18-month development program in ExxonMobil's Melbourne office in Australia. The graduates will gain valuable experience in: operations technical support; safety, health and environment; and global real estate and facilities.

Meanwhile, the number of Papua New Guinean graduates on contract to the Project in 2011 increased from nine in the second quarter 2011 to 13 in this quarter. Three of these contracted graduates are working at Project construction sites in the Highlands region and four are working at the LNG plant site. The other six contracted graduates are gaining experience in the areas of procurement, human resources and business controls.

Additionally, two Papua New Guinean drilling engineers continue working alongside experienced engineers in ExxonMobil's Melbourne office and two Papua New Guinean engineers are gaining experience within a multi-national work group with the Hides Gas Conditioning Plant and Hides Wellpads contractor engineering team in Singapore.

7.2.4 Operations and Maintenance training

During this quarter, more than 70 Production Operations and Maintenance trainee technicians commenced a six-month Basic Skills Training Program designed to introduce them to the fundamentals of the oil and gas industry. This Program builds on subject matter studied during their 12-month Foundation Skills Program. Both programs are conducted at the residential Production Operations Training Centre in Port Moresby.

For the Basic Skills Training Program, trainees study core disciplines of both Production Operations and Maintenance roles. The trainees have embraced the new Program and are developing a better understanding of the core processes related to the HGCP and the LNG Plant. They will share some of their learnings about oil and gas through 'Lunch and Learn' presentations to office-based Esso Highlands Limited employees.

In 2012, Operations and Maintenance trainees who meet the Program's academic and behavioral expectations will have the opportunity to spend one year in Canada completing Advanced Skills Training. This will enable them to return to Papua New Guinea for start-up and commissioning activities at the HGCP and LNG Plant.

The campaign to recruit the second intake of Operations and Maintenance trainees is now well advanced. Up to 76 trainees will be selected by early November 2011 and are expected to commence their training in January 2012. To qualify, applicants must meet the eligibility criteria of a B grade or above for English, Maths A, Physics and Chemistry. The Project is funding 24 Papua New Guineans to return to school for six months so they can improve their Year 12 results and potentially meet the eligibility criteria.

Plate 7.2 – Instructor, Ola Moseson explaining pipeline basics to Production Operations Training Centre trainees

Also during this quarter, the Project commenced recruitment of Papua New Guineans with operations and maintenance experience. Once recruited, they will be part of the initial operating team for the production phase and, after completing any required initial skills gap training, will receive facility-specific training prior to start-up of the HGCP or the LNG Plant. The experienced Papua New Guineans will play an important role in mentoring the inexperienced operations and maintenance trainees as they join the Project workforce after completing their Advanced Skills Training in Canada.

In addition, the Project's Internship Program is giving experience to 45 young Papua New Guinean men and women who missed out on last year's Operations and Maintenance trainee intake.

Through this Program, the interns are making worthwhile contributions to the Project in areas such as dispatch/ logistics, medicine and occupational health, local business development, land and community affairs and human resources. The interns who are currently working with the Project have all met the criteria to be reconsidered for the second Operations and Maintenance trainee intake.

7.3 Health management

Improved health program reporting and conformance is benefiting the health program implementation. With a clearer picture of health indicators, resources are being allocated to areas of greatest need. Key areas addressed in the quarter were clinical services, malaria and tuberculosis diagnosis procedures, and camp accommodation services.

Project Health managers and key subcontractors were also brought together this quarter for a two-day Health Managers Technical Workshop to discuss health program implementation strategies.

A number of assessments were conducted during the quarter, including health assessments for offshore vessels, Project-wide malaria and tuberculosis control program assessments, and Project-wide clinical capability assessments along with the introduction of contractor self-assessments.

7.3.1 Camp and contractor health support

Eight new self-assessment checklists were introduced across the Project for contractors, allowing them to conduct their own assessments on health program implementation and measure their conformance with the Project's minimum health requirements. The checklists cover topics such as malaria prevention, tuberculosis control, vector control, food safety, potable water safety, camp hygiene and sanitation, clinical operations, and industrial hygiene.

Results of the self-assessments are reported regularly and validated by Project health advisors during worksite visits. The results are providing valuable data for measuring strengths and areas for improvements in health program implementation by Project contractors.

In addition to contractor self-assessments, the Project's Health team completed on-site health assessments corresponding to the planned and scheduled work program on each worksite. Figure 7.3 illustrates the Health team's activities during this quarter.

Results of camp health inspections conducted this quarter indicated a need for improvement in the areas of clinical operations, industrial hygiene and food safety, as shown in Figure 7.4. Project activities in relation to these identified areas of improvement are outlined in the following sections.

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

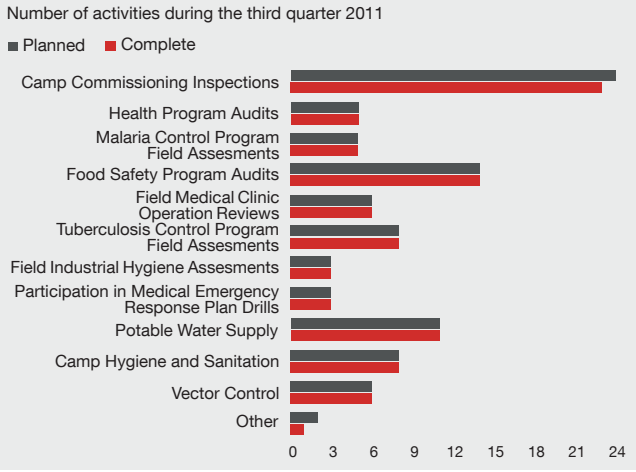
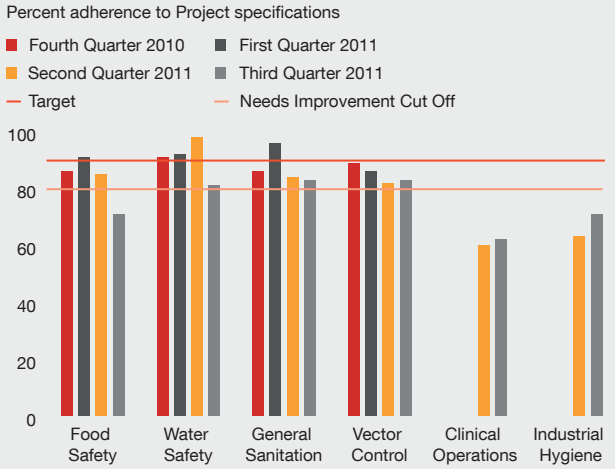


Figure 7.4 – Camps adherence to Project specifications by public health category



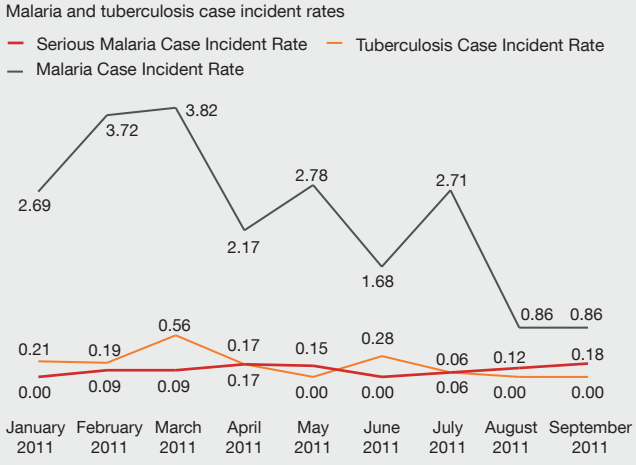
7.3.2 Leading and lagging indicators

This section covers both leading indicators and lagging indicators for numerous Project health criteria. Leading indicators are those where the Project is taking a proactive approach to the management of worker health, for example, the Malaria Control Program. Lagging indicators are those where the Project is required to respond to a health-related situation, for example, tuberculosis awareness-raising in response to an increase in tuberculosis cases.

Malaria and tuberculosis

The Project's management of malaria and tuberculosis resulted in a lower number of cases for both illnesses in this quarter. Malaria and tuberculosis incident trends for the year-to-date are shown in Figure 7.5.

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



NOTE: Malaria and tuberculosis case incident rates have been re-calculated to include all worksites. Previously, case incident rates only included Category 1 worksites. Health incidents included in the PNG LNG Quarterly Environmental and Social Report are based on the best information available at the time of publication. Health incidents are subject to an investigative process and this sometimes leads to incidents being re-categorized or an illness confirmed, following a detailed investigation, after the Report has been released. This means that the number of incidents reported against a particular category may increase or decrease between one Report and the next.

Malaria

A review of all serious malaria cases on the Project was conducted to determine reliability and accuracy of diagnosis for serious malaria cases. It was found that some malaria cases were incorrectly diagnosed. The review findings also revealed that diagnostic procedures were not consistently followed and some local laboratories tended to over diagnose. As a result, a reclassification of some existing serious malaria cases occurred and improved diagnosis and testing procedures are being implemented across the Project.

The Project also reviewed its Malaria Control Program and found that awareness and use of chemoprophylaxis was effective across the Project. Areas for improvement included the 'show me' verification process criteria used upon arrival and departure at all worksites, the need for more malaria awareness training on after hours clothing requirements, and improved visitor Malaria Chemoprophylaxis Compliance Program testing. On worksites where a need for improvement was identified, the contractor involved was required to develop a close-out plan, which will be monitored by the Project.

Compliance with the Malaria Chemoprophylaxis Compliance Program remains steady with the non-detect rate[1] of 0.9 percent for the year-to-date. This indicates that less than one percent of individuals tested did not show detectable levels of chemoprophylaxis.

Tuberculosis

A greater emphasis was also placed on tuberculosis diagnosis and testing this quarter. Two tuberculosis cases were confirmed and seven suspected cases were under investigation and awaiting test results at the end of the quarter.

1 A non-detect means chemoprophylaxis is not detected during testing.

An assessment of the Tuberculosis Control Program was conducted across the Project with contractors. It was found that contractors effectively conducted tuberculosis case management, contact tracing and workplace controls where a tuberculosis case was suspected.

Areas of the Program requiring improvement include pre-employment screening protocols, human immunodeficiency virus testing criteria, the quality control review of chest x-rays, identification of latent tuberculosis records and a review of accommodation requirements. The Project continues monitoring tuberculosis requirements with contractors on a monthly basis.

The confirmation of suspected tuberculosis cases remains a challenge because of the limited facilities available to conduct a diagnosis of sputum samples across Papua New Guinea's health system. Given samples need to be sent away to laboratories, diagnosis takes an extended time. People who are suspected to have the illness are immediately relocated from site to hospital for analysis.

Food and water safety

The Project is working with contractors to identify ways of improving food safety standards including an increase in qualified kitchen staff supervisors and better logistical support for supplies of food and kitchen equipment to the field. In addition, initial food safety assessments of offshore vessels arriving in Papua New Guinea indicate kitchen improvements are required. The Project will continue working with contractors to help them meet Project food safety standards.

Adherence to Project specifications for potable water reduced this quarter, largely due to contractors not being able to submit water samples to laboratories for routine analysis within the specified timeframes. Meanwhile, offshore vessels upgraded their water treatment systems to include chlorination disinfection to vessel water supplies.

Camp hygiene and sanitation

Camp hygiene and sanitation standards remain steady across the Project. The focus remains on improving ventilation in shared sleeping accommodation to reduce the potential for respiratory illness outbreaks.

Plate 7.3 – Workers applying hygiene standards

Vector control

Contractors are effectively implementing vector control programs across Project worksites. The Project and contractors are working toward increasing education and awareness raising efforts relating to vector borne illness prevention.

Resource room targets Vector Borne Disease

In August, a Vector Borne Disease resource room was opened at the Project's Head Office in Port Moresby to help the fight against diseases such as malaria, which are prevalent in Papua New Guinea.

The Vector Borne Disease resource room joins many Project health initiatives intended to raise awareness of disease prevention, the importance of early diagnosis and treatment as well as chemoprophylaxis use.

The room includes displays of Vector Borne Disease awareness information, malaria survival kits and mosquito bite prevention products such as insect repellent, mosquito nets and protective clothing.

The Project's Vector Borne Disease resource room is targeting malaria awareness

Clinical operations

The rapidly increasing contractor workforce – and the related need for pre-employment medical examinations – places demand on medical supplies including vaccinations, medicine and equipment, particularly in remote sites. The Project's medical provider is investigating alternative diagnostic options including using private medical facilities or developing an in-house capability.

Industrial hygiene

Training provided to LNG plant site workers during the quarter resulted in improved use of respiratory protection for activities associated with concrete batching plant operations. Notably this quarter, respiratory protection equipment is now being worn correctly by workers.

General illness events

No cholera cases were reported on the Project this quarter. Meanwhile, one case of the mumps was recorded in a Highlands camp, and as a result, camp workers and nearby residents were provided with information about the importance of vaccination against preventable infectious diseases.

Work-related medevacs and medical transfers

Medevac activity remained stable this quarter, with an average of five medevacs per month across the Project. Medical transfer activity increased significantly with 55 transfers this quarter. This increase is associated with clinic equipment mobilization lagging behind workforce mobilization, resulting in the need for off-site specialist medical care. A reduction in medical transfer activity is predicted over time as the large clinics become fully operational and the integrated health care model becomes effective in handling most patient medical needs.

7.3.3 Other strategic initiatives

The Project is progressing an integrated health care model and improving clinical diagnosis capability within Project clinics, as well as building the capacity of local health services (refer to *Section 5.4 Community health*). Building this local capacity will benefit the community and provide a medical referral location for Project personnel needing tuberculosis diagnosis and treatment.

7.4 Safety management

A Project-funded Safety Champions initiative commenced in September, providing selected Papua New Guinean workers with training and experience so they may positively influence a culture of safety in the workplace. Almost 200 candidates were selected based on their positive attitudes and ability to influence peers and model good behaviors within the workforce. The initial training session, for almost 50 candidates, was well received by the trainees. The course itself features the tagline *Pasin Barata,* which translates into English as 'Caring for my Brother'.
The initiative's key message is that good safety performance is not just about enforcing the rules – it's about influencing people. The Project is also investing in ongoing coaching to support the Safety Champions as they take this training into the workplace.

In addition to the Safety Champions initiative, the Project's safety management activities in the quarter included:

- A Safety, Security, Health and Environment (SSHE) Leadership workshop encouraging a safety culture among key Papua New Guinean contractors supporting the Project. Subtitled 'A Day in the Life of a Supervisor,' the workshop's objectives were to reinforce the Project's safety expectations, build safety leadership capacity and enhance understanding and application of safety fundamentals. Over 25 contractor companies were represented at the workshop.
- Two workshops with construction contractor executives and sponsor participation. Objectives were to share lessons learned from fatal incidents, develop fatal risk mitigation plans for each construction contractor, and focus the mindset of Project personnel towards mitigating risks associated with higher hazard activities.
- First Line Supervisor 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 300 personnel have been trained to date.
- Almost 200 personnel completing Field Safety in Uncontrolled Environments training for small teams performing work in remote environments. This training enables supervisors to plan work, prepare their teams to perform work safely, and respond to potential emergencies.
- Both Papua New Guinean workers and expatriates continue participating in cultural awareness programs, enabling them to implement the Project's safety management system effectively.

7.4.1 Leading indicators

As illustrated in Figures 7.6 and 7.7, the Project is achieving an ongoing positive safety trend through the use of 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.

7.4.2 Lagging indicators

The Project's Total Recordable Incident Rate continues to improve (as shown in Figure 7.8), while the Lost Time Incident Rate remains consistent with previous reporting periods. At the same time, Figure 7.9 shows the significant increase in Project work hours due to the increase in construction activity.

Plate 7.4 – Some awarded Safety Champions from the first session

Figure 7.6 – Job Safety Analysis trends[2]

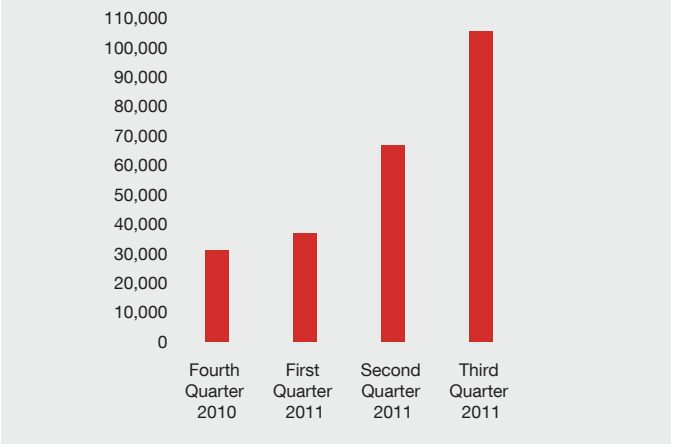


Figure 7.7 – Observation and Interaction trends[2]

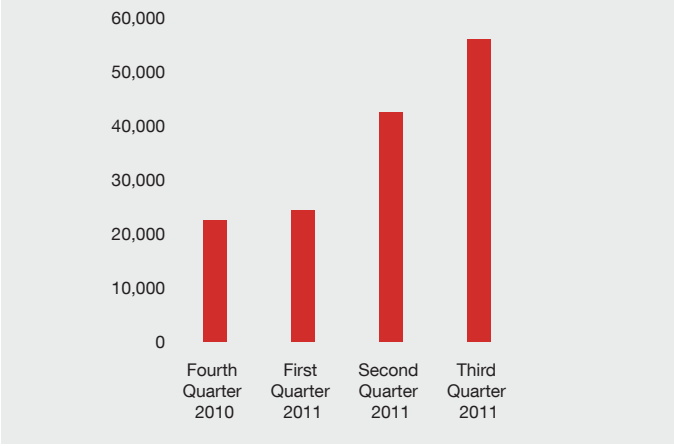


Figure 7.8 – Trend analysis[2]

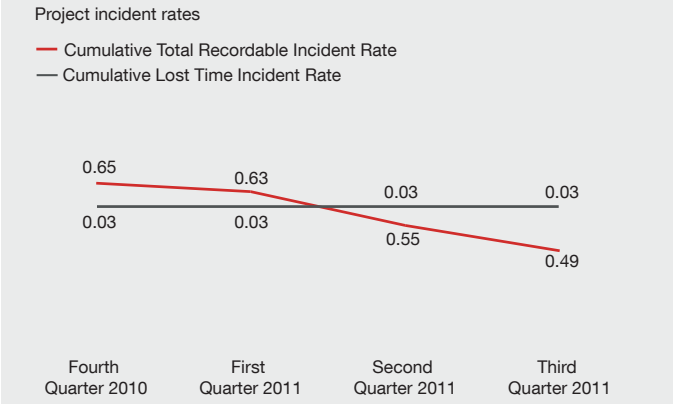
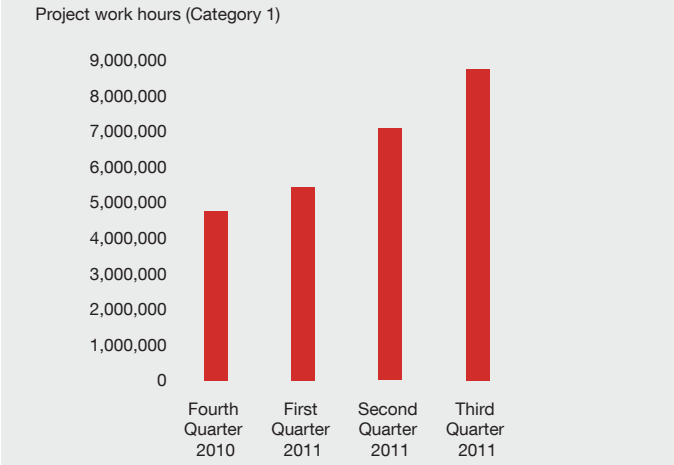


Figure 7.9 – Project work hours[2]



NOTE: Project-to-date work hours totalled 35,808,020.

7.5 Worker welfare and conditions

The Project and its contractors operate in accordance with the Project's Labour and Worker Conditions Management Plan and Camp Management Plan to maintain appropriate worker welfare conditions including a high standard of accommodation and on-site working conditions.

7.5.1 Camps

This quarter, the Project's improved camp standards were recognized by the IESC, which reported that the living and accommodation standards of the camps were of a high quality. The Project and contractors are working to ensure that mitigation efforts identified in camp assessments and through the Management of Change process are in place. A review of two camps during this quarter revealed seven non-conformances in the areas of: key camp standards, recreation facilities, grievance procedure, induction training content and attendance, and camp rules and regulations.

The Socioeconomic team is supporting contractors with continuous improvement in addressing and closing-out these non-conformances.

All Onshore Pipeline contractor camps are managed as 'closed' camps. This means that these camps are closed to the public. Workers must also remain within the campsite and sleep inside the camp area at the end of work shifts.

7.5.2 Labor and worker conditions

In accordance with ExxonMobil's global workplace and labor policy, the Project is committed to providing positive, productive and supportive work environments. Key to this is developing and retaining a highly talented workforce that is representative of the Papua New Guinea region.

2 Data adjustments may be reported by contractors after the Report is released, and as such safety data may be refined between one report and the next.

To achieve this, the Project and its contractors continue to work with Lancos to raise awareness and build capacity for conformance with the Project's Labour and Worker Conditions Management Plan.

While work is progressing in this area, four non-conformances were raised during the quarter relating to: pay resolution, policies and procedures, pay transparency, and recruitment policy and procedure.

A positive outcome was achieved in terms of labor and working conditions conformance with the formation of the National Workforce Committee this quarter. The Committee gives workers better representation and helps address concerns such as communications, pay processes and grievance management, which were raised during a work stoppage at the LNG plant site in the quarter. As a result of the work stoppage, the Project has taken steps to proactively improve the management of industrial relations including improved communications to workers.

Following the successful establishment of the National Workforce Committee at the LNG plant site, the Hides Gas Development Corporation in the Upstream North area formed a Worker Representative Committee to help manage worker grievances and industrial relations. Meeting on a fortnightly basis, this Committee offers an open forum where representatives can voice concerns to management as an alternative to the use of work stoppages for drawing attention to worker needs. To date, the meetings have been well received and there has been a reduction in the number of work stoppages due to industrial relations issues.

Meanwhile, the Socioeconomic team is progressing demobilization risk assessments as contractors complete their various scopes of work.

Plate 7.5 – Members of the Hides Gas Development Corporation Worker Representative Committee

8 Conformance

The Project uses systems of verification, monitoring, assessment and audit to manage conformance with environmental commitments outlined in the ESMP.

Incidents are investigated so causes can be addressed and non-conformances are recorded and tracked. This allows lessons from incidents and non-conformances to be shared throughout the Project. Management system requirements of the ESMP can be found at www.pnglng.com/commitment.

8.1 Verification

By the end of the third quarter, eight Project field environmental advisors were based throughout the construction sites to conduct verifications. These advisors are responsible for ensuring that all contractors understand and implement the Project's environmental requirements including the Project Environment Permit, Papua New Guinean laws and regulations, International Finance Corporation requirements and applicable international treaties and conventions.

Verification is accomplished through daily and weekly inspections, audits and environmental walks in conjunction with the construction contractors. It also involves weekly and monthly meetings, awareness raising and in-house training for contractor teams. The Project's Field Environmental team is supported by an environmental trainee who is responsible for maintaining verification data collected in the Project's IMS and an archeologist who records, tracks and manages the Project's cultural heritage items.

8.2 Monitoring

The Project's Environmental Verification and Monitoring Manual was formally implemented this quarter as part of continual in-field training. This Manual provides detailed procedures to ensure consistent and technically sound monitoring methods are applied across the Project.

Monitoring requirements of the ESMP and the Environmental Monitoring Plan are also progressively implemented through the individual contractors' environmental management systems.

The results of monitoring programs undertaken throughout this quarter are outlined in the following sections.

8.3 Assessments and audits

During this quarter, the IESC conducted its fourth site audit, spending 16 days visiting most active worksites and meeting with Project workers and members of Project impacted communities. The purpose of the visit was 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.

Meanwhile, the IESC's report from its third site visit conducted in March 2011 was released.

This report is available on the Project website in the environmental and social reports section.

In addition to regular inspections and verifications, contractors undertook independent audits and assessments of their activities. For example, the Upstream Infrastructure contractor undertook an audit specifically focusing on workshops in relation to spills, corrective action responses and the level of implementation. Meanwhile, the Komo Airfield contractor conducted targeted audits such as waste management, hazardous materials and weeds.

A Project assessment was conducted of the Offshore Pipeline contractors' works at the LNG plant site, and the LNG Plant and Marine Facilities contractors' works landfill and marine area. In addition, the Project's Field Environmental team completed verification inspections of all Project camps including Moro B Camp, Kobalu Camp and the Juni Construction Training Facility.

Joint site inspections involving Project, contractor and subcontractor representatives were also undertaken. For example, at the LNG plant site an inspection of sedimentation pond construction was conducted, with a follow-up inspection held two weeks later to check progress. A joint waste management assessment of the landfill, biodigester, medical waste incinerator and the interim waste storage transfer facility was also conducted at the LNG plant site. A similar joint inspection of the Waste Management Area of Kaiam Camp 2 was performed with the Onshore Pipeline contractor. The area was commended for orderliness and methods adopted for processing wastes.

8.4 Incidents, non-conformances and corrective action

8.4.1 Incident summary

There were no serious environmental incidents (greater than Severity Level 0) requiring Project or contractor notification to the IESC/Lender Group or the Papua New Guinean Department of Environment and Conservation this quarter.

There were 91 environmental incidents (less than Severity Level 0) reported during this quarter, which is 18 fewer than the second quarter 2011, and 44 fewer than the first quarter 2011. This decrease can be attributed to the continuous proactive efforts of the Project and its contractors to prevent incidents and spills. The recorded incidents were primarily spills of hydrocarbon and wastewater; however there was no hydrocarbon spill over 100 litres and the spill rate for two consecutive months was the lowest spill rate on the Project since January 2010.

Figure 8.1 illustrates these incidents, classified by severity.

All incidents are recorded and investigated to a level appropriate to the severity. Part of those investigations is to ascertain the causal factors. Figure 8.2 shows the causes of incidents for this quarter.

Figure 8.1 – Environmental incident summary

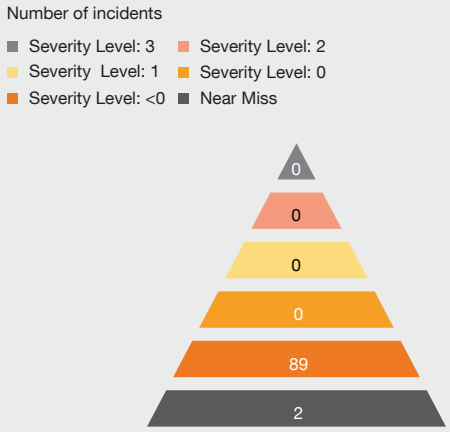
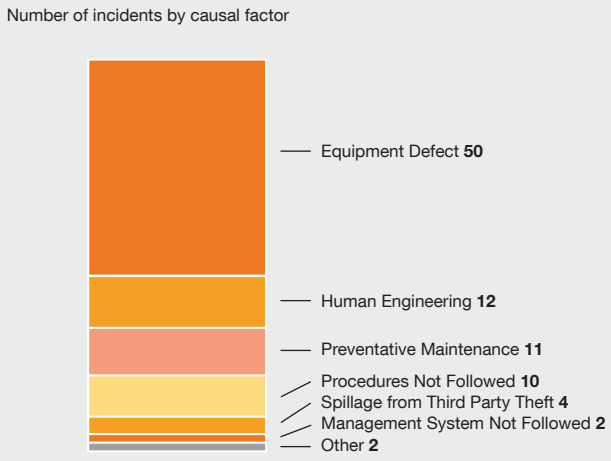


Figure 8.2 – Environmental incident and near miss causal factors



There were no Level 3, 2, 1 or 0 incidents this quarter. The largest spill reported was classified as a Level <0 incident. It occurred when a fuel truck, which was under service, was not adequately controlled by appropriate use of the 'tag out' energy control program. To prevent such an incident reoccurring, learnings were highlighted and shared across the Project through safety bulletins and toolbox talks.

8.4.2 Non-conformance and field observation performance

Field observations are part of ongoing verification efforts to ensure contractor conformance with environmental requirements at each worksite. Non-conformances are raised for environmental lapses where deliberate or repeated offences increase the level of risk of previously identified field observations or have the potential for immediate harm to the environment.

This quarter, 60 site verification visit reports across the Project were registered, from which a total of 255 field observations and four non-conformances were raised. There was a slight decrease in the total number of site visit reports, field observations and non-conformances when compared with the previous quarter because of work stoppages.

As part of its environmental commitments, the Project is required to provide a summary of Level II non-conformances and above. No Level II or Level III non-conformances were recorded this quarter. A summary of all non-conformances and field observations is outlined in Figure 8.3.

Most field observations and non-conformances were in relation to erosion and sediment control and waste management. More than half the number of field observations raised were closed by the end of the quarter. Through awareness coaching and daily site visits, the Project is working closely with each contractor to proactively address areas identified. The closure status for non-conformances and field observations reported this quarter are shown in Figure 8.4.

A total of 37 positive field observations were also made this quarter. Despite the heavy rains, many positive field observations were raised in relation to erosion and sediment control, with contractors taking proactive approaches to prevent such issues.

Compared with the second quarter 2011, field observations relating to spill response and prevention declined this quarter due to the implementation of proactive efforts from contractors. For example, the Onshore Pipeline contractor had no preventable spill for the last three weeks of September.

Figure 8.3 – Environmental non-conformance and field observation summary

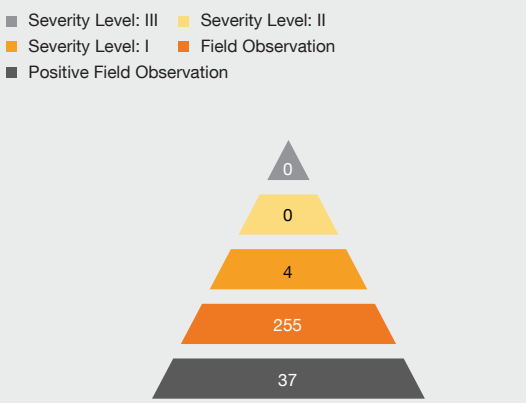
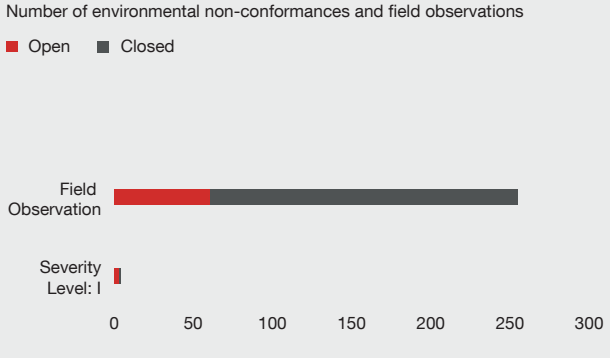


Figure 8.4 – Environmental non-conformance and field observation closure status



9 Pollution Prevention and Abatement

The Project continues finding new ways to minimize pollution and promote recycling of materials during construction activities.

9.1 Air emissions

Air emissions from Project activities are primarily related to dust generated from exposed soils, flue gas from waste incineration and machinery operation, and greenhouse gas emissions from combustion of fuels.

During the third quarter, rain persisted in the areas around Hides and the onshore pipeline works, so there was little requirement for dust control measures at worksites. However, water spray trucks were used for dust suppression at the LNG plant site where conditions were dry. The LNG plant site also focused on reinstating areas where construction work is complete to minimize both erosion and dust.

The Upstream Infrastructure contractor prepared for drier periods by drafting reinstatement plans for spoil dumps and revegetation plans for cleared areas (see *Section 10.5 Reinstatement*). Some sections of the road between the HGCP and Komo Road turnoff were sealed during the quarter, which will reduce dust issues.

Plate 9.1 – Newly sealed road between HGCP and Komo Road

The Upstream Infrastructure contractor also conducted verification and incidental inspections of incinerators, finding they were all operating efficiently. Environmental awareness training was undertaken with incinerator operators and supervisors, followed by supervisors leading additional training to reinforce operator knowledge and skills.

At the HGCP site, the commissioning of the first of two planned construction waste incinerators was postponed while damage sustained during transit was repaired. As an interim measure, the Hides Gas Conditioning Plant and Hides Wellpads contractor cleared a backlog of stored waste using three drum burners (with operations observed, monitored and recorded) as well as Upstream Infrastructure contractors' waste incineration facilities.

All construction contractors monitor incineration emissions and confirm whether incinerators are operating within their design specifications by tracking average incinerator combustion temperatures. All incinerators maintained their correct temperatures this quarter.

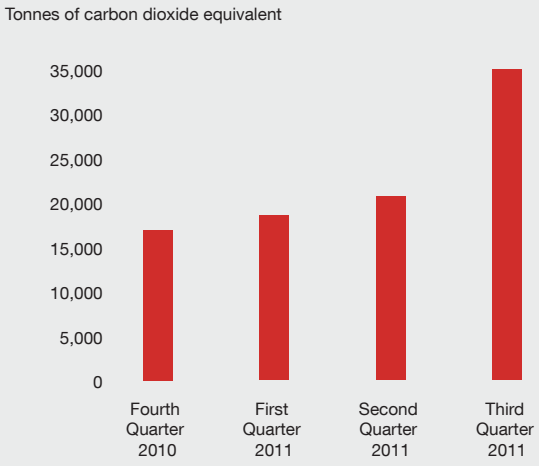
Overall, greenhouse gas emissions increased this quarter, reflecting greater construction activity and consequential fuel use. Greenhouse gas emissions are calculated based on direct fuel use within the Project. Indirect sources such as purchased electricity are not included. Greenhouse gas emissions from aviation and marine transport are calculated using transport conversion factors, and all other Project fuel conversion factors are based on stationary sources. Marine operations use automotive diesel, so emission factors are lower than the heavier marine fuels typically used in shipping.

This quarter, the Project's onshore and aviation fuel use equated to a greenhouse gas emissions value of 34,127 tonnes of carbon dioxide equivalent. This quarter also saw the first calculation of marine operations contributing 751 tonnes of carbon dioxide equivalent. Marine operations are set for a short and intense offshore campaign in the fourth quarter 2011 and first quarter 2012, and it is expected that emissions will increase accordingly over this time period.

Figure 9.1 shows the increase of Project-related greenhouse gas emissions.

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

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.

9.2 Noise and vibration

Noise and vibration monitoring across the Project footprint continues, particularly in semi-permanent accommodation camps. Vibration monitoring of airblast overpressure is required where blasting is undertaken near sensitive receptors.

The Project Verification teams continue to rollout the noise monitoring procedure as a verification measure.

Contractors also began noise monitoring, trialing measurement sites and methodologies. Contractor results showed that noise levels at all facilities were under Project noise level guidelines for industrial/commercial noise levels and residential/educational/institutional levels. The exception was Komo Airfield, where the noise level at Komo Main Camp was above the residential noise management guidelines. Further monitoring is being conducted to determine if these elevated noise levels are typical and whether measurement methods are correct.

Despite there being no blasting close to sensitive locations during the quarter, the Onshore Pipeline contractor undertook vibration monitoring as part of their daily activities.

One community grievance was recorded this quarter regarding noise on a public road near the LNG Plant from nighttime truck movements. There has been a growth in non-Project industrial parks in the area and vehicles from a range of communities and industries, including vehicles from the Project, use this road.

Recognizing these impacts on the community, the Project partnered with the Papua New Guinean Department of Works and a local civil works contractor to upgrade the road and erect traffic calming devices such as speed humps and signage. In addition, the Project continues monitoring its traffic through enforced speed limits including the use of radar guns.

9.3 Waste management

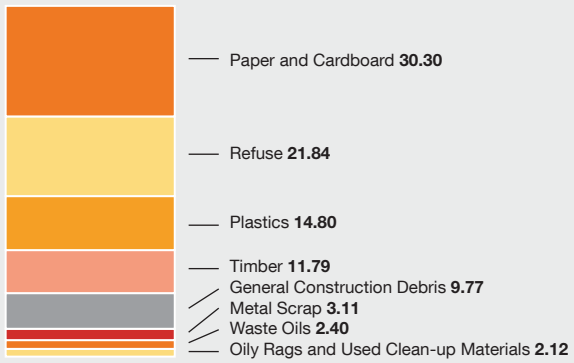
Activities identified in the Project-wide waste review completed in the first quarter 2011 progressed in this quarter. Construction of the Hides Waste Management Facility included the installation of the lined landfill, a wetland filter for the leachate treatment facility, laydown areas and facility roads. A second review of this facility's layout identified the potential to establish a secure, centralized, bulk waste storage site within the existing footprint. This augmentation will enable all Upstream construction contractors to use the storage site until the completion and commissioning of the Hides Waste Management Facility.

During this quarter, the Project assessed 11 Papua New Guinean companies to determine their ability to provide waste management services to the Project.

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.

Figure 9.2 – Solid waste by type

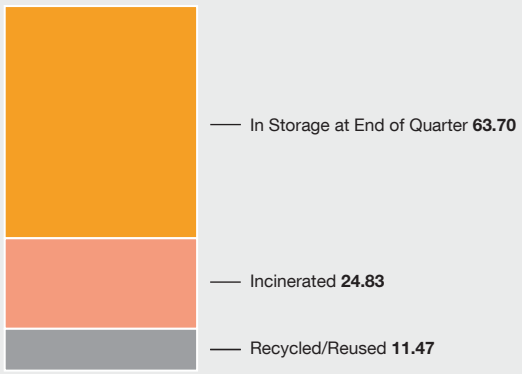
Percentage of solid waste by type



NOTE: The following waste types have a value of less than 2%: Tyres (Whole) [1.47%], Ash (Non-Restricted) [0.57%], Empty Containers (Restricted) [0.44%], Insulation [0.28%], Empty Containers (Non-Restricted) [0.24%], Filters (Restricted) [0.23%], PPE and Clothing [0.18%], Paint Waste [0.09%], Glass [0.09%], Batteries [0.076%], Medical Waste [0.069%], Oil and Chemical Contaminated Soil [0.061%], Electrical Goods [0.045%], Printer Cartridges and Toner [0.020%], Filters (Non-Restricted) [0.007%], Fluoroscent Tubes [0.002%], and Chemical - Spent/Unused/Contaminated [0.00006%].

Figure 9.3 – Waste by disposal method

Percentage of waste by disposal types



As part of the Upstream Infrastructure contractors' site demobilization at Gobe, scrap metals were transported to Port Moresby and waste oils to Lae for recycling and reuse at Project-approved recyclers.

During repair of an HGCP incinerator damaged in transit to site, the Upstream Infrastructure contractor assisted with managing the backlog of waste by allowing incineration at their facilities. HGCP waste was also burned in temporary drum burners and stored in shipping containers for future processing.

Plate 9.2 – Hides Waste Management Facility under construction showing grey lined landfill cell

Plate 9.3 – HGCP Waste Management Area with segregation bins under construction

The Hides Gas Conditioning Plant and Hides Wellpads contractor also commenced installation of a purpose-built Waste Segregation Area at the HGCP site. This will serve as a receiving depot for all Hides Gas Conditioning Plant and Hides Wellpads contractor wastes, enabling full sorting and segregation of all waste streams, prior to the completion and commissioning of the Hides Waste Management Facility. The Waste Segregation Area was designed with dedicated bunded areas for hazardous waste storage, partitioned waste sorting areas, storage hardstands and a vehicle washdown facility.

Also at the HGCP site, an interim HGCP Waste Management Area was established by the Upstream Infrastructure contractor, and two high temperature construction incinerators commissioned. The interim HGCP Waste Management Area supports both the Upstream Infrastructure and Hides Gas Conditioning Plant and Hides Wellpads contractors' construction efforts. It also boosts the incineration capacity in the greater Hides region, enabling improved maintenance of other incineration units in the area. In addition to the new facilities, waste segregation training was conducted for waste management crews, while other personnel received training on general waste management.

During this quarter, the Onshore Pipeline contractor introduced waste management areas at Gobe and Kantobo for sorting of waste prior to incineration or storage (for non-combustible waste). This adds to existing waste management facilities at Kopi Shore Base, Kopi Camp 1 and Kaiam Camp 2. The Kopi Waste Management Area supports the management of waste generated from the Kopi Shore Base activities and excess combustible waste generated from Kopi Camp 1. Most of the non-hazardous and non-combustible wastes (such as pipe end caps, metal shavings and plastics) produced at Kopi Camp 1 are transferred to Kopi Shore Base for storage prior to shipping for recycling or disposal.

The Kaiam Camp 2 Waste Management Area became fully operational during the quarter. All crushing equipment was functional with crushing activities showing up to 70 percent reduction in volume of the items crushed.

Management of all plastic, specifically wrapping to protect the pipe coating is ongoing. At pipe yards, all loaded pipe trucks are inspected for loose pipe wrappings and a crew removes loose wrappings. Plastic waste that can be shredded is transported from the ROW to the Kaiam Camp 2 Waste Management Area to reduce overall waste volume.

The Onshore Pipeline contractors beveling crew, who prepare the edges of the pipe for welding, was awarded the first 'environmental crew of the month' award in August. This is a new Onshore Pipeline contractor initiative where crews need to demonstrate sound environmental performance, including good housekeeping, having spill prevention measures in place, monitoring and maintaining sediment and erosion controls in their work areas, showing good waste management, and staying within the construction footprint.

Plate 9.4 – Onshore Pipelines beveling crew awarded environmental crew of the month

At the LNG plant site, the building of the sanitary landfill for the construction phase was completed and preparations were made for the start of operations in the fourth quarter 2011. Construction of the operations phase landfill is also complete. A waste wood collection area began operation in preparation for the donation of waste LNG plant site wood to four surrounding villages. The waste wood, mainly from construction packaging, is dismantled and nails are removed prior to transport to the wood waste collection area.

Scrap metal recycling also began at the LNG plant site this quarter, with the first shipment of 8.3 tonnes of metal scrap sent to a Papua New Guinean recycling facility. In addition, an aerobic biodigester was commissioned to process organic food wastes from the LNG plant site Pioneer Camp canteen to compost material.

Meanwhile, the LNG Plant and Marine Facilities contractor assisted with the treatment of sewage water from the Offshore Pipeline contractors' onshore operations at Caution Bay and made arrangements to receive non-hazardous wastes during offshore installation work.

9.3.1 Wastewater

Wastewater treatment plants continue being installed in new camps, decommissioned in closed camps and in some cases moved to new camp locations. Furthermore, the management of treatment plants at Gobe and Kantobo camps was transferred from the Upstream Infrastructure contractor to the Onshore Pipeline contractor during the quarter.

In addition to Gobe and Kantobo, the Onshore Pipeline contractor manages nine wastewater treatment units between three of their worksites. Two of these units were commissioned on a trial basis and are awaiting installation at Gobe Camp 3 once the camp is constructed. Other units from existing sites will also be transferred to Gobe Camp 3.

New wastewater treatment plants typically take up to three months to stabilize. During that time frequent in-situ sampling is undertaken to monitor and modify the performance of each unit. At the LNG plant site, a strong wind caused a sludge foam overflow, resulting in adjustments to the treatment plant operation. The foam settled in the containment area of the plant and had no environmental impact. During the start-up stabilization of the new wastewater treatment plant at the HGCP Pioneer Camp, a system failure resulted with a 7,000 litre overflow of primary treated effluent from a balance tank. The fluids did not extend beyond the treatment plant facility and were treated through the application of hypochlorite solution prior to site washdown. Investigations were instigated to determine the cause of the system failure and ongoing monitoring of nearby construction campsite drains is occurring as a precautionary measure to minimize environmental impact.

In the Upstream area, a specialized water quality team with local knowledge was formed by the Upstream Infrastructure contractor to improve the consistency in sampling methods and determine better access to sampling points. All in-situ effluent quality analyses for fully commissioned wastewater treatment plants across Project worksites were within wastewater monitoring criteria this quarter, with the exception of:

- Elevated bacteriological tests at Gobe. Plant operation and chlorine dosing was reviewed and there was no discharge off-site. Subsequent tests were within the required criteria.
- Onshore Pipeline contractor camps – Kopi Camp 1 and Kaiam Camp 2, and the Upstream Infrastructure contractors HGCP Pioneer Camp. At these sites, remediation measures such as increasing the frequency of cleaning ultraviolet lamps resulted in an improvement in treatment efficiency.
- Wellpad A, where an incorrect sample location was used. The correct locations met testing criteria.
- Komo Main Camp treatment plants, which registered elevated faecal coliforms. A wastewater specialist determined the issue was associated with the type of detergents being used in the Camp. These detergents were substituted and monitoring will continue.

In response to a water pollution grievance raised near the Moro B wastewater treatment plant an investigation was undertaken this quarter. The grievance was raised in an area with multiple water users and is expected to be closed-out during the fourth quarter 2011.

9.4 Hazardous materials

This quarter, the Onshore Pipeline contractors' field joint coating crew implemented a painting hood system, which prevents paint overspray from reaching the ground. The paint residue is collected and taken back to the camps for storage.

Meanwhile, the Telecommunications contractor removed spent batteries from site. The batteries were completely contained within weatherproof equipment rooms and were replaced with new units.

The approach of both these contractors is in accordance with the Project's procedures, which are in place to prevent the uncontrolled release of hazardous materials during transportation, handling, storage or use.

The Project also aims to avoid the use of hazardous chemicals and materials, particularly those that are subject to international bans or phase-outs. During the quarter, no materials subject to bans or phase-outs were reported to be on any Project site.

9.5 Spill prevention and response

Maintaining appropriate field awareness on spill prevention measures and implementing the necessary training to minimize both the number and volume of spills remains a priority for the Project.

The Spill Performance Improvement team strongly demonstrated the value of sharing lessons learned across the Project in spill prevention and response during the quarter. The team was formed in late 2010 and includes contractor construction managers and Project employees. The team meets monthly to discuss topics such as fuel handling and procedures, equipment checks, preventative maintenance and ways to avoid spill complacency.

The success of *Spills Nogat!*

In partnership with the Project, contractors continue taking up the challenge of minimizing spills across all worksites. This quarter, the Upstream Infrastructure contractor more than halved its number of preventable reportable spills thanks to the successful *Spills Nogat!* (No Spills) campaign.

The campaign involved multiple initiatives to reinforce spill prevention and response including placing *Spills Nogat!* commitment billboards around worksites, providing one-on-one spill prevention coaching, and implementing spill prevention training at pre-start inspections. In addition to more than halving the number of preventable reportable spills, this campaign achieved a reduction in hydrocarbon spills from 1,200 litres in the second quarter 2011 down to 120 litres in the third quarter.

***Spills Nogat!* signature board and spill prevention posters in a workshop**

Meanwhile, the Onshore Pipeline contractor introduced a certification process for workers involved in re-fuelling operations for plant and vehicles. Attendants who pass the assessment receive hard hat stickers that identify them as Qualified Re-fuelling Operators.

Kemaru Moroba, in hard hat with the Qualified Re-fuelling Operator sticker

Contractors continued to train on refueling procedures, the use of spill kits and spill response measures. Proactive observations on worksites highlighted the need to provide adequate spill response equipment for remote activities and the need to inspect and clean drip trays.

Oil spill response drills were also conducted by the Upstream Infrastructure contractor and the LNG Plant and Marine Facilities contractor during the quarter.

9.6 Dredging and offshore trenching

Dredging in the Omati River is required to create a shallow access channel for the offshore pipeline. In Caution Bay, trenching is also required to bury and protect the pipeline from shipping traffic. Material removed to create the trench needs to be stockpiled for five months in Caution Bay before it can be used to backfill the trench.

This quarter, a solution was found to minimize the potential impacts of offshore pipeline trenching activity on near-shore coral reefs and sea grass beds in Caution Bay.

The proposed offshore pipeline trench sediment stockpile area was originally approved by the Papua New Guinean Department of Environment and Conservation (as part of the Environmental Impact Statement) for location in the vicinity of near-shore coral reefs and sea grass beds in Caution Bay as shown in Figure 9.4.

The Project conducted further simulation modeling to assess a more suitable sediment stockpile location to reduce the potential impact of plumes being created from depositing material excavated from the pipeline trench into the stockpile. As a result of this modeling, the stockpile area is being relocated to a site approximately 5 kilometres offshore at Caution Bay, shown in Figure 9.5. Sediment plume modeling shows that the new location will result with a reduced spread of sediment and therefore, minimize the impact of trenching activities on reefs and sea grass beds in this region.

Figure 9.4 – Initial stockpile location and plume model

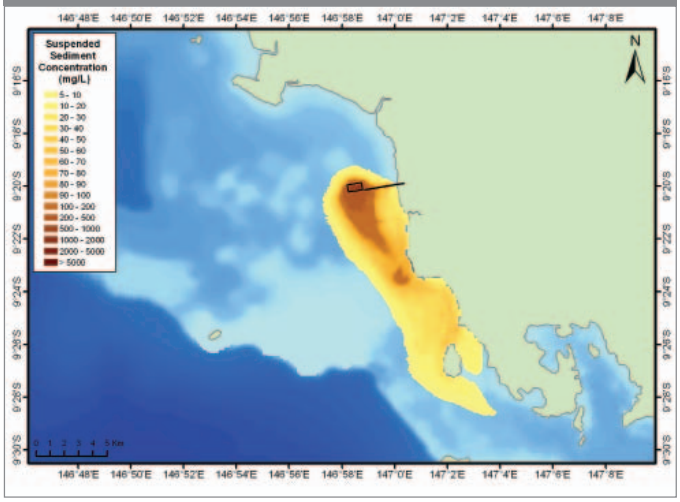
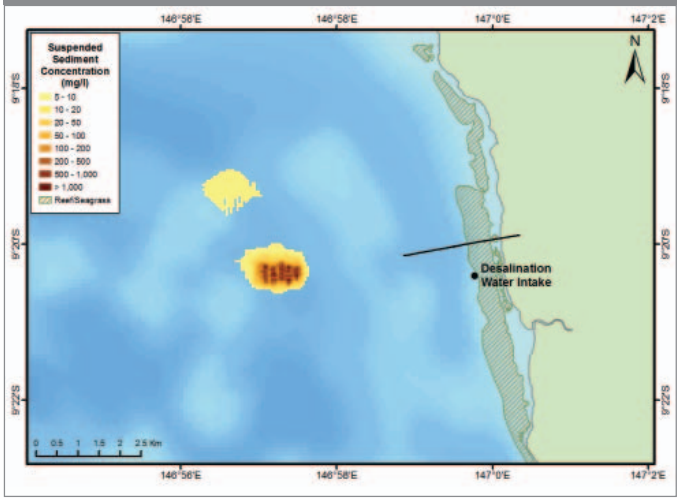


Figure 9.5 – New stockpile location and plume model showing reduced impact to near-shore coral reefs and sea grass beds



10 Biodiversity

Recognizing Papua New Guinea's varied and high value natural resources, biodiversity considerations are integral to Project planning and construction management. The Project and construction contractors work together on numerous initiatives designed to help preserve and protect these resources.

10.1 Ecological management

In the third quarter, the pre-construction surveys (refer to *Section 2.7 Pre-construction surveys*) identified fauna which included the Raggiana Bird-of-Paradise *Paradisaea raggiana*, Eclectus Parrot *Eclectus roratus*, Vulturine Parrot *Psittrichas fulgidus* and Sulphur-crested Cockatoo *Cacatua galerita*. Habitats identified included flood plain forest, small crowned open canopy swamp forest, *Nothofagus* forest and *Pandanus* swamp forest. New mitigation measures were developed for the Deware Camp and laydown area, the main one being a drainage plan at the camp and laydown area to reduce potential impacts to *Pandanus* swamp forest.

Sightings of cassowaries *Casuarius sp.*, Monitor Lizards *Varanus salvadorii* and snake species continued along Project access roads and cleared sections of the ROW demonstrating ongoing use of these areas. A 2.5-metre long Freshwater Crocodile *Crocodylus novaeguineae* was sighted in a drainage ditch, 2 metres from a busy running track at Kilometre Point 283, while a juvenile 0.5-metre crocodile was basking on the access road near Kilometre Point 240. A colony of about 1,000 Fruit Bats (Flying Foxes) *Pteropus sp.* roosted near Dini River Bridge at Kilometre Point 284.

Plate 10.1 – Freshwater Crocodile sighted at Kwil Creek during ROW clearing activities

Since the area between the Ebo and Kwil creeks to the Mubi River is known to be inhabited by crocodiles, with recent sightings made, a survey was undertaken of potential crocodile breeding habitat on Project areas near Kwil Creek. It concluded that all the watercourses of the area, including the ROW, provide suitable habitat. During ROW clearing and grading no stream was blocked or drained to preserve crocodile habitat.

A sighting of a crocodile was made at Kwil Creek during ROW clearing indicating some degree of tolerance to such activities.

The Project's no hunting, no fishing and no collection of flora or fauna policies were reinforced by posting signage at the main stream crossings along the onshore pipeline ROW.

Plate 10.2 – Signage posted at stream crossings advising of the Project's no hunting, no fishing and no collection of flora or fauna policies

In accordance with the Bat Cave Management Plan, monitoring of the bat cave at Kilometre Point 261 continued and a full time spotter was stationed at the cave entrance during pipe laying operations to monitor bat movements. Monitoring indicated that the bats were undisturbed by construction activities. In addition, a specific survey undertaken at Tumbi Quarry found no bats.

A number of animals were rescued from work areas during the quarter. A turtle and 19 fish were rescued from the pipeline trench and placed in nearby streams during dewatering and backfill operations at Kilometre Point 278. A large python discovered during trench inspections at Kilometre Point 252 was guided away from the worksite. Birds trapped around tents and container units in Kaiam Camp 2 during heavy rainfall were rescued and released.

Reducing the Project footprint is an important way to minimize impacts on biodiversity. This quarter, the Upstream Infrastructure contractor employed previously used quarry spoil dumps to stockpile material. The Onshore Pipeline contractor continued walkover surveys of the ROW from Kilometre Points 191 to 220 and Kilometre Points 220 to 226 to record actual construction areas versus those approved. The results showed that the footprint cleared is notably less than that planned.

Raising awareness of mitigation measures is key to their successful implementation. This quarter, the Onshore Pipeline contractor trained 25 members of the tree felling crew covering topics such as the Project's prohibition on fishing, hunting, gathering and collection of flora and fauna and the use of car washdowns for preventing the spread of weeds and pathogens. Other training by this contractor stressed the importance of topsoil preservation to ten equipment operators at Kilometre Point 239. Meanwhile, the Upstream Infrastructure contractor trained 241 Papua New Guinean nationals and 13 expatriate workers on fauna management.

Plate 10.3 – A bat spotter at the Kilometre Point 261 bat cave

Plate 10.4 – Rescue of a turtle discovered during dewatering operations

A number of species of marine mammals are present in Caution Bay where pipeline installation will take place, including the turtles and dolphins. In order to protect marine fauna, the Offshore Pipeline contractor will undertake marine mammal observations and commenced training this quarter to:

- Ensure the jetty construction crew and ship captains are aware of presence of marine mammals within the Project area.
- Ensure the safety of the marine mammals observed within Caution Bay.
- Avoid possible collision risks and entanglement from vessel traffic.
- Minimize disturbance to habitats and feeding sites.
- Avoid direct strikes from/to ships and marine vessels.

No marine mammal or turtles were observed during offshore soil investigation/drilling activities.

Clearing of a mangrove area for the Caution Bay landfall was completed in the quarter, with larger branches stockpiled for distribution to local communities.

10.2 Quarantine management

Subsequent to the inspection of the line pipe coating facility last quarter, Papua New Guinea's National Agriculture Quarantine and Inspection Authority advised they support clearing and discharging the vessels carrying this equipment at sea.

At the end of the quarter the Project was still working on standardizing the format of reports detailing projected cargo movements from all contractors and subcontractors and consolidating the report in a customized format to suit individual Government agency requirements.

Adherence to the objectives of the Quarantine Management Program is monitored and the emergence of any trends is checked. The Project is updating the Quarantine Procedure to formalize the definitions of non-conformances, near misses and incidents and the associated reporting and corrective action requirements for contractors and subcontractors.

Minimizing construction footprint

Ongoing detailed design reviews of construction activities are enabling the Project to find more ways to minimize environmental impact.

This quarter, the results of trial soil excavation enabled the Project to significantly reduce the land required for the offshore pipeline as it exits the LNG plant site.

Excavation trials showed that the soil was less prone to land slip than previously anticipated, which enables narrower trenches, and therefore reducing the offshore pipeline ROW width. As a result, the Project is also able to reduce the storage space required for excavated material from the trench. This finding means that more than 13 hectares of mangrove habitat originally designated for construction is able to be reduced to less than 3.5 hectares.

In addition to reducing the land size required for the pipeline construction, the Project is minimizing land required for a jetty that will link the LNG and condensate storage tanks with the marine export berths. For the jetty design, an innovative cantilever bridge – which uses beams supported on only one end, rather than pylons on both sides – will be used to project the bridge horizontally into space, ultimately minimizing the impact of bridge construction in the mangroves.

Aside from regular stakeholder meetings, Project representatives are in regular contact with senior National Agriculture Quarantine and Inspection Authority staff to maintain lines of communication and address any individual issues reported by contractors and subcontractors.

10.3 Weed, plant pathogen and pest management

The Upstream Infrastructure contractor produced posters for display in camps and at worksites to help identification and reporting of priority weeds documented in pre-construction surveys.

Weeds present on the onshore pipeline ROW and at onshore pipeline camps include Big Lip Rope *Merremia peltata*, Bamboo Piper *Piper aduncum*, Bitter Vine *Mikania micrantha*, and Kunai Grass (also known as Cogon Grass, Blady Grass or Japanese Bloodgrass) *Imperata cylindrica*.

Such weeds are subject to monitoring and control by either chemical means or a combination of chemical and physical methods. No active control of weeds using herbicides was possible in the course of the quarter due to significant rainfall and flood conditions.

In the quarter, Bamboo Piper continued to spread between Kilometre Point 235 and Kilometre Point 278 but no new emergences were noted. The spread and distribution of Bamboo Piper is noted to be under natural control by a foliage pathogen. Once this pathogen is identified it will be assessed for its potential use in controlling the weed. No outbreaks of priority weeds were noted along the section of the ROW from Kilometre Point 266 to Kilometre Point 278 where weed control has been underway since the first quarter 2011. Natural dieback of some priority weeds was observed in flooded areas along the Kopi Shore Base to Kopi Camp 1 access road.

An assessment of the new Kantobo to Mubi River Road recorded the presence of weeds prior to road usage. Nine weed species were newly recorded along the road including priority weeds, which will be treated as necessary. Big Lip Rope remains the dominant weed species along the onshore pipeline ROW from Kilometre Point 235 to Kilometre Point 290. While distribution of this species is increasing, Forest Wallaby *Dorcopsulus spp.* and an unidentified species of beetle are natural predators that are providing some degree of control. Weed audits were undertaken at a number of Komo Airfield camps, the Komo Airfield Zone D worksite and the Komo Airfield plant, machinery and vehicles workshop this quarter. At the HGCP worksite, weeds were removed, placed in bags and incinerated to prevent any spread.

Sensitivity awareness training for onshore pipeline Project workers continued through toolbox talks and inductions on the presence of priority weeds and measures to avoid their spread. In order to prevent the introduction of new species and to prevent the spread of weed species that are already present, the Upstream Infrastructure contractor issued a notice to all staff as a reminder that the following activities are prohibited: planting gardens (edible or decorative) on Project worksites, unless endorsed by the Upstream Infrastructure contractor; keeping pot plants and/or cut plants/flowers in rooms or offices; and decorating Project vehicles with plant material (such as wreaths).

Potted plants were confiscated and food crop gardens removed as part of the initiative with native confiscated plants used to reinstate areas where crops were removed. The Onshore Pipeline contractor also emphasized the potential for workers and machinery to spread weeds and the need to stay within Project worksites.

The Hides Ridge is considered a sensitive area from a plant pathogen and weeds perspective. One of the measures to control weeds, plant pathogens and pests is a temporary washdown facility and associated washdown certificates on the Wellpad Access Road with 294 certificates issued in the quarter. The washdown bay was improved this quarter. Pre-start inductions commenced for the Wellpad Access Road to emphasize the need for drivers to continuously wash their vehicles. The induction materials are translated into Tok Pisin.

For the HGCP, discussions were held with the local community regarding setting up a separate 'pay for service' washdown area, for use by the Hides Gas Conditioning Plant and Hides Wellpads contractor. In the meantime, drivers are responsible for washing their vehicles themselves. Meanwhile, a vehicle wash station arrived for installation at Kopi Shore Base and preparation of the installation location began.

The potential spread of the fungal pathogen Cinnamon fungus *Phytophthora cinnamomi*, which results in canopy defoliation and death in trees, is a concern for the Project. A permanent laboratory, established at Moro B Camp to analyze samples for the fungus, has replaced the temporary laboratory set up last quarter.

More than 61 cultures of Lupin *Lupinius* seeds were prepared using soil samples collected from areas with potential dieback along the onshore pipeline ROW to ascertain the presence or absence of the fungus.

The preliminary findings show that Cinnamon fungus is widely distributed in the areas surveyed. It seems to be a common component of the soil micro-flora, and independent of the health of the forest system. This suggests that Cinnamon fungus occurs independently of dieback and that earth movement may not necessarily increase forest dieback through spread of the pathogen.

Plate 10.5 – Weed identification posters

Plate 10.6 – Car wash attendant washing down a light vehicle prior to entering Hides Ridge

10.4 Induced access

Project activities are planned and executed to control access to new Project roads and reduce potentially damaging non-Project activities. Wherever possible, existing roads are utilized and no new roads were opened during the quarter.

Requirements for access to the onshore pipeline ROW continue to be evaluated, and the Onshore Pipeline contractor will issue its Induced Access Management Plan for use in the fourth quarter 2011.

Security checkpoints are 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.

The Upstream Infrastructure contractor continues its control of access to the Wellpad Access Road through worker inductions and identification cards. Access control was further tightened during the quarter, with requests for access to the Wellpad Access Road now requiring senior management approval.

During the reporting period, the Project identified the need for permanent vehicle access to certain aboveground facilities, including mainline valve stations and checkpoint valves, which cannot reasonably be achieved via helicopter as previously anticipated. A formal risk assessment of access to these remote sites was undertaken, considering the potential for induced access and immigration impacts. This identified the need for further studies to be undertaken for certain locations, which will be followed up during the fourth quarter 2011.

The Project is also evaluating the potential for a program of community stewardship in and around key worksites, including the Wellpad Access Road, to prevent the community clearing vegetation for garden establishment.

10.5 Reinstatement

In order to maximize the potential for successful reinstatement, contractors follow topsoil management procedures to prevent soil loss, maintain soil fertility and preserve the stock of seeds and other plant material from which vegetation can regrow. In areas where there are restrictions on the ROW width, the Onshore Pipeline contractor inspected soil stockpiles, and soil is being stored in small, cleared pockets (rather than in-between trees) to limit damage during recovery of topsoil for reinstatement.

The Upstream Infrastructure contractor continued developing a reinstatement plan for spoil dumps, working with the Project to determine suitable native grasses for use in reinstatement and potential sources of stock. In addition to purchasing grass seeds, where available, the contractor is planning a nursery to cultivate stock. Worksites in the Gobe area, the Mubi River Bridge and east and west laydown sites were reinstated. The Onshore Pipeline contractor held a workshop to agree on the reinstatement plan and schedule. They also conducted preliminary clean-up and temporary reinstatement activities for the ROW section between Kilometre Points 274 and 278, which will still permit access for back-end activities such as hydrotesting. The Telecommunications contractor undertook reinstatement at the Moran Peak site.

The Komo Airfield contractor reinstated areas of the Airfield. This included the batters at the Komo Main Camp; patches of disturbed ground around the terminal following a stream diversion; batters of the concrete batch plant and batters of a new laydown area opposite the old Komo airstrip.

The Komo Airfield contractor withdrew from Tumbi Quarry and stabilized spoil and overburden left from their activities, with spoil stockpiles seeded to control erosion.

The grasses used were locally collected and seed stocks were developed at the Komo Airfield nursery. At one location requiring additional stabilization, jute matting was used in combination with seeding with Japanese millet *Echinochloa spp.* – a species recognized for its soil stabilization properties. Reinstatement trials at the base of a buttress found that water diversion features were undersized, providing a useful learning for future reinstatement.

10.6 Biodiversity Strategy

Implementation of the Project's Biodiversity Strategy continues as a tangible measure of how seriously the Project takes its environmental responsibilities.

Following finalization of an agreement in the previous quarter, Conservation International commenced work with a series of meetings and a visit to the Project Area in July. Also in July, the Project and Conservation International jointly conducted further consultation with Papua New Guinean stakeholders including the Papua New Guinean Department of Environment and Conservation and the non-government organizations – Mama Graun Papua New Guinea, Research and Conservation Foundation of Papua New Guinea, Wildlife Conservation Society Papua New Guinea, World Wide Fund for Nature Western Melanesia, Eco Forestry Forum, Partners with Melanesia and Papua New Guinea Institute of Biological Research.

A multi-stakeholder meeting is scheduled for October 2011 as an opportunity to update key stakeholders on the status of the Biodiversity Offset Delivery Plan, demonstrate how ideas received from stakeholders are being addressed, and present the Project's guiding principles for the Offset Program. This meeting will conclude formal consultation on developing the Biodiversity Offset Delivery Plan, and further discussion and input on key themes will be encouraged. A draft Biodiversity Offset Delivery Plan is anticipated by the end of 2011, with finalization by the end of first quarter 2012.

During the quarter, fieldwork continued on Programmed Monitoring Activity 3 (Regeneration Surveys) as part of the Biodiversity Monitoring Program with the identification of benchmark sites for regenerating forest. For Programmed Monitoring Activity 1 (Remote Sensing), the Project finalized the remote sensing design and commenced the collection of baseline imagery over the Project Impact Area. Fieldwork to verify the baseline imagery was delayed and will be undertaken during the fourth quarter 2011.

Case Study Two

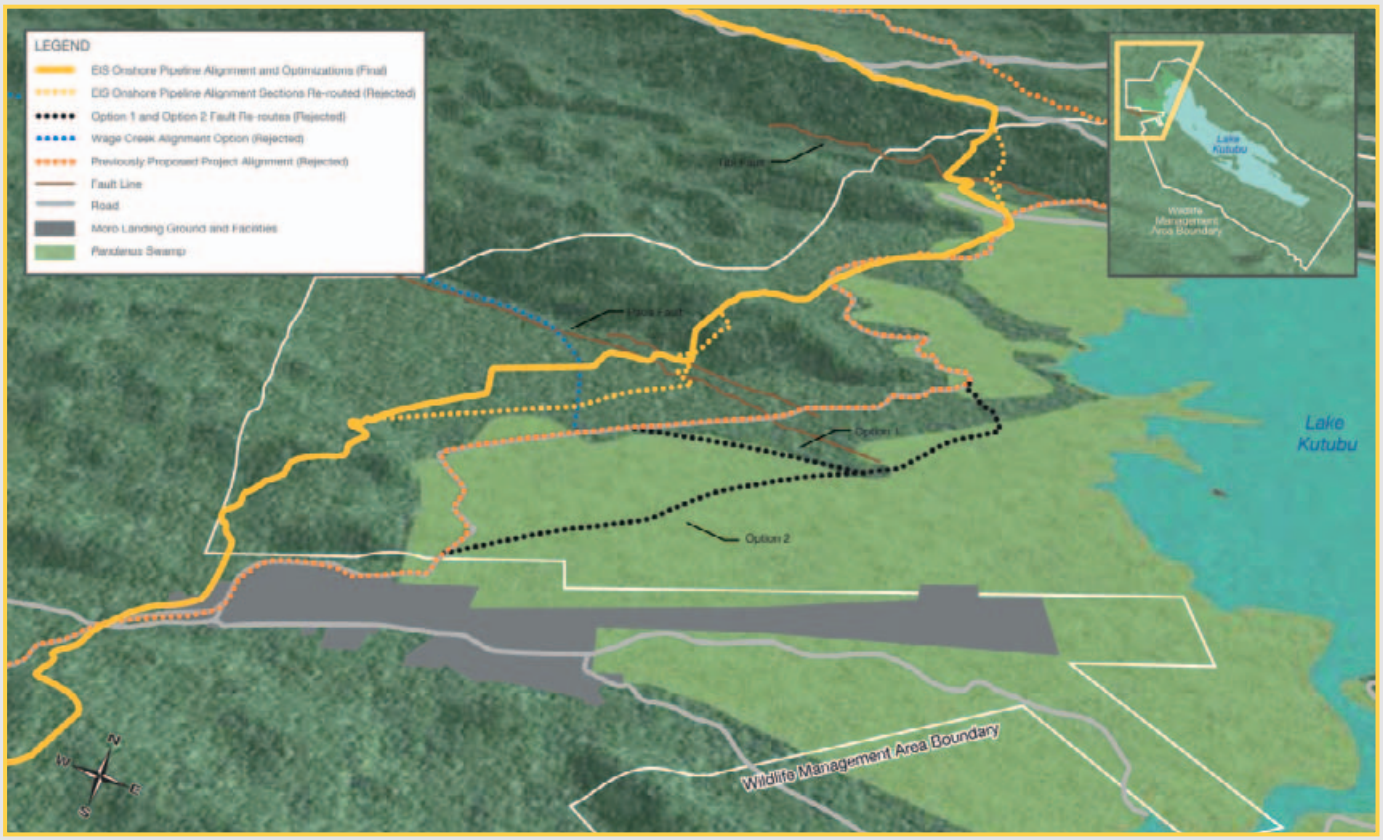
CARE AND CONSERVATION IN THE LAKE KUTUBU REGION

ExxonMobil is committed to operating the Project in a way that protects Papua New Guinea's natural environment, while helping to bring economic benefits to its citizens. Therefore, the Project aims to avoid designated conservation areas or, where impact is unavoidable, to mitigate the impact of development on the environment. These principles are being applied to the area surrounding Lake Kutubu, where approximately 8 kilometres of the Project's onshore pipeline will cross the edge of a designated Wildlife Management Area (WMA)/Ramsar site, as shown below. Lake Kutubu is located in Papua New Guinea's Southern Highlands Province and drains into the Kikori River. Because of its rich biodiversity, a 240 square kilometre area in and around Lake Kutubu's catchment area was gazetted as a WMA by the Papua New Guinean Department of Environment and conservation, and as a 'Wetland of International Significance' under the Ramsar Convention.

The pipeline crosses the northern boundary of the site, north of Lake Kutubu. It involves an area, which accounts for approximately 0.2 percent of the WMA/Ramsar site.

The pipeline's location (yellow route) is the result of extensive investigation and a review of multiple options, which aimed to avoid the WMA/Ramsar site.

The Project's consideration included the investigations conducted by others, which go back several decades, through previous attempts to commercialize natural gas from Papua New Guinea's highlands. For example, a routing analysis conducted in 2006 as part of a previous project, led to the selection of a pipeline route along the existing Moro Poroma Road north of Lake Kutubu. This decision was made before the area was designated as a Ramsar site (orange dotted route). Following the WMA and Ramsar designation, alternative routes were evaluated with the aim of avoiding the WMA/Ramsar site. The alternative routes generally involved routing through ranges to the north-west of Lake Kutubu. These ranges are extremely rugged with steep gorges and cliffs. Therefore, the potential of these areas as routes was discounted on the grounds of environmental impact, constructability and cost.



Pipeline routing options and final route selection

Case Study Two

CARE AND CONSERVATION IN THE LAKE KUTUBU REGION

The PNG LNG Project conducted a detailed evaluation of an alternative shorter route through Wage Creek (blue dotted route). Wage Creek flows directly into Lake Kutubu, with a narrow and steep valley of previously undisturbed terrain. However, this was dismissed as an option because it required major earthworks to a previously undisturbed, steep and narrow valley – which was likely to increase sedimentation in Wage Creek and its delta with the potential to impact Lake Kutubu.

Having selected a route following the existing Moro Poroma Road within the WMA/Ramsar site, the Project focused on optimizing this route to minimize environmental impact. Two options were considered (Option 1 and Option 2: black dotted routes) both of which involved direct impacts to the swamp woodland and forest north of Lake Kutubu Following careful analysis, Option 1 was preferred as it would involve clearing 0.2 hectares of swamp woodland and forest compared with the 2.3 hectares required for Option 2.

Further re-alignments were made to this route (replacing dotted yellow route) to avoid the sensitive swamp woodland and forests north of Lake Kutubu, which are an important part of the ecosystem and key driver for the Ramsar status. This approach also reduces the length of pipeline crossing the WMA/Ramsar site by 2 kilometres.

Environmental mitigation during construction

Environmental pre-construction surveys, which precede work at Project sites, provide site-specific information to further identify ecological and cultural heritage constraints as well as higher risk areas for weeds and pests.

Independent subject matter experts undertook two pre-construction surveys for the section of ROW, which intersects the WMA/Ramsar site. One was commissioned directly by the Project in 2010 and the other in 2011 by the Project's Onshore Pipeline contractor. These surveys resulted with numerous environmental mitigation measures for the WMA/Ramsar site. Examples of mitigation measures being applied in the WMA/Ramsar site include:

- Ensuring all workers are aware of the ecological significance of Lake Kutubu.
- Minimizing the construction footprint to the minimum required for works.
- Avoiding *Pandanus* swamp forest as far as practicable.
- Maintaining adequate drainage, surface flows and hydrological connectivity.
- Preventing new plant pathogens and controlling dieback of the *Nothofagus* forest.
- Prohibiting disturbance, harassment, hunting, and feeding of fauna.
- Restricting workers to the construction area.

The pre-construction surveys also identified some cultural heritage sites in the Lake Kutubu area, although not necessarily within the WMA/Ramsar site. These include six sites classified as having high local significance, which resulted in the localized re-alignment of the pipeline ROW. One site is under further assessment to determine whether archaeological salvage is required prior to construction.

Long-term conservation program

The Project is working in partnership with stakeholders to enhance conservation aims in the Lake Kutubu area. One of the outcomes to date is a program to revitalize the Lake Kutubu Catchment Management Plan (a World Wide Fund for Nature initiative). The Project is collaborating with Oil Search Limited to develop a conservation program focused on the development and application of sustainable fish catch strategies for Lake Kutubu, to ensure the lake's long-term viability for fish supplies for surrounding communities. The proposed program will build on existing initiatives and culminate with the development of a Fisheries Management Plan to help realize the objectives of the Lake Kutubu Catchment Management Plan.

The Project's overall proposed Lake Kutubu Conservation Program is still under development in consultation with stakeholders, with the next workshop scheduled for the fourth quarter 2011. Further details will be provided as this work progresses.

What is the Ramsar Convention?

The Convention on Wetlands of International Importance, especially as Waterfowl Habitat (Ramsar, Iran, 1971) – called the "Ramsar Convention" – is an intergovernmental treaty that embodies the commitments of its member countries to maintain the ecological character of their Wetlands of International Importance and to plan for the "wise use", or sustainable use, of all of the wetlands in their territories. While construction activities may still occur within a Ramsar designated site, measures must be taken to mitigate environmental impact.

11 Resource Management

Papua New Guinea's natural resources such as water, timber, quarry materials and soils have an ongoing social, economic and cultural value. In recognition of this value, the Project takes care to sustainably manage these resources during construction activities.

11.1 Water management

11.1.1 Usage

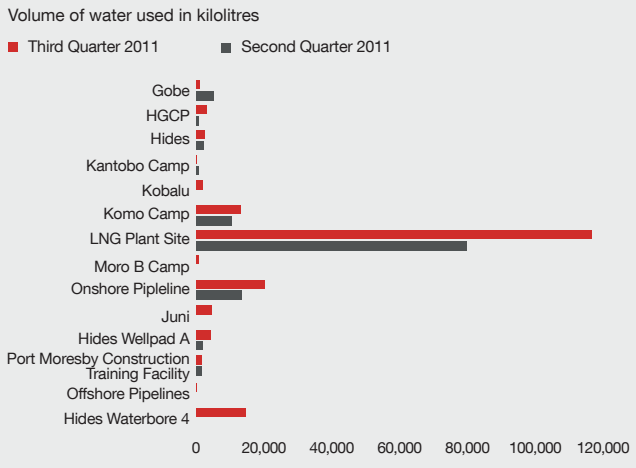
Across the Project, water extraction volumes were within the annual limits set by the Project Environment Permit.

Approximately 184,600 kilolitres of water was used in the third quarter for drinking, domestic camp needs, dust suppression and construction-related activities. This increased from approximately 110,800 kilolitres used in the second quarter 2011, as a result of growing construction activity, in particular at the HGCP site, where a new water supply borehole was commissioned. The new bore supplies both the Hides Gas Conditioning Plant and Hides Wellpads contractor and the Upstream Infrastructure contractor with water, avoiding the need to extract water from Tumbi Quarry. Drilling of a second bore at the HGCP site also began during the quarter.

Other contractors continued using existing groundwater bores or surface water extraction points, but not exclusively. For example, the Telecommunications contractor, operating in remote mountain top sites, collected rainwater for use in concrete preparation, while the LNG plant site increased the proportion of site water sourced from desalination.

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

Figure 11.1 – Water use in the second and third 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

The quality of water is monitored in water bodies surrounding Project activities to detect any changes that may have a potential impact on the environment. Sampling is undertaken for surface waters, groundwater and seawater to record baseline data, provide background monitoring during construction, ensure quality testing of potable water prior to consumption, and monitor wastewater treatment plant outflows. Results of wastewater treatment monitoring are detailed in *Section 9.3.1 Wastewater*.

A Project Stream Monitoring Survey was conducted in August and September. A series of selected streams along the pipeline route were assessed (both upstream and downstream of the pipeline ROW) to gain an understanding of the health of the streams in the area so that future impacts can be identified. The Survey included analysis of physical, chemical and biological aspects of the streams. Laboratory results and a full report will be returned in the fourth quarter 2011.

Plate 11.1 – Sampling for macroinvertebrates in the Benaria River

Managing fresh water turbidity presented challenges across the Project this quarter due to very high rainfall. Individual contractors worked extensively to try to minimize this issue. For example, the Upstream Infrastructure contractor completed an engineering review of HGCP sedimentation and erosion control needs. By the end of the quarter, four out of eight areas of concern were addressed, and additional sediment and erosion controls teams were appointed to perform control works.

Meanwhile, control measures such as sediment retention ponds, rubble drains, gabion baskets and sheeting of batters and slopes throughout the HGCP site resulted in improved turbidity levels recorded.

Field measurements in the Upstream Infrastructure area fell within Project criteria limits, with the exception of: water turbidity; and higher than normal total coliform bacteria in Tilini Creek (total coliform bacteria are a commonly used indicator of the sanitary quality of foods and water).

Additional tests showed no correlation between Project water quality and the elevated surface water samples at Tilini Creek. Therefore, it was concluded that a source other than the Project wastewater effluent discharge was responsible for the elevated levels of total coliform bacteria.

The results of water sampling, for creeks near the HGCP site, sent to an independent laboratory in response to a grievance recorded in the second quarter 2011 showed no adverse impacts to water quality. Investigations also commenced in response to a water quality grievance for Kumara Creek located outside the HGCP boundary. Findings will be presented when sampling is completed.

Surface water monitoring at Komo Airfield detected elevated turbidity for two locations from the site as well as reduced dissolved oxygen readings during heavy rains. The Komo Airfield contractor's corrective actions included installing additional sediment traps, berms of vegetation brush at the perimeter of cleared areas, and silt dams of wood structures wrapped in geotextile. The large extent of earthworks at this site means these installations will be ongoing. Additional fenceline inspections of watercourses also commenced and supervisors were reminded of the need to compact soils to minimize runoff of loose soil. In response to grievances relating to water quality after heavy rains, the Komo Airfield contractor is conducting additional sampling and continues to install erosion and sediment control structures.

This quarter, the LNG Plant and Marine Facilities contractor undertook monthly surface water quality monitoring at Roku River, located to the north-east of the site. Monitoring values were well within the Project discharge criteria for pH (acidity), change in turbidity and temperature from background levels. Stormwater monitoring of sheet runoff was also undertaken at the LNG plant site following heavy rainfall. All points were within the stipulated limits.

In addition, the LNG Plant and Marine Facilities contractor undertook baseline samples from the six groundwater monitoring wells around the construction waste management area. Results will provide comparative values each quarter when the waste management area is in operation.

Seawater quality monitoring for turbidity commenced during this quarter at the LNG plant site desalination plant seawater intake pond. This monitoring checks for any significant changes to water quality during Project trenching and dredging activities in Caution Bay. A turbidity trigger limit was set to minimize the environmental impacts caused by raised turbidity and to avoid damage to the desalination plant reverse osmosis membrane. Based on the monitoring results, no significant changes were detected in the quality of seawater.

The Project's Environmental Monitoring Plan includes pre-, during-, and post-construction monitoring of marine habitats, water quality, and levels of sedimentation in Caution Bay. Water quality data from construction monitoring is compared with physical and chemical guidelines set out in the Environmental Monitoring Plan (specifically the seawater quality criteria). The data is also compared to the baseline marine environmental conditions collected during development of the Project Environmental Impact Statement and pre-construction water quality monitoring surveys.

During this quarter, the monitoring program included analysis of total suspended solids, turbidity and other physicochemical characteristics (including: temperature, pH, salinity and dissolved oxygen) as measures of sedimentation and water quality. All water quality parameters monitored in the survey met the water quality criteria outlined in the Environmental Monitoring Plan, except for dissolved oxygen, which was below the set limit at three near-shore sites. These sites are estuarine environments, where lower dissolved oxygen can be expected due to increased activity of aquatic flora and fauna. It was concluded from the analysis that the low dissolved oxygen was not Project-related. However, it is anticipated that the ability to interpret results more meaningfully will increase as further sampling campaigns are undertaken over the course of construction and a variety of seasons.

11.2 Raw materials

To minimize environmental impact, the Project sources quarry materials for construction activities from existing third party (operating or previously abandoned) quarries wherever possible. At the end of this quarter, 14 quarries were in use as outlined in Table 11.1.

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

Area/quarry name	Volumes extracted (m^3)
LNG plant site (2 suppliers)	118,044
Hides (6 quarries)	1,325,908
Komo (2 quarries)	27,043
Onshore Pipeline (6 quarries)	166,611
Offshore Pipeline (1 supplier)	9,600

The Onshore Pipeline contractor used quarry material to build camp platforms, running tracks and perform general road repairs. Meanwhile, the Offshore Pipeline contractor used gravel for road construction near the LNG plant site and stones were used as a base material for a path to enable excavators to travel through the mangrove area. The Hides Gas Conditioning Plant and Hides Wellpads contractor used aggregate sourced in Tari and limestone from local Hides quarries for construction activities.

Only small volumes of timber have been required by the Project-to-date. At the end of the quarter, the total volume purchased was 112 cubic metres.

Mangrove clearing works at Caution Bay landfall were completed this quarter. Small branches and roots were burned on-site and large branches stockpiled for distribution to local communities.

Plate 11.2 – Stockpiled timber for distribution to local community

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

11.3 Erosion and sediment control

Maintenance of erosion and sediment control devices is an ongoing challenge across the Project. In particular for the areas of the Upstream Infrastructure, Onshore Pipeline, Hides Gas Conditioning Plant and Hides Wellpads and Komo Airfield contractor sites where rainfall is high and earthworks extensive. In addition to the ongoing inspection and maintenance of existing devices, new erosion and sediment control devices continue to be installed in areas of recent work.

Plate 11.3 – Erosion control device at the HGCP

The Hides Gas Conditioning Plant and Hides Wellpads contractor has implemented remediation measures after identifying early signs of erosion at the HGCP site as part of a formal assessment following heavy rains. All water from the site drains into the perimeter drain, which feeds into the sediment basin. Sediment fences are installed at regular intervals along the perimeter drain, reducing sediment transport along the drain. Small trial areas of Kunai Grass, a native Papua New Guinean species common to the Highlands, were planted this quarter. The grass is being trialed as an alternative, or augmentation, to silt fence control methods.

The Onshore Pipeline contractor undertook extensive maintenance of erosion and sediment control measures due to rain and floods. For example, at the Kopi Shore Base rainfall was well above the historical average in July and reached an historical maximum in September, which represented over 2,000 millimetres in total. Earthen berms were constructed on both banks of streams (where feasible) to prevent sediment ingress into watercourses. Gaps were opened across the temporary soil covering over the pipeline to allow for stormwater drainage across the ROW. Backfill operations also proceeded in close proximity with trenching and lowering to reduce the chances of open trench and dewatering being required. Rain was so heavy this quarter that even in laydown areas some of the berms on which the pipes were laid had eroded in places.

Three Onshore Pipeline contractor erosion control crews were deployed between the Omati landfall and Mubi River crossing in the quarter. The first crew was charged with installing silt fences and maintaining erosion control devices behind the preliminary trench restoration crew. The second crew was responsible for maintaining and replacing silt fences along access roads in the Kopi and Omati areas. The third crew was tasked with installing and maintaining erosion control measures behind the clearing and grading crew. Despite the increased resources, heavy rainfall presented a significant challenge, causing flooding across the ROW from Omati through to Mubi.

11.4 Acid sulfate soils

Acid sulfate soils are soils and sediments that, when exposed to air, produce sulfuric acid. These acid soils can adversely impact ecological communities, agricultural practices and engineering structures.

Project activities have the potential to expose acid sulfate soils during trenching or excavations – typically near estuaries and coastal marsh environments. The Project has specific management plans detailing sampling programs, monitoring and management of potential acid sulfate soils.

For example, the acid sulfate soils specialist from the Onshore Pipeline contractor undertakes weekly acid sulfate soils monitoring in accordance with the Acid Sulfate Soils Management Plan. Weekly monitoring activities include analysis of pH of ditch water and stockpiled soil. Most sites sampled along the pipeline consistently depicted stability around a typical pH. No evidence of significant acid sulfate soil oxidation was observed in the course of this quarter.

During the quarter, the Offshore Pipeline contractor commenced testing for potential acid sulfate soils at the Caution Bay landfall trench and stockpiles. All results were within the required range, however acid levels will continue to be monitored.

At the LNG plant site tank area, deep excavation works were completed early in the quarter, exposing potential acid sulfate soils. During dewatering at the completion of these works, acid levels were monitored and no significant changes in acidity were recorded.

12 Cultural Heritage

Papua New Guinea is one of the most diverse countries in the world, supporting a significant wealth of cultural heritage. To help protect this, the Project's activities are conducted under the Cultural Heritage Management Plan, which includes a Chance Finds Protocol.

The Project has developed a Cultural Heritage Tracking System, which collates and manages the extensive data collected since 2009. Using this System, reporting statistics are generated from cultural heritage data collected by construction contractors. This enables the Project to more accurately report on areas (such as chance finds) both internally and externally, for example, to the Papua New Guinea National Museum and Art Gallery.

Cultural heritage awareness and chance finds training for construction workers continued in the third quarter. The Upstream Infrastructure contractor trained 164 Papua New Guinean citizens and three expatriate workers, while the Komo Airfield contractor trained Timalia River Borrow Pit workers, in the Chance Finds Protocol. The Onshore Pipeline contractor provided toolbox talks and general awareness training regarding cultural heritage sensitivities and the Chance Finds Protocol. The training was provided to workers including: the ROW clear and grade crew, Kaiam Camp 2 and Gobe Camp 3 platform construction crews, the brush clearing crew at Tamadigi and Kantobo, the explosive magazine construction crews and the crew extracting material from Quarry 2000 along the road to the Gobe Production Facility.

Spotters are a valuable resource for identifying cultural heritage artifacts during earth moving activities, and their numbers were increased at Komo Airfield, with the recruitment of local people. The Komo Airfield contractor also undertook a number of cultural heritage audits in the quarter for sites such as: the Komo Airfield footprint, Timalia River Borrow Pit, Heavy Haul Road Sections 2 and 3 and the Tumbi Quarry.

12.1 Pre-construction surveys

The Project conducts pre-construction surveys to identify cultural heritage sites for preservation. In cases where sites cannot be preserved, discussions are undertaken with local landowners to determine appropriate mitigation measures (such as relocation, compensation and spirit ceremonies) accompanied by cultural heritage recording. Examples of cultural heritage interest sites recorded in the quarter were burial sites, oral tradition sites (sites where spirit rituals, sacrifices and other ceremonies were/are carried out), a cave burial/ossuary site, a water spirit site, a former spirit house/ceremonial site and a cemetery.

Monitoring continued for five cultural heritage sites that are not directly on Project work areas but which were previously demarcated for protection (as listed in Table 12.1). These sites were found to be undisturbed. No new sites were demarcated this quarter.

Table 12.1 – Cultural heritage sites monitored during the third 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 12.1 – Demarcated cultural heritage site

12.2 Salvage excavations

During this quarter, salvage works were completed at two sites discovered during pre-construction surveys for the ROW pipeline. One is a settlement near Moro that pre-dates local knowledge and the second site, near Tamadigi Bridge, was a scatter of artifacts located on a watercourse bank.

The LNG plant site Cultural Heritage Salvage Program, for sites discovered as part of the Environmental Impact Assessment studies, commenced in September 2009 and salvage excavation activities concluded in March 2010, with material transferred to the Papua New Guinea Museum and Art Gallery for analysis and documentation.

The analysis of recovered artifacts was completed this quarter, indicating that people occupied the Port Moresby area as far back as 4,200 years ago. This is notable, considering that previously no sites older than 2,000 years had been found in this area.

12.3 Incidents of disturbance to known cultural heritage sites

No incidents of Project-related disturbance to known cultural heritage sites occurred in this quarter.

Salvage excavation

The Project carefully conducts salvage operations to minimize the risk of disturbance to items of cultural significance. For example, for the Moro and Tamadigi Bridge sites, a preliminary survey was undertaken to identify and collect surface artifacts and establish the extent of the site. This was followed by the excavation of eight shovel test pits to establish the density and distribution of subsurface deposits. The artifact distribution information gained was used to determine the locations of four 1-metre by 1-metre controlled excavations. These help to establish the nature of possible subsurface cultural deposits and provide artifacts for characterization of the site.

This quarter, the survey recovered 91 artifacts, mostly flakes and cores left from tool making. A few artifacts that could be formal tools were also found. The recovered assemblage is typical of the Papua New Guinea highlands. Since the assemblage was considered neither dense nor unique, it was deemed to be of low cultural significance.

During the pipeline pre-construction survey at the Tamadigi Bridge site, completed around Kilometre Point 149 (11 kilometres to the southeast of Tamadigi), five stone artifacts were discovered in sediments of Kaipu stream. These were: one fragment of a ground igneous artifact (likely a stone axe) and four flaked chert artifacts (including a chert core), which may have potentially been part of hafted sago pounders.

Hand sorting clay and mud deposits during excavation

These artifacts had been re-deposited due to stream flows and potentially disturbed through previous construction associated with the existing road located approximately 10 metres south of where the scattering of artifacts were found.

Due to a re-route being unfeasible, a dedicated survey and salvage was required. No further stone artifacts were observed during the survey, this was most likely due to the very high rainfall the area receives causing the artifacts to be washed downstream or reburied. It was concluded that the site was not significant.

12.4 Chance finds

Chance finds recorded on Project worksites this quarter are shown in Table 12.2. No items of particular significance were recorded.

Table 12.2 – Chance finds during the third quarter 2011

Location of find	Type of find
HGCP	Stone implements (2)
Komo Airfield	Unhafted stone axe
	Burial site
	Burial site complex
Onshore pipeline ROW	'*Koy'yabu*' pool
HGCP	Stone blade
	Isolated stone – chert flake
Upstream Infrastructure Laydown Pad 19	Stone tool

This quarter, a '*doline*' (a fishing site used sporadically during the rainy season as conditions allow) within the horizontal directional drill platform on the north bank of the Kikori River crossing was recorded as a social feature during a pre-construction survey. It was reclassified as a heritage site by the landowner, resulting in the site being recorded as a chance find. This site consists of a pool named '*Koy'yabu*' with a large tree and two large rocks sheltering a black stone also named as '*Koy'yabu*'. The black stone is used as a tool to beat the bark of a tree to make '*tapa*' cloth, while the pool is used for treating the newly made cloth. The juice from the tree's bark is used as medicine to remove bad spirits. This oral tradition site was classified as being of low significance by Project archaeologists.

Plate 12.2 – Scanning for archaeological artifacts at Quarry 2000

Plate 12.3 – Unhafted stone axe (without a handle) identified near the Komo Airfield

13 Stakeholder Engagement

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

13.1 Government

The Project continues interfacing with all levels of Government, including Provincial Government, to keep Ministers and Government agencies well informed about the Project's status.

13.1.1 People processes

After Papua New Guinea's Immigration and Citizenship Services Visa Hub Processing System became fully operational for the Project and its contractors in the second quarter 2011, Immigration and Citizenship Services announced that the System was open for use by approved recruitment agencies. Access to this System will enable efficient processing of contractors entering Papua New Guinea. To date, more than 3,200 working residency visas have been processed, with more than 1,200 approved in the third quarter. Over 90 percent of these were processed through the Visa Hub Processing System.

To date, 3,300 work permits have been approved by the Department of Labour, with more than 1,600 approved during the quarter. The Department has upgraded facilities and employee resources to cater for growing capacity requirements for the Project's peak mobilization period. The upgrade includes installation of a new computer server, 20 new computers and the recruitment of 30 additional casual employees.

Papua New Guinea's National Intelligence Organisation and the Australian High Commission continue assisting the Project, and in July, provided a refresher training session for contractors regarding the security clearance process for certain workers applying for working residency visas in Papua New Guinea.

13.1.2 Materials and tax

In the quarter, Papua New Guinean Customs approved the backlog of applications from subcontractors to enable Project cargoes to be cleared duty exempt. The Project is working with Papua New Guinean Customs to clarify the administrative processes to implement Project customs duty and excise exemptions as well as Goods and Services Tax.

The Papua New Guinean Customs Service has also agreed to engage the assistance of a third party service provider to help it manage clearances for the Project. The Project will meet the agreed costs for these services.

13.1.3 Infrastructure and Government support

This quarter the Papua New Guinean Department of Works began maintenance work on the Highlands Highway between Mendi and Hides. The Department of Works collaborated with the Project to develop the Government's program for rehabilitation work on critical sections of the Highway, such as Tindom Hill. The Project also helped the Department of Works develop a bridge replacement program along the Highway.

In addition, the Project is conducting a review with PNG Power Limited of overhead electrical line crossing heights along the Highlands Highway to determine whether clearances are adequate for proposed oversized loads being transported from Lae to Hides.

Plate 13.1 – Oversized load trailer at Port Moresby prior to transport to Lae

13.1.4 Advocacy

Workshops continued this quarter with key government departments and provincial governments, covering topics such as national content, land and community affairs and business development.

In August, an LNG plant site tour was conducted for the Minister for Environment and Conservation, and the Environmental Council to provide an understanding of the scope of the LNG plant site and of the environmental standards maintained by the Project.

The Project also hosted the Department of Education at the Port Moresby Construction Training facility to showcase Project-sponsored training activities.

Engagements continue with the Hela Transitional Authority regarding the formation of the Hela Province in 2012. In August, the Project's Government Interface team attended the launch of the Hela three-year Strategic Development Plan in Tari.

Plate 13.2 – Peter Graham, Managing Director, Esso Highlands Limited at the launch of the Hela Transitional Authority Strategic Development Plan

13.1.5 Benefits assurance delivery

The Government Interface team maintains dialogue with Government departments that administer benefits, including the Department of Petroleum and Energy and the Department of Commerce and Industry, to continue to promote the importance of the Papua New Guinean Government meeting its obligations under the Benefit Sharing Agreement.

The Papua New Guinean Government-owned National Petroleum Company of Papua New Guinea, a participant in the Project, plans to deploy its personnel to the field to provide Government representation and to liaise with relevant Government departments to assist with issues that need Government support.

Business Development Grants (seed capital) remain unpaid for two Project License Areas, with mediation pending in related court actions between landowners and the State.

13.2 Communities

Led by the Project's Socioeconomic team, a range of subject matter experts are interacting with communities impacted by the Project to address community questions and concerns as they arise and create a clearer understanding of Project activities and impacts.

13.2.1 Engagement activities

At this stage, the majority of communities impacted by the Project now have a general awareness of the Project, and engagement activities have progressed to providing information about specific construction activities and encouraging two-way dialogue.

Discussing future Project activities with communities helps develop positive relationships and identifies potential future concerns while activities are still in the planning phase. The Socioeconomic team is also encouraging a consultative and participative process by ensuring team members with specialist knowledge are available to speak with communities directly.

The use of drama as a culturally powerful way to communicate was also expanded beyond communities to include national contractor and Lanco employees as a way of drawing attention to worker safety (refer to *Case Study Three – PLAY IT SAFE: Using drama to communicate safety*).

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

Table 13.1 – Stakeholder engagement activities

Area	Planned engagements	Number of participants
Hides	22	1,402
Komo	3	450
Moro	42	3,457
Kopi	14	1,209
Gobe	5	536
LNG plant site	33	2,994
Total	**119**	**10,048**

Hides and Komo

This part of the Project area continues to see considerable infrastructure development as worker camps and access roads are completed. Due to the high volume of traffic movements, road safety is an ongoing priority and safety awareness is incorporated as a standard component of all community engagements. In addition, aspects of community safety awareness are being highlighted to workers through drama. More than 1,000 workers in eight camps attended 14 performances under the theme of 'Holding hands for safety'.

Pipeline topographic surveys began this quarter at the northern end of the ROW in the approach to the HGCP site. The Socioeconomic team has been communicating with communities about the pipeline's construction and the cut-off dates for houses and gardens to be surveyed. Community perceptions and expectations will be monitored over the coming months to ensure cut-off dates are understood and speculative housing is discouraged.

Pipeline (North and South)

During the quarter, the Moro-based Socioeconomic team introduced a regular schedule of community engagements, repeated every two weeks, and expanded activities into the northern part of the ROW towards Benaria. Awareness sessions addressed pipeline construction and installation along with road and construction safety and clarified restricted and permitted community activities on the ROW, as well as the process to access job and business opportunities.

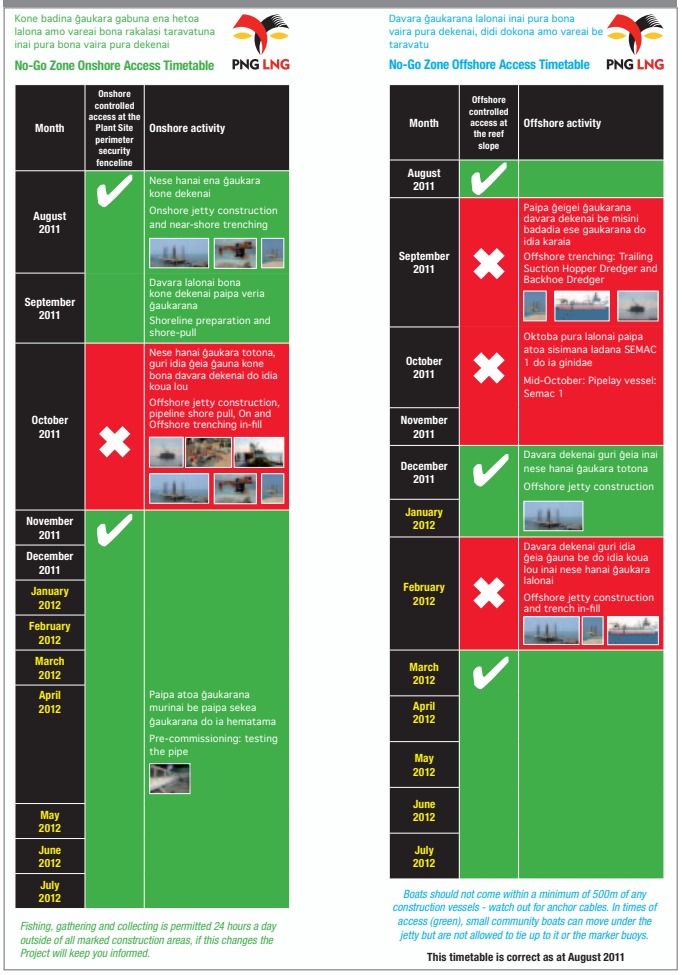
At the southern end of the pipeline route, disclosure meetings required under Project Resettlement Action Plans were conducted with 16 communities along the Omati River ROW to inform the communities about the Project and provide opportunities to raise any issues or concerns. The meetings addressed a range of topics related to dredging and pipe laying activities associated with pipeline landfall and its impact on fishing communities and other river users. Additional clarifying information on compensation and the Project grievance processes was also provided.

Presentation methods and materials took into account literacy levels at different locations. The Environmental Law Center, a Papua New Guinean advocacy non-government organization, accompanied the integrated engagement team to provide independent advice to communities and landowners.

LNG plant site

Ensuring fishers and other marine users at LNG plant site communities fully understand the construction 'no-go' zones that will apply during construction of the jetty where LNG tankers will dock for loading, is important. Taking advantage of the high literacy levels in these communities, a 'No-Go Zone Onshore Access Timetable' and a 'No-Go Zone Offshore Access Timetable' was developed and published in Tok Pisin. These colorful, pocket-sized cards, as shown in Figure 13.1, are printed on waterproof paper as an easy-to-use reference for marine users to carry.

Figure 13.1 – Onshore and offshore 'no-go' zone access timetables

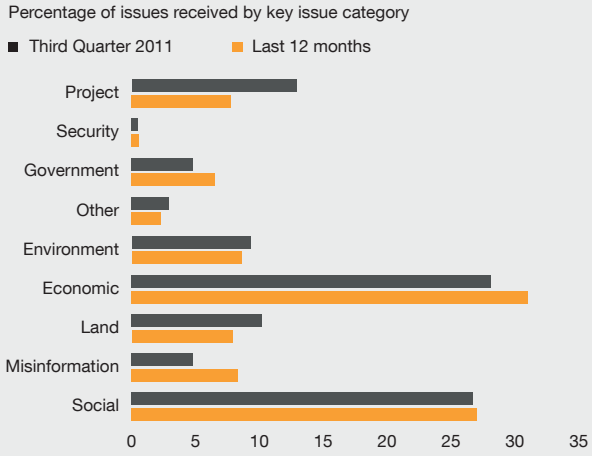


Recognizing that employees are another important stakeholder group, the LNG plant site has introduced a print publication for contractor employees. Published every second day, the Worker Bulletin has a distribution of 1,900, with a much larger readership when shared with family members.

Issues identification

Figure 13.2 shows the categories of issues raised by Project stakeholders for this quarter compared to the last 12 months.

Figure 13.2 – Comparison of issues received by key issue



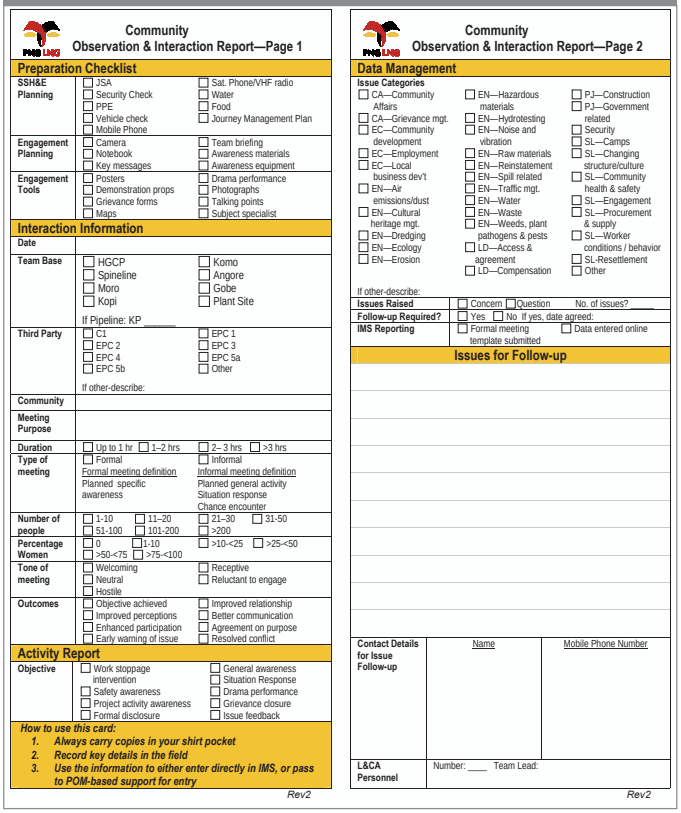
Economic issues being raised continue to relate predominantly to employment or business opportunities. As construction activities ramp up, community expectations that they will be employed or supplied with equipment for use on the Project increase, despite communication that a relatively limited number of opportunities are available.

As the Project matures, social issues are trending towards requests for community development projects, often as a result of frustration at the lack of education and health infrastructure available in an area. The Project's role is not to replace Government, but these requests are valuable because they inform the nature and location of the Project's community development investments.

In the Hides and Komo areas, the Project has a large operational footprint requiring interaction with scattered and remote communities. This geographic challenge, compounded by limited internet access at times, can impact timely recording of community meetings and issues. To support field teams in fulfilling these important tasks, a simple tool was developed and field-tested during this quarter. This is aligned with a familiar Project-wide safety initiative called Observation and Interaction.

Like its safety counterpart, the Community Observation and Interaction Report card (refer to Figure 13.3) is printed on both sides of a waterproof card and fits comfortably in a shirt pocket. The card is formatted in line with the data fields in the issues management section of the IMS, and a largely tick-a-box layout facilitates data capture. Where direct access to the IMS is difficult, a completed card can be scanned and sent to the Socioeconomic team based in Project headquarters for entry into the System.

Figure 13.3 – Community Observation and Interaction Report card



Community Observation & Interaction Report—Page 1

Preparation Checklist

SSH&E Planning	☐ JSA ☐ Security Check ☐ PPE ☐ Vehicle check ☐ Mobile Phone	☐ Sat. Phone/VHF radio ☐ Water ☐ Food ☐ Journey Management Plan
Engagement Planning	☐ Camera ☐ Notebook ☐ Key messages	☐ Team briefing ☐ Awareness materials ☐ Awareness equipment
Engagement Tools	☐ Posters ☐ Demonstration props ☐ Grievance forms ☐ Maps	☐ Drama performance ☐ Photographs ☐ Talking points ☐ Subject specialist

Interaction Information

Date		
Team Base	☐ HGCP ☐ Spineline ☐ Moro ☐ Kopi If Pipeline: KP _____	☐ Komo ☐ Angore ☐ Gobe ☐ Plant Site
Third Party	☐ C1 ☐ EPC 2 ☐ EPC 4 ☐ EPC 5b If other-describe:	☐ EPC 1 ☐ EPC 3 ☐ EPC 5a ☐ Other
Community		
Meeting Purpose		
Duration	☐ Up to 1 hr ☐ 1–2 hrs	☐ 2– 3 hrs ☐ >3 hrs
Type of meeting	☐ Formal Formal meeting definition Planned specific awareness	☐ Informal Informal meeting definition Planned general activity Situation response Chance encounter
Number of people	☐ 1-10 ☐ 11–20 ☐ 21–30 ☐ 31-50 ☐ 51-100 ☐ 101-200 ☐ >200	
Percentage Women	☐ 0 ☐ 1-10 ☐ >10-<25 ☐ >25-<50 ☐ >50-<75 ☐ >75-<100	
Tone of meeting	☐ Welcoming ☐ Neutral ☐ Hostile	☐ Receptive ☐ Reluctant to engage
Outcomes	☐ Objective achieved ☐ Improved perceptions ☐ Enhanced participation ☐ Early warning of issue	☐ Improved relationship ☐ Better communication ☐ Agreement on purpose ☐ Resolved conflict

Activity Report

Objective	☐ Work stoppage intervention ☐ Safety awareness ☐ Project activity awareness ☐ Formal disclosure	☐ General awareness ☐ Situation Response ☐ Drama performance ☐ Grievance closure ☐ Issue feedback

How to use this card:

1. ***Always carry copies in your shirt pocket***
2. ***Record key details in the field***
3. ***Use the information to either enter directly in IMS, or pass to POM-based support for entry***

Rev2

Community Observation & Interaction Report—Page 2

Data Management

Issue Categories

☐ CA—Community Affairs	☐ EN—Hazardous materials	☐ PJ—Construction
☐ CA—Grievance mgt.	☐ EN—Hydrotesting	☐ PJ—Government related
☐ EC—Community development	☐ EN—Noise and vibration	☐ Security
☐ EC—Employment	☐ EN—Raw materials	☐ SL—Camps
☐ EC—Local business dev't	☐ EN—Reinstatement	☐ SL—Changing structure/culture
☐ EN—Air emissions/dust	☐ EN—Spill related	☐ SL—Community health & safety
☐ EN—Cultural heritage mgt.	☐ EN—Traffic mgt.	☐ SL—Engagement
☐ EN—Dredging	☐ EN—Water	☐ SL—Procurement & supply
☐ EN—Ecology	☐ EN—Waste	☐ SL—Worker conditions / behavior
☐ EN—Erosion	☐ EN—Weeds, plant pathogens & pests	☐ SL-Resettlement
	☐ LD—Access & agreement	☐ Other
	☐ LD—Compensation	

If other-describe:

Issues Raised	☐ Concern ☐ Question No. of issues? ____
Follow-up Required?	☐ Yes ☐ No If yes, date agreed:
IMS Reporting	☐ Formal meeting template submitted ☐ Data entered online

Issues for Follow-up

Contact Details for Issue Follow-up	Name	Mobile Phone Number
L&CA Personnel	Number: ___ Team Lead:	

Rev2

13.2.2 Media

The Project's sixth PNG LNG Quarterly Environmental and Social Report covering activity during April to June 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*, *Wantok Nius*, and *The Sunday Chronicle*.

Case Study Three

PLAY IT SAFE:
Using drama to communicate safety

A crowd at Baguale, mostly children, gather on a muddy playing field. The steady drizzle doesn't dampen the spirits of this Southern Highlands village.

They know something is about to happen here, but what?

Nine performers from Fiwaga and Damaiyu villages have made an impromptu dressing room by wrapping a flowered sheet around four wooden poles.

When they emerge in painted faces and traditional bush dress, the audience erupts in laughter

One of the actors wears a white hard hat and holds two long boards in his hand attached to a flat piece of wood. The children point, they know immediately he's a bulldozer

Another actor wears a hat made of plastic pipe. "I'm the big pipe," he tells the children

That laughter continues almost without pause for the next hour as the actors perform a comedy called The Life of Ba'amo, the Gas Pipeline – or in Tok Pisin, as it is acted, *Laif Bilong Ba'amo, Ges Paiplain*.

The idea of the play is to help people living along the pipeline, like the people of Baguale, to understand what is happening with the construction activity and, most importantly, how to remain safe during the construction phase and after.

Case Study Three

PLAY IT SAFE:
Using drama to communicate safety

The Fiwaga and Damaiyu performers do this in a very simple, but effective and often humorous way. Even when Ba'amo, the young boy in the story, gets accidentally hit when he plays in front of the bulldozer, it is performed in a way that reinforces the safety message without losing any of the plays fun. Luckily, Ba'amo recovers and helps to teach the lesson about construction site safety.

Performers in traditional dress with painted faces

"It's a cultural medium", says Marliza Eloff, who coordinates the use of drama to teach safety for the Project, "and if you want to speak to people in a way that reaches them in their language, this kind of street theatre is the way to do it."

To date, 22 performances of *Laif Bilong Ba'amo, Ges Paiplain* held in 25 communities have attracted more than 3,000 audience members. People from the communities have commented that the drama is 'awareness in action'; engaging, relevant, appropriate and *'nambawan!* (outstanding)'.

The use of drama to reinforce safety messages extends beyond communities to inside Project camps. Inside camps, messages of safe working behaviors and practices, and how to work with people from different cultures, are communicated through performances of *'Yumi holim han wantaim sefti'* (Holding hands for safety). More than 1,000 Project workers have already attended 14 performances across eight work camps in the Upstream Project area. While the performances are often light-hearted and raise a lot of laughter, their message remains firm on reinforcing the Project's safety culture to workers.

Poster for the *'Yumi holim han wantaim sefti'* performances

14 Acronyms

AusAID	Australian Agency for International Development
CEDPA	Centre for Environment and Population Activities
ESMP	Environmental and Social Management Plan
HGCP	Hides Gas Conditioning Plant
IESC	Lender Group's Independent Environmental and Social Consultants
iHDSS	Integrated Health and Demographic Surveillance System
IMR	Papua New Guinea Institute of Medical Research
IMS	Information Management System
Lanco(s)	Landowner Company (Companies)
LNG	Liquefied Natural Gas
PNG	Papua New Guinea
PSI	Population Services International
ROW	Right of Way
SSHE	Safety, Security, Health and Environment
WMA	Wildlife Management Area

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.

Esso Highlands Limited acknowledges the aforementioned contractors for their respective contributions to the development of this PNG LNG Quarterly Environmental and Social Report.

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